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CONTENT

BUSINESS DEVELOPMENT BUSINESS SYSTEM ECONOMICS AND MANAGEMENT

Laura AIDUKIENĖ, Taurimas VALYS

PRIVATE & PUBLIC PARTNERSHIPS AS A TOOL FOR MANAGEMENT EFFICIENCY
IMPROVEMENT & PROJECT FINANCE IN PUBLIC INFRASTRUCTURE AREA 9

Dagmar CAMSKA

PREDICTING CORPORATE FINANCIAL DISTRESS IN THE CASE OF THE
EUROPEAN FUNDS 19

Anna DRAB-KUROWSKA

SOCIAL MEDIA IN INTERNET MARKETING 25

Gitana DUDZEVIČIŪTĖ

LITHUANIAN ENERGY DEPENDENCY AND CONSUMPTION IN THE CONTEXT OF THE
EUROPEAN UNION COUNTRIES 32

Monika ROLKOVA, Dagmar HRASKOVA

TELEWORKING – FLEXIBLE CONCEPTION OF MANAGING THE ENTERPRISE 39

Aleksandras Vytautas RUTKAUSKAS

STOCHASTICALLY INFORMED EXPERTISE AS NATURAL STEP FOR EXPERTS SYSTEMS
NETWORK DEVELOPMENT 46

Vladimirs SATREVICS, Nikolajs BARANOVSKIS

SMALL BUSINESS SUSTAINABLE STRATEGY 54

Hana SCHOLLEOVA

DEVELOPMENT OF BUSINESS ENVIRONMENT IN THE CHECK REPUBLIC 63

Viktorija STASYTYTĖ

RISK IDENTIFICATION AND VISUALIZATION TECHNIQUES FOR REASONABLE
ENTERPRISE RISK MANAGEMENT 71

Teresa SZOT – GABRYŚ

MEASURING THE SOCIAL IMPACT OF INVESTMENT PROJECTS 79

Stasys TARAILA

NON-LIFE INSURANCE BUSINESS DEVELOPMENT IN LITHUANIAN MARKET 87

FINANCIAL MARKETS FINANCE MANAGEMENT

George ABUSELIDZE THE DIRECTIONS OF FISCAL LEGISLATION IMPROVEMENT IN THE PROCESS OF GRADING THE TERRITORIAL BUDGETS CAPACITY	97
Artūras BALKEVIČIUS LITHUANIAN FINANCIAL SECTOR DEVELOPMENT OF POST-CRISIS PERIOD	105
Dušan BARAN HEDGING AND SPECULATION IN TRADING ON FUTURES MARKETS	110
Mariya BOROVIKOVA, Olena LIUBKINA PROBLEMS AND PROSPECTS OF THE DEVELOPMENT OF UKRAINE STOCK MARKET IN THE CONTEXT OF FINANCIAL LIBERALIZATION AND INTEGRATION PROCESS	111
Fernando GARCÍA, Concepcion BARTUAL-SANFELIU, Vicente GIMENEZ-MOLINA, Agustin ROMERO-CIVERA PROBABILITY OF DEFAULT USING THE LOGIT MODEL: THE IMPACT OF EXPLANATORY VARIABLE AND DATA BASE SELECTION	118
Jekaterina KARTAŠOVA FACTORS FORMING IRRATIONAL LITHUANIAN INDIVIDUAL INVESTORS' BEHAVIOUR	125
Aušrinė LAKŠTUTIENĖ, Jurgita STANKEVIČIENĖ VALUATION OF IMPACT OF COMPANY'S RESTRUCTURING: ECONOMIC VALUE ADDED	132
Audrius LINARTAS AN ANALYSIS OF INSURANCE COMPANIES FINANCIAL STABILITY AND ITS MEASUREMENT	140
Algirdas MIŠKINIS, Giedre ULEVIČIŪTĖ FINANCING PROBLEMS OF LITHUANIAN POLITICAL PARTIES	147
Nuray TERZİ FINANCIAL DEVELOPMENT AND FINANCIAL SYSTEMS	156
Eglė ZUPKAITIENĖ GOVERNMENT DEBT SECURITIES AS A STATE LENDING FACILITY	164

ECONOMICS AND SOCIALITY DEVELOPMENT INTERNATIONAL TRADE AND SERVICES

Alicja BRODZKA

DEVELOPING COUNTRIES IN INTERNATIONALIZED WORLD - DIFFICULT ASPECTS OF TAXATION 174

Agnieszka BUDZIEWICZ - GUŹLECKA

THE DIGITAL EXCLUSION IN POLAND IN THE CONTEXT OF GLOBALIZATION 182

Francesco CONTO, Anna Paola ANTONAZZO, Mariantonietta FIORE, Piermichele LA SALA

A DEVELOPMENT MODEL FOR THE INTERNATIONALIZATION OF SMES AGRO-FOOD OF PUGLIA: THE “ISCI” PROJECT 187

Gediminas DAVULIS

DEVELOPMENT OF INSTITUTE OF LOCAL TAXES IN LITHUANIA AFTER JOINED IT TO EU 196

Rimvydas JASINAVIČIUS, Vidmantas GANIPRAUSKAS

AVERAGE SALARY IMPACT RESEARCH TO THE VALUE OF PRIVATE INCOME AND ANNUAL REVENUE IN LITHUANIA 205

Ioannis KATSIKIS, Garyfallos FRAGIDIS, Dimitrios PASCHALLOUDIS

CROSS BORDER PROJECT COLLABORATION: THE CASE OF GREECE AND BULGARIA 214

Marius LANSKORONSKIS

HIGHER EDUCATION IN THE MARKET PLACE: MILESTONES FOR THE LONG -TERM INSTITUTIONAL COMPETITIVENESS 222

Alfonsas LAURINAVIČIUS

MODERNIZATION OF INTELLECTUAL PROPERTY PROTECTION TO ENSURE THE RIGHT OF CONSUMERS 235

Tomáš LÖSTER, Jana LANGHAMROVÁ

ANALYSIS OF DIFFERENCES IN UNEMPLOYMENT RATE BETWEEN REGIONS OF THE CZECH REPUBLIC 244

Gediminas MAČYS

POVERTY IN LITHUANIA AND EUROPE AT CLOSE RANGE 251

Nikolajus MARKEVIČIUS

UEFA EURO 2024 IN THE BALTIC STATES AND FINLAND OR KEYNESIANISM HELP TO THE FREE MARKET 262

Gregory OLEVSKY, Margarita DUNSKA

INDUSTRIAL POLICY OF THE EUROPEAN UNION AND THE DE-INDUSTRIALIZATION 263

Tomas PAVELKA

THE MINIMUM WAGE IN THE EUROPEAN UNION AND UNEMPLOYMENT 273

Pasquale PAZIENZA

THE IMPACT OF FDI INFLOW IN THE "AGRICULTURE AND FISHING" SECTOR OF OECD COUNTRIES ON CO2: SOME EMPIRICAL EVIDENCE 280

Kristofers RITOVŠ

LATVIAN COMPANIE'S ENTRY MODEL IN THE MARKET OF FRANCE 294

Elzė RUDIENĖ

LITHUANIAN RETAIL INTERNATIONALIZATION STAGES, THEIR DESCRIPTION AND PERSPECTIVES 301

Irina SKRIBANE, Sandra JEKABSONE

STRUCTURAL PROBLEMS OF THE DEVELOPMENT OF ECONOMY OF LATVIA 294

Arseny TARABANOV, Victoria TARABANOVA

THE CULTURE OF ECONOMIES: SELECTING METHODOLOGICAL APPROACHES 301

1.

Business Development

Business System Economics and Management

VIEŠOJO IR PRIVATAUS SEKTORIŲ PARTNERYSTĖS TAIKYMO ALTERNATYVOS IR POTENCIALAS LIETUVOS VANDENTVARKOS SEKTORIJE

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Santrauka

Didėjant investicijų poreikiui vandentvarkos sektoriuje, ryškėjant ES paramos ir kitokių subsidijų intensyvumo mažėjimo tendencijai bei smunkant gyventojų bendram pasitikėjimui ES paramos nauda ir efektyvumu, Viešojo ir privataus sektorių partnerystės (VPSP) priemonių taikymas turi didžiulį potencialą bei gali padėti spręsti daug su finansavimo pritraukimu susijusių problemų ir sukurti papildomą pridėtinę vertę, didinant vandentvarkos sektoriaus efektyvumą. Pažymėtina, jog pagrindinės sąlygos efektyvumui pasiekti vandentvarkos sektoriuje, taikant VPSP modelius, yra šios: 1. politinis palaikymas (ilgalaikis įsipareigojimas); 2. tinkamas teisinis reguliavimas; 3. tinkamų projektų parinkimas; 4. subalansuotas rizikos tarp šalių pasiskirstymas; 5. detalus rizikų valdymo planas bei tinkama kontrolė viso proceso metu.

Raktiniai žodžiai: *Viešojo ir privataus sektorių partnerystė; verslo plėtros alternatyvos; vandens sektoriaus investicijos*

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Įvadas

Straipsnio tikslas atsakyti į klausimą, kokios galimybės vandentvarkos sektoriuje taikyti viešojo ir privataus sektoriaus partnerystės (VPSP) būdus Lietuvoje. Siekiant įgyvendinti šį tikslą, analizuojamos VPSP būdų taikymo alternatyvos ir potencialas vandentvarkos sektoriuje.

Darbo tikslas – išaiškinant pagrindines sąlygas, įtakojančias viešojo ir privataus sektoriaus partnerystės plėtrą Lietuvoje, pateikti rekomendacijas šių sektorių bendradarbiavimo efektyvumo didinimui vandentvarkos sektoriuje.

Tyrimo metodai: pateikiant gerosios užsienio praktikos pavyzdžius, atlikus VPSP užsienio ir Lietuvos ekspertų apklausą, išskyrus ir detalizuojant viešojo ir privataus sektorių partnerystės taikymo vandentvarkos sektoriuje būdus ir būtinąsias prielaidas, įvardijami galimi taikyti VPSP partnerystės metodai vandentvarkos sektoriuje bei kitose viešosios infrastruktūros srityse.

Daugelyje šalių didėja naujų kiekybinių ir kokybinių infrastruktūros projektų paklausa. Su projektų finansavimo klausimais aštriausiai susiduria vietinės valdžios organai, tokie kaip savivaldybės ar miestų tarybos, sprendžiančios miesto infrastruktūros plėtros problemas. Šiuo metu tiek centrinės, tiek vietinės valdžios struktūroms svarbiausia yra aukšta komunalinių paslaugų kokybė ir nedidelė jų kaina, prieinama vietos visuomenei. Tokiu atveju partnerystė gali tapti geriausia visuomenei. Miestų tarybos vis geriau numato savo investicinius poreikius ir lygina juos su ateityje įmanomų gauti resursų lygiu.

VPSP perspektyvos pasaulyje ir plėtros pradžia Lietuvoje: status quo

Nūdienoje daugelio šalių ekonomikos, besivaduodamos nuo pasaulinės finansų krizės padarinių ieško naujų ekonominio ir politinio bendradarbiavimo formų, padėsiančių atsitiesti tiek

privačiam, tiek viešajam sektoriui. Vienas iš santykinai neseniai atsiradusių, bet sparčiai populiarėjančių reiškinių – viešojo ir privataus sektorių partnerystė (*Public – Private Partnership* (trumpinama kaip *PPP* arba *3P*, kas pasaulyje yra geriausiai pažįstamas atitikmuo), daugelyje pasaulio šalių (ypač EBPO) nebėra naujas reiškinys.

Pažymint, kad nėra vieningo VPSP apibrėžimo, Pasaulio bankas naudoja terminą „Privatus dalyvavimas infrastruktūros projektuose“; kiti Plėtros bankai naudoja terminą „Privataus sektoriaus dalyvavimas“ - JAV ir Kanadoje naudojamas terminas. Kanados VPSP taryba apibrėžia partnerystę kaip „bendrą viešojo ir privataus sektorių įmonę, sudarytą kiekvieno partnerio patirties ir ekspertizės pagrindu, kuri geriausiai atitinka aiškiai apibrėžtus visuomenės poreikius per tinkamą išteklių, rizikos ir atlygių paskirstymą“. - Australijoje vartojama sąvoka „Privačiomis lėšomis finansuojami projektai“ - Jungtinėje Karalystėje naudojamas terminas „Privataus Finansavimo iniciatyva (PFI)“. Viešo ir privataus sektoriaus partnerystę (Saladžius, 2009) atskleidžia kaip viešo ir privataus sektoriaus bendradarbiavimą, kurio esmė yra privačiam partneriui sutartiniais pagrindais perduodama teisė, teikti įprastai tik viešojo sektoriaus kompetencijai priskiriamas paslaugas/atlikti darbus ir plėtoti šių paslaugų/darbiui teikimui reikalingą infrastruktūrą privataus partnerio lėšomis už tai gaunant atlyginimą iš viešojo administravimo subjekto.

Pauliukevičiūtės (2010) teigimu, nepriklausomai nuo to, ar partnerystė inicijuota individualių asmenų, privataus verslo arba viešųjų institucijų, ar dalyvauja platus ar siauras partnerių būrys ir kokią įtaką jie turi sprendimams, galima skirti du partnerystės logikos tipus:

- *valdymo partnerystė* (esminis tikslas – lėšų paskirstymas ir panaudojimas). Tokia partnerystė – tai susidariusių galimybių (programos, projektai ir kita) finansavimas. Ją dažnai labai riboja laikas ir tikslai, vadovaujamosi projekto logika – rasti ir įtraukti galinčius suteikti lėšų ir turinčius konkrečios veiklos patirties;
- *plėtrą arba vietos identiteto išsaugojimą koordinuojanti partnerystė* (orientuota į regiono gyvybingumo palaikymą, plėtotę bei rėmimą. Partnerystė siekia sukurti socialinį projektą, remiasi mokymu ir susitelkimu, reikalauja padidintų laiko sąnaudų.

Kaip matyti iš apibrėžimų, viena iš VPSP sampratų gali būti labai plati, t.y. kai viešasis ir privatus sektorius tam tikram trumpalaikiam ir konkrečiam tikslui kartu nusprendžia teikti prekes ar paslaugas įvairių sutarčių, privilegijų ir dotacijų pagrindu, kurias organizuoja vyriausybė, teikia privatus sektorius, o apmoka vartotojas ar vyriausybės. Kitu atveju, viešojo ir privataus sektoriaus partnerystė gali būti įvardijami sudėtingi infrastruktūros projektai, kai objektai galiausiai yra privatizuojami (Obrascovas ir kt., 2003). Trečioji, tiksliausia ir siauriausia samprata Kavaliauskaitės ir Jucevičiaus (2009) nuomone, apima naujoviškus viešųjų paslaugų teikimo ir infrastruktūros plėtojimo būdus, kuriuos įvairiais aspektais aiškina autoriai savo darbuose. Pažymėtina, ir tai, kad skirtingos valstybės įvardija kiek skirtingus tokios partnerystės tikslus. Dažniausiai nurodoma, kad tokiu tikslu yra privataus kapitalo panaudojimas viešiesiems (visuomenės) poreikiams tenkinti – viešosioms paslaugoms teikti ir (ar) tam reikalingai infrastruktūrai sukurti (pagerinti).

Iš pateiktų VPSP bruožų analizės matyti tai, kad skirtingos viešojo ir privataus sektorių sutartys sudaromos įvairiems tikslams skirtinguose ūkio sektoriuose, atspindi skirtingus vyriausybės poreikius infrastruktūros plėtrai ir viešosioms paslaugoms. Europos Komisija siūlo pagrindiniu kriterijumi, skiriančiu partnerystės sutartis nuo kitų viešojo ir privataus sektorių sutarčių, laikyti rizikos, perduodamos privačiam partneriui, mastą. Be to, perduodamos rizikos apimtis leidžia apibrėžti skirtingus VPSP formas, suprasti, kokie teisės aktai jiems taikytini, ir nustatyti privačių partnerių atrankos metodus. Visoms ES šalims narėms, partnerių atrankos metodai, ar jie atrenkami paprastoms ar partnerystės sutartims vykdyti, pasirenkami vadovaujantis Europos Bendrijos Europos Bendrijos steigimo sutarties nuostatomis ir kitais teisės aktais, viešųjų pirkimų direktyvomis ir nacionaliniais teisės aktais.

Globalioje aplinkoje vykstančios valdymo reformos reikalauja iš viešųjų institucijų priimti naujus iššūkius planavimo, sprendimų priėmimo, jų įgyvendinimo koordinavimo, visų rūšių

išteklių valdymo srityse. Vykstantys pokyčiai, orientuojantis ne į tradicinio viešojo administravimo, naujojo viešojo administravimo, naujosios viešosios vadybos, o į šiuolaikinį viešąjį valdymą reikalauja peržiūrėti tradicines normatyvines orientacijas, įveikti nuolat atsinaujinančius trukdžius (Raipa, 2010). Didžiojoje Britanijoje įgavęs didžiulį pagreitį milžiniškas intensyvumas skaičiuoja jau ketvirtą dešimtmetį, o pastaruoju metu visame pasaulyje įgauna didesnę pagreitį bei mastą, įvairiausiomis VPSP formomis generuojamos apyvartos ir į viešąjį iš privataus pritrauktos lėšos jau šiuo metu skaičiuojamos trilijonais eurų. Pažymėtina, jog atitinkamais skaičiavimais 2030 m. pasaulyje vien į vandentvarkos sektorių, taikant įvairias VPSP priemones iš privataus į viešąjį sektorių bus pritraukta per 22,6 trilijonai JAV dolerių).

Lietuvoje viešojo ir privataus sektorių partnerystės sąvoka apibrėžta LR investicijų įstatyme pažymi valstybės arba savivaldybės institucijos ir privataus subjekto teisės aktais nustatytus bendradarbiavimo būdus, kuriais valstybės arba savivaldybės institucija perduoda jos funkcijoms priskirtą veiklą privačiam subjektui, o privatus subjektas investuoja į šią veiklą ir jai vykdyti reikalingą turtą, už tai gaudamas teisės aktais nustatytą atlyginimą.

Lietuvoje VPSP sėkmingai ir efektyviai ypač trukdo ir procesą stagnuoja neigiamas visuomenės požiūris įgyvendinant bendrus projektus, kuomet nepakankamas viešojo sektoriaus efektyvumas išreiškiamas kaip viešosios politikos, efektyvių sprendimų, racionalių išteklių naudojimo, pozityvių organizacijos veiklos rezultatų trūkumas. Buškevičiūtė, Raipa (2011) pažymi, kad todėl prioritetu tampa kuo efektyvesnis ir racionalesnis turimų išteklių panaudojimas.

VPSP projektų galimybes apibrėžia VPSP vykdomų projektų privalumai, atsiskleidžiantys per finansinių šaltinių pritraukimą, rizikos mažinimą, sąnaudų optimizaciją. Sudarytoje 1 lentelėje matyti išskirti privalumai, kuriuos įvardija moksliniai ir praktinių analitinių tyrimų autoriai.

1 lentelė. VPSP vykdomų projektų privalumai

Teiginiai	Pagrindimas
Ribotos valdžios sektoriaus finansinės galimybės	Pastebimas deficitas lėšų, skirtų esamai infrastruktūrai atnaujinti, pasiektam veiklos lygiui palaikyti ir projektui eksploatuoti. Taikant VPSP, galima sukaupti papildomos patirties arba lėšų, kad viešasis sektorius galėtų užtikrinti savo plėtrą.
Sąnaudų mažėjimas ir kokybės gerėjimas	Partnerystė yra veiksminga, pritraukiant konkurencingas įmones ir tokiu būdu užtikrinant kokybiškas paslaugas ir santykinai mažą jų kainą
Rizikos valdymas	Paskirstoma rizika tarp viešojo ir privataus sektorių priskiriant didesnę dalį rizikos tai šaliai, kuri geriausiai ir efektyviausiai sugebės ją valdyti ir kontroliuoti.
Didžiausia nauda (Best Value for Money)	Vienas iš esminių valdymo efektyvinimo veiksnių – atskirų paslaugų perdavimas valdyti privačiam sektoriui privatizuojant arba privačios ir viešosios partnerystės pagrindu. Pagrindinis motyvas perleisti viešojo sektoriaus paslaugas privačiam sektoriui yra įsitikinimas, kad privatus operatorius, būdamas motyvuotas siekti pelno, natūraliai planuoja dirbti efektyviau, nei tai darytų viešasis sektorius.
Geresnis viešasis valdymas - viešasis sektorius orientuojasi į rezultatą	Konkurencijos tarp paslaugų tiekėjų skatinimas, efektyvumo siekimas per kontraktų valdymą, orientacija į klientų poreikių tenkinimą.
Pritraukiamas kapitalas kitiems projektams, skatinamos inovacijos	Kiekvienas partneris turi būti pajėgus investuoti į partnerystę tiek materialinius (pinigai, infrastruktūra, žemė ir kt.), tiek ir nematerialinius resursus, tokius kaip galia, informacija, žinios.

Šaltinis: Sudaryta darbo autorių remiantis (Pauliukevičiūtė, 2010; Backūnaite, 2006; Staponkiene, 2005; Raišienė, 2005).

Kintama viešojo administravimo aplinka verčia viešajame sektoriuje viešųjų paslaugų teikimo funkciją keisti į vadovavimo funkciją, kai valdžia orientuojasi į politinių sprendimų priėmimą, socialinių ir ekonominių institucijų kūrimą, reguliavimo veiklos atlikimą, užtikrina,

kad kitos institucijos teiktų viešąsias paslaugas, atitinkančias visuomeninius poreikius, nesamdydama papildomai valstybės tarnautojų (Backūnaitė, 2006). Viešojo ir privataus sektoriaus partnerystė apima atskirų viešojo sektoriaus organizacijų bendradarbiavimą, kurio esmė – teikti kokybiškas tradiciškai viešojo sektoriaus kompetencijai priskiriamas paslaugas ir plėtoti šioms paslaugoms teikti reikalingą infrastruktūrą (Pauliukevičiūtė, 2010).

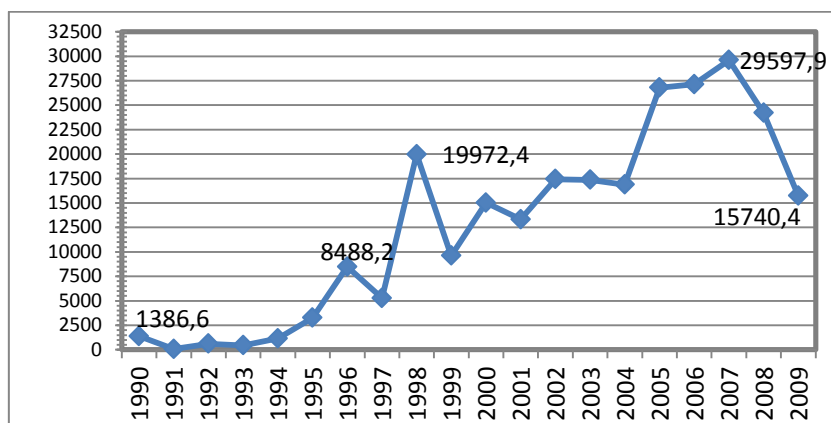
Kalbant apie viešąjį sektorių kaip apie bendradarbiavimo iniciatorių, pabrėžtina, kad partnerystė dažniausiai pasitelkiama siekiant pasidalinti konkrečios veiklos sąnaudas ir riziką, tačiau priimant kitus – politinius, ekonominius ar socialinius – sprendimus bendradarbiavimo būtinybė vis dar nėra pakankamai įvertinta. Tai lemia jau įprastą Lietuvoje situaciją, kai vyriausybės ar savivaldos institucijų priimti sprendimai yra ne kartą keičiami, papildomi, koreguojami.

Lietuvos vyriausybei, tiek ekonomikos analitikams vis daugiau susirūpinimo kelia vandentvarkos klausimai, tačiau sėkmingai įgyvendintų projektų skaičius Lietuvoje labai mažas, nors daugelyje Vakarų Europos šalių VPSP projektų skaičius sparčiai auga. Pažymėtina, jog vandentvarkos sektoriuje šiuo metu VPSP plėtra nevyksta, tačiau septynios sutartys atliekų naudojimo, perdirbimo ir tvarkymo srityje formuoja gerąją praktiką, kurią nesudėtingai galima bus inkorporuoti tiek tiesiogiai, tiek netiesiogiai susijusiuose sektoriuose bei išvengti galimų klaidų¹.

Visame pasaulyje VPSP tema tampa vis aktualesnė, dėl to didėja tyrimų šia tema skaičius. Apibendrinant kokybinių interviu metu gautus duomenis, galima reziumuoti, jog šiuo metu tiek Lietuvai, tiek kitoms naujosios ES šalims ypač aktualu skatinti ir plėtoti VPSP vandentvarkos sektoriuje dėl šių priežasčių: intensyvi technologinė pažanga, aplinkosauginiai išpareigojimai, didėjantis aukštos kokybės viešųjų paslaugų poreikis, tarptautinė finansų krizė bei globalizacija.

Sektoriai, kuriuose pasaulyje buvo įgyvendinti VPSP projektai (<http://www.ppplietuva.lt/partneryste/apie/partneryste-pasaulyje.html>) apima: energijos gamybą ir teikimą; vandens teikimą ir nuotekų surinkimą; atliekų tvarkymą; sveikatos apsaugą (ligonines); švietimą ir mokslą; sportą (stadionai, baseinai); susisiekimą (oro eismo kontrolė, geležinkeliai, keliai); informacines technologijas; visuomenės saugą (kalėjimai, policijos nuovados); būstas (socialinis būstas, bendrabučiai). Kaip matyti pagal struktūrizuotai pateiktus statistinius duomenis (žr. 1 pav.), VPSP projektų skaičių vertė nuo 1990 m. išlaikė augimo tendencijas iki ekonominio nuosmukio, kuomet įgyvendintų projektų vertė 2007 m. siekė 29597,9 mln. Eurų.

1 pav. ES įgyvendinti VPSP projektų vertė, mln. Eurų



Šaltinis: (Kappeler; Nemoz, 2010)

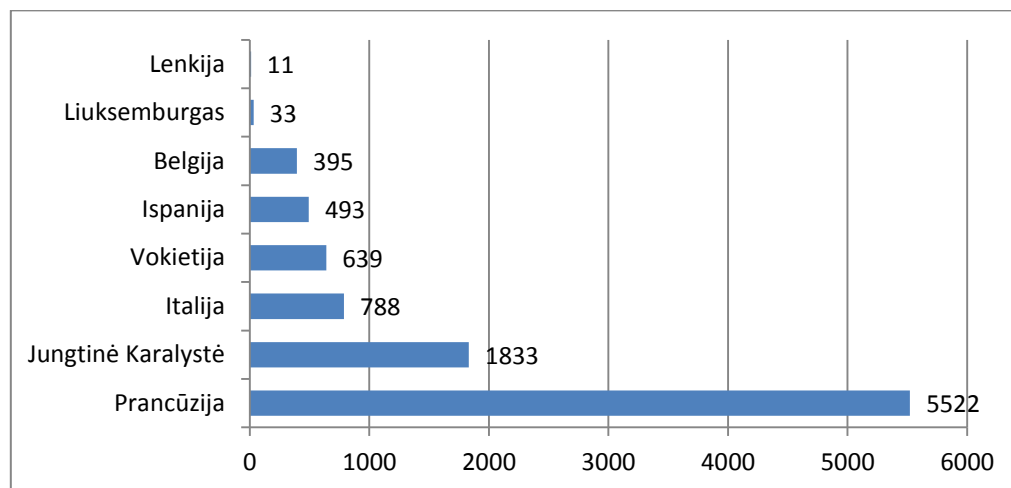
¹LR finansų ministerijos duomenimis, apibendrinus VPSP projektus įgyvendinančių institucijų pateiktą informaciją apie sudarytas VPSP sutartis iki 2012 m. sausio 1 d., pažymėtina, jog tendencija dėl daugiausia VPSP sudarytų sutarčių vietos valdžios lygmeniu ir toliau išlieka. Iš viso VPSP sutartys yra įgyvendinamos 20-tyje savivaldybių. Iki 2012 m. sausio 1 d. yra įgyvendinamos 32 VPSP sutartys, iš kurių 31 – koncesijų sutartys, 1 – valdžios ir privataus subjektų partnerystės sutartis (toliau – VŽPP). Per 2011 m. nebuvo sudaryta nė viena VPSP sutartis, nutrauktos 4 VPSP sutartys sveikatos apsaugos sistemos srityje 1.

Nuo 1990 m. iki 1996 m. įgyvendintų projektų vertė išaugo 5 proc., o 1998 m. jau siekė 19972,4 mln. Eurų., kas sudarė 18585,8 mln. Eurų (1340 proc.). AECOM (2005) apskaičiavo, kad nuo 1985 iki 2004 metų, pasaulyje buvo pradėti 2096 VPSP projektai, kurių bendra vertė sudarė apie 887 mlrd. JAV dolerių. Iš jų 325 mlrd. buvo skirti finansuoti 656 projektus transporto srityje. Ataskaitos rengimo metais, 1121 projektas jau buvo baigtas įgyvendinti, o bendra jų vertė siekė 451 mlrd. JAV dolerių.

2010 m. sudarytų projektų vertė pirmą kartą nuo ekonominio nuosmukio išaugo ir pasiekė 18,3 bilijon. EUR ir pasiekė 2004 m. lygį. Sudarytų projektų vertė išaugo dėl naujų sudarytų sutarčių šiems objektams: Flemish mokyklos Belgijoje; Greitojo traukinio maršrutas Portugalijoje; Greitkelis Portugalijoje; Metro linija iš Barselonos Ispanijoje; GSM-R geležinkelių projektas Prancūzijoje; Automagistralė Nyderlanduose; Naujosios Karolinos ligoninė Švedijoje ir Jungtinėje Karalystėje.

Šie faktai rodo, kad partnerystės sudaromų sutarčių vaidmuo tampa vis svarbesnis, dėl projektų tikslingumo ir siekiamos gauti paramos (Review of the European PPP Market in 2010). Per 2004-2005 m. pasaulyje buvo sudaryta VPP apie 206 sandorių bendros vertės apie 42 mlrd. eurų. Iš jų 54 sandoriai už Europos ribų ir 152 sandoriai Europoje. Analizuojant paskutiniuosius 2011 metų I ketvirčio statistinius duomenis, matyti, kad pagal įgyvendintų projektų vertę, ES lyderiauja Prancūzija – 5522 mln. Eur., kurioje fiksuojamas 8 didžiausių projektų skaičius (žr. 2 pav.).

2 pav. Europos VPSP rinka pagal šalis, mln.EUR



Šaltinis: PPP in Europe, 2009

Antroje pozicijoje yra Jungtinė Karalystė, kurioje įgyvendintų projektų vertė siekė 1833 mln. Eur., ir fiksuojamas 20 projektų skaičius. Pažymėtina, kad į šią suvestinę patenka ir Lenkija, kurioje fiksuojamas vienas 11 mln. Eurų vertės VPSP projektas. Jungtinė Karalystė pripažįstama aktyvia Europoje pagal viešojo ir privataus sektorių partnerystės projektų skaičių ir jų piniginę vertę. Pažymėtina, kad Didžiojoje Britanijoje įsteigta Jungtinės veiklos organizacija PPP klausimais konsultuoja ir teikia visapusę metodinę pagalbą ne tik viešojo sektoriaus, bet ir privataus sektoriaus subjektams, aiškindama dalyvavimo tokiuose projektuose taisykles ir taip skatindama privataus sektoriaus susidomėjimą juose dalyvauti. Taip yra sukuriama prielaidos ne tik privačių subjektų konkurencijai didinti, varžantis dėl viešųjų paslaugų teikimo ar valstybei (visuomenei) reikalingų infrastruktūros objektų kūrimo (pagerinimo), bet ir viešojo sektoriaus galimybėms derėtis dėl geresnių projekto sąlygų.

VPSP taikymo vandentvarkos sektoriuje būdai ir būtinosios prielaidos

Europos sąjungoje yra taikomos įvairios VPSP formos. Pažymėtina, jog vandentvarkoje įmanoma taikyti platų spektrą modelių nuo riboto iki pilno ar dalinio privatizavimo, steigiant mišraus kapitalo įmones arba tiesiog parduodant dalį akcijų, iki „sutartinių partnerystių“ (įsk. įvairaus tipo bei apimties koncesijas). Siekiant nustatyti ir pasirinkti patį optimaliausią VPSP modelį, reikia atsižvelgti į atitinkamos šalies dominuojančias pramonės šakas, ekonominę bei finansinę aplinką, teisinę bazę ir politinę santvarką. Taigi, dėl minėtųjų priežasčių įmanomos plačios galimybės pačios priemonės taikymui, tačiau nėra nustatytas unifikuotas ir universalus „europietiškas“ VPSP modelio.

Užsienio praktikoje vieni iš esminių vandentvarkos sektoriuje taikomų VPSP bruožai dažnai išskiriami šie: ilgalaikė sutartis tarp viešojo ir privataus sektoriaus partnerių, pagal kurią pasidalijama rizika tarp partnerių bei privačiam partneriui deleguojami tam tikri viešosios infrastruktūros kūrimo ir paslaugų teikimo įsipareigojimai; privataus sektoriaus dalyvavimas daugelyje infrastruktūros kūrimo ir paslaugų teikimo etapų (projektavimo, statybos, finansavimo, eksploatavimo); privataus partnerio pajamų šaltinis yra viešojo sektoriaus mokėjimai ir/arba vartotojų mokesčiai už paslaugas; perkamos paslaugos su konkrečiu rezultatu. Mokėjimas už paslaugą priklauso nuo paslaugos pateikimo ir veiklos efektyvumo (Viešosios vadybos ir politikos institutas, 2005).

LR finansų ministerija apibendrinant užsienio tendencijas ir praktiką bei atsižvelgiant į mūsų teisinės sistemos ypatumus išskyrė šiuos bruožus, taikytinus VPSP projektuose: 1. ilgalaikis partnerystės sutartimi pagrįstas viešojo ir privataus sektorių bendradarbiavimas (sutarčių trukmė nuo 3 iki 25 metų²); 2. partnerystės sutartimi su vienu privačiu subjektu įgyvendinama ne vienos rūšies veikla, o veiklų kompleksas (pvz. infrastruktūros objektų projektavimas, statyba, rekonstrukcija, remontas, priežiūros paslaugų teikimas); 3. partnerystės projektų pagalba gali būti sukuriamas viešųjų paslaugų pridėtinė vertė; 4. projekto rizika paskirstoma tarp partnerių, atsižvelgiant į gebėjimus ją valdyti; 5. viešojo sektoriaus mokėjimai privačiam partneriui pradedami vykdyti tik po to, kada galutinai sukuriamas numatytai veiklai vykdyti reikiamas turtas ir pradedamos teikti paslaugos; 6. Išsaugoma viešojo sektoriaus nuosavybės teisė į privačiam subjektui perduotą valdyti ir naudoti turtą, kuris reikalingas tai veiklai vykdyti.

Lietuvoje galimi skirtingi įvardinti bei mišrūs VPSP sprendimų variantai vandentvarkos sektoriuje sėkmingai panaudoti Vidurio ir Rytų Europos šalyse: taip pat prie sėkmingų („gerosios praktikos“) pavyzdžių įvardijami Sofijos³ ir Prahos⁴ miestuose įgyvendinti projektai, kurių teigiamas pasekmes bei rezultatyvius pokyčius vertina regionų vartotojai⁵. Išskirtinas ir „Talino vandenų“ (est. „Tallinna Vesi“⁶), kaip sėkmingo viešojo ir privataus sektoriaus bendradarbiavimo Baltijos šalyse, privatizacijos atvejis vandentvarkos sektoriuje, kuomet buvo pritrauktas strateginis investuotojas ir pasėjo dalis akcijų buvo pradėtos kotiruoti Baltijos šalių vertybinių biržoje, o įmonė pasiekė labai gerų finansinių rezultatų, iki šiol turi aukštą investuotojų pasitikėjimą, puikiausiai tenkina vartotojų poreikius regione. Galima būtų papildomai išskirti gerąją praktiką formuojantį VPSP projektą vandentvarkos sektoriuje, mėgstamą pabrėžti⁷ Armėnijos šalies atvejį kaip sektiną ir dėl daugelio aspektų, kas dėl bendrų istorinių ir socialinių-ekonominių panašumų neabejotinai galėtų būti aktualu bei taikytina priimtina Lietuvos kontekste), kuomet privatus investuotojas sumažino investicijų poreikio našą

² Yra nemažai šalių kuriose nėra terminų apribojimų arba jie ilgesni ir siekia 50 ir daugiau metų – VPSP apribojimai yra kiekvienos suverenios valstybės nustatomi skirtingai.

³ Veolia Water in Bulgaria. <http://www.veoliawater.com/about/locations/bulgaria.htm> (prisijungta 2012-04-29)

⁴ <http://www.veoliavoda.cz/en/> (prisijungta 2012-04-29)

⁵ Giluminio interviu su ES VPSP kompetencijų centro ekspertais Liuksemburge EPEC (prie Europos investicinio banko) išvados.

⁶ Tallinna Vesi: <http://www.tallinnavesi.ee/> (prisijungta 2012-04-30)

⁷ USAID, ERPB, EPEC, pasaulio banko ir kiti ekspertai.

valstybei, taip pagerinant paslaugų kokybę ir prieinamumą ir sumažino paslaugų kainas vartotojams.

Pasak Viešosios politikos ir vadybos instituto specialistų, VPSP yra gera alternatyva viešajai infrastruktūrai kurti ir viešosioms paslaugoms teikti (vandentvarkos sektorius – ne išimtis). Ji gali būti naudojama tada, kai privatizacija yra neįmanoma arba netinkama viešosioms paslaugoms teikti, įvertinant eilę faktorių, kaip antai rizikos pasidalinimo balansą, atitinkamų viešojo sektoriaus subjektų ilgalaikės strategijas bei specifiką. Skirtingai nuo tradicinių pirkimų ir privatizacijos, VPSP apima platesnį ir intensyvesnį bendradarbiavimą tarp viešojo ir privataus sektorių.

Natūralus veiksnys, skatinantis nagrinėti Lietuvos situaciją ir vertinti galimybes vystyti VPSP projektus vandentvarkos srityje yra padidėjęs valstybės valdžios dėmesys. 2010 m. sudaryta viešojo ir privataus sektorių partnerystės strategija, tobulinama įstatyminė bazė, papildytas LR valstybės ir savivaldybių turto valdymo, naudojimo ir disponavimo juo įstatymas, kuriame buvo apibrėžta ir įteisinta institucinė partnerystė, buvo kuriamos darbo grupės, skiriamos lėšos partnerystės plėtrai. Todėl aktualu ištirti, kokią įtaką šie pokyčiai gali turėti tolimesnei VPSP plėtrai vandentvarkos sektoriuje.

Siekiant nagrinėti VPSP galimą įtaką vandentvarkos sektoriui, būtina apžvelgti viešojo ir privataus sektorių skirtumus, jų stipriąsias ir silpnąsias puses, bei priežastis, dėl kurių kyla poreikis bendradarbiauti. Reiktų išskirti šiuos VPSP privalumus, kurie galėtų būti taikomi Lietuvos vandentvarkos sektoriuje bei plėtojant kitus viešosios infrastruktūros finansavimo scenarijus: apklausos rodo, kad VPSP projektai sukuria didesnę pridėtinę vertę bei duoda daugiau naudos ilgu laikotarpiu, nes gerina paslaugų kokybę ir jų teikimo efektyvumą; dauguma atvejų investiciniai projektai įgyvendinami nustatytu laiku bei nereikalauja nenumatytų papildomų viešojo sektoriaus išlaidų; nereikalauja arba reikalauja mažiau pradinių viešojo sektoriaus investicijų, nes privatus partneris gali visiškai ar dalinai finansuoti tam tikros infrastruktūros sukūrimą ar modernizavimą; vpsp turtas gali būti neapskaitomas viešojo sektoriaus balanse, ir tai leidžia išvengti biudžeto deficito ar valstybės skolos didėjimo plėtojant viešąją infrastruktūrą; vpsp skatina inovacijas ir geros praktikos sklaidą kuriant viešąją infrastruktūrą ir teikiant viešąsias paslaugas.

Atkreiptinas dėmesys į tai, kad VPSP projektų sėkmė ir proceso eigos sklandumas priklauso nuo šalių sugebėjimo kiekvienu konkrečiu atveju tinkamai įvertinti šios partnerystės taikymo efektyvumą bei pasirinkti teisingą formą. Viešojo sektoriaus subjektas, prieš priimdamas sprendimą dėl partnerystės taikymo tikslingumo, turi atidžiai įvertinti bei ekonominiais skaičiavimais pagrįsti numatomą naudą, efektyvumą ir galimas grėsmes. Ekspertų teigimu⁸, pagrindine paskata, motyvuojančia šalis naudoti VPSP vandentvarkoje galėtų tapti integruotos teisinės sistemos bei ja pagrįsto skatinimo plano sukūrimas. VPSP tikslas yra perkelti (arba dalintis) rinkos ekonomikos rizikomis, pastarąsias perkeliant privačiam sektoriui, geriausiai prisitaikiusiam prie minėtosios konkurencijos ypatumų. Todėl reikalinga Vidurio ir Rytų Europos regione stiprinti privatų sektorių, ypač tais atvejais, kuomet pastarasis yra priverstas konkuruoti su viešuoju, kuris ne visada savo konkurencingumą tvirtina rinkos ekonomikai būdingais principais ir priemonėmis, ko pasekoje iškreipiama konkurencija ir turimas realybės neatitinkantis vaizdas atitinkamose ūkio šakose.

Privataus sektoriaus efektyvumas, orientavimasis į pelną ir rezultata, investicijos kartu su viešojo sektoriaus visuomenės poreikių išmanymu, įgyvendinimo kokybės ir proceso kontrole VPSP suteikia galimybę valstybei sumažinti biudžeto išlaidas, išlaikant ar net padidinant viešųjų paslaugų apimtį, kadangi dalį finansinės naštos perima privatus sektorius. Be to, sektorių partnerystė skatina naujoves, didina verslo konkurencingumą ir skatiną efektyvesnę viešojo sektoriaus veiklą.

⁸ Giluminio interviu su ES VPSP kompetencijų centro ekspertais Liuksemburge *EPEC* (prie Europos investicinio banko) išvados.

VPSP yra viešajam sektoriui priimtinesnis bendradarbiavimo būdas dėl kelių priežasčių: pirmoji - yra apsaugoma monopolijos strategiškai svarbiose infrastruktūros bei paslaugų srityse, tokiose, kaip elektros, dujų tiekimas, vandentvarka, viešasis transportas, todėl šias sritis privatizuoti vengiama. Antra priežastis žymi tai, jog privatus sektorius nepakankamai vertina visuomeninę infrastruktūrą, ir net privatizacijos atveju, itin aukštos infrastruktūros užtikrinimo kainos labai apriboja konkurenciją ir sumažina dalyvių skaičių iki vos vieno ar kelių⁹, tačiau eliminuojant progresyvias privataus sektoriaus iniciatyvas ypač ekonominio nuosmukio metu, valstybei brangiai kainuoja išlaikyti šias sritis, todėl VPSP yra vienas iš alternatyvių privatizacijos problemų sprendimo būdų. Svarbu pažymėti ir tai, jog VPSP apima platesnį ir intensyvesnį viešojo ir privataus sektorių bendradarbiavimą nei tradiciniai pirkimai ar privatizacija.

Kadangi politinė valdžia, formuojanti šalies politiką, yra renkama piliečių ir kartu viešųjų paslaugų vartotojų, jai yra svarbi rinkėjų nuomonė ir pasitenkinimas vykdoma šalies politika ir viešųjų paslaugų kokybe. Todėl viešasis sektorius *a priori* yra suinteresuotas efektyviu politikos įgyvendinimu ir produktyvia viešojo sektoriaus veikla. Akivaizdu, jog teigiama visuomenės nuomonė ir palaikymas VPSP paskatintų bendrų VPSP projektų skaičiaus didėjimą, sėkmingą įgyvendinimą bei veikimą. Tuo tarpu kategoriškai neigiama visuomenės nuomonė apie VPSP skatina politinę šalies valdžią susilaikyti nuo bendradarbiavimo su privačiu sektoriumi ir ieškoti alternatyvių problemų sprendimo būdų.

Reikia pripažinti, jog šiuo metu Lietuvos įstatymai nereglamentuoja visų įmanomų ir pasaulyje taikomų VPSP formų, tačiau būtinos sąlygos VPSP kurti yra sukurtos, inkorporuota ir tarpinstituciniame lygmenyje pakankamai sėkmingai taikoma ES teisė. Buvo atsižvelgta į 2008 m. valstybinio audito išvadas: parengtos ir patvirtintos įstatymų pataisos bei papildymai, apibrėžta VPSP sąvoka, sukurta VPSP plėtros strategija, nustatyta administracinė sistema, patvirtintos VPSP projektų rengimo taisyklės (2009-11-11 nutarimas Nr.1480), patvirtintas nutarimas dėl metodinės ir konsultacinės pagalbos teikiančio juridinio asmens (2009-10-14 Nr. 1290), kuris pastaruoju metu sėkmingai teikia pagalbą viešojo ir privataus sektorių subjektams rengiant koncesijų ir valdžios ir privataus subjektų partnerystės projektus, toliau tobulinami įstatymų projektai, kurie užtikrins dar skaidresnį ir aiškesnį VPSP projektų įgyvendinimą ir vykdymą.

Bendra VPSP plėtros vizija leidžia planuoti ilgalaikius projektus, mažina neapibrėžtumą ir riziką dėl būsimos valstybės valdžios politikos pasikeitimo VPSP atžvilgiu. Valstybinis sektorius pripažįsta, jog perleidus kai kurias paslaugas teikti privačiam sektoriui yra sutaupomos lėšos bei užtikrinamas efektyvesnis ir kokybiškesnis paslaugų teikimas. Be to, sėkmingi VPSP projektai galėtų ženkliai pagerinti abiejų sektorių įvaizdį visuomenės akyse. Kitą vertus strategijoje yra objektyviai įvertinami tiek partnerystės privalumai, tiek trūkumai, kas turėtų padėti išvengti aklo projektų vykdymo tik VPSP pagalba, atmetant tradicinius būdus.

Partijų programose VPSP nors ir nėra aktyviai minima, tačiau palaikymas VPSP juntamas bent jau iš politikų pasisakymų, ypač pastaruoju metu ryškėjant tendencijai dėl ES paramos intensyvumo sumažinimo.

Tačiau reikėtų prisiminti, jog esminis principas, remiantis kuriuo turėtų būti priimtas sprendimas rinktis projektą įgyvendinti VPSP ar vienu iš tradicinių būdų, yra maksimali nauda, atitinkanti sąnaudas, kitaip tariant turi būti pasirenkamas efektyviausias pinigų panaudojimo būdas, atliekama kaštų – naudos analizė. Apibendrinant galima teigti, jog šiuo metu egzistuoja didelis politinės valdžios dėmesys ir palaikymas viešojo ir privataus sektorių partnerystei, kas vienareikšmiškai tik skatina jos plėtrą ir sėkmingą įgyvendinimą. Tačiau reikia atminti, jog VPSP būdo taikymas visiems projektams iš eilės arba neskaidri VPSP gali atnešti daugiau žalos nei naudos.

⁹International Monetary Fund "Public- Private Partnerships" Fiscal Affairs Department, 2004<www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf>.

Išvados

Pažymėtina, jog dabartinio ekonominio sunkmečio metu VPSP yra viena iš galimybių skatinti papildomų investicijų pritraukimą ir padėti tiek viešajam, tiek privačiam sektoriui susidoroti su galimais krizės padariniais vandentvarkos sektoriuje. Daugelis tyrimo metu paminėtų faktorių byloja, jog ryškėja ES paramos bei kitokių subsidijų intensyvumo mažėjimo tendencija, smunka gyventojų bendras pasitikėjimas ES paramos nauda bei efektyvumu.

VPSP priemonių taikymas yra tik viena iš alternatyvų finansuoti bei įgyvendinti vandentvarkos sektoriaus projektus, todėl klaidinga manyti, jog minėtosios alternatyvos tinka įgyvendinti bet kuriam projektui. Kaip ir tradiciniai projektų įgyvendinimo būdai, VPSP turi savo stipriąsias ir silpnąsias puses. Todėl VPSP plėtojimas vandentvarkos sektoriuje turėtų būti taikomi tik kruopčiai parinkus tiek pilotinius, tiek tolimesnius projektus bei įrodžius, jog atitinkamas būdas (-ai) atneš daugiausiai naudos, atitinkančios sąnaudas, kitaip tariant atsižvelgiama į *value for money* kriterijų. Labai svarbu užtikrinti politinės aplinkos stabilumą ir paramą VPSP priemonių taikymui. Dažniausiai VPSP įgyvendinimas trunka ilgiau nei vieną politikų kadenciją, todėl būtina užtikrinti, jog pasikeitus šalies politinei valdžiai, nepasikeistų ir politika VPSP atžvilgiu, būtų vykdomi praeitos kadencijos politikų priimti įsipareigojimai. Esminės sąlygos rezultatyvumui vandentvarkos sektoriuje pasiekti šalims, sėkmingai taikančioms VPSP modelius yra šios: 1. politinis palaikymas (ilgalaikis įsipareigojimas); 2. tinkamas teisinis reguliavimas; 3. tinkamų projektų parinkimas; 4. subalansuotas rizikos tarp šalių pasiskirstymas; 5. detalus rizikų valdymo planas bei tinkama kontrolė viso proceso metu.

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PREDICTING CORPORATE FINANCIAL DISTRESS IN THE CASE OF THE EUROPEAN FUNDS

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Abstract. Predicting corporate financial distress or bankruptcy has been a highly discussed topic in the research as well as business circles since 1960's. Bankruptcy models provide a quick answer about company's financial conditions. They are helpful for business partners, banks as well as for governmental institutions. Cooperation with the ailing partner can be devastating. The Czech Republic has € 26.7 billion available for the program period 2007-2013 from the European funds. There are more than twenty financial support programs. Beneficiaries of different support programs are thoroughly chosen according to criteria. Among the criteria also financial health is monitored.

The aim of this paper is to show if the Czech institutions that distribute the European money support healthy businesses. Altman formula is selected as a bankruptcy model which should help to fulfill the main aim. The analysis will be done with the use of a database of beneficiaries and the corporate database Albertina which provides financial data.

Keywords: financial distress, bankruptcy prediction models, European funds. Czech Republic

JEL classification:

G30 – General (Corporate Finance and Governance)

G32 - Financing Policy; Financial Risk and Risk Management; Capital and Ownership Structure; Value of Firms

F36 - Financial Aspects of Economic Integration

Introduction

The financial health or stability is a crucial issue for every company. Prediction of bankruptcy or probability of default is a research topic which has inspired economists since 1960's. This paper is focused on the financial health of companies supported by the European funds in the Czech Republic. Financial support programs are an important money source for the Czech Republic as well as other European countries which joined the European Union in 2004 or later. Companies as well as municipalities, regions, NGOs and others can ask for non-returnable subsidies. All applicants cannot succeed because money sources are limited and only the best projects are chosen, therefore there are conditions and requirements. The conditions may differ because there are more than 20 different financial support programs in the Czech Republic. On the other hand among the conditions we can always find financial stability because a support of ailing business units is not appropriate.

Czech financial support programs usually use their own distressed prediction models. The paper uses the Altman Z-Score for evaluating because it is the most famous model worldwide which is globally accepted and still highly used although it was originally published in 1968. As it is mentioned the Czech Republic has plenty of support programs. For purposes of this paper the Operational Program Environment is selected. This program is one of the most important according the amount of funds or number of projects. Potential beneficiaries may be many different units enterprises, non-governmental organizations, regions, municipalities or public companies. The attention is paid only to enterprises and their financial position. Results of specific model used by the OP Environment will be compared with results provided by Altman Z-Score. As the conclusion, a comparison of the specific approach and the Altman formula is presented.

Financial support programs

Financial support programs co financed from the European Union can be described as a significant money source. For running program period of 2007 – 2013, the Czech Republic has € 26.69 billion available (European Union Funds, Information about EU Funds, 2012). Different projects are supported and therefore the Czech Republic has four major groups programs:

- Thematic Operational Programs;
- Regional Operational Programs;
- Operational Programs Prague;
- European Territorial Cooperation.

These groups consisted together of 26 different programs. Unfortunately main data set referring to the state of financial drawing contains only 19 Czech operational programs (Objective 1 and 2). The Objective 3 is classified separately. It seems to be a limitation of the analysis but we have to take into account that only € 0.39 billion is reserved for territorial cooperation (European Union funds, European Territorial Cooperation). First two above mention groups follow the Objective 1. OP Prague fulfils the Objective 2 and the last group of programs supports the Objective 3. Detailed information about the content of objectives can be found in Boháčková, Hrabánková (2009).

Data set – selected program Operational Program Environment

It is mentioned above that the Czech Republic has together 26 different support programs co financed from the European money. These programs and projects can vary not only in content but also in geographical location. It is very difficult to analyse such heterogeneous group which contains over 42 000 projects right now (European Union Funds, State of drawing, 2012). For purposes of this paper one operational program is selected as a representative unit.

Operational program Environment has been selected as a representative unit because of several reasons – amount of money and number of projects. The most important factor is the amount of financial sources. For OP Environment the amount of EUR 4.92 billion has been available – it means 18.4% of all Czech financial sources from the EU funds (European Union Funds, Operational Program Environment, 2012). According finance it is one of the most important programs. Difference could be detected in the number of supported projects. Table 1 displays the number of projects in case of Operational Program Environment compared with all programs fulfilling Objective 1 and 2.

Table 1: Current number of beneficiaries of OP Environment (September 2012)

	Number of projects			
	All	Cancelled	Finalized	Ongoing
OP Environment	4 980	4	2 456	2 520
All programs	42 272	1 142	17 736	23 394

Source: own elaboration based on data European Union Funds, State of Drawing (2012)

Number of beneficiaries of OP Environment represents more than 11% of all projects which supports the idea of importance of this program. On the other hand we can conclude that OP Environment supports bigger projects than in general.

It is already mentioned that beneficiaries may be very different units. Because our aim is to analyse financial health we narrow the group of beneficiaries. It is not an easy question to evaluate financial health of business companies and it is even harder task in the case of municipalities or NGOs. Our attention is paid only to enterprises (limited liability companies, joint-stock companies, public companies and cooperatives).

Data set adjustments

Data set contained 4 980 projects at the beginning. There were regions, municipalities, religion organizations etc. which had to be excluded. After this exclusion it is gained 596 projects in years 2008 – 2012. Each unit can ask repeatedly because the financial support is not determined for the asking unit but for a concrete purpose. It means that there are less beneficiaries than projects because some of them are supported repeatedly. Last problem is connected with data availability. For further work it is needed companies' financial statements. Unfortunately not all companies in the Czech Republic are following the rule of a disclosure obligation. Consequence is that we are not able to count results for companies in the sample. Financial data of some companies are neither available in business register nor in corporate databases. Table 2 contains comparison of number of projects, companies and analyzed units according allocation years.

Table 2: Allocation years and number of approved projects and supported companies

	Total	2008	2009	2010	2011	2012
Number of projects	596	22	75	260	130	109
Number of companies	501	18	56	223	108	96
Number of analyzed companies	326	12	41	174	83	16

Source: own elaboration based on List of beneficiaries (2012)

The time period 2008 – 2012 is long in the case of financial health. According the market conditions and results of projects financial situation can change. Table 2 shows that companies are divided according the year when they became beneficiaries. The year of allocation is crucial for our further analysis. If the company asked for the money support in the year 2010 and got the subsidies it means that its financial health was evaluated and monitored with the help of historical financial statements by authorities of the operational program. The same assumption is applied in paper's experimental part – financial health of the company will be checked one year before the year of allocation. It ensures comparability with the results of the methodology of the operational program. Unfortunately not enough data are available for the allocation year 2012 (see Table 2). The reason is that most of financial statements, which refer to the year 2011, have not been published yet

The following part introduces methods of evaluation corporate financial health.

Financial health and methods

Financial health and stability is crucial for every company. No business unit is able to survive in the long run period if the stability is not ensured. In reality the situation is not important for the company itself but also for other subjects as investors, business partners, employees or government institutions. It sets up a question why the financial health should be monitored and crucial for the decision of authorities of operational programs.

The answer is very easy no one wants to support a business unit which is likely to go bankrupt. Money sources are limited and their spending is checked not only by national but as well as supranational authorities (EU). From the beginning of an application process all programs have their own requirements and conditions which have to be fulfilled by potential beneficiaries. Among the conditions it we can always find financial health of an organization.

It is answered that financial health is crucial and it should be monitored but it is not said which methods should be used. Czech financial support programs use their own methodology how to evaluate the financial health. There can be significant differences. Unfortunately the methodology of the Operational Program Environment is not known publicly but the authority

asks completely applicant's financial statements. It provides with other documents enough relevant information which support decision making.

The critical question is how to predict financial distress or probability of default in general and if this prediction has sufficient reliability. Predicting corporate financial distress or bankruptcy has been a highly discussed topic in the research as well as business circles since 1960's. Now nobody is able to say how many prediction approaches have been developed since 60's. In this area researchers, banks and other institutions, which need that for their functioning, are active. Very popular are bankruptcy models which could be created by one equation which consists of several financial ratios. Most of these equations have been created as a statistical result of discriminate or regressive analysis.

The most famous model worldwide is the Altman Z-Score which was originally published in 1968 (Altman, 1968). This model is based on discriminate analysis and contains 5 financial ratios (number can differ according to modification). Although this model was created more than 40 years ago and importance of components changed several times it is still highly used and its accuracy comparing with newer model is still sufficient (Maňasová, 2007). Altman Z Score used in experimental part is presented by the equation 1 (Altman, 2012) and its evaluation table is mentioned as well. Calculated value of Altman Z-Score has to be evaluated according Table 3.

$$Z \text{ Score} = 3.107 \times \frac{EBIT}{A} + 0.998 \times \frac{S}{A} + 0.42 \times \frac{E}{L} + 0.847 \times \frac{RE}{A} + 0.717 \times \frac{NWC}{A} \quad (1)$$

where

EBIT	Earnings Before Interest and Tax
A	Total Assets
S	Sales
E	Equity
L	Total Liabilities
RE	Retained Earnings
NWC	Net Working Capital.

Table 3: Evaluation of Z-Score

Evaluation	Z Score
Unhealthy	$Z < 1.23$
Grey Zone	$1.23 < Z < 2.9$
Healthy	$2.9 < Z$

Source: Altman (2012)

Results

This chapter contains results of the experimental part which are followed by discussion. The financial health of companies is generally evaluated one year before they became beneficiaries. The Altman Z Score is calculated for each company from sample using adequate financial data. According the value of Z Score companies are divided into three groups – healthy, grey zone and bankruptcy or distress zone. Final results are summed up in the table 4.

Table 4: Evaluation of Altman Z-Score

Altman	2008	2009	2010	2011	2012
Healthy	5	24	77	28	7
Grey zone	6	12	78	39	8
Bankruptcy	3	5	19	16	1

Source: own elaboration

It is hardly possible to discuss results of years 2008 and 2012 because there are not enough projects evaluated. Reasons are different for every year. The year 2008 was the starting point and there were neither many applicants nor program calls. The 2012 exception has been already mentioned there is not a decrease in number of projects but financial statements of the year 2011 are still not available and we are not able to evaluate financial health of these beneficiaries right now. In half a year we would be able to evaluate also majority of 2012 projects and beneficiaries.

Three major years are 2009 and mainly 2010 and 2011. In 2009 12% of companies are evaluated as unhealthy (distress zone). The tendency is same in 2010 (11 %) and there is a slight deterioration in 2011 (19%). The worse result in 2011 can be partly explained by the consequences of economic crisis which had slower impact in the Czech Republic. The financial support programs do not respect only profitable view but also public interest and general advantages of projects. If we take into account that the analysed sample consisted of liability companies, joint stock companies but also public companies and agriculture cooperatives the financial health of beneficiaries of the Operational Program Environment is very good. It seems as very strong conclusion without any additional data testing but we are able to compare financial health of beneficiaries in three different programs.

Čámská (2012) tested another hypothesis but gained data are comparable. Regional operational programs support Objective 1 as Operational Program Environment. Tables 5 and 6 display results for programs – ROP NUTS II Central Moravia and ROP NUTS II North-East.

Table 5: ROP NUTS II Central Moravia - results of Altman formula for all companies

Zone	Frequency	Percent
Safe	14	0.38
Gray	13	0.35
Distress	10	0.27

Source: Čámská (2012)

Table 6: ROP NUTS II North-East - results of Altman formula for all companies

Zone	Frequency	Percent
Safe	22	0.44
Gray	10	0.20
Distress	18	0.36

Source: Čámská (2012)

Tables 5 and 6 show absolute as well as relative frequencies of financial health classification for two regional programs. 27% for Central Moravia and even 36% for North-East are classified as bankruptcy or distressed zone. Data showed in the Table 4 are transformed to same format how the table 7 displayed. Only 13% are classified as distressed zone in the case of the Operational Program Environment. It speaks definitely in the favour of evaluation which is done by authorities of this program. The results are at least two times better than for regional programs.

Table 7: Operational program Environment - results of Altman formula for all companies

Zone	Frequency	Share
Safe	141	0.43
Gray	143	0.44
Distress	44	0.13

Source: own elaboration

Conclusions

This paper evaluated financial health or position of companies who became beneficiaries of the Operational program Environment. For evaluating the Altman Z Score formula was used. Results were suitable because according the Altman formula most supported companies are classified in healthy or gray zone. The importance of distressed zone is not significant, especially if we do the comparison with two regional programs (Central Moravia and North-East) who have very frightening evaluation. Methodology used by Operational Program Environment seems to be successful.

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SOCIAL MEDIA IN INTERNET MARKETING

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Abstract. The Internet is a new medium that exerts a growing influence on business activity, and also contributes to changes in marketing. Owing to its unique features, it affects both the shape of the strategy, as well as tactical and operational activities aimed at satisfying the needs of customers. It affects every instrument of the marketing mix. In particular, it affects promotional activities leading to the development of concepts such as direct marketing, mass customization, interactive communication with consumers or permission marketing. The Internet has contributed to the emergence and development of new tools – web sites, banners, search engines, directories, forums and newsgroups, e-mailing.

Introduction

The Internet is an effective tool that can be used to promote a brand, service or product. It offers the opportunity to reach out to current and prospective customers, conduct market research and explore new markets. The constantly growing number of Internet users stimulates an increase in interest in the Internet as an advertising medium. This brings financial benefits to the most often visited web sites that sell some of their web space to advertisers (Siegel, 2001, p.173).

The Internet is a new medium that exerts a growing influence on business activity, and also contributes to changes in marketing. Owing to its unique features, it affects both the shape of the strategy, as well as tactical and operational activities aimed at satisfying the needs of customers. It affects every instrument of the marketing mix. In particular, it affects promotional activities leading to the development of concepts such as direct marketing, mass customization, interactive communication with consumers or permission marketing. The Internet has contributed to the emergence and development of new tools – web sites, banners, search engines, directories, forums and newsgroups, e-mailing. E-promotion is playing a more and more important role, and although today it usually only supports traditional promotional activities, it is expected that more and more campaigns will be based on the web as the main medium. The role of web promotion is growing and will continue to grow, so that in the future no brand will attain a certain potential without web promotion.

Internet advertising

It should be noted that advertising on the Internet is an addition to traditional advertising media, such as newspapers, radio, television or direct advertising. Its characteristic feature is the ability to effectively reach narrow audiences. Due to the advent of this technology, a new media description language, charging methods, and agencies specializing in the sale and purchase of advertising space on the Internet have emerged¹⁰

It is necessary to point out the advantages of online advertising. These are primarily: (Adamczewski, 2001, p.78).

a) global reach – communication over the Internet has no geographical or time barriers. This gives advertisers the ability to target advertising messages towards potential customers around the world;

b) interactivity – this feature enables maintaining bilateral contacts with users of the Internet;

¹⁰ A. Banach, http://www.e-mentor.edu.pl/artykul_v2.php?numer=13&id=250#30

c) low cost – the Internet is considered to be the cheapest advertising medium. In this way, it allows small businesses to organize advertising campaigns, which could not be carried out in the press, radio and television because of the high cost;

d) flexibility – all stages of the campaign can be monitored. In the case of the Internet, the advertiser can continually analyse the effects of various forms of advertising;

e) profiling customers – the possibility of gaining interest of the target group is one of the biggest advantages the Internet. Unlimited access to different consumer segments allows companies to make contact with the desired audiences.

Of course, the disadvantages of Internet advertising should also be pointed out, and they are as follow:

- limited access to the network, resulting in the fact that using only Internet advertising, advertisers cannot reach the whole society;
- lack of representativeness of Internet users;
- psychological resistance against the new medium – the reasons for such attitudes can be traced to misunderstanding of how this new medium functions, as well as to the individual characteristics of each person.

The Internet offers many different types of advertising. It all depends on what is to be advertised and what form of advertising is most appropriate (Dąbrowska, Janoś-Kresło, Wódkowski, 2009).

The key forms of internet marketing include in particular: (Sznajder, 2000).

- positioning websites in search engines,
- sponsored links,
- social media marketing,
- e-mail marketing,
- banners.

Among the wide selection of methods and forms of marketing, the most popular for many years has been positioning in search engines (SEO), which is currently used by more than 80% of enterprises. This tool allows website owners to increase traffic to their websites coming directly from search engines. The higher a web page appears after typing a certain keyword or phrase in a search engine, the more likely it is to be visited by Internet users, which increases the chances of gaining new clients. Most members of the information society use the World Wide Web as a primary tool to search for local businesses, and 60% of those users later make purchases in the shops they found, which is why the vast majority of the companies analysed use this method of promotion on a smaller or larger scale (E-commerce Report, 2011, p.26).

Second in terms of popularity is advertising in search engines as sponsored links in the form of PPC (Pay Per Click) (S. Collin, 2002). PPC tools are assumed to allow accurate determination of the recipients of advertising messages, primarily by matching ads to a selection of phrases and keywords that the user searched for. Using control tools, the advertiser may determine what message the web surfer will read, check the performance (click-through rates), calculate daily costs and accurately determine the budget for the entire marketing campaign. These advantages have significantly contributed to the strong growth in the popularity of this form of online advertising. Another factor has been the chance that the web address of the online store will be displayed on the first page of the search results. Positioning a website to appear on the first page of search results in search engines (e.g. Google) is currently a very difficult task, given the fierce competition among companies doing business on the Internet. However, buying keywords appropriate for the given industry results in the address of the shop showing among the sponsored links on the first page. With the growing interest in PPC, the costs of promotion go up as well, as the position of the advertised web address is determined via a mechanism of bidding between the companies that pay for the same keywords. Website positioning and sponsored links are used both by shops that have been on the market for a long time, longer than 10 years, and by those that have appeared on the market only recently.

Diversification of the various forms of advertising on the Internet has been complemented by social media marketing. Its popularity has grown extensively in recent years. Social media, until now used as the social channels of communication between Internet users, are beginning to play a significant role in the field of e-commerce.

A significant increase in e-mail marketing has been reported, which was used by 47% of online stores (E-commerce Report, 2011, p.26). The increase in popularity of social networking sites did not result in reduction of interest in e-mail marketing. Users of social media sites check their e-mail boxes more frequently than other Internet users. Every third respondent company takes advertising beyond the Internet, as well as uses visual advertising. Banners are the oldest and still popular form of online advertising. The effectiveness of banners used to be determined by the value of the click-through rate, but currently this ratio began to decline drastically, due to the overwhelming prevalence of banners and their high invasiveness. Currently, visual advertising is used as brand promotion, a way to inform about the existence of the company or building product brands, because of its huge creative potential.

Social Media Marketing – the essence and applications

Social Media Marketing is a field of Internet marketing involving indirect promotion through communication with potential customers through social networking sites or blogs, by posting or sharing articles, videos and images. Social media is a communication channel to allow interaction between Internet users, using technologies such as blogs, forums, discussion groups, wikis, podcasts, emails, instant messaging, VoIP, sharing music, videos and photos (<http://socialmedia.pl/tag/social-media-definicja/> z dnia 10.01.2012).

The Internet is a channel for companies to reach millions of potential consumers. Many organizations want to reach them using the opportunities offered by social media. Especially so, because they allow for an open debate on specific products or services, and the large number of consumer feedback expressed on the web is a chance for companies to benefit from collective intelligence.

This, in turn, may stimulate the development of their innovativeness – companies can offer new products and services, and implement innovative business solutions.

With social websites, consumers have the opportunity to take a number of actions shown in Figure 1. Owing to the speed in the transmission of information and the possibility of joint action, consumers can effectively influence the image of the company and sometimes even create it.

Figure 1. Consumer behaviour on the web



Source: *Community business – a new era in business communications*, Report based on the audit *Polish companies on Facebook – social websites in marketing communications of Polish enterprises*, Deloitte Poland 2012, p. 6.

It should be stressed that social media is treated as a kind of social networking revolution that has both staunch supporters and opponents. Discussions and disagreements may involve a number of issues. It is arguable, for example, whether we are dealing with a revolution, or perhaps an evolutionary transition to the next stage of development of the information society how much novelty the new media bring, and whether social media are a step forward, giving new opportunities for marketers, or maybe a step back, making their work harder, whether marketing in social media is based on creative marketing solutions, or the opposite - it is very simple, not to say primitive marketing (Gregor, Stawiszyński, 2012).

No matter how social media are seen and to which of the above groups one belongs, it must be admitted that social media have enormous potential. It is worth noting that what is happening on the Internet may be just a prelude to the real revolution that will form the pillars of the economy of global communication (Gregor, Stawiszyński, 2012). There is no doubt that the traditional business models of companies that use the Internet in their operations do not meet the expectations of their young net-surfing customers, who are open to new ideas and changes. Companies, however, recognize this problem as they adapt and test new solutions and look for potential clients on various social networking sites. These types of websites are gaining popularity, regardless of the latitude, age, gender or skin colour of their users. Of course, the people most open to this kind of novelty are the very young. The degree of popularity of social media decreases with the age of the users. However, it is characteristic that these "older" age groups saw the largest increase in the number of social media users in the years 2008-2010 (Generations 2010). It can also be observed that the opening of companies to the new opportunities offered by social media depends on the industry in which a given firm operates. Globally, social media are used most enthusiastically by educational companies. Almost three-quarters of these companies (72%) use social media. Second is the communications sector (71%), and third and fourth, respectively, are services (66%) and sales (64%). The potential of social media is yet to be discovered by representatives of many companies operating in the energy sector (32%) (Harvard Business Review, October 27, 2010). It is also characteristic that companies which have been on the market longer, use social media more extensively. According to JBrief Inc., social media have been fully integrated with business models of nearly three quarters of American companies operating on the market for over two years (The State of Social Media for Business, SmartBrief Inc., November 3, 2010).

A report by Deloitte for Facebook Inc., published in 2011, showed that owing to the activities of Facebook and its related companies, 27 countries belonging to the EU and Switzerland earned 15.3 billion euros. The portal has become a global phenomenon, and not just because it gave rise to a new model of communication among Internet users. Its unique position results from the economic impact it has on other entities. These results show that Facebook affects the economies of countries¹¹ both in a narrow sense, through the daily activities of the company itself, as well as in a wider spectrum of the activities of third parties that use its ecosystem (Report Measuring Facebook's economic impact in Europe, Deloitte, 2012).

Evaluation of the use of Social Media in Poland

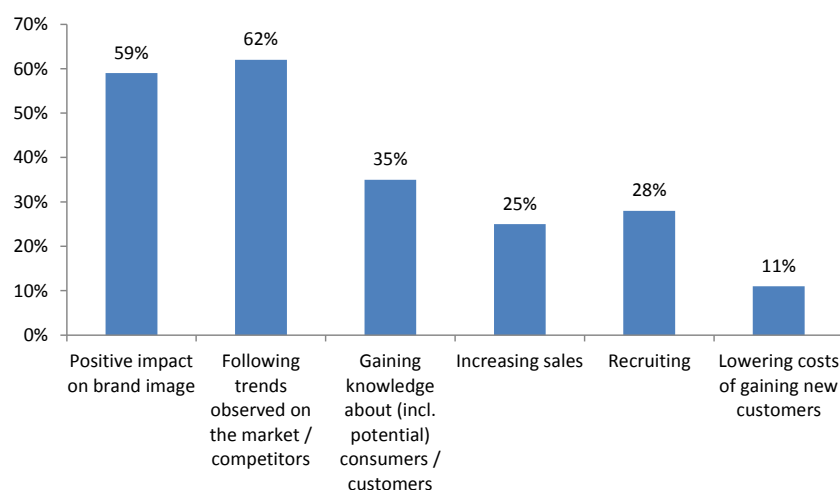
There are 1.67 million businesses in Poland, and currently more than 5% of them, i.e. 70 thousand Polish companies and brands (Small and Medium-Size Enterprises in Poland, PARP, Warszawa 2011), have accounts on Facebook. However, despite the fact that social media are increasingly regarded by most companies as the key pillar of communication between them and the consumers/customers, business organizations have still have much to do in this field (A. Budziewicz-Guźlecka, 2012).

¹¹ In Poland, taking into account the GDP and popularity of Facebook, this can be estimated at around 150-200 million EUR annually.

Social networks can be an effective tool to attract new and maintain existing customers and employees, and may be helpful in developing innovative projects and take part in building the image of a brand close to consumers.

The highest percentage of companies involved in the Deloitte study¹² uses social media due to their positive impact on the image of the brand (59%), and also because this is the market trend and their competition is using social networks (62%). These numbers indicate that the directors and managers of Polish companies still do not fully realize how much can be achieved through an active presence on the web and well planned social media strategy. Awareness of the versatility of these media and of the specific effects that can be achieved through them is low. Especially undervalued seem to be the benefits for recruitment (HR departments). Only 28% of companies use social media for recruitment purposes. Their potential in this field, however, is quite large – a carrier of image-building content, a tool for verifying the competence of candidates, an interactive platform to build long-lasting, deeper relationships with the community gathered around the company (Survey Candidates 2.0, Employer Branding Institute). Figure 3 presents the objectives of presence in social media.

Figure 3. What is the objective of presence in social media?



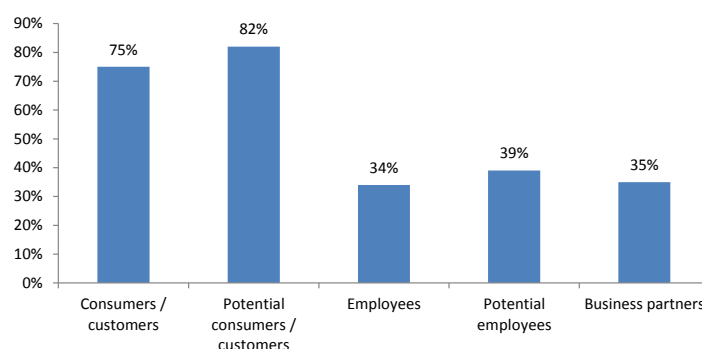
Source: *Community business – a new era in business communications*, Report based on the audit *Polish companies on Facebook – social websites in marketing communications of Polish enterprises*, Deloitte Poland 2012.

Another issue to discuss is the direction in which communication is achieved through social media. Firms interact in social media mainly with consumers/clients and potential consumers. Internal communications, recruitment goals and business cooperation are secondary. At the same time, few businesses reported that they use social media to gain knowledge about the consumers/customers (including potential), increase sales and reduce the costs of obtaining clients. Relatively few companies use social media to engage in dialogue with potential employees, and even fewer use the opportunity to utilize these dynamic media to improve internal communication and dialogue with their employees. Companies should take it into account that current and potential employees will express opinions about them on-line anyway. It should be noted that a lack of engagement limits control over what happens with the image of the employer. Moreover, as in the case of recommendations of satisfied consumers/customers, the recommendations of satisfied current and former employees are the most reliable and portals such as glassdoor.com are becoming places for exchange of information about employers. 78% of respondents in the survey “Candidates 2.0” said they would reject a job offer from an employer that has a bad reputation among their friends (Survey Candidates 2.0, Employer

¹² *Community business – a new era in business communications*, Report based on the audit *Polish companies on Facebook – social websites in marketing communications of Polish enterprises*, Deloitte Poland 2012

Branding Institute). Figure 4 shows the target groups with whom entrepreneurs communicate using social media.

Figure 4. Which target groups do you communicate with through social media?



Source: *Community business – a new era in business communications*, Report based on the audit *Polish companies on Facebook – social websites in marketing communications of Polish enterprises*, Deloitte Poland 2012.

An important aspect which needs to be mentioned is the approach to using social media in the future, and whether entrepreneurs have strategies for their activities in social media. Unfortunately, this area is clearly neglected.

The vast majority of companies do not have a separate strategy for social media activities. 15% per cent do not have a strategy at all, 43% of companies in the survey have indicated that their actions in the social media are part of their marketing strategy and support traditional marketing and PR activities. Only 17% of companies have a specific strategy for the social media, fully integrated with their business development strategy and marketing plans.

A strategy for brand presence in social media is a concrete plan of actions to achieve predefined, measurable results, which has clearly defined criteria for evaluating effectiveness. Lack of a strategy or a mismatch with the company's strategy eliminates the main benefits of activities in social media, increases the cost of communication and increases the risk of mistakes. Lack of a strategy equals a greater risk of failure.

Social media pervade all areas of social and economic life. In order to use them effectively, companies should see more in them than just modern technology and risk. Regardless of the industry in which a company operates, its top management should approach these media in the most practical manner possible.

It is necessary to clearly define business objectives, define the target group, and choose the most effective way to use social media to achieve the predefined goals.

Conclusions

The Internet is the driving force behind today's economy, creating opportunities and chances for business development worldwide. Internet technologies are developing very intensively, and the quality of the telecommunications infrastructure is improving systematically, new media providing access to the Internet are being offered. This result is a growing number of Internet users. Structures and business profiles transform under the influence of technology and the e-commerce sector is developing intensively.

It seems that the serious barriers that used to restrict the development of e-commerce a few years ago, have now disappeared. In turn, the opportunities that have emerged on the market provide a very good environment for the development of this market in the future.

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LITHUANIAN SECURITY OF ENERGY SUPPLY AND CONSUMPTION IN THE CONTEXT OF THE EUROPEAN UNION COUNTRIES

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Abstract. The aim of this paper is to describe Lithuanian’s position in the context of the 27 EU Member states according to the most relevant energy indicators, such as security of energy supply (energy dependency) and energy consumption. Economic sustainability and country’s security of energy supply and consumption assessment arise as comprehensive approach. The growth of global energy prices, significant dependency on imported energy and increase in energy consumption result international competitiveness of the country and pose constraints towards sustainable development. Restructuring of the economies from energy intensive industries towards more technologically advanced products and services might lead to higher value added per unit of product, and energy saving sectors with lower energy consumption per unit of output. In order to sustain international competitiveness of exporting sectors, it is necessary to diminish gradually intensity of expensive energy resources.

Keywords: energy consumption, energy dependency, security of energy supply, sustainable development.

JEL classification: Q4- Energy; Q43- Energy and Macroeconomy

Introduction

Growth in the dependency and consumption of energy in the EU countries poses serious development constraints in recent years. Security of energy supply for Europe has been for decades at the forefront of the energy policies of individual European Community member countries (Haghighi, 2008). According to forecasts for global energy consumption, natural gas and oil consumption will continue to increase in the next twenty years. It is estimated that global oil consumption will increase one percent and global natural gas consumption will increase 1.5 percent on average per year, so that total increase in energy demand will amount to 45 percent by 2030 (IEA, 2009; Ozkan, 2011). Growing energy dependency and consumption and its economic and political consequences make the energy supply security a more pronounced concept each and every day. Energy supply security, which is defined as “continuous and stable supply of energy from reliable and different sources in sufficient amounts, at reasonable price and via reliable means of transport”, became a priority for the developing and developed countries. The energy supply security became more important for international system dynamics after economic parameters became as important as political and military parameters in the 21st century security perceptions (Ozkan, 2011). Sustainable development of a country largely depends on the utilization of her energy, which has direct linkage with economic activities and environmental securities (Ahmed, 2002; Rahman, 2002). Energy is considered to be one of the important driving forces of economic growth in all economies (Pokharel, 2006; Munim *et al.*, 2010). Energy has always been a major component in the day-to-day life of humans. More than one billion people in the industrialized countries (about 20% of the world’s population) consume nearly 60% of the total energy supply, whereas about 5 billion inhabitants in developing countries consume the other 40% (Munim *et al.*, 2010).

Many studies have been done regarding energy dependency and consumption. The scholars in their researches have been analyzed energy consumption at national, regional and

international levels as well as country's energy dependency impact on global economy and society.

Research aim is to describe the position of Lithuania in the context of other EU countries according to the dependency on imported energy and final energy consumption.

Research object is country's dependence on imported energy and consumption in the 27 EU Member states.

Research methods used are systemic analysis of scientific literature, statistical data comparison, general and logical analysis.

In *Section 1*, the author makes review of scientific studies regarding security of energy supply and consumption. In *Section 2*, the comparison analysis of 27 EU countries is made by country's dependence on imported energy; and in *Section 3*, the position of Lithuania has been described by the most relevant energy indicator- final energy consumption.

Conceptual approaches towards energy issues: review of scientific studies

The energy sector is central in sustainable development and it affects all aspects of development - social, economic and environmental (Augutis *et al.*, 2011). According to Hoeven (2012), the Executive director of International Energy agency, energy markets in 2012, like the broader economic picture, are marked by significant uncertainty. From a policy perspective, global macroeconomic concerns in 2011 diverted attention away from energy policy and could do the same this year. That could have worrying impacts on policy progress, especially as recent months have ushered in record carbon dioxide emissions, worsening energy efficiency and sustained high oil prices.

Many studies have been done regarding security of energy supply and consumption. The debate over the best means to guarantee security of energy supply at national, regional and international levels has become one of the most controversial topics among energy scholars (Metcalf, 2008).

Ighodaro (2010) in the research found the existence of a long-run relationship between energy consumption and economic growth (Dudzevičiūtė, 2012). Electricity consumption and gas utilization are found to determine economic growth, while economic growth determines domestic crude oil production. Efficient energy consumption and sustainable economic development are objectives which can be in a collision of different interests. Burinskienė and Rudzkienė (2007) did research dealing with economic, ecological and social components of sustainable development and focusing on the aggregated indicators, such as pollution variation, income, energy consumption and selected social indicators of national residents. The authors have explained the relationship between the increase in the economic efficiency and the decrease in the environmental impact (Dudzevičiūtė, 2012).

The analysis made by Mulligan (2010) has sought to show the ways in which natural, political, economic and security discourses have affected perceptions of fossil fuels as an environmental and security issue. It has argued that a more natural or ecological view of energy may be found by considering fossil fuel decline as a natural resource limit, and recognizing the dependence of *homo industrialis* on these energy sources. According to the author, market forces might assist the transition, but economic thought cannot easily embrace the constraints on growth that peak oil and declining net energy imply. Mulligan (2010) has concluded that this study has sought to push scholars of energy and ecological security to begin a discussion that might help avert such a future, but we should beware of holding too much hope for change: if there are limits to human control over nature, these will surely be exacerbated by humanity's limited control over itself.

The research of Molis (2011) aimed to develop methods for risk intensity assessment in the area of energy supply security in the Baltic States, based on scenario-building and risk assessment tools as well empirical examples. The analysis performed by using this methodology shows the existence of at least two major risks for the Baltic States: dependency on a single

energy resources supplier and a wrong (in the terms of transparency, competence and knowledge) decision making process. The survey demonstrates that the Baltic States should focus their attention on neutralizing two risks with intolerable intensity. Increase of investment in diversification of energy resource supply plus improvements in the quality of long-term decisions in the energy sector should become the priorities in the Baltic States.

The group of scientists has done investigation regarding the assessment of energy supply security in Lithuania (Augutis *et al.*, 2011). Summarizing the investigations it is possible to note that energy security level in 2007 was approximately 7.3 in a fifteen point system. Comparing to this in scenario when gas it is using in the Lithuanian Power Plant in 2010, energy security level is decreasing to 6.96 points; whereas using heavy fuel oil energy security level is increasing up to 7.45 points. The closure of Ignalina NPP has had a multifaceted impact upon energy security of Lithuania. According to authors, diversity of fuel is an essential element of security and sustainability because concentration of dependency on few energy sources increases risks and reduces flexibility of system. It is natural that part of energy security indicators decreased after the shutdown of Ignalina NPP. It is, first of all, related to the increased gas export and higher prices for electricity energy.

Pomfret (2010) in his paper has analyzed the nature of the EU's current energy supply security problems, emphasizing the increased importance of natural gas and high level of dependence on Russian supplies through a small number of pipelines. The author made conclusion, that rapid development of liquid natural gas (LNG) facilities will have huge implications for both sellers and buyers of natural gas. Russia will lose its monopoly power in EU markets, but will have options to ship gas from its growing Far Eastern and Arctic operations to the customers in Asia, Europe or the Americas willing to pay the best price. The landlocked Central Asian producers, on the other hand, will remain bound by pipeline routes and largely dependent on Russian and Chinese markets. Construction of LNG terminals is giving EU importers the option of buying gas in a spot market with many suppliers, although this development is being embraced to varying degrees by individual EU members and without an integrated EU gas market the LNG option will not be available to all countries (Pomfret, 2010). To conclude, the scientists have analyzed the issue of energy in different economic aspects, such as security of energy supply, country's energy dependency and consumptions. A commonly accepted practical definition of energy security concept related to energy supply at a reasonable price. This definition suggests that energy should be physically available and its price should be reasonable.

Lithuania's dependence on imported energy in the context of the EU countries

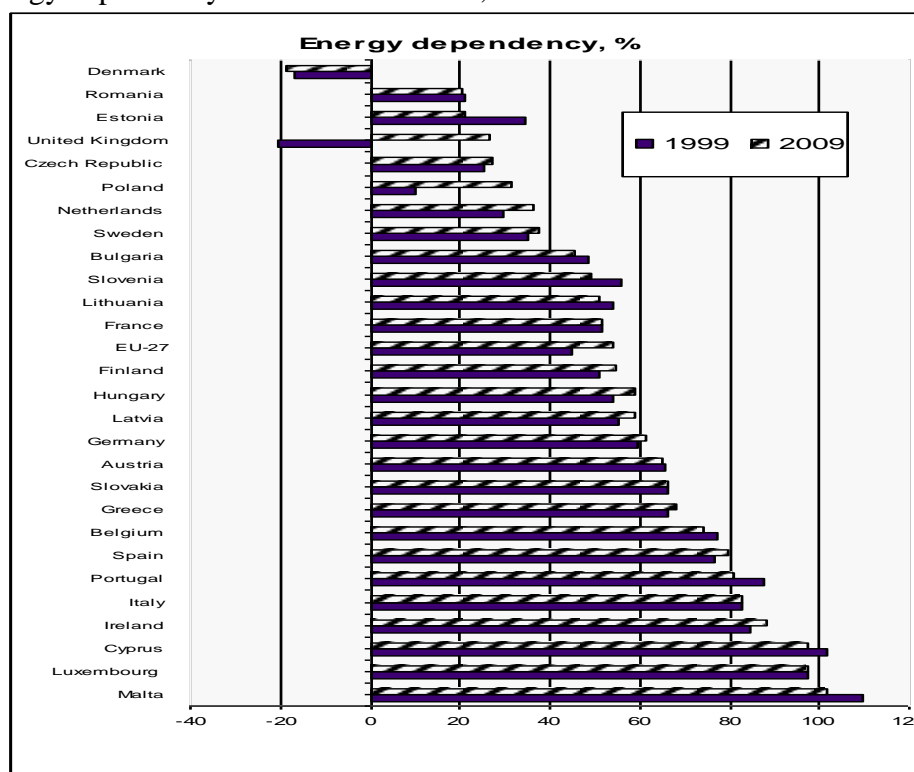
The privatization process of the energy sector and the entrance of foreign investors were slower in Lithuania than in other Baltic States. According to Enerdata (2011), until mid-1995, all energy companies in Lithuania were public. At the end of 1995 and throughout the first half of 1996, all companies were transformed into joint stock companies. The privatization of the gas sector was launched in the year 2002.

In 2009 the Ministry of Energy became responsible for the energy sector in Lithuania, which since 1996 had been under the supervision of the Ministry of Economy. In 1993 an Energy Agency was created in order to overcome the difficulties faced by the country in terms of energy: poor energy efficiency, few energy resources and a strong dependence on Russia for its energy supply (90%) (Enerdata, 2011).

In the period of ten years (1999-2009), EU-27 dependency on imported energy has grown, reaching 53.9% in 2009. It increases by 9 percentage points from 1999 (Fig. 1). Negative dependency rate indicates a net exporter country. Positive values over 100 % indicate stocks build-up during the reference year. Over the period of 10 years, Poland's energy dependency increased from 9.8 % to 31.7 %. It presented the highest increase among all the EU countries.

Estonia experienced the highest energy dependency decrease with 21.2 % in 2009 compared to 34.8 % in 1999. Denmark was the only country in the EU with a negative dependency rate in 2009 (- 18.8 %) as well as (- 16.6 %) in 1999.

Figure 1. Energy dependency of the EU countries, %



Source: Eurostat (2011)

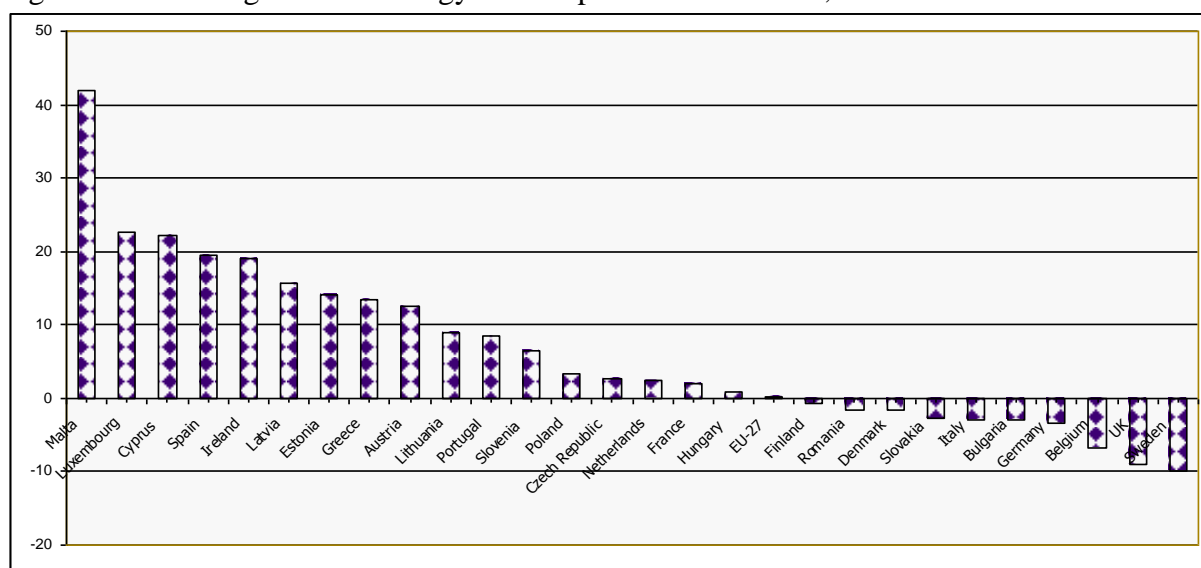
According to the data of Eurostat, the United Kingdom was a net exporter until 2003, but became an importer since. Over the period of ten years, the change of Lithuania's energy dependency rate has not been significant. It made 51.2 % in 2009 compared 53.9 % in 1999. In 2009, it was 8.8 percentage points higher than the average of EU-27 Member States. According to Eurostat, between 2008 and 2009, eighteen countries of the EU presented decreased energy dependency rates. Lithuania experienced the highest decrease from 59.2 % in 2008 to 51.2 % in 2009.

Energy consumption in Lithuania and other EU Member States

Final energy consumption in the EU-27 recorded slight annual deviations between 1999 and 2009 (Eurostat 2011). In the period of ten years (1999-2009), Malta's energy consumption has grown significantly, reaching 41.9% (Fig. 2). Malta has reported the biggest growths of transport and industry sectors. Over the same period, energy consumption in Luxembourg and Cyprus has increased by 22.5% and 22.2% respectively. Lithuania's energy consumption has increased by 8.9 % in the period of ten years. It presented higher indicator if compared with the same ratio of EU-27. Between 1999 and 2009, ten countries of the EU presented decreased energy consumption rates. Sweden and UK have reported the highest decline, reaching 9.9 % and 9.0 % respectively.

In the period of ten years, at sector level of EU-27, the largest growths have been observed in services (14.6 %) and transport (8.2 %), whereas energy consumption by households has showed a moderate increase (1.4 %) and energy consumption by the industrial sector has declined by 15.7 % (Fig.3).

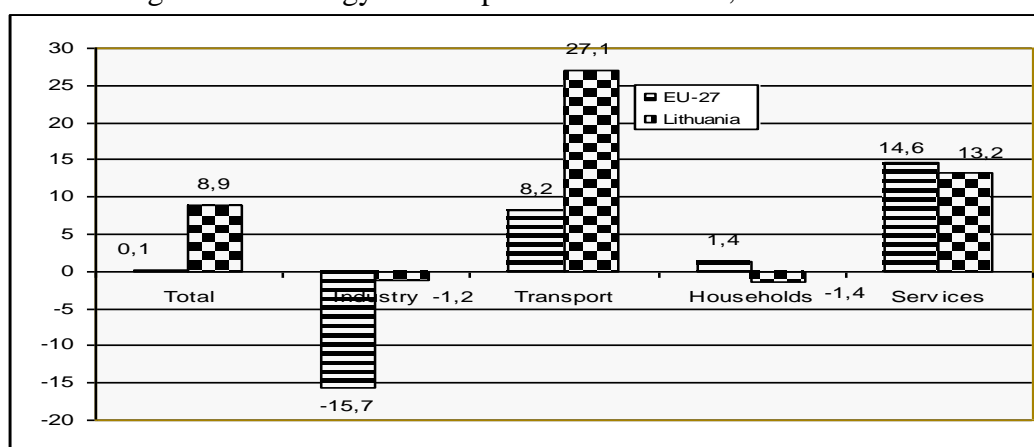
Figure 2. The change of final energy consumption in 1999-2009, %



Source: Eurostat (2011), author's calculations

For the same period, Lithuania has reported the growth of energy consumption in transport by 27.1 % and services by 13.2 %, whereas energy consumption by households and industry has showed a moderate decline by 1.4 % and 1.2 % respectively (Fig. 3).

Figure 3. The change of final energy consumption in 1999-2009, %



Source: Eurostat (2011), author's calculations

In 2009, the transport sector consumed almost a third (33 %) of EU-27 final energy, an increase of 2 percentage points since 1999. Energy consumption of the transport sector made 34 % of Lithuanian total energy; it has increased by 5 percentage points since 1999. In contrast, the share of the industrial sector in EU-27 decreased from 29 % in 1999 to 24 % in 2009. The same ratio in Lithuania declined from 20 % to 19 %. In 2009, energy consumption by households and services of EU-27 accounted for 26 % and 13 % of the total respectively, whereas the same indicators for Lithuania amounted to 31 % and 14 %.

Table 1 presents the tendencies of energy dependency and consumption in EU 27 Member States during the period of 10 years.

Table 1. The relationship between energy dependency and consumption in the EU countries

Year	Energy dependency, %	Energy consumption, Mtoe
1999	45,1	1113
2000	46,7	1120
2001	47,4	1144
2002	47,6	1132
2003	49,0	1172
2004	50,2	1186
2005	52,5	1193
2006	53,7	1993
2007	53,0	1167
2008	54,7	1175
2009	53,9	1114
		Correlation 0,38

Source: Eurostat (2011), author's calculations

The correlation between energy dependency and consumption was determined. It showed positive, but tenuous relationship (correlation coefficient is 0,38), i.e. that means that both indicators have moved to the same direction during the period of 10 years, i.e. both indicators have grown, but statistical relationship between them was insignificant.

Conclusions

Nowadays economic sustainability and country's dependence on imported energy and energy consumption arise as comprehensive approach. The growth of global energy prices, significant country's dependence on imported energy and increase in energy consumption result international competitiveness of the country and pose constraints towards sustainable development. In scientific literature security of energy supply is considered as one of the most important driving forces of economic growth in all economies as sustainable development of a country largely depends on the energy supply and consumption, which has direct linkage with economic activities and environmental securities.

In the period of ten years (1999-2009), EU-27 dependence on imported energy has grown, reaching 53.9% in 2009. It increases by 9 percentage points from 1999. Lithuania's energy consumption has increased by 8.9 % in the same period of time. In 2009, Lithuanian energy dependency was 8.8 percentage points higher than the average of EU-27 Member States. It means that Lithuania's industry depends on the energy supply from other countries and any changes in energy supply market could directly impact on Lithuania's economy development.

Final energy consumption in the EU-27 recorded slight annual deviations in 1999- 2009. Over 10 years, Lithuania's energy consumption has increased by 8.9 %. At sector level of EU-27, the largest growths have been observed in services (14.6 %) and transport (8.2 %), whereas energy consumption by households has showed a moderate increase (1.4 %) and energy consumption by the industrial sector has declined by 15.7 %. Lithuania has reported the growth of energy consumption in transport by 27.1 % and services by 13.2 %, whereas energy consumption by households and industry has showed a moderate decline by 1.4 % and 1.2 % respectively. In 2009, the transport sector consumed almost a third of EU-27 as well as Lithuania's final energy.

The statistical analysis of the EU 27 Member States has showed the positive, but insignificant relationship between two energy indicators- dependence on imported energy and energy consumption. It means that both indicators have moved to the same direction during the period of 10 years, but statistical relationship between them was tenuous. Restructuring of the economies from energy intensive industries towards more technologically advanced products and services might lead to lower energy consumption per unit of output, but it is hardly credible

that it solve energy supply problem, which requires specific decisions and actions plan from Government.

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TELEWORKING – A FLEXIBLE CONCEPTION OF MANAGING THE ENTERPRISE

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Abstract. Teleworking is in the current environment of globalization carried out by using modern information and communication technologies. It is one of flexible forms of work and working time organization, which helps to reconcile work and family life balance. The paper analyzes the benefits of the implementation of this arrangement for the employee, employer and society, but on the other hand, also presents some disadvantages and risks posed by this type of work management. It describes a current state of teleworking, group of jobs that are suitable for this kind of conception, relevant working conditions and the proportion of teleworkers in selected countries.

Keywords: teleworking, telecommuting, employee, employer, work arrangement

JEL classification:

M54 – Labor Management

Introduction

Current time of globalization is characterized by the continuous development of information technologies. Even because of that, in Europe there have been developed more and more new forms of employment and work organization characterized by flexibility towards the needs and interests of all stakeholders, i.e. employers, employees and unemployed persons as well. One of the innovative methods of employment is working at home, teleworking and telecommuting.

Teleworking nowadays rapidly gets into the consciousness of workers in various sectors of business services, it also represent a future in Slovakia. For the new way of home working - teleworking, or "virtual commute" (telecommuting) - our language doesn't have simpler and unambiguous Slovak term. The principle of that is limitation of the need to commute to the company and to perform the work at agreed hours and days of the week. Instead of a fixed time and the local mode, teleworking allows optimize individual performing of work according to the needs of worker in terms of time and space (place of work is most often at home). Limitation of physical presence in the workplace can be partial or total, depending on the type of work and the employer requirements. The teleworking includes following modes of work, for example: work of mobile workers - businessmen, engineers, consultants, other professionals in the field, the work of distributed virtual teams with members in several locations, telecentre work close to home, uniting more workers of different professions, etc.

Currently, the performance of dependent work of employee that is made somewhere else than in the location of his employer, has some specific features that require different legislation than the employment of an employee who performs work at the employer. According to agreement with the employer a place of work can be different from the employer's workplace, this place could be a home or other place of work as well. There are of course jobs that are specifically connected to the employer's workplace, for example: administration in government - because of business hours or hours for the public, work of receptionist and others.

When working at home the essence lies in the fact that the performance is done in the working time, but this working hours can employee establish usually by himself. Consequently, for these forms of employment are specified deviations of the rules of employment in place of work in the employer's workplace, such as provisions of the determined weekly working time and downtimes are not applicable to teleworking, with important personal obstacles to work the

company does not pay wages to employees except of the death of a family member, does not pay employees for overtime, wage surcharge for work on holidays, wage advantage for night work and wage compensation for the difficult job performance. Our research objective is to describe the current situation of flexible working arrangements in labor market and explain pros and cons for all involved participants – employees, employers and society. In our paper we use as the scientific method the systematic review. Systematic review as a form of scientific expression is a summary of recent developments of theory and empirical research in defined area (Hendl, 2008). Based on a critical review of the literature, we described the current state of teleworking. In the first section of the paper we explore the benefits of this working arrangement, in second section we describe the criteria of suitable jobs for teleworking and appropriate working conditions, in conclusion we show some successful examples of company that support this work conception and present the proportion of teleworkers in various countries. The research issue of this article is to answer two questions: 1. Why and where use companies use teleworking as the method of employment? 2. What are the requirements that should be considered if the company would like to apply the teleworking model?

In the first part of the article, we introduce the current state of teleworking in the USA and EU countries, in the second part we describe advantages and disadvantages of this model of work for employer and employee as well, and we mention the work conditions of teleworkers, in the end of the article we provide the recommendations for teleworking business model in the company.

Teleworking in the USA and EU

In Western Europe and USA, this form of employment has begun to emerge in early 80's in the last century. The most popular it is in the USA. It is possible mainly because of good conditions, especially because of early building of the information society in the USA. This trend is influenced by total utilization of ICT, the internet, the spread of computers in households. As Hoffman (2011) says: *“Remote work is no longer an experiment or a last resort solution. It is a business model.”*

In the European Union the countries with the highest proportion of teleworkers in 2011 according to Eurostat (in: Institute of Employment, 2012) are Luxemburg (12,2 %), Denmark (12,1%), Netherlands (11,6%) and France (11,5%).

The remote work is not suitable for each employee. The managers should delegate it only to independent but responsible individuals who are satisfied with this model and are able to cope with its disadvantages. One of the good examples is IT company Cisco in Great Britain and Ireland – more than half of their employees are virtual workers. The effectivity of this system is visible in result that only 5 % of their employees left them voluntarily during the year which is one of the lowest rate in IT sector (Blyth, 2010, p.31). In USA the company Cisco has even 90% of regular telecommuters, company Accenture 81%, Intel 80% and all of these companies are in the 100 Best Companies to Work For of Fortune Magazine (CNN Money, 2012). The experience shows that teleworking is starting to be one of the most valuable benefits for the employee. For example in United States 72% of employees say flexible work arrangements would cause them to choose one job over another (The Edge Report, 2008 in Global Workplace Analytics).

Teleworking – Pros and Cons

Teleworking is an innovative work conception, which allows employees to work productively outside the traditional office or workplace. It is therefore considered to be part of a general trend towards the progressive development of the workplace, as it ranks among the phenomena of the information age, growing up from information - based work, as well as from the rapid advancement of technology. The driving force of development of this form of employment is

technological progress. Today's workforce, equipped with mobile phones, laptops and other technology is ready to perform work anywhere. Technology is not the only reason or incentive of teleworking popularity, but also it is the balance of work and family life. Currently, many employees evaluate their priorities, paying more attention to the choice between work and private life, and increasingly they are also looking for their employment opportunities that allow flexible working hours, health, or financial benefit.

Teleworking is a form of employment, which provides the following benefits:

For the employee:

- reduces time needed to commute to work
- reduces stress situations (traveling at rush hour, conflicts in a team)
- reduces costs related to job
- provides better and more productive working environment
- increases the possibility of better organization of work and private responsibilities as well
- improves quality of life, health of employee
- provides the opportunity to work for disadvantaged (disabled) people.

Most employees who have experience with teleworking, perceive improvement of quality of their lives. Behind this view are lot of factors such as higher job satisfaction, less stress, greater flexibility in organizing work-time or opportunity to spend more time with family.

For the employer:

- offers the opportunity to acquire and retain skilled workers
- reduces absenteeism, sick leave
- reduce overheads in the company (for energy, equipment)
- saves office space
- increases productivity and employee satisfaction, loyalty to the organization.

Teleworking is useful for example for foreign companies to start their activities in Slovakia, it is preferable to create well equipped homeoffice for their representative than to rent the entire building along with a full service personnel, or for distribution companies as well. Although teleworking is not suitable for all categories of employees, many employers would allow their employees to work remotely at least part - timely. In Austria, this type of work could also be used by some local officials or government - part of the agenda they process at home and in the office they sit only in the public hours.

It is not always the intention of the organization itself to build employment policy that supports telecommuting. If the employee feels that his case is correct or even the only appropriate way, then he must persuade the employer about the following matters:

- how much money will be saved for employees transferred to work in remote mode compared to office work
- there can be possibility to try out a new style of work during a probationary period
- there is no need to lose contact with other employees, as the employee can have effective phone and electronic communication with a focus on specific tasks without loss of time and money and according to personal needs regular communication (the presence in team meetings etc.) or at least by video or voice conferencing

For employee it is appropriate to apply for the following requirements:

- reimburse the operating costs for telephone and other connections (ISDN, cable TV with the possibility of data transmission and internet access) or to pay the installation of a telephone connection (cheaper in the name of the owner households than of the employer), the best use of call-back for communication with corporate network and the internet,
- reimburse the additional costs associated with work - own office equipment, hardware and small articles of consumption clearly applied only to work for the employer, an alternative way is to use only the company's computer equipment, both because it is

covered by corporate support (repair, reinstallation, upgrading software, etc.), and secondly, the company will gradually depreciate it,

- distinguish between own costs, which would exist in any case, and additional working costs at home, and on the basis of this division apply requirements to the employer - of course, the goal is win-win situation for both sides within a reasonable compromise of terms of reimbursement of specific costs.

For the whole society:

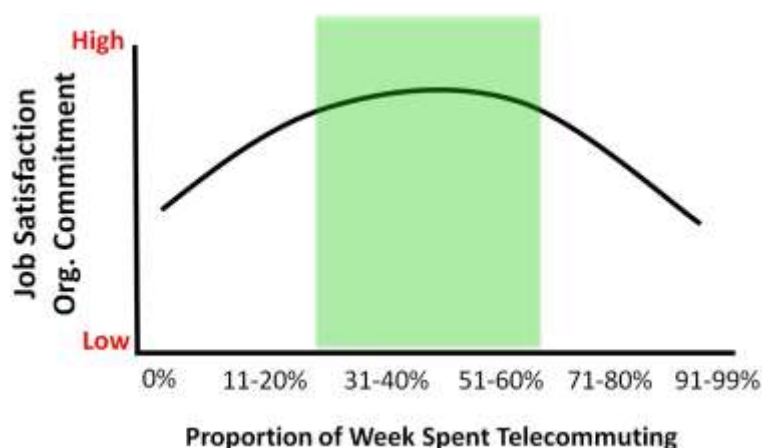
- reduces amount of traffic during the hours of increased traffic, it may also help reduce the costs of roads and their maintenance
- reduces air pollution
- increases employment and labor flexibility
- contributes to reducing of social exclusion
- improves working engagement of disabled people
- contributes to development of marginalized regions.

For some organizations and individuals teleworking can represent a dramatic shift in how they perceive the workplace and the job itself. Although in our country teleworking is not much spread, in Western Europe this way of employment is already extended. Most popular is teleworking in Scandinavia, but it is used increasingly in the UK and even The Ireland, where people prefer traditional forms of employment recently. Because this type of work brings for certain type of people some cons, not all Europeans inclined to teleworking, this form of employment is refused especially because of following:

- **limiting possibility of direct communication** with colleagues at work – isolation of employee is setting the stage for better concentration and thus higher productivity, but some people miss the interaction with colleagues in the office
- **work exceeding the limit** can cause stress - shift to teleworking opens access to work 24 hours a day, teleworkers can be lured to work more hours, than obligatory working hours
- **teleworker must determine the rules in relation to work** - teleworking provides more flexibility in program of personal issues, work from home can be carried out only under the condition that the employee will not be disturbed at work by family members,
- **distrust of superiors** - the management believe that teleworking is a good idea, but still doubt about whether working from home is the best for their company, many of them are suspicious of employees, of their ability to organize working hours outside the traditional workplace.

Advocates of teleworking, however, highlight many benefits of working from home - environmental, social and economic. They argue that the environment and, finally, the traffic situation, especially in big cities would be helpful if all the people don't go to work every day. Although the work from home for an employer is generally assessed positively, the results of research show that it works to the mutual satisfaction, if an employee spends some day of the week in the company to have a feeling that remains in the center of company life, does not feel lonely when working alone, has no sense of exclusion from the team.

Figure 1: Job satisfaction vs.Telecommuting proportion



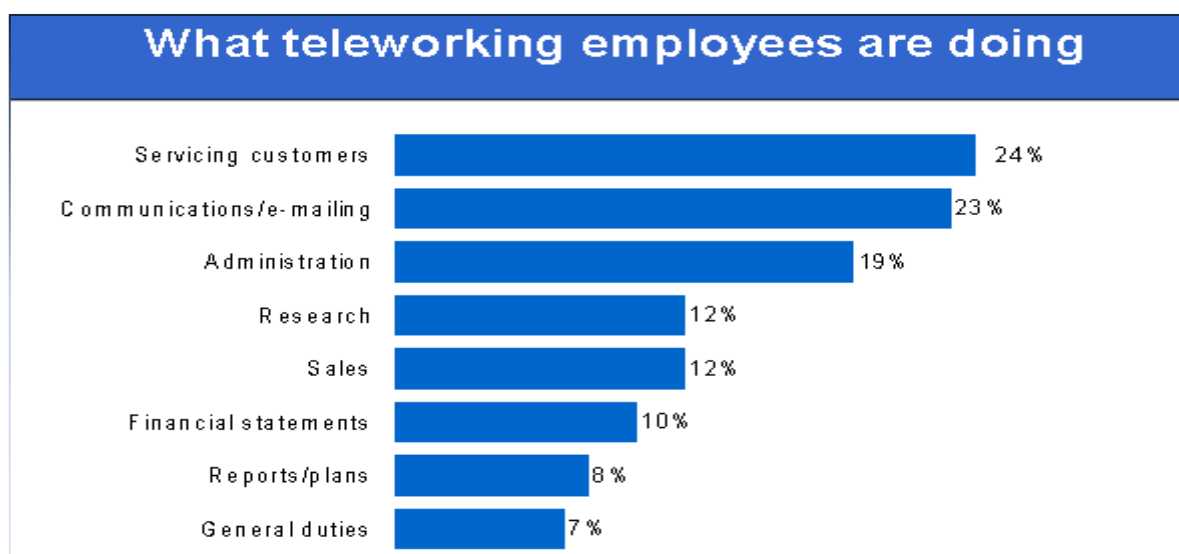
Source: The Virtual Leader (2011)

This is the reason why working from home is less frequently done by men, or it is done usually later in lifetime. Women generally use their maternity leave to transition to teleworking, after maternity leave they often struggle to adapt again to work and teleworking can help them shorten the time spent away from work, or allow them to work at least part-timely and not lose working habits.

An employee may feel lonely and socially isolated due to the absence of face-to-face contact and less frequent opportunities for personal and professional relationship building. The literature suggests that remote workers' feelings of isolation are influenced by their managers as well as their own competencies (e.g. autonomy). Managers should encourage their virtual employee to join company activities which foster relationships with the colleagues (Mulki, Bardhi, Lassk & Nanavaty-Dahl, 2009 in Busch, Nash, Bell, 2011). Research also discusses the role of technology and how it can provide opportunities for greater social and professional exchanges between teleworkers and their colleagues and managers. Common forms of communication technology (e.g. e-mail) do not provide a high level of information richness and can inhibit social exchange (Marshall, Michaels, Mulki, 2007 in Busch, Nash, Bell, 2011).

Working from home can greatly help disabled people or parents who care for young children. Teleworking is also ideal for professionals who work independently on tasks, such as programmers, translators, accountants and entrepreneurs engaged in the visual arts. Psychologists, however, warn that working at home is psychically demanding, it requires great discipline and bears significant risks, lack of boundary between work and private life can often result in some type of temperament to stress or even burn-out. The main obstacle to the development of teleworking is currently probably its image. These positions should have the same selection process as other positions in the company, so the employees who remain in the company don't feel envy towards those who can work from home. "Company" employees must also learn that those who work at home, are not always easy to be reached or they are not still available. The economic benefit of teleworking is not easy to measure because a number of factors are the reasons for increase in productivity. The benefits of teleworking, however, can be measured in cases where the results are electronically monitored. Possibility of working remotely brings not only higher employee productivity and savings on travel, but the staff also offer great flexibility, which significantly contributes to employee satisfaction, thereby increasing their work effort and quality of work. If we talk about the use of teleworking in various jobs, in Australia, for example, the statistics show the situation in 2005:

Figure 2: Teleworker Jobs in Australia



Source: Sensis Business Index (2008)

For new style of work to create awareness and higher levels of staff engagement, all of them should be informed about the successful and beneficial impacts on the results of the company, in other words on increasing productivity and satisfaction of individual workers. The company should not force anyone to take this kind of work for their own if they don't want to. Psychological aspects of "lonely" job, which are in addition to concern about job retention and career growth the main barriers to implementation of working at home, have the greatest impact on the strength extroverts, but meets the requirements of introverts. Employer's obligation to create actions towards the elimination of workers isolation should be covered for home work as well. The employer is required to create the working conditions for employees engaged in working at home or teleworking, to ensure they are not disadvantaged in comparison with comparable employees in the workplace of the employer. Home office staff performing telework can work in home office - e.g. in separate lounge, study or just part of the room - a work area, tailored to work, telecentres - teleworkers prefer such venues because of the ability to video conferencing, faxing and because it eliminates problems with software and hardware or in virtual office – the proportion of teleworkers who are becoming mobile workforce by creating such an office is increasing.

Conclusions

To answer our first research question about using of teleworking as the method of employment, based on results of described companies, we can see that teleworking is not a solution for everyone, but in most cases it can substantially reduce costs, accelerate product development and increase sales. If a business plan explains the benefits, then there is no problem to get top management agreement to remote work. To answer our second research question about the criteria of application of teleworking in the company, we have to say that implementation of the new organization of work represents a significant change for each company, and therefore teleworking is not possible to be started immediately. It should be started with a small (pilot) number of employees and the results of the pilot operation will prove the effectivity and then the amount of staff can be increased. A suitable job for telecommuting application must meet the following criteria:

- work must be "portable" (everything needed for the work can be taken home, or can be available by the means of communication),
- work does not require too much personal contact with colleagues, partners or customers,
- work has well defined beginning and end (outputs), so everyone knows what is the expected outcome (report, financial balance sheet, website, graphics, etc.).

Application of teleworking is possible only in an environment where management is aware of the possible beneficial effects of a new working style, has full confidence in the disciplined and well organized staff. Company policy with regard to teleworking must include clearly defined rules for evaluation of employees (with regard to the objective of reducing cost and higher performance) and must be in accordance with a collective agreement and general rules and laws (Labor Code, social security etc.). Teleworker must have at home the necessary technical equipment. In today's terms, almost universally, regardless of profession, is means a computer, printer, phone and especially the ability to communicate electronically in the internet and have access to the corporate LAN (data, information, mailbox, etc.). The company must have a clear strategy in solving its information infrastructure and information system, and of course not only with regard to their needs, but also the needs of its customers, suppliers and other partners.

The traffic jams in big cities, real estate costs of the companies and ecological issues, all of these make the remote work very effective alternative for employers and employees in the future.

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STOCHASTICALLY INFORMATIVE EXPERTISE AS NATURAL STEP IN EXPERT SYSTEMS NET DEVELOPMENT

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Abstract. At this paper is analyzed the problem of expert systems net development and stochastically informative expertise systems, as a very important component of the net, preparing. Specifically, the work considers the case, when for the feature possibilities expertise is used the distribution possibilities of examined feature probability. The necessity of these methods is reasoned that calculating index, choosing of single-or ranged estimates from a variety of assumptions, later attempt to restore the environment, which would have allowed to see how a distribution possibilities of examined feature probability. The paper presents the concept of the evaluation and the practical scheme realization rating, while analyzing the situation where the expert way of measuring revenues from company newly developed product sales opportunities in the three markets, coupled with the company the best distribution of sales in selected markets.

Keywords: Expert systems net, stochastically informative expertise, distribution possibilities of examined feature probability, the optimal resource allocation under uncertainty.

JEL classification:

P51 - Comparative Analysis of Economic Systems

O15 - Human Resources; Human Development; Income Distribution; Migration

Introduction

The overall objective of this paper is to form a vision of how to develop expert systems net. Expert system is necessary to create new knowledge generation or decision-making principles like existing in expert mind vision, based on the well-developed decision-making systems, knowledge bases and other sources, which are designed to accumulate target information to selected problems.

An experts evaluations are used to solve analytical problems (Keilman, 2002) for evaluation and decision making (Kujarczyk, 1993), forecasting various events. Scientists are developing a variety of models (Kangas, 2001; Kalogirou, 2002), expertise methods (McDaniel, 2002), and examines their performance (St-Pierre, 2006) .

Avraamides(2002) examines how to improve future implementations from experts in a variety of disciplines, including military pilots, cognitive psychologists, an HCI specialist, a logistic specialist, and a software designer. Financial market behavior research (Rutkauskas, 2008a; 2008b; 2011), expert systems for the financial planning (Humpert, 2007; Elnathan,2009), advances in artificial intelligence development and application of expert systems (Malagoli, 2007; Maknickienė, 2011; 2012) in areas influenced by the evolution and success of financial prediction. Stochastic prediction using expert systems is dealt with several authors (Liao, 2010; Billari, 2011, 2012) in order to get reliable information and efficiency in expert evaluation (Li, 2012).

The specific objective of this paper is to offer one opportunity, how using distribution possibilities of examined feature probability should be considered complex multiattributive systems. This option is caused by several factors. Today's development both micro and macro process level is characterized by an increasing number of situations in which objects or processes of condition and the dynamics of change can't explain the observed changes in the environment or existing knowledge and disposable analytical method. Visually speaking, the development process becomes dynamic zero-trace woke up, this is without statistical information, which is

based on the specific knowledge development, assessments and management actions (the expert systems global net development).

1. Stochastically informative expert systems nurturance

Stochastic expert system as a way to generate new knowledge and new decision criteria, when traditional fundamental methods and their environment are not ready yet to do so, need to create not only an excellent expert opinions processing, but also to dispose of ranking stochastic variables, a stochastic utility functions of formation, stochastic optimization and rational use of resources under uncertainty impeccable systems.

This expressed circumstances must directly be apply to expert groups that create and exploit expert systems and methods to solve more diverse problems. It is very important to use expert system or method to be adequate to the problem occurring. There we could say that drugs should be used for this disease, which is going to treat. Universal systems to more advance and diverse problems as a whole can hardly be.

1.1. The main stochastic informative evaluation

Formally, stochastically informative evaluation situation principles and sequence can be determined as follows:

- the standard for expert assessment of the situation is the case where we have k objects that are valued by the l different features and evaluation of m participate experts;
- expert evaluation is expressed by the chosen distribution possibilities of examined feature probability;
- if the attribute values are measured the same dimension containing units, the ability to attribute remains the same dimension. If different characteristics are used for measuring different dimensions, then usually chosen arbitrary dimensionless unit - score (in french. bulle - the ball, the ball). Of course, there is then the individual features points unify or just the course (latin - corso) problem fixing;
- evaluation system must accept not only distribution possibilities of examined feature probability (normal distribution, lognormal distribution), but also empirical distributions, if they meet the regulation of the distribution of attribute.

Here are displayed the divide between the potential distributions of assessment and feasibility assessment of a deterministic (unambiguous) values or intervals. True, the distributions of evaluation seems to require much more expert's effort and responsibility, but we have mentioned earlier in the text that there is information operations with stochastic terms methodology, which allows you to generate normal distributions under an expert thinking, average and variance, or other distribution form and parameters indicators. Finally, most experts formulated their own expert evaluation in the manner specified clearly sees and understands their further evaluation path for a while and realized the need for evaluation is the only way to begin to provide pleasure of cognitive. Valuable object k for each feature l have m (number of experts) distributions to evaluate this feature by each expert. (see 1 table)

Table 1. The k object of l attributes describing the evaluation of experts, who assess distributions - S_{ij}^k

Experts	1	2	3	...	m	
Attitudes						
1	S_{11}^k	S_{12}^k	S_{13}^k		\square	Σ
...						
l	S_{l1}	S_{l2}	S_{l3}		\square	Σ
						Π

Source: created by author (2012)

The past column on the right of the table have all the expert distributions weighted arithmetic average. Weights described what the weight of the individual experts to provide a general evaluation. At the same time draw attention to the fact that the declared number of experts on almost always turns into \bar{m} ($m \leq \bar{m}$), since not all expert evaluation is initiate to general system.

Viewed in this context, particular attention is necessary to notice to the individual expert opinions combination with each other, as well as the individual distributions (expert opinions) for compatibility with each other already agreed on a weighted sum of distributions (accumulated combined set of expert opinions).

Incompatibility of distributions is carefully examined, and the main features of incompatibility are:

- Signs for the possibility of a small intersection of sets;
- Very large distributions parameters (average, mode, median, variance) summarized differences;
- Very large relative distributions summarized index (a coefficient of variation, which is incompatible settings) differences;
- Officially in probability theory are used the compatibility between the two distributions screening criteria: the criteria, Kolmogorov-Smirnov test and other criteria.

There is always a group of experts whose evaluation is combined with each other to save critical weight of coordinated evaluation. Of course, there is expert evaluation that are inconsistent with the accumulative coordinated evaluation weight and some values are not included to general evaluation.

Before finding the final object state evaluation - II, finding the individual features values integrate value, which is usually functionally articulated in question features values. Then there is no problem with the assistance of experts to generate estimates of the connection into integral value. However, there are often cases when determining the features of integration results using weighted geometrical features value distribution possibilities of examined feature possibility.

The resulting integral object in every estimate is a stochastic size, which accumulates inside information disclosed by the experts who are ready for this activity, wisdom. In turn, the distribution possibilities of examined feature probability - that's the future for multi-valued object, or portrait, which reveals all the features values of options: the expected (average) and most likely (mode) and the minimum and maximum values, and the asymmetry of risk indicators, which in practice is difficult to assess the absence of an initial claim expertise information represent as a distribution possibilities of examined feature probability.

1.2 The requirements for the formation of an expert to generate the information stochastically informative examination

Growing number of situations where the answers to questions not only be, but also what is or what has been prepared by experts. Maybe that's why so much attention is for the expert to expert conceptual content refinements and its prototype concretize seemingly have finally settled cognition: "experience - knowledge - truth" chain.

I have to agree with the idea that an expert differs from the specialist, the specialist must be able to solve the problem and the expert evaluation needs to know. In reality there is more on expert evaluations of methods, and expert knowledge to the solution creates or selects the method of solution. This is only the first iteration, when the expert becomes a specialist and together again and revert to an expert. Apparently, this process must be infinite. In addition, you can list the entire set of features which are the expert characteristic: the area has specific knowledge in education is necessary for experts in the field, has the necessary qualifications in the field of sufficient competence in the practical field, are ambitious and hopes to great achievements in the work; to assess the importance of work-related situations, can improve the

quality of the work, is a charismatic, may distinguish the essential work situations, work is intuitive, can decide what is most important in his work, knows who he is and what can be in your field, is independent; is self-confident, are sociable and friendly.

And then it becomes unclear what should be a peer review system as a tool, which performs at least one iteration process described above. Apparently it is best to use dimensional definition that an expert is someone who has an advantage over others when actuality is the uncertainty limits.

2. Examination of the situation.

At practical situation have been analyzed a new company that seeks with its unique product to penetrate into three new markets. It is understood that a lot of experience and even more statistical data. There are only a desire to allocate their efforts to the market to expect the best of luck in general. We understand that this is a difficult marketing problem, which require use of expert evaluations.

And the first of this complex problem solution phase, apparently, is a value as to the formation of the revenue from sales in the market. So company should be able to complete based on expert evaluation of the potential amount of sales in the market, as well as on the sales prices. It's not very important as the interaction (correlation) between the sales price and sales amount. The dependency knowledge can provide constructive information to optimize the revenue from sales.

The second phase should be disclosed to the possibility of how best to distribute the company's sales between markets, a firm in order to have the greatest effect on the sales. Suppose that each market gives the company an opportunity to realize their sales in the market in any part of the expert assessment of sales. Then it should be a concept of what it is the best option when it described the possibility of size (effect) and reliability (guarantee) rates together. It has already been mentioned that this problem is best suited for analysis of survival (survival) function, which is directly attributed to each possible x and reliability or assurance $P\{\xi > x\} = P_x$. Features the size and reliability of the product options

$$x \times P\{\xi > x\} \quad (1)$$

often used as an integrated access efficiency and reliability of the measure.

Best search sales distribution among the three markets - a stochastic programming problem in three dimensions: the inability to value the coordinate of the reliability values of the coordinate and the riskiness of coordinates. This utility function is chosen for the performance reliability $x1 p(x)$ and the risk function r

$$U = x * p(x) / r \quad (2)$$

2.1 Detailed Expert Review Presentation

The final stage of the peer review was seven experts, although at an early stage was eleven experts, which proposed the individual evaluation to find company's incomes and sales opportunities at each of three markets. However, four experts in the initial evaluation proved to be incompatible with the core estimates (interoperable with the emerging group of values).

In the earlier text have been mentioned that the select expert values of probability distributions forms, special attention is to the distributions of the compatibility check. In this case study was used and Kolmogorov - Smirnov tests and checking the compatibility between distributions and the distribution of each compatibility with the emerging mutually compatible core distribution.

Formed seven teams of experts (core) estimates are given in the table 2. The table in the company is one of the three options adequate for the markets. The table is a total of seven expert evaluation, the income from the sales opportunities in terms of three features:

1. Marketable products market volume potential;
2. Marketable commodity price options;
3. The correlation between the number of sales and price options.

We repeat that these possibilities are described of the distribution possibilities of examined feature probability, which are presented in tables experts and valued features numbers at the intersection.

The symbols - $N(a, \delta)$, $LN(a, \delta)$, $LP(a, \delta)$, $GB(a, \delta)$ - normal distribution hypotheses, lognormal, Laplace, Gumbel type, and a number in parentheses, and mean δ used for distribution options mean and standard deviation, respectively.

On the right column of table 3-5 characters in Σ is marked by the row estimates a simple arithmetic average. This would mean that all the experts estimates give equal weight. There is no doubt that in general the weights are different. Symbol Π is expressed by the fact that take into account all items of income and sales (E) factors - sales opportunities (S), sales price expectations (P) and interaction (correlation) between sales volume and sales prices of options (c) - together. This fact can be formally written as a system:

$$\left\{ \begin{array}{l} E = S \times P \\ \text{Correl}(S, P) = C \end{array} \right. \text{where } E, S, P \text{ and } C \text{ are the indicators of probability distributions.}$$

Table 2. Company revenues from sales opportunities in the first market indicators illustrating the values of probability distributions.

Experts	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Σ
Attitudes								
1 st	$N(950;27)$	$N(890;26.1)$	$N(777;30.3)$	$N(951;34.6)$	$N(897;31)$	$N(875;35)$	$N(999;35)$	Π
2 nd	$N(48; 1.4)$	$N(49;1.84)$	$N(47;1.78)$	$N(44;1.4)$	$N(51;1.82)$	$N(50;1.84)$	$N(42;1.56)$	Π
3 rd	$N(-0.5;0.1)$	$N(-0.4;0.12)$	$N(0.6;0.24)$	$N(-0.3;0.1)$	$N(0.7;0.08)$	$N(0.5;0.2)$	$N(0.4;0.16)$	Π
								\square

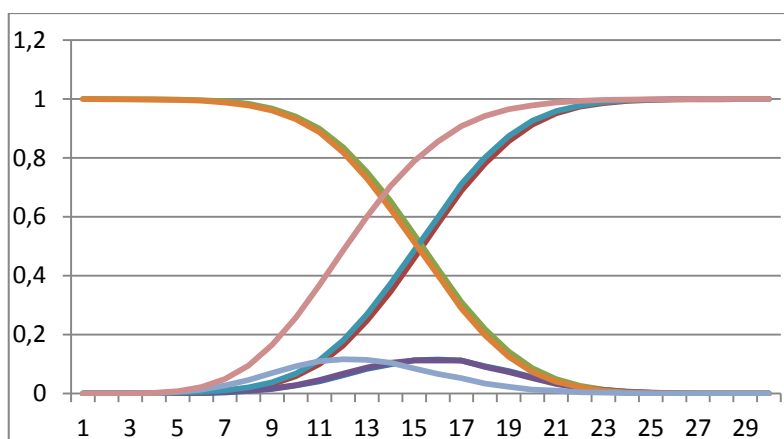
Source: created by author (2012)

3. More detailed analysis of qualitative evaluation

It is understood that the choice of the expert evaluation purpose - to assess the company's revenue and sales opportunities in the three markets and the company choose the most favorable proportions of sales in those markets - is hard enough. Few situations suggested peer review system makes it possible to obtain estimates of constructive we can immediately check the specific situations, or to compare with other methods of obtaining peer evaluations.

Let's try, using graphical analysis to explore the possibilities to obtain solutions of graphics. Figure 1 has illustrated sales in the three markets and information is provided through all three distribution functions which define unambiguously: density, distribution and survival functions. The following pages will be used in most cases, the survival function, as most adequately providing us with information about the distribution as a whole. Often argument value is on the abscissa in the order number: 1, 2, 3...31, 32.

Figure 1: Sales in the three markets, together with the density, distribution and survival functions



Source: created by author (2012)

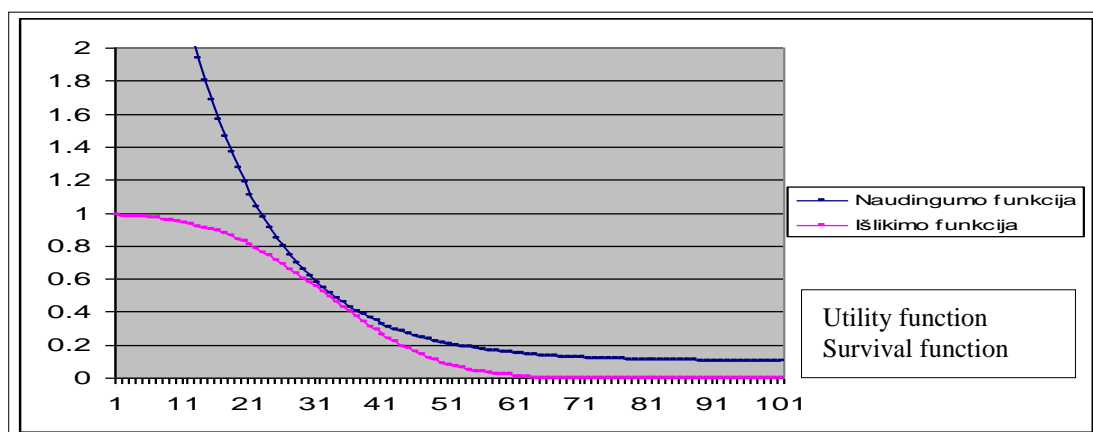
Apparently, special attention should be noticed to the optimal distribution of sales among the three markets expert evaluation problem. Experts estimates provides it. Usually the sales volume of the market, or a market share of vendors 'cockpit'. However, in this case the company all of its products to sell in any one of the markets. Therefore, it is free to allocate their sales in all parts of each market. In this case, the help of the revenue from sales of probability distributions and accepting that any ratio by dividing it between markets can be displayed. Perception must be remembered that any sales structure $s_1 + s_2 + s_3 = I$ (here s_i - sales of the i -th market) the formation of the sales probability distribution. Sales revenue is a random variable with its own distribution format and parameters. Associated this with the portfolio, and set out all the sales opportunities according to their performance (revenue volume) of the income scale reliability (guarantee) and the risk level, which defines the mentioned structure, is formed by the sales of portfolio risk.

Now having income of the sales opportunities for three-dimensional surfaces, and selecting three-dimensional utility functions

$$U_r = x * P_x / r \text{ (where } r - \text{risk level)} \quad (3)$$

family. Be able to find the optimum in (3) the opportunity. This point brings oodles of potential surface and spatial utility functions, which is elevated relative to one another, intersections. In our case, the income from the sales opportunity, allowing for income $x = 46.083$, $r = 2.061$ belonging to the risk level and have $P_x = 0.46$ reliability. This option is formed, when we choose $S_1 = 0.185$, $S_2 = 0.675$, $S_3 = 0.14$ of the sales structure: $S_1 + S_2 + S_3 = 1$. (See figure 2)

Figure 2. A concrete possibility and usefulness of the surface intersection point.



Source: created by author (2012)

Conclusions

1. Uncertainty on reality testing is not decreasing, despite the human experience, knowledge, information systems growth. In order to have an effective uncertainty and risk management strategies is necessary, first of all, to understand the extent of the current reality. Becoming a determination and how much uncertainty remains.

2. Article provided by offering expert evaluation systems based on the requirement that all expert assessments - both on the parameters values and probabilities of events and processes in the trajectory from the start to be formulated probability distributions of aid. This would not only provide for complete information about the objects in question, but also to become experts able to generate information across a wide range of uncertainty to the degree of preparation facility.

3. Risk management problem perhaps the most urgent sustainable development of organization and management, so important for humanity, today's problem. Admittedly, this problem is quite big though maybe not quite adequate experience. These econometric statistical methods for assessing the parameters or processes trajectory values, assumptions which determine the proportion of reality becoming a deterministic factors influence what remains uncertainty.

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SMALL BUSINESS' SUSTAINABLE STRATEGY

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Abstract. In this paper an approach for analysing the sustainability of competitive advantage for small businesses that emphasizes competitive factors are developed. We investigate the added-value approach to business strategy by introducing strategy development evolution of how companies create value for growth. This allows us to identify important factors for performance improvements, using resource for improving strategy level and efficiency. Competition and strategy are analysed as a new system to be integrated in order to implement crucial issues needed for strategic management to help small and medium organization to create and sustain competitive advantages. It has to include long-term objectives, which are responding to client requirements comparing to competitors, ability to innovate products, quality, and efficiency. Traditional cost leadership strategies should be analysed as minor strategy element from strategic management for achieving sustainable development. Using this approach, we focus on value creating as primary achievement for traditional development in the strategy literature on competition and strategy development.

Keywords: strategic planning, strategic theory of the company, small business, industry development

JEL classification: E01, E23, E64, O31, O33, O38

Introduction

As well as a long-term perspective, the concept of competitiveness and sustainable development entered in the Latvian system of planning under the influence of international commitments and planning practices. The concept of sustainable development in the Latvian public space appeared only around 1995 and its increased use is observed only since 2000. Sustainable development is most often seen declarative as a question of environment and natural resources quality; as a problem of a single ministry, not reflecting in planning policies of industry.

Nowadays currently developing countries have pointed manufacturing emphasis from the product that helps to increase competition level of the brand and technology, developing an industry standard, to production process mostly decreasing cost level. The explanation suggested for above mentioned fact is that developing countries may be expected to play a role of residual or alternate suppliers of growth products on world markets due to their late entry into the world markets for growth products. It is difficult for developing countries to spend on research and on product development and make loyalty of consumers to products manufactured, technology and innovations improves the standards and manufacturing process, but requires a lot of investment (R&D), which is why, is easier for companies in developing countries to focus on decreasing the cost level. This takes into account both demand factors, such as consumers preferences and the business cycle, and supply factors, such as the lack of human skills in developing countries. Because developing countries are likely to be residual suppliers of growth products, they probably absorb a relatively large share of demand fluctuations during the business cycle, being able to expand their exports of these products during the upcoming phase of the business cycle, when industries are working close to capacity in industrialized countries, but experiencing a decline in sales (or in the growth rate of sales) during the downturn phase.

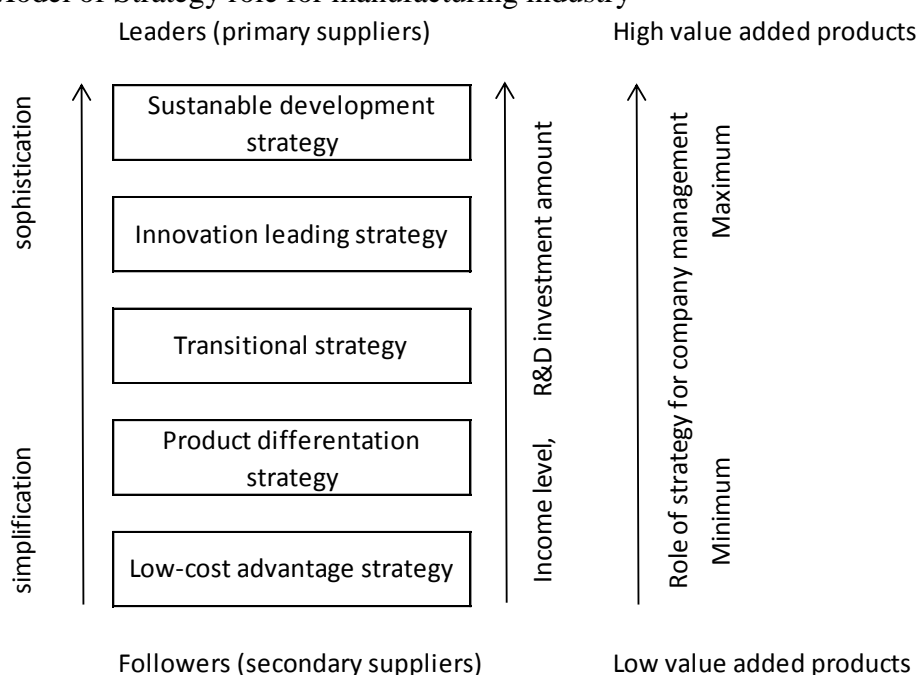
Nevertheless to respond to competition and develop in long term perspective, organizations should create sustainable competitive advantages in order to maintain current customers and acquire more customers. Strategic management is the best instrument to compete rivals at short and long runs, but too expensive for companies in developing countries.

The object of this paper is small business successful development strategy. The aim of this paper is to analyse the crucial aspects of strategy that influence the financial output of the companies. Our main conclusion is that cost management is crucial strategy that could be upgraded with some tools from strategic management. This conclusion is done based from the results of the existing literature that shows that cost strategy is main competitive advantage used by small companies from developing countries. The broad number of studies indicate that more innovative companies and companies which have sufficient level of strategic management seem to be more competitive, nonetheless that the empirical evidence is not totally conclusive it seems that both in developed and in developing countries innovative activities do influence the decent output probability, and it is expected that company needs a minimum level of strategic thinking and innovation level in order to be competitive on the world market. So the less innovative and strategic level company has the lower competitive level probability.

Firstly we analyse a traditional cost management as part of popular cost strategy amongst small companies from developing countries. Presenting cost management as a set of certain tools, then compare existing literature, followed by an explanation of influence these tools have on financial result.

After overviewing series of literature in previous works authors presented strategy model which explains the role of different strategies for manufacturing industry according to income level (Shatreovich, 2012) (Figure 1). It is also important to understand the performance and profit output implementing these strategies.

Figure 1. Model of Strategy role for manufacturing industry



A new era in strategic management was generated by the idea of competitive advantages based on core competencies and resources. Over time, the increasing attention given to intangible and invisible assets has emphasized the role of new sources of competitive advantages. The growing role technological advantage represented in strategic management, as technological cycles become shorter and innovation becomes critical for survival, contributions in strategic management require a renewed integration of their perspectives and a closer connection with the business world.

But sustainability issues are too complex and interconnected to be managed by small and medium companies. Usually only large companies could afford such complex and sophisticated strategy system.

Author and some researchers (Hilton et al. (2000) believe that traditional cost systems used by companies in developing countries will be switched by strategic cost management. Traditional cost systems focus on measuring and controlling product costs. Therefore, they are not producing information needed at current business environment.

As a result, new cost management concept emerges. This system integrates some crucial part from strategic management as aims to produce a continuous cycle of information about activities at both short run and long run to add value to customers and reduce costs [Hamilton (2004), Horngren et al (2003), Nicolaou (2003)].

Despite cost management is a common concept in literature, this concept is not well defined in acceptable way [Horngren et al. (2003), Agrawal et al. (1998)]. Some researchers looked at long-term dimension of cost management. Within that, strategic cost management has special attention as a system that not only traditional cost systems but also generates necessary information to support strategic management and sustain competitive advantage at the long run [Blocher et al. (1999), Shank (1989)]. Other researchers [Hilton et al. (2000), Dailey (1998)] ignore dividing cost management into two constructs according to time dimension. Therefore, cost management concept used to maximize profit and sustain competitive advantage at short run and long run as well.

Usually cost management is considered as a system of improvement. This system aims to permit organizations to seek what is needed to cement its ties with customers to attain their satisfaction and reduce costs at the same time via specific tools to maximize profit and sustain competitive advantage by using long-term strategies (Horngren et al., 2003; Nicolaou, 2003; Barfield et al., 2001; Hilton et al., 2000).

In the 1980s Porter's models helped companies to analyse the industry and gave vectors to their strategies, companies now need new models to create and manage knowledge and learning from market. Companies now compete in a very complex and dynamic environment, where knowledge and information is increasingly becoming the most valuable resource. The impact of technology, innovation and globalization increasingly defines that high capability of companies to transform, create knowledge and to be innovate is crucial to compete successfully.

Sustainable strategy

For Latvia and European Union research for small and medium enterprises (SME) are extremely important. SME's contribution to the EU's prime economic objectives is acknowledged and well documented in both the Lisbon strategy for economic growth and more and better jobs and its successor Europe 2020 strategy. In 2010, there were almost 20.8 million SMEs in the EU of which the biggest share – 19.2 million (or 92.1 percent of all EU business) – were micro-firms with less than ten employees, moreover in Latvia it is 99,5% in 2009. As in previous years, the share of large businesses, i.e. non SMEs, remains marginal in terms of the number of enterprises (43,000 or 0.2 percent of the total). Altogether these SMEs provided more than two-thirds (87.5 million) of all employment opportunities in the private sector in EU-27. Also, 58.4 percent of the total Gross-value Added (GVA) produced by private businesses in the EU in 2010 was accounted for by SMEs.

One step further, the Small Business Act for Europe (SBA) establishes a comprehensive SME policy framework for the EU and its Member States. In the review of the Small Business Act (SBA) in February 2011 the Commission and the Member States have acknowledged that strong governance is a key to a successful implementation of the SBA.

Comprehensive share of SME brings us eventually to controversial question that has been debated about the differences between large scale and small business companies for some time, arguing that large scale companies are growth-oriented, strategically-innovative firms, while small business companies are neither growth oriented nor strategically innovative.

The strategic management literature has emphasized that achieving competitive advantage in today's dynamic and intensely competitive environment hinges on formulating and

implementing a coherent business or competitive strategy (henceforth business strategy and competitive strategy are used interchangeably throughout the paper) (Hoskisson et al., 2000; Porter, 1980, 1985). New flagship initiative of the “Europe 2020 strategy” sets out an aims to boost growth and jobs by maintaining and supporting a strong, diversified and competitive industrial base in Europe offering well-paid jobs while becoming more resource efficient. New strategy is describing sustainable development of the Europe, and, of course, role of SME is very important due to its share. Europe 2020 strategy is saying “there will be no sustainability without competitiveness, and there will be no long-lasting competitiveness without sustainability.”

All incentives bring us to the fact that SME companies have lack of resources to raise strategy level due to their small size. Theoretical studies often treat both types of businesses (SME and large companies) equally in terms of construct and theory, which poses clear problems given their differences. As a result, in fact we face different model of company survival and growth and our understanding of how theoretical perspectives in strategic management apply to small business companies.

A new era in strategic management is going to be generated for SME due to the growing role of technological advantage, as well as technological cycles become shorter and innovation becomes critical for survival, contributions in strategic management require a renewed integration of their perspectives and a closer connection with the reality.

Sustainability issues are too complex and interconnected to be managed by small and medium companies. Usually only large companies could afford such complex and sophisticated strategy system. However, there are a number of other factors that limit small firm growth. This is because small companies have scale, scope, and learning liabilities and disadvantages relative to large firms (Stinchcombe, 1965; Welsh & White, 1981). Small companies used to produce a small volume (scale) of a few products (scope) and typically have a limited capacity for acquiring knowledge (learning) (Nooteboom, 1993).

Small companies differ from large firms in that they are often ‘resource poor’ (Welsh & White, 1981) and therefore require different approaches to strategy, especially in the early stage of a companies’ existence when the two most important issues are survival and growth (Aldrich & Auster, 1986). Smaller and younger companies both have limited resources that are also less valuable than those possessed by larger and older firms. Smaller and younger companies pay lower wages and offer lower returns to their employees (Oosterbeek and Van Praag, 1995; Van Praag & Versloot, 2007), they employ individuals with lower levels of human capital (Troske, 1999), and realize lower levels of capital-skill complementarity (Troske, 1999) than larger and older firms do. This relative scarcity of resources in small and young companies makes them more vulnerable to external threats and internal missteps than larger and older firms (Moore, 2001).

Because of that developing countries are likely to be residual suppliers of growth products, they probably absorb a relatively large share of demand fluctuations during the business cycle, being able to expand their exports of these products during the upcoming phase of the business cycle, when industries are working close to capacity in industrialized countries, but experiencing a decline in sales (or in the growth rate of sales) during the downturn phase.

Nevertheless new strategy era force us to respond to global competition and develop in long term perspective, small organizations should create sustainable competitive advantages in order to maintain current customers and acquire more customers. Strategic management is the best instrument to compete rivals at short and long runs, but too expensive for companies in developing countries.

As such, we argue to focus for government and company’s management on evolutionary mechanisms, for small and medium companies growing from low value added products as residual suppliers to more larger and more valuable company in creating a more sustainable system. In industry, breakthrough innovations, or technological discontinuities, initiate eras that end when a dominant design, or standard of the industry, starts an era of incremental change. The

emphasis on product that helps in developing an industry standard is replaced by an emphasis on process. Once the standard is set by industry's leaders, as demand grows in amount and sophistication, there is for efficient processes that satisfy this demand at increasingly lower costs which usually involves secondary suppliers. This cycle is dominating while process technology improves the current standards innovated by leaders, a seemingly passive product technology evolution is already giving birth to the next technological discontinuity. The theories and concepts of strategic management in fact follow evolutionary cycles that explain alternating emphasis on process or content research as well as shifts of attention, first to the environment, then to the firm, now to new paradigms explains Farjoun's conclusion that 'mechanistic (content) models and ideas are losing their potency, while organic (process) ideas have not gone far enough to renew them or to provide an alternative and more current perspective'. (Farjoun, 2002)

Whereas in the 1980s Porter's models helped firms analyse the industry and streamline their strategies, firms now need new strategic models to create and preserve knowledge and learning. According to the business strategy perspective, a company's competitive advantage lies in its ability to develop or obtain organizational resources and capabilities, take a strategic position in a market and implement a competitive strategy that takes into consideration the opportunities and threats in the external environment (Porter, 1980; Miller and Friesen, 1986).

Companies now compete in a complex and dynamic environment transformed by instant information, where knowledge is increasingly becoming the most valuable and competitive resource and advantage. The impact of technology and globalization increasingly affecting on capability of firms to acquire information, create knowledge and innovate that is essential to competing successfully. The current trends of strategic management will in the future stress individual and organizational capabilities to learn and innovate. (Huff 2000; Rynes et al. 2001).

Since we understand far less about the strategies of small firms than the strategies of large firms, these problems present an opportunity to revise strategic management theory for the small business contexts. Thus, in this paper we examine the possibilities for small companies in strategic management and competitive advantage in order to determine the applicability of strategic management theories. From a strategic management standpoint, small companies create an environment in which both the opportunities and constraints are different from those in large organizations (Cooper, 1981). Small companies go through stages – inception, survival, growth, expansion, and maturity – differently than large firms that pose unique challenges to their managers (Scott & Bruce, 1987).

Nowadays currently developing countries have high tax rates and government shares relative to their state of development. The analysis also shows that high tax rates and government consumption at early stages of development can slow the structural transformation and economic growth, and thus business environment for innovations are not favourable. Manufacturing emphasis is migrating from the product that helps to increase competition level of the brand and technology, developing an industry standard, to production process mostly decreasing cost level. Technology and innovations improves the standards and manufacturing process, but requires a lot of investment (R&D), that is why is easier for companies to focus on decreasing the cost level.

Observing Latvian export structure, we see that Latvia's exports mostly the goods with low added value are dominating it seems that local strategy is based on lower cost level rather than on innovation and technology development. In the foundation of Latvian national economy growth lies an unstable, traditional and reacting to consumption, model of economic development, rather than innovation, modelling alternatives, the choice of sustainable growth and consumption. Existing competition and unequal position of the countries (between developing and developed ones), leads to the fact of short-term competitiveness and short-term planning prevails over the principles of sustainable development. There are several empirical connections between economic development and company strategies.

To ensure successful sustainable development industry needs to keep planning process of existing strategies, local companies has gradually moved from short, intuitive ad hoc decision-making, to understanding that making decisions must be a deliberate process, predicting future scenarios, weighing the benefits and costs in the short, medium and long term.

As well as a long-term perspective, the concept of competitiveness and sustainable development entered in the Latvian system of planning under the influence of international commitments and planning practices. The concept of sustainable development in the Latvian public space appeared only around 1995 and its increased use is observed only since 2000. Sustainable development is most often seen declarative as a question of environment and natural resources quality; as a problem of a single ministry, not reflecting in planning policies of industry.

In the 1980s Porter's models helped companies to analyse the industry and gave vectors to their strategies, companies now need new models to create and manage knowledge and learning from market. Firms now compete in a very complex and dynamic environment, where knowledge and information is increasingly becoming the most valuable resource. The impact of technology, innovation and globalization increasingly defines that high capability of companies to transform, create knowledge and to be innovate is crucial to compete successfully.

The empirical evidence from the competitive strategy literature in both advanced industrialized economies and emerging economies indicate that the implementation of a coherent business or competitive strategy leads to superior performance (e.g. Bowman and Ambrosini, 1997; Campbell-Hunt, 2000; Kim et al., 2004; Li, Zhou and Shao, 2009; Miller and Dess, 1993; Spanos et al., 2004).

Strategic management theories at their essence are growth-oriented (e.g. Penrose, 1959) and there is assumption is that small firm strategy should be growth oriented as well (Aldrich & Auster, 1986; Covin & Slevin, 1989; Merz, Weber, & Laetz, 1994).

In fact, only a very tiny fraction of small businesses ever grow into successful large firms (Bracker & Pearson, 1986).

This fact between the theories in strategic management and the business reality raises question about successful strategic management theory. Our findings provide insights into how firms become leaders and successful in innovative and dynamic environment growing from small and medium enterprise to large international company. We provide a new perspective on strategic business development in correlation with the development of modern sustainable systems, which shifts the simplification and low value added products to sustainability and sophisticated innovation and sustainable development strategies.

Recent studies pointed to the importance to distinguish between activities in short run and long-term strategies that adopted to create and sustain competitive advantages [Morse et al. (2003), Horngren et al. (2003), Blocher et al. (1999)]. Accordingly, cost management is an information system that supports the entire managerial functions, which are: strategic management, short-term planning, operational decision-making, and control techniques (Blocher et al., 1999). Thus, strategic cost management is used to support strategic decisions such as selecting products, manufacturing techniques and distribution channels.

Most small companies in developing countries have a product specialisation and cost strategy - based on low wages and process innovations of standardised and incrementally improved products- to compete on the world market while the enterprises of the developed countries and of some specific sectors of developing countries do have a product innovation strategy. In order to successfully compete there are variety of strategic management tools that could be used by cost management and ensure company long-term development (Table 1).

Table 1: Tools of Strategic Cost Management

Tool	Description
Value chain analysis	add value to customers ‘reducing costs, and understanding relation between business organization and booth customers
Activity based costing	an analytical tool aims to provide accuracy in allocating indirect costs.
Competitive advantage analysis	defining strategy that an organization could adopt to excel over rivals.
Target costing	cost that an organization is willing to incur according to competitive price that could be used to achieve desired profit
Total Quality Management	adopt necessary policies and procedures to meet customers’ expectations
Just-In-Time	a Comprehensive system to buy materials or produce commodities when needed in appropriate time
SWOT analysis	a systematic procedure to identify critical success factors of an organization
Benchmarking	a process performed to determine critical success factor and study ideal procedures of other organization in order to improve operations and dominate market
Balanced scorecard	an accounting report of critical success factors about the organization. It is divided into four major dimensions: financial performance, customers' satisfaction, internal operation, and innovation and growth
Theory of constraints	an accounting report of critical success factors about the organization. It is divided into four major dimensions: financial performance, customers' satisfaction, internal operation, and innovation and growth
Continuous	conducting continuous improvements in quality and other critical success factors

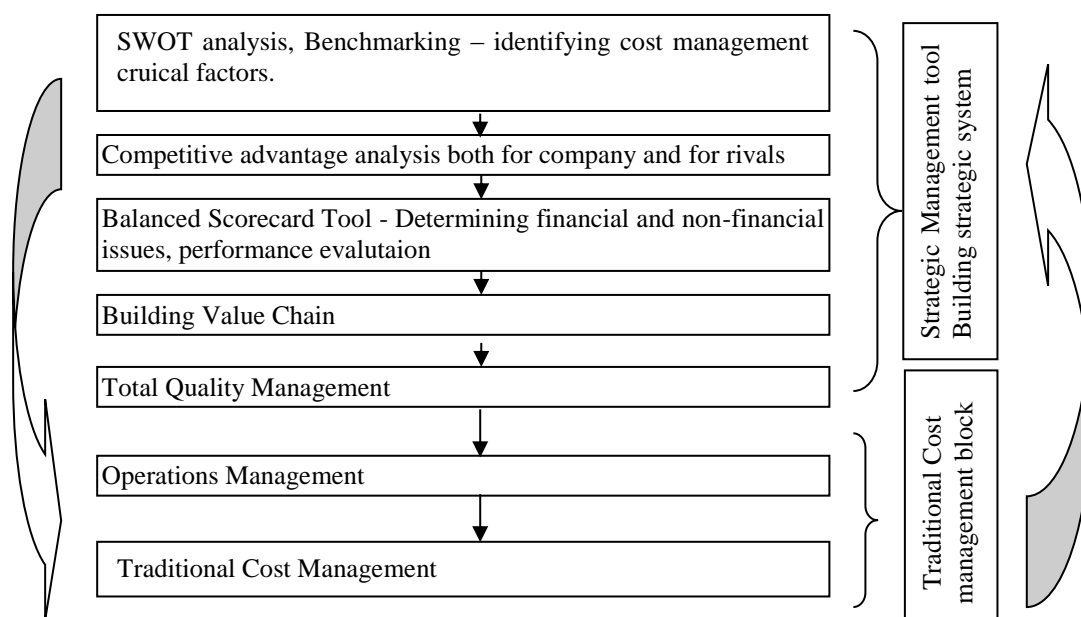
Source: Blocher et.al. (1999)

Figure 2 presents an author’s model of strategic cost management for small companies . The model contains a few interconnected blocks as representation of continuous improvement.

Authors use evolutionary approach presenting strategic cost management as improved cost management. This means that strategic cost management is analysed as evolutionary transition phase for companies in developing countries.

Consequently, that model is not related directly to strategic cost management, but presents some issues to integrate in cost management in order to improve competitive advantage system as part of long term strategic system (Figure 2).

Figure 2. Model of Strategic Cost Management for small companies



So an important conclusion for the comparison of the outcome of different strategies, are financial results of the company. In the model we are trying to analyse the possible explanatory factors of sustainable financial output, the main conclusion shows that implementing strategic

management elements in cost management and innovation efforts have a positive impact on financial output.

Conclusions

Strategic cost management presented in this paper is a new concept of cost management. It is analysed as a new system to be integrated in order to implement crucial issues needed for strategic management to help organization to create and sustain competitive advantages. It has to include long-term objectives, which are responding to client requirements comparing to competitors, ability to innovate products, quality, and efficiency. Traditional cost management instrument should be upgraded with important element from strategic management.

Authors point that there is no general acceptance of tools could be used within strategic cost management, authors presented only concept. In addition, some tools have more attention than others do.

So, on the one hand, the company needs a minimum level of innovation and therefore the less innovate ones do not export. This fact probably could explain the low export probability of minimum level innovative companies. On the other hand, on the international markets a combination of an intermediate innovative level with low wages seems to be a good competitive strategy, especially for developing countries.

Nowadays currently we see that developing countries have high tax rates and government shares relative to their state of development. The analysis also shows that high tax rates and government consumption at early stages of development can slow the structural transformation and economic growth, and the size of government expands as an economy develops over time.

In this paper we proved the importance of innovative activity to compete on the world market. This conclusion was confirmed. Also we explained briefly the difficulties in comparing results of the existing literature and in fact the sometimes apparently contradictory results could be explained by the particularities of each of the studies. This was especially so where different studies use different kinds of companies and strategies (large versus small companies, or specific sectors are discussed. This problem was clearly confirmed by the different outcomes from the models. The results of the standard model show that innovation and highly qualified human resources would be a method to reach the international standards of the world market and therefore it is necessary to compete in export markets. We analysed the results of the standard model in the existing literature and found that they are very similar to those of other studies and, and more important, it seems that the existing differences could be interpreted. So paper does not generate contradictional results. This paper confirms that the least innovative companies have the lowest export probability; this relationship is reflected by the number of studies and has no contradictions. On the other hand, the paper defines a certain negative effect for two aspects (product diversification and the size of the company) on export probability. So the companies most specialised in only one or a few products (percentage of sales related to the main product) are more competitive on the world market than the companies with a broad range of products, regarding the company innovation strategy and size.

Our final conclusion is that the innovative activities are related to export; we understand that the interpretations for the relationship presented in this paper are theoretical and abstract explanations do not allow us to clearly define them. However, the modern studies did not specify the strong linear relationship either. Nonetheless, the product strategy as a part of innovation strategy should be analysed more broadly as causal and significant factor of export, especially in the case of the developing countries. This means that the relationship between innovation and international trade has to be analysed more broadly.

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DEVELOPMENT OF BUSINESS ENVIRONMENT IN THE CZECH REPUBLIC

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Abstract. In the context of development of the business environment both at global and national level, it is possible to monitor a number of changes. Some changes are influenced by the natural position of small economies, technological development and in the long run they can be expected. Other changes, too predictable, were affected by the convergence of the economies in the global world. In the last few years, but strong economic recession caused many other changes that affect the impact of the basic approaches to business. Article deals with changes in the business environment in the Czech Republic within the context of clear accurate data, so the objective assessment scales, but also compared with the subjects' perception of the business environment, in particular companies. This, to some extent subjective data were obtained from surveys carried out by our faculty and then will be compared with other surveys.

Keywords: business environment, local market, global market, firms, crises

JEL classification:

M21 - Business Economics

M13 - New Firms; Startups

M14 - Corporate Culture; Social Responsibility

O12 - Microeconomic Analyses of Economic Development

O44 - Environment and Growth

Introduction

Late 20th century was marked by great changes in the world economy, which reflected in national economies. The close connection of all markets and faster response on markets demand greater flexibility from business units. Flexibility in many sectors gained such an importance that it caused a tendency of inclination to short-term management, operational and tactical. Strategic management is often underestimated. While previously a corporate strategy and long-term monitoring of corporate objectives in the Czech Republic was rather random due to short-term history (Mikovcová, 2002), over time, it placed a greater emphasis on it (Krause, 2011). Also, after the period of the stressed globalization as a response to the economic recession returns the term local prosperity. Competitiveness is evaluated at the supranational level (World economic forum, 2005, 2011). State authorities demand studies on the competitiveness of their countries or ask research institutes to evaluate the annual results of the Czech Republic in terms of competitiveness. One of the basic pillars of competitiveness is the quality of the business environment (see Methods World economic forum, 2005, 2011). The aim of this article is to investigate the evaluation and development of the business environment - both in terms of quantity and quality. The carried research then enables the inclusion of both objective or "hard" characteristics, and the opinions of the business community. This article is one of the outputs of IGA project, focusing on *Crucial aspects of competitiveness of enterprises and national economies in the global economic system registered at VŠE under the code IP300040*.

Research object and methods

The business environment can be evaluated in many ways.

If we classify basic approaches to evaluation as

a) quantitative, where the measure of rate are numerical data of ordinal type (such as tax rates, interest rates);

b) qualitative, where the results are based on emotional, verbal responses (dissatisfaction, transparency ...) or just the cardinal type (order of preference).

In terms of the insight of the subject, that assesses competitiveness, we can distinguish two basic approaches to evaluation

a) external – assessed by transnational and ideally independent subjects (scoring OECD, WEF, as well as ratings of countries)

b) internal – assessed by national subject or more entities tied to the national economy (indicators of development (Czech Statistical Organization, 2012), surveys by the Chamber of Commerce, reports by CzSO).

Figure 1 shows the views the development of the business environment in the local context can receive.

Figure 1: Methods of "measurement" of the business environment

Relationship to the object	external	OECD WEF taxes...	rating, Corruption index,
	internal	Surveys CZSO Confidence indicators	number of texts on corruption collated views from local business community
		quantitative	qualitative
		expression	

Sources: own processing

The aim of this article is to look at the development of the Czech business environment, especially in terms of the expression of internal factors and at the qualitative level. The basic method chosen is trend analysis and comparison of surveys that have been carried out in our country in the years 2003 - 2011. In these surveys, the contacted companies would comment on their strengths and weaknesses and the opportunities and threats, as perceived in a given situation. Because the strengths and weaknesses are internal affairs of each company and are heavily dependent on its financial health, technology, industry and stage of development, they are not considered any further.

Our processing focused on external factors of business prosperity - opportunities and threats - only. These are actually determined by the business community and its quality is reflected in them.

Our research compares the situation in the Czech Republic before joining the EU (at the turn of 2003 and 2004) and at the end of 2010 (at a time when companies in crisis were able to see the light at the end of the tunnel). All of our research addressing the large stable businesses, differed in the size of the observed sample. The first research received 85 respondents and the second one at the end of 2010, 109 respondents. In both cases, large companies were contacted, based on the assumption that they are especially focused on strategy and their decision-making includes elements of the business area. Replies of soft character (verbal, not selecting options from the spectrum) were subsequently classified and rated using frequency analysis.

Business environment- quantitative evaluation

The business environment is defined in different ways, we will incline to the following one: it is a set of external elements that interact to form the company's identity. The concept of business economy divides these elements into those with which the company can operate interactively, hence influencing each other (competitors, suppliers ...) and those that can only be accepted (or used) by the company. Porter's analysis tends to prefer interactive subjects (Kotler, 2005), that depends more on the evaluator than the environment itself. To be as objective as possible, we will thus follow the elements without mutual interaction.

Table 1: Comparison of the Czech Republic, according to some charts and economic data (years 2004 and 2009 to 2011, according to availability)

Measure	2004	2010	2011	evaluation
WEF	38 (40)	38 (45)		same
Corruption index	51	53	57	worst
Country rating	A1	A1	A1	same
Doing business ranking (easy of doing business)		74(66)	64	
CLEAR index	30 (2005)	22 (2009)		better
GDP growth	4,7 %	2,2%	1,65 %	worst
Total tax rate (%)	49,6 % (2005)		49,1 %	same
Inflation	2,83 %	1,5 %	1,94 %	better
Unemployment	9,47	9,57		same

Sources: World Economic Forum (2005), World Economic Forum (2011), Czech statistical organization (2012), Doing Business (2004), Doing Business (2011), Transparency International (2012), CESifo Group Munich (2012).

As we can see from the table, the Czech business environment did not receive the best rating, but the perception of external elements did not worsen between 2004 and 2011. According to clearly measurable characteristics of economic development, there was a slight deterioration.

It is worth noting the evaluation using Opacity index where the experts comment on the state of 5 areas in the evaluated country - Corruption, Legal system Inadequacy, Economics enforcement policies, Accounting standards and Regulation (that means “CLEAR” index). The CLEAR Index score improvement was due to well-rated groups A and E, while groups C and L maintain very high scores. Individual figures on GDP, Inflation, etc. as clear quantitative indicators tell us exactly, but do not give global information about the overall situation and development of the business environment. That is attempted by global indexes. The problem is that the complex index is drawn without considering the interdependence of individual components. Other comprehensive indexes try to eliminate this by replacing accurate measurements with expert opinions. Global indexes are created by external experts, not directly affected by the state of business environment, thus is perceived differently to internal subjects by them. Therefore, I will attempt to further evaluate the business environment in the Czech Republic by means of subjective factors and internal inputs.

Business environment – internal qualitative assessment

The fundamental question is how the business environment perceives their business units itself, ie companies that operate on given market. This section will use the results of two of our internal surveys carried out in 2004 under the project Preparation of Czech companies for the Czech accession to. Another survey created in 2010, in the framework of the research named

New Theory of Economy and Management in Organizations and Their Adaptation Processes. Both surveys were very broad, the issues related to all business activities and were based on a questionnaire survey, which was carried out directly in companies. The addressed companies were particularly large and stable.

From an earlier research from 2004, we have learned (Mikovcová, 2002), that one of the tools that are generally used (in more than 85% of Czech companies) to evaluate their own position of enterprises, is the SWOT analysis. Therefore, we tried to formulate a set of qualitative questions so that the respondent could understand them and asked them about their perception of the companies' strengths, weaknesses, opportunities and threats at the time.

A number of questions were selected from both questionnaires, which related to opportunities and threats as the assessment of the external business environment. In both investigations, the firms were able to express themselves verbally, not picking from pre-modelled answers. The wide range of expressions received will be summarized in the following section.

Survey in firms in year 2003/2004

The questionnaire survey in 2003/2004 included the voice of 85 companies- their expected opportunities and threats are summarized in chart 2. Because the demarcation is rather loose and broad, for further comparison, we decided to classify the listed factors into groups using the PEST analysis (Kotler, 2005) (ie, political and legal, economic, social and technological factors of the enterprise environment). However, we enriched the spectrum by adding another unspecified factor: market (M). The market factor was introduced because of the large percentage of classified responses such as "increased competition" or "lower demand", etc., which could not be clearly assigned to any one of the aforementioned groups. We can thus compare the evaluation of the Czech business environment as it is perceived directly by its subjects. In terms of “hard” economic measures, the studied time periods were comparable (see Fig. 2), but differed in the expectations for further development.

In 2003/2004, during the first investigation, the corporate sector had great expectations prior to EU accession. Businesses have seen the greatest opportunities for their future in market access (21%), growth in demand (19%) and the elimination of customs duties (12%). (For details see table 2.) Conversely, the biggest threat seemed to be the growth of competition (39%), EU standards (12%) and increased costs (11%). (For details see table 3.) We can say that everyone was aware of the risks of a big market. 46% of opportunities and 48% of risks were seen by businesses in the markets. It could be said that their expectations were balanced.

Considering other (non-market) opportunities and threats (for details see table 2) in 2003/2004 it is interesting that

- the catalog does not mention any information about technological factors,
- social factors are also virtually absent (1% and 5%),
- legislative and political factors dominate the area of opportunities(29%)
- these are significantly less perceived as a threat (13%),
- the dominant threats are of economic nature (15%).

Table 2: Opportunities and Threats (2004)

Opportunity	% of firms	PEST + M	Threats	% of firms	PEST + M
Market access	21%	M	Competition growth	39%	M
Growth of demand	19%	M	EU standards	12%	P
Elimination of custom duties	12%	P	Cost growth	11%	E
Unified currency	9%	P	Outflow of workers	5%	S
Uniform Legislation	6%	P	Strong currency	4%	E
Simplified logistics	4%	P	Threats of substitute	2%	M
Unified norms	4%	P	Increased demand for quality	2%	M
Free movement of labour	4%	P	Product imitation	1%	M
Prices rise to EU level	4%	E	Lower agricultural quota	1%	P
Cheap labour	2%	E	New product	1%	M
Growth in the number of suppliers	2%	M	Firms move to a cheaper area	1%	E
Strong currency	2%	E	Recession on	1%	M
Use of resources from the EU	2%	E	Change in consumer behaviour	1%	M
Functional justice	1%	P			
Integration	1%	S			
New products	1%	M			
Protection of the EU against Asian competitors	1%	P			
Reducing the number of competitors	1%	M			
Increased offer of goods	1%	M			
Higher agricultural quota	1%	P			
Foreign owners and the use of them	1%	E			

Source: processing from Mikovcová, Scholleová (2003)

Survey in firms at the of 2010

The questionnaire survey at the end of 2010 caught the businesses while compensating for the effects of severe economic recession. From the perspective of economic rankings, the assessment of the business environment does not differ significantly, it is the evaluation of expectations that allows us to see the differences. Newly formulated opportunities and threats could be explained as the demise of the euphoria of the great free market. While in 2003/2004, there were huge and balanced market expectations, at the end of 2010 companies still saw many opportunities on the market (new clients, weakened competition (34%), products and innovation 17%, for further information see table 3), but they also felt more threats (the ongoing crisis 25%, weakening of customers 16%, unavailable capital 14%, further see table 3).

To sum up the 2010 survey, the respondents see the opportunity in the market at 52%, but at the same time fear far more threats - 68%.

If we look at other (non-market) opportunities and threats (for details see table 3) in 2010, it is interesting that

- we only find a slight mention of technological factors (1% of threats),
- shows the importance of social factors (13% opportunities and 9% threats),
- dominant are the economic opportunities (30%),
- which are significantly less perceived as a threat (6%),
- dominating threats are of political nature (16%),
- which are significantly less perceived as opportunities (6%).

Table 3: Opportunities and Threats (2010)

Opportunities	% of firms	PEST + M	Threats	% of firms	PEST + M
Infrastructure	1%	P	Research and development - stagnation	1%	T
Legislation and politics	5%	P	Unreliable suppliers	3%	S
Capital	5%	E	Impossibility of investments	6%	E
Acquisition and investment opportunities	5%	E	Lack of suitable staff	6%	S
Suppliers struggle	8%	E	Development of the capital market and the exchange rate	6%	M
Reduction of costs	11%	E	Competition	7%	M
People on labor market	13%	S	Unavailable capital	14%	M
Products, Innovation	17%	M	Legislation, politics	16%	P
New clients and markets, weakened competition	34%	M	Customers are being weakened	16%	M
			Ongoing crisis	25%	M

Source: self processed according to Kislingerová (2010)

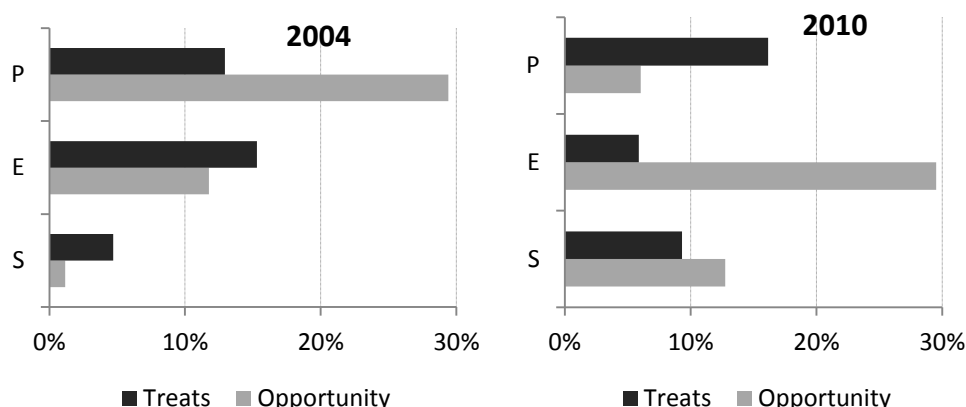
Comparison of both surveys in firms (year 2003/2004 and in end of 2010)

The results of both surveys are displayed and compared in Figure 2, where there are political and legislative (P), economic (E) and social (S) factors as perceived by the firms – either as an opportunity or as a threat. Let us consider the technology factor (T), which was not included. Why? The companies stated them neither among opportunities nor threats - neither in 2004 nor in 2010. This suggests that firms perceive technology as its internal affair, which may limit them in the future. In terms of the nature of the Czech Republic, the competitive advantage would need to be based on technology (Žížalová, 2011). Innovation should then be drawn not only from internal resources, but also externally, for example in the form of open innovation (Muška, 2012).

Although the representation of social factors is not too large, it is positive that over the years, the companies began to perceive its importance. What largely contributed to the situation was the economic recession, when the companies realized the value of their employees (Čámská, 2012) and stopped treating them simply as another cost item - we believe that this trend will further strengthen.

Most interesting is the shift in the perception of opportunities and threats to the economic and political-legislative factors. In 2003/2004, these businesses had high expectations in uniform and clear legislation and stable policies. This was seen as a great opportunity, far greater than the economic opportunities (and almost equal perception as being an opportunity and a threat). At the end of 2010, the companies see significantly more opportunities than threats on the economic side (but this is influenced by the respondent sample - more stable companies that had dealt successfully with the economic recession). Unfortunately, the situation faced a rapid deterioration in the political-legislative, which was perceived more as a threat than an opportunity at the end of 2010.

Figure 2: PEST comparison from surveys in 2003/2004 and the end of 2010



Source: self processed from data Mikovcová, Scholleová (2003) and Kislingerová (2010)

Conclusions

Both studies presented initially questioned the companies' strengths, weaknesses, opportunities and threats, however, only the factors of the perception of the environment (opportunities and threats) were selected for an assessment. It should be noted that it is only the perception of the subjects rather than hard data, though for this we tried to demonstrate it in a clear way-numerically using frequency analysis. The shift in the perception of the business themselves around firms during the 6 years is clear. At the turn of 2003/04 the companies expected particularly new market opportunities, knowing that they also expect potential threats in the market. Economic environment had been increasingly perceived as a threat, facing great expectations in political and legislative activity. Social and technical aspects hadn't practically been taken into account when considering the business environment. In 2010, a shift can be traced in the perception of the market, which begins to be increasingly perceived as a risk factor. The positive is that the companies started acknowledging social factors. Both surveys show that businesses like the factors of environment are being perceived as essential especially by political and legislative, and economic factors. Over the years, there had been a shift from hoping in positive developments in the political and legislative surrounding to the economic one. It is positive that companies focus on opportunities in the economic field. Unfortunately, it is alarming that a large percentage perceives the political-legislative area as a threat. Considering that the market of Czech enterprises consists of mainly EU countries with politically stable agenda and constructed legal system, the source can be traced in the law and policy of the Czech Republic, for example, which corresponds with the results of the CLEAR index. In conclusion we can say that there is a room for improvement in the Czech political representation. It should try to improve the political and legislative atmosphere before moving from the local impact to the global one and reflecting into economic factors on the international level (eg, distrust of investors is reflected in a higher required rate of investment).

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RISK IDENTIFICATION AND VISUALIZATION TECHNIQUES FOR REASONABLE ENTERPRISE RISK MANAGEMENT

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Abstract. In today's business environment risk retains its position high on every organization's agenda. The ability to anticipate and assess threats determines the efficiency of responses to risk, and, in turn, the attainment of the company objectives. Thus risk identification can be seen as a critical part of the risk management process. Along with that, substantial attention should be paid to methods and techniques of risk identification, further assessment of the risks identified and the visualization of the whole situation. The techniques of determining potential risks will be analysed in the paper, proposing suitable combination of these techniques and assessing their impact on enterprise risk management.

Keywords: risk management process, risk identification, event identification, uncertainty.

JEL classification:

D81 - Criteria for Decision-Making under Risk and Uncertainty

L21 - Business Objectives of the Firm

M21 - Business Economics

Introduction

Every business is subject to many various risks. Depending on the size of the business and on present financial situation in a company, these risks can have different impact on company activity – from small losses to bankruptcy. Unfortunately, not all managers and directors of companies understand that and treat risks adequately.

Also, often the management of risk in a company is limited to financial risk management: market risk, credit risk, exchange rates risk, etc. However, the management of enterprise activity risk is as much important as financial risk management, and should be treated with not smaller effort and resources in order to achieve efficiency of company activity. Thus in this paper a lot of attention will be paid to enterprise activity risk, and especially to risk identification in companies presenting and providing a discussion on methods and techniques of risk identification.

Analysing the previous research performed on the topic of risk and risk management, it is worth to begin from risk concept analysis, which originated in 1921, when Frank Knight published his famous book *“Risk, Uncertainty and Profit”* distinguishing risk and uncertainty, and was further discussed in the works of Luce and Raiffa (1957), French and Liang (1993), Taylor (2003), Rejda (2008), Balžeikienė (2009), Rutkauskas and Stasytytė (2011).

The issue of risk management in organizations, is extensively discussed on the international level (Beasley *et al.* 2005; Chapman 2007; FERMA 2010; Liebenberg *et al.* 2003). World practice shows that risk management has now become an integral part of business activities undertaken by the company, builds value to the organization, shaping the effectiveness of undertaken actions (Hopkin 2010). However, it should be noted that the literature clearly indicates that risk management is still in the early stages of development (Gorzeń-Mitka, 2012).

Taking into account the variety of issues related to risk management and the rising need to apply the adequate methods to solve these issues, **the scientific problem** of the paper can be defined as a growing need for enterprises to manage the arising risks successfully and insufficient knowledge of company executives about various aspects, methods and ways of implementation of enterprise risk management.

The research objective is to analyse the methods and techniques for risk identification and further analysis, proposing the ways and combinations of their application in order to increase the efficiency of risk management in a company.

In order to attain the stated objective, the following **tasks** have been distinguished:

- To analyse definitions of risk, provided in scientific literature and practical user guides for risk management;
- To discuss main aspects and prerequisites of risk identification;
- To analyse and describe risk identification techniques;
- To present recommendations on what visualization tools should be used in further assessment of identified risks.

The **object** of the research is enterprise risk management.

The research **methods** applied are scientific literature analysis, comparative analysis, synthesis and generalization, graphical visualization.

In Section 1 of the paper the risk concept is described presenting different definitions used in literature. Section 2 presents the prerequisites for efficient risk identification. In Section 3 event identification techniques are analysed proposing the suitable methods for business companies to identify risks in their activity. Section 4 presents the techniques and methods for further analysis of risks identified.

The evolution of risk concept

Due to the great amount of research on risk management, many different definitions of risk appeared. It is worth to start from S. French and Y. Liang (1993) notice “*Risk is a much overused word; indeed, it has been used in so many senses as to become virtually meaningless*”. The Oxford English Dictionary (Thompson, 1996) definition of risk is as follows: ‘A chance or possibility of danger, loss, injury or other adverse consequences’, and the definition of *at risk* is ‘exposed to danger’. In this context, risk is used to signify negative consequences. However, taking a risk can also result in a positive outcome. A third possibility is that risk is related to uncertainty of outcome.

Definitions of risk can be found from many sources. Sometimes in the literature there coexist two parallel definitions of risk:

1. Risk is an uncertain situation with possible negative outcomes.
2. Risk is the potential variation in outcomes. The variation can be either positive (upside risk) or negative (downside risk).

Definition 2 is mainly used in finance, where both positive and negative positions in securities are possible. In other fields, definition 1 is more common.

Also, and some key definitions are set out in Table 1. An alternative definition is also provided to illustrate the broad nature of risk that can affect organizations. The Institute of Risk Management (IRM) defines risk as combination of the probability of an event and its consequence. Consequences can range from positive to negative. This is widely applicable and practical definition that can be easily applied.

The international guide to risk-related definitions is ISO Guide 73 and it defines risk as ‘effect of uncertainty on objectives’. This definition appears to assume a certain level of knowledge about risk management and it is not easy to apply in everyday life.

Guide 73 also notes that an effect may be positive, negative or a deviation from the expected. These free types of events can be related to risks as opportunity, hazard or uncertainty. The guide notes that risk is often described by an event, a change in circumstances, a consequence, or a combination of these and how they may affect the achievement of objectives.

The Institute of Internal Auditors (IIA) defines risk as the uncertainty of an event occurring that could have an impact on the achievement of objectives. The IIA adds that risk is measured in terms of consequences and likelihood.

Table 1. Definitions of risk

Source	Definition of risk
ISO Guide 73 ISO 31000	Effect of uncertainty on objectives. Note that an effect may be positive, negative or a deviation from the expected. Also, risk is often described by an event, a change in circumstances or a consequence.
Institute of Risk Management (IRM)	Risk is a combination of the probability of an event and its consequence. Consequences can range from positive to negative.
‘Orange Book’ from HM Treasury	Uncertainty of outcome within a range of exposure, arising from a combination of the impact and the probability of potential events.
Institute of Internal Auditors	The uncertainty of an event occurring that could have an impact on the achievement of the objectives. Risk is measured in terms of consequences and likelihood.
P.Hopkin, 2010	Event with the ability to impact (inhibit, enhance or cause doubt about) the mission, strategy, projects, routine operations, objectives core processes, key dependencies and/or the delivery of stakeholder expectations.

Source: created by author (2012)

Risk in an organizational context is usually defined as anything that can impact the fulfillment of corporate objectives. However, corporate objectives are usually not fully stated by most organizations. Where the objectives have been established, they tend to be stated as internal, annual, change objectives. This is particularly true of the personal objectives set for members of staff in the organization, where objectives usually refer to change or developments, rather than the continuing or routine operations of the organizations (Hopkin, 2010).

It is generally accepted that risk is best defined by concentrating on risks as events, as in the definition of risk provided in ISO 31000 and the definition provided by the Institute of Internal Auditors, as set out in Table 1. In order for a risk to materialize, an event must occur. Greater clarity is likely to be brought to the risk management process if the focus is on events.

Also, there is a useful definition of risk in the field of decision-making. The definition distinguishes three types of decision-making situations. We can say that most decision-makers are in the realms of decision-making under either:

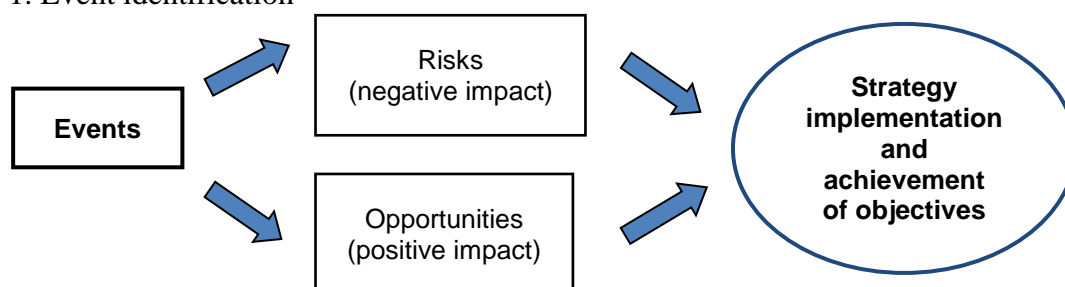
1. Certainty, where each action is known to lead invariably to a specific outcome;
2. Risk, where each action leads to one of a set of possible specific outcomes, each outcome occurring with a known probability;
3. Uncertainty, where actions may lead to a set of consequences, but where the probabilities of these outcomes are completely unknown (Luce, Raiffa 1957).

A risky situation is thus a situation where the outcome is unknown to the decision-maker, i.e. he/she is not sure which outcome will occur.

2. Prerequisites for efficient risk identification

Risk identification is one of the most important steps of risk management process according various methodologies and standards. Risk identification is sometimes named as event identification, for example, in COSO Risk management cube (COSO, 2004). Events can be both positive and negative (Fig. 1).

Figure 1. Event identification



Source: created by author (2012)

An event is an incident or occurrence emanating from internal or external sources that affects implementation of strategy or achievement of objectives. Events may have positive or negative impact, or both.

Table 2. Establishing event categories within the context of broad internal and external factors

External Factors				
Economic	Natural environment	Political	Social	Technological
<ul style="list-style-type: none"> • Capital availability • Credit issuance, default • Concentration • Liquidity • Financial markets • Unemployment • Competition • Mergers/acquisitions 	<ul style="list-style-type: none"> • Emissions and waste • Energy • Natural disaster • Sustainable development 	<ul style="list-style-type: none"> • Governmental changes • Legislation • Public policy • Regulation 	<ul style="list-style-type: none"> • Demographics • Consumer behavior • Corporate citizenship • Privacy • Terrorism 	<ul style="list-style-type: none"> • Interruptions • Electronic commerce • External data • Emerging technology
Internal factors				
Infrastructure	Personnel	Processes	Technology	
<ul style="list-style-type: none"> • Availability of assets • Capability of assets • Access to capital • Complexity 	<ul style="list-style-type: none"> • Employee capability • Fraudulent activity • Health and safety 	<ul style="list-style-type: none"> • Capacity • Design • Execution • Suppliers/dependencies 	<ul style="list-style-type: none"> • Data integrity • Data and system availability • System selection • Development • Deployment • Maintenance 	

Source: COSO ERM Integrated Framework (2004)

In event identification, management recognizes that uncertainties exist, but does not know whether an event will occur, or when, or its precise impact should it occur. Management initially considers a range of potential events – stemming from both internal and external sources – without necessarily focusing on whether the impact is positive or negative. In this way management identifies not only potential events with negative impact, but also those representing opportunities to be pursued. To avoid overlooking relevant events, identification is best made apart from the assessment of the likelihood of the event occurring and its impact. However, practical limitations exist, and it is often difficult to know where to draw the line. But even events with a relatively low possibility of occurrence should not be ignored if the impact on achieving an important objective is great.

A lot of external and internal factors drive events that affect strategy implementation and achievement of objectives. As part of enterprise risk management, management recognizes the importance of understanding these external and internal factors and the type of events that can emanate therefrom. The factors, categories and types of events, proposed by COSO event identification methodology, are presented in Table 2.

The proposed scheme of determining categories for events in risk identification process can help companies develop event categories based on categorization of their objectives, using a hierarchy that begins with high-level objectives and then cascades down to objectives relevant to organizational units, functions, or business processes. Each company, depending on its size and field of activity, can have slightly different event categories.

Event identification techniques

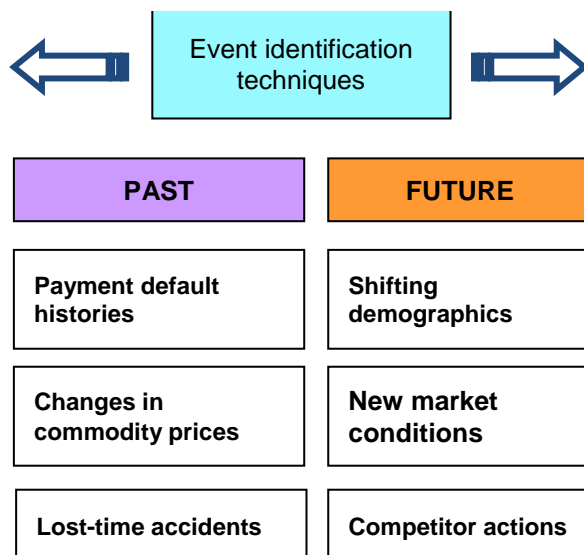
An entity's event identification methodology may comprise a combination of techniques, together with supporting tools. For instance, management may use interactive group workshops as part of its event identification methodology, with a facilitator employing any of a variety of technology-based tools to assist participants.

Event identification techniques look to both the past and the future (Fig. 2). Techniques also vary in where they are used within an entity (Fig. 3).

Further the most widely used and proposed in literature event identification techniques will be analysed (COSO ERM Integrated Framework, 2004; ISO 31000:2009):

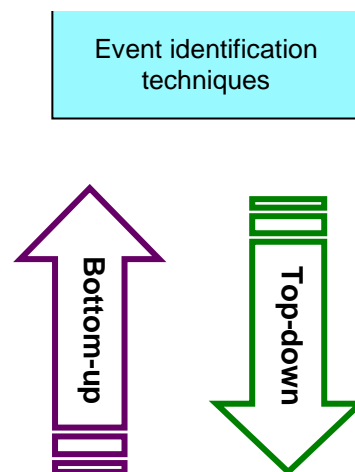
- **Event inventories.** These are detailed listings of potential events common to companies within a particular industry, or to a particular process or activity common across industries.
- **Internal analysis.** This may be done as part of a routine business planning cycle process, typically via a business unit’s staff meetings. Internal analysis sometimes utilizes information from other stakeholders (customers, suppliers, other business units) or subject matter expertise outside the unit (internal or external functional experts or internal audit).
- **Facilitated workshops.** These techniques identify events by drawing on accumulated knowledge and experience of management, staff, and other stakeholders through structured discussions. The facilitator leads a discussion about events that may affect achievement of entity or unit objectives. By combining the knowledge and experience of team members, important events are identified that otherwise might be missed
- **Process flow analysis.** This technique considers the combination of inputs, tasks, responsibilities, and outputs that combine to form a process. By considering the internal and external factors that affect inputs to or activities within a process, an entity identifies events that could affect achievement of process objectives.
- **Leading event indicators.** By monitoring data correlated to events, entities identify the existence of conditions that could give rise to an event.
- **Loss event data.** Repositories of data on past individual loss events are a useful source of information for identifying trends and root causes. Once a root cause has been identified, management may find that it is more effective to assess and treat it than to address individual events. This analysis equips management to identify root causes of events and take action.

Figure 2. Classification of event identification techniques in time



Source: created by author (2012)

Figure 3. Event identification techniques according their manner application



Source: created by author (2012)

- **Brainstorming** is a creative method applied in risk identification step. Applied in a group of persons (eg. staff) in order to broaden up each other’s ideas and generate new ideas. It gathers a list of ideas spontaneously contributed by its members.

- **The Delphi technique** gains information from experts, anonymously, about the likelihood of future events (risks) occurring.
- **Cause and effect diagrams** or fishbone diagrams are used for identifying causes of risk.

Along with the techniques and methods mentioned above, some traditional techniques as SWOT, PEST, PESTLE or more sophisticated as systems analysis, scenario analysis and system engineering can be used for risk identification. Also, a company can choose a combination of techniques or methods for more successful risk identification.

Visualization techniques for proper risk analysis

According various risk management methodologies, after risk identification step the risk assessment (or risk analysis) takes place. This is quite a broad field of discussion, and it is beyond the scope of the research described in this paper. This section just aims to show how the gathered information in the step of risk identification is further used for performing a thorough analysis.

Risk assessment allows an entity to consider the extent to which potential events have an impact on achievement of objectives. Management usually assesses events from two perspectives – likelihood and impact and considers both inherent and residual risk.

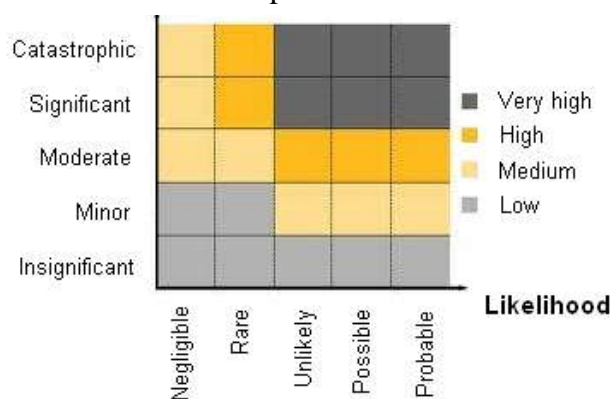
An entity's risk assessment methodology comprises a combination of qualitative and quantitative techniques.

- **Qualitative assessment techniques** are used where risks do not lend themselves to quantification or when there is a lack of sufficient quantitative data.
- **Quantitative techniques** typically bring more precision and are used in more complex and sophisticated activities to supplement qualitative techniques.

Quantitative risk assessment techniques usually receive more attention as they help to analyse the required information that can be used for further work with risks identified and analysed. Examples of quantitative techniques are Value at Risk, Cash Flow at Risk, Earnings at Risk, Loss Distributions, Back-Testing, Sensitivity Analysis, Scenario Analysis, Stress Testing, Benchmarking.

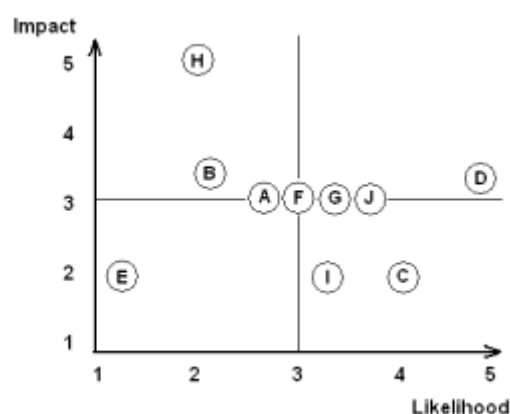
Qualitative techniques, on the other hand, help in determining causes or consequences of certain events and provide a linguistic description of risky situations. These include tables with qualitative description of risk, its occurrence and probability, also various types of logical trees (fault trees, event trees, decision trees). Also, sometimes a method of risk assessment can have features of both qualitative and quantitative groups.

Figure 4. Risk map showing various levels of risk impact and likelihood



Source: created by author (2012)

Figure 5. Risk map with placed risks (events) on it



Source: created by author (2012)

Risk maps are adequate means for portraying the results of risk assessment made by quantitative as well as qualitative techniques. In Fig. 4 the risk map shows the colored areas of various levels of impact and likelihood of risk, and Fig. 5 can be used for placing the identified events, potentially dangerous, also with respect to their impact and likelihood.

Thus sound application of the described techniques in a company can significantly improve risk management and drive the efficiency of company activity.

Conclusions

Risk is a very much overused concept, and there are many definitions of risk in literature. It can be defined as potential variation in outcomes, uncertain situation with possible negative outcomes, a combination of the probability of an event and its consequence.

In order to manage risks successfully, a company manager responsible for risk management process should select a proper risk identification procedure, and identify possible risks based on internal and external factors and further forming the classification system suitable for the particular company.

The event identification techniques described in the paper can help company managers adequately distinguish potential risks. Risks further should be analysed applying risk assessment methods, which can be qualitative or quantitative, or both, and should be visualized using risk maps. Such application of the described techniques in a company can significantly improve risk management and drive the efficiency of company activity.

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MEASURING THE SOCIAL IMPACT OF INVESTMENT PROJECTS

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Abstract. According to the idea of social responsibility of an enterprise, a business entity should focus not only on economic but also on social and environmental goals.

The enterprise's influence on its surrounding through investment processes may have positive and negative effects. Respecting the principles of business social responsibility allows for combining the enterprise's interests with interests of its internal and external surrounding.

Measuring and reporting the effects of the social influence of investment projects that are carried out by enterprises presents a great challenge for managerial accounting and goodwill management. The aim of the article is to depict the methods of measuring the factors of economic effectiveness of investment projects, including their benefits for the social and business surroundings.

Key words: investment projects, social impact, social corporate responsibility, stakeholders

JEL Classification is: M21 - Business Economics

Introduction

Under contemporary economic conditions, social responsibility of business is growing, which in turn requires enterprises to combine economic goals with the social ones. The systems of measurement and reporting of social involvement of an enterprise are being developed.

An enterprise functions in a specific market surrounding, in a network of relations and interactions with internal and external partners. Therefore, it has to take these conditions into consideration in its economic decisions. It concerns decisions related to investment undertakings carried out by an enterprise, too.

Socially responsible investments involve combining the company's good with the social good, while making investment decisions. According to the concept of business social responsibility, an enterprise aiming at its goals should take into consideration the influence of the project on the internal and external stakeholders. The analysis of this influence, after prior analysis of the stakeholders' problems and needs, may be of descriptive character. The traditionally used methods for investment project evaluation, conducted from the point of view of the enterprise's interests, involve calculation and interpretation of the financial indicators.

One feature of financial ratios, such as the Financial Net Present Value (FNPV), is that their measurement is to demonstrate that a given investment undertaking is profitable for an enterprise. Their quantifications are based on real data on cash flows and miscellaneous numerical data originating (or anticipated) from the accounting system.

However, it is possible to apply economic ratios, e.g. the Economic Net Present Value (ENPV) the formula of which includes initial data used to calculate financial ratios, and more importantly, which also contain a qualitative evaluation of the benefits that stakeholders receive when the project has been accomplished.

The issue of measurement of economic impact of an investment project upon its socio-economic surroundings will be presented herein on the basis of an investment project involving starting up dried lucerne pellet production.

Social responsibility of business. The aspect of investment projects' impact on stakeholders

Modern business has today much bigger impact on societies and the environment. The concept of social responsibility business is a philosophy of conducting business activities

oriented towards building stable positive relations with all stakeholders participating in this process (Szot-Gabryś, 2010, p. 184).

In Poland, the European management model based on a few pillars, one of which is social responsibility, is consistently being developed. The model involves European companies treating themselves as an integral part of the society. This means that (Penc, 2008, p.30):

- They operate in a socially responsible fashion and they think that a company is morally obliged with regard to the society, or that it has some sort of a civic duty to fulfil;
- They treat profit as one of the main company goals, which include, amongst others, continuity of employment and sustainability of the company;
- They take long-term strategic and investment decisions, balancing economic and social goals even more;
- They cooperate more closely with their partners, i.e. the shareholders, employees, managers, customers, creditors, suppliers, and the whole society, as this enables an optimal achievement of their goals.

The awareness of the meaning of reliability and positive image in relations with the environment in business circles is growing. It is generally believed that expenditure on charitable activities, social activities and environmental protection usually translate into higher income and profits. Thus we may say "yes" to the question: "does socially responsible business really pay off?".

Investment in fixed assets constitute an indispensable element of an enterprise's technological potential development. Thanks to investments, innovations are implemented, whereas an enterprise is able to improve its competitive position. Investment decisions should be preceded by an analysis of effectiveness of a planned undertaking in order to minimise the risk of project's failure. Such analyses are to examine project's viability for a given enterprise and its owners, thus they have the nature of financial effectiveness analysis. However, what is important is that an investment project analysis be extended so as to include not only financial aspects but also the impact of a particular project on the project's internal and external stakeholders. That is because a project may bring both benefits and expenses to said stakeholders (in the case of projects that are not friendly for the environment, e.g. ones that make noise, produce unpleasant smells or much waste).

Stakeholders are people or institutions that may - directly or indirectly, positively or negatively - influence the investment project or be subject to its influence (Kubera, 2010, p. 145). The term "stakeholders" was introduced by the Stanford Research Institute (1963). It is used to determine a person or an entity interested in the company's activity and incurring various types of risk related to its functioning as well as such people or entities that are influenced by the company through its activity. Stakeholders, defined in the most classic manner, are groups or individuals that are directly or indirectly influenced by the company and that influence the company in a similar way. Stakeholders are the surrounding of the company which, through its representatives, enters into interactions with the company of varied intensity and nature. Stakeholders are not only individuals and organizations, but also the natural environment which may be "represented" by e.g. non-governmental organizations with an ecological profile or state administration whose task is to implement the environmental policy (Ćwik, 2010).

Company's competitive position may be significantly improved by showing the stakeholders that the said company respects their needs and expectations, and that its investments work to the advantage of particular groups of stakeholders. A meaningful method of demonstrating the level of said impact is by the way of specific ratios, i.e. by showing numerical values e.g. in the form of the Economic Net Present Value (ENPV).

Projects financial effectiveness and its measurement

Enterprises, in their activity, carry out some developmental projects, which involve incurring capital expenditure on tangible fixed assets. The need for investing is determined by many various factors, including e.g. (Określlicka, 2004, p. 177):

- the need for renewal of the enterprise's assets
- the necessity for introducing a new technology
- the requirements related to environmental protection as well as other requirements imposed on an enterprise with regard to standards of its operation
- the need for increasing the production potential.

Investments made by an enterprise in tangible assets are characterised by long-term employment of capital in specific resources. Therefore, there is a need for detailed evaluation of an investment project. Generally speaking, an investment project is born in a situation of specific needs, i.e. it is an answer to problems and dysfunctions identified in an enterprise or it may result from competitive market opportunities perceived in the environment (Szot-Gabryś, 2011, pp. 130-132):

In a traditional approach to investment, the business goals of an enterprise are exposed. This is a typical approach in management in Polish conditions. Nevertheless, an increasing number of business entities begin to notice the dependencies and opportunities connected with including in their projects their meaning and influence on internal and external stakeholders.

Traditional methods of investment project evaluation take into consideration, apart from legal, organizational as well as technical and technological aspects, most of all, the financial profitability aspect. Therefore, an economic and financial analysis is conducted of a planned venture.

There are two stages of examination while undertaking real investments in enterprises (Śliwa, 1998, p. 274):

- material study, determining the reasonableness of a venture from the point of view of widely understood market conditions;
- financial statement of project viability (best from the variant perspective).

The most precise tool for evaluating the developmental venture viability is discount methods of economic calculation. They take into consideration, unlike the simple evaluation methods, the time distribution of expected receipts and expenditures connected with the investment under examination. This is done with the use of the discount technique and the concept of time value of money (Sierpińska, Jachna, 1999, p. 210). The evaluation procedure is based on future money flows and discounting of the expenditure and costs in accordance with the UNIDO method for evaluating investment projects (Jaki, 2004, p. 92).

The method - indicator most frequently used in practice: Financial Net Present Value (FNPV) is a criterion for evaluating investment projects, fully compliant with the basic goal of the company's activity, i.e. maximization of the owners' income obtained through maximization of the company's value (Machala, 2009, p. 104).

The positive value of FNPV means that the positive money flows generated by the project are higher than the expenditures connected with its implementation. Positive value of FNPV also means that the actual rate of return from the project is higher than the capital cost and the project provides more benefits than the expenditures it requires (Jajuga, Jajuga, 2008, p. 346).

The above described method allows for measuring the effectiveness of an investment project planned for implementation, which is determined in terms of value. As regards the issue of project effectiveness for external and internal stakeholders, there are no indicators expressing in numbers the influence of the project and the benefits of these social groups. Therefore, it is possible to use the quality description of benefits that will be obtained by individual groups of stakeholders as a result of accomplishing the investment project in the context of their problems and needs which are solved by the analysed project.

However, one may attempt to estimate the economic impact of a project on its socio-economic environment, and to introduce additional values into calculation formulas of the financial ratios.

The problem will be presented in the subsequent part of this work in the form of a case study analysis of an enterprise operating in the agriculture industry.

Project economic effectiveness and its measurement based on a selected case study

A venture analysed herein involves organising and opening an operational activity of a dried lucerne plant. The sugar factory is being reorganised and is stopping sugar production in the "K" department", while seeking other opportunities to use the tangible assets (buildings, structures, machine) and the personnel.

A long-standing cooperation of the sugar factory with local farmers in the field of raw materials supply (it has involved sugar beets so far) is highly important. The above is the driving force behind the search for possibilities of effective use of currently owned assets as part of a new undertaking, in accordance with the principle that profit is generated only by working capital. In such context the idea to start up a dried lucerne plant. A business plan was designed for said venture, which aimed at verification of economic-financial effectiveness of the planned undertaking¹³.

Implementation of the project of a factory profile change, i.e. from current sugar production into dried lucerne manufacture, requires capital investment, most of all one related to the purchase of a technological line for drying, granulation, and packaging of lucerne.

One key precondition of the venture's success is to ensure appropriate raw material resources. Underlying problems in the course of raising raw materials, lucerne, for further processing is to guarantee an adequate quantity of green fodder and good quality raw materials. Thus, to ensure the right quantities of raw materials for drying it is necessary to contract with farmers. Farmers were described as the main group of external stakeholders in the venture. Therefore, the idea of opening a dried lucerne production through the replacement of the current sugar production from beet roots requires one to guarantee said farmers suitable benefits.

Manufacturing capacities of the dried lucerne plant intended to be purchased enable ca. 104 400 tonnes of green fodder to be processed during one season. This estimate is based on the following assumptions:

- 150 day of the drying room activity per one season,
- production capacity - 696 tonnes/24 hours of lucerne shred (when working continuously it is 29 tonnes/h).

That is why there needs to be ca. 104 400 tonnes of green fodder guaranteed per one season. One hectare of crops, with a triple harvest, may yield 50 tonnes of lucerne. Hence, in order to ensure enough green fodder to be processed, one needs to seed an area of about 2 088 ha, whereas 24 hours of production require lucerne to be reaped of an area of approximately 42.18 ha. The organisation of raw material resources is then a vital element of the plan of new enterprise operation.

Persuading farmers to grow lucerne needs to be supported by a guarantee of adequate benefits. It was assumed that the price of lucerne in the estimates be established on the basis of the level of profit made from wheat growing, which is an alternative type of farming due to the quality of soils in the "K" town. Wheat yield from one hectare is ca. 50 q/ha. Therefore, the price of lucerne green fodder per 1 tonne needs to correspond to the price of wheat per 1 quintal. For the purpose of calculations included herein it was assumed that the purchase price of lucerne green fodder be established in relation to the alternative, achievable price of wheat. As a result,

¹³ Case study presented in this article was designed on the basis of: T. Szot-Gabryś, *A business plan for a dried lucerne factory*. a non-published work.

the price was set at PLN 42 per tonne. A farmer then will generate PLN 2 100 of income from one hectare.

The responsibilities of farmers, who will start cooperating with the dried lucerne plant under a contract, will be as follows:

- to purchase lucerne seeds - once every three years,
- to prepare the field,
- to sow,
- to use suitable agrotechnological products.

The plant will organise lucerne harvest and its subsequent transport to the factory and it will bear the costs thereof. Farmers will not cover the costs of harvest and distribution of the green fodder to the processing plant. Cooperation with the factory will be beneficial to farmers due to several reasons:

- a farmer will receive a 1 ha income comparable to that generated by wheat production (or other crops) while his production outlays and time will be considerably lower than in the case of other, alternative crops.
- dried lucerne factory will arrange for lucerne seeds' delivery and will conduct agrotechnology courses for the planters.

It was estimated that farmers' involvement in lucerne farming will let them limit their own outlays when compared to other, alternative crop growing (e.g. sugar beets, wheat) at the level of ca. PLN 400 per year per hectare.

Below are the results of financial ratio and economic calculations for the project of opening a dried lucerne factory.

An assessment of financial ratios, e.g. the Financial Net Present Value (FNPV), is carried out from the point of view of company's interests. The calculation is based on real data on cash flows and miscellaneous numerical data originating (or anticipated) from the accounting system.

An application of economic ratios, e.g. the Economic Net Present Value (ENPV), includes in its formula the data used to calculate financial ratios, and more importantly, a qualitative evaluation of the impact of the project on individual groups of stakeholders. This effect may have a form of the costs and benefits that each particular group of stakeholders will gain after the company will have carried out the planned investment project.

Table 1: Financial Net Present Value (FNPV) and Financial Rate of Return (FRR) by discount rate 10%

Year	2012	2013	2014	2015	2016	2017
Profit	-349 145	146 342	598 272	727 771	944 851	1 028 078
Depreciation	0	1 379 556	2 364 954	2 364 954	2 364 954	2 364 954
Investment	4 766 078	13 260 852	0	0	0	0
Cash flow	-5 115 224	-11 734 954	2 963 226	3 092 724	3 309 804	3 393 032
Discount cash flow	-5 115 224	-10 668 140	2 448 947	2 323 610	2 260 641	2 106 806
Return period of investment	-5 115 224	-16 850 178	-13 886 952	-10 794 227	-7 484 423	-5 377 617
Discount return period of investment	-5 115 224	-15 783 364	-13 334 417	-11 010 807	-8 750 166	-6 643 360

Source: Self-study based on Szot - Gabrys, T., *Managing a business project - purchase of a quark packaging machine and a milk product packaging device* (unpublished work).

Seq. of Table 1: Financial Net Present Value (FNPV) and Financial Rate of Return (FRR) by discount rate 10%

	2018	2019	2020	2021	2022	2023	2024
Profit	1 044 370	1 053 692	1 053 692	1 170 673	1 254 230	2 168 583	2 821 692
Depreciation	2 348 841	2 337 332	2 337 332	2 192 911	2 089 754	960 924	154 616
Investment	0	0	0	0	0	0	0
Cash flow	3 393 211	3 391 024	3 391 024	3 363 584	3 343 984	3 129 506	2 976 308
Discount cash flow	1 915 379	1 740 131	1 581 938	1 426 488	1 289 251	1 096 873	948 343
Return period of investment	-1 984 406	1 406 617	4 797 641	8 161 225	11 505 209	14 634 715	17 611 023
Discount return period of investment	-4 727 981	-2 987 850	-1 405 912	20 576	1 309 826	2 406 699	3 355 042

Source: Self-study based on Szot - Gabrys, T., *Managing a business project - purchase of a quark packaging machine and a milk product packaging device* (unpublished work).

Financial Net Present Value (FNPV): 3 355 042 zł

Financial Rate of Return (FRR): 14,09%

Table no 2. Economic Net Present Value (ENPV) and Economic Rate of Return (ERR) by discount rate 10%

Year	2012	2013	2014	2015	2016	2017
Profit	-349 145	146 342	598 272	727 771	944 851	1 028 078
Depreciation	0	1 379 556	2 364 954	2 364 954	2 364 954	2 364 954
Economic benefits for farmers	0	0	835 200	835 200	835 200	835 200
Investment	4 766 078	13 260 852	0	0	0	0
Cash flow	-5 115 224	-11 734 954	3 798 427	3 927 926	4 145 007	4 228 236
Discount cash flow	-5 115 224	-10 668 140	3 139 196	2 951 109	2 831 096	2 625 402
Return period of investment	-5 115 224	-16 850 178	-13 051 751	-9 123 824	-4 978 817	-2 353 415
Discount return period of investment	-5 115 224	-15 783 364	-12 644 168	-9 693 059	-6 861 963	-4 236 561

	2018	2019	2020	2021	2022	2023	2024
Profit	1 044 370	1 053 692	1 053 692	1 170 673	1 254 230	2 168 583	2 821 692
Depreciation	2 348 841	2 337 332	2 337 332	2 192 911	2 089 754	960 924	154 616
Economic benefits for farmers	835 200	835 200	835 200	835 200	835 200	835 200	835 200
Investment	0	0	0	0	0	0	0
Cash flow	4 228 416	4 226 230	4 226 231	4 198 792	4 179 193	3 964 716	3 811 519
Discount cash flow	2 386 830	2 168 724	1 971 568	1 780 698	1 611 260	1 389 609	1 214 467
Return period of investment	-2 353 415	1 875 000	6 101 230	10 327 461	14 526 253	18 705 446	22 670 162
Discount return period of investment	-4 236 561	-1 849 731	318 994	2 290 561	4 071 259	5 682 519	7 072 128

Source: Self-study based on Szot - Gabrys, T., *Managing a business project - purchase of a quark packaging machine and a milk product packaging device* (unpublished work).

Economic Net Present Value (ENPV): 8 286 595 zł

Economic Rate of Return (ERR): 19,56%

Based on calculations, it is evident that the analysed project of opening a dried lucerne factory is effective both financially and economically. Financial effectiveness is a prerequisite for undertaking an investment enterprise, which is to be conducted for business purposes.

If the Financial Net Present Value (FNPV) is more than 0, it means that the project is bringing in more benefits than it requires investment and expenditure. It is thoroughly justified to implement the plan from the business point of view. All in all, if the Financial Rate of Return (FRR) expressed in per cent constitutes a value that is higher than the discount rate used to calculate the Financial Net Present Value (FNPV) it means that the project generates a higher rate of return than the capital of those involved in project realisation costs.

When analysing the value of economic factors one may conclude that a positive Economic Net Present Value (ENPV) demonstrates that a given project may bring more economic benefits than it needs outlays and costs.

When comparing the value of financial and economic ratios it is necessary to state that:

- one feature of financial ratios is that they are based on real cash flows (both carried out and intended) and analysed from the point of view of a company.
- in addition to quantities used to calculate financial ratios, economic ratios take into consideration also project's influence on its socio-economic surroundings.

When it turns out that economic ratios are higher in terms of value than financial ratios, one may conclude that the project operates for the good of a wider range of stakeholders in its surroundings, not merely to achieve business aims of an enterprise.

However, one needs to stress that a methodology of performing calculations of economic ratios must be perfected at all times as identification of economic influence of a project and an estimate of said influence may be arguable. For it is not certain that all significant elements of influence have been identified and assessed because such values are excluded from the traditional accounting system of an enterprise.

Conclusions

Free market economy development is characterised by the freedom to undertake and conduct business activity while respecting both legal and business culture norms. These underlying principles, however, are not enough in the contemporary society. This is because a social pressure, which is related to business operations' concern with the needs of its external and internal stakeholders and directed against business environment, is growing. It is also the case with investment projects, which most often take on the nature of purchase and implementation of a particular technology preconditioning operations of a business entity for years and years.

The investment project's effectiveness financial analysis that is performed at the stage of taking a decision to accept an undertaking for realisation is now already insufficient from the point of view of interests of both external and internal environment. A socially responsible business ought to take into consideration interests of internal and external stakeholders when taking decisions related to investment. An evaluation of social influence of the analysed projects may be accomplished with the application of economic ratios of project's effectiveness.

The methods of economic analysis of business projects' effectiveness indicated herein need to be improved while paying special attention to all quantities (costs and benefits for the stakeholders) that are related to the project and the methodology of evaluation in monetary units of their influence.

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NON-LIFE INSURANCE BUSINESS DEVELOPMENT IN LITHUANIAN MARKET

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Abstract. The paper analyses the factors influencing the Lithuanian non-life insurance market and their evaluation methods. The econometric models, describing the non-life insurance market, the vehicle insurance market and the property insurance market, are composed. Those factors that were not included in the regression analysis, were distinguished and evaluated by applying expert assessment. Conclusions are presented at the end of the article.

Keywords: insurance, non-life insurance market, economic factors, expert assessment.

JEL classification:

E31 - Price Level; Inflation; Deflation
D86 - Economics of Contract: Theory
G22 - Insurance; Insurance Companies
G2 – Financial Institutions and Services

1. Introduction

The insurance market has a significant impact on the economic development of Lithuania, as well as of any other country, as the insurers perform the risk transfer and loss prevention functions. It ensures the stability in both daily life and business. In Lithuania the insurance market has been growing rapidly since the Restoration of Independence and during the last decade has reached the fastest growth. However, compared with other European Union countries, the insurance development rates are much lower, therefore the insurance sector should be given more attention, especially non-life insurance, as in Lithuania it occupies the major part of the insurance market.

Relevancy of the topic. During the period of economic boom, the Lithuanian non-life insurance market was growing more rapidly, however, after the beginning of the global economic crisis, in Lithuania the non-life insurance market decline was significantly higher than the whole economy. Although in 2010 it was possible to see signs of recovery in other sectors, the Lithuanian non-life insurance market was further shrinking and only in early 2011 positive growth was recorded; the sum of contributions signed in 2011 grew by 12,5 percent compared with the same period of the previous year.

In the presence of these changes, it is relevant to figure out how macroeconomic factors influence changes in the Lithuanian non-life insurance market and how they can be evaluated. The article focuses not only on macroeconomic factors and their assessment, but also on the assessment of other possible factors, which the author considers to be important.

The problem of the research. What are the macroeconomic factors and how is the non-life insurance market functioning? How to identify and assess the significance of the factors?

The aim of the article - to assess what factors influence the Lithuanian non-life insurance market development, to compose the models describing the Lithuanian non-life insurance market and its individual sectors.

2. The factors influencing the non-life insurance market and their evaluation methods

The link between the economic growth and the non-life insurance sector growth was examined by several scholars. The importance of the non-life insurance market to the economic growth was analysed by Outreville (1990) as well as Ward and Zurbruegg (2002). Summing up the works of these authors, it can be stated that the non-life insurance activity for the risk transfer, financial intermediation and employment enlargement contribute to economic growth. The performed theoretical and empirical studies suggest that the country's financial development influences economic growth. Insurance is one of the branches of financial sector, therefore the evaluation of the factors that affect the insurance market would allow to find out what contributes to the development of financial services, and thus to economic growth. In respect of this, the theoretical literature analyses the insurance market and its separate types. Brown et al. (2000), Ward and Zurbruegg (2002) and Esho et al. (2004) conducted empirical studies, where they examined the factors that influence the non-life insurance. Summing up the works of these authors it could be stated that *the non-life insurance market is influenced by the economic, legal and social factors.*

An econometric assessment. The aim of the investigation is to define and evaluate the key factors affecting the Lithuanian non-life insurance market. The non-life insurance sums of contribution were selected for the examination. There is no consensus and no single research methodology among the scholars, who deal with this problem, which factors may affect the life or non-life insurance markets.

One part of the investigation, i. e. econometric examination, was performed using regression analysis by the least squares method. This method was chosen because it allows to evaluate how much each factor affects separately, and how it works together with other factors. When analysing the factors, which could be included in the study, the problem arises, i. e. in order to include a certain factor, discussed in the theory, in the model, the right measured equivalent is necessary, i. e. the best approximation must be found. In the creation of the research model, possible factors were determined that were included in the regression analysis.

The Lithuanian non-life insurance market consists of three major insurance groups: Compulsory Motor Third Party Liability Insurance (MTPLI), vehicle insurance and property insurance. According to the literature analysis, it is appropriate to compose three models, which will contribute to the identification of the factors that affect the whole Lithuanian non-life insurance market, the vehicle insurance market and the property insurance market, in the analysis including the previously selected factors.

Expert assessment. Such factors as religion, culture, legal system, etc. are distinguished in the articles dealing with the factors influencing non-life insurance market. Since the object of this research is the non-life insurance market of only one country, it is complicated to include these factors in the econometric model. As the educational level of residents in the country may be associated with the risk avoidance level (educated people are more aware of insurance benefits and are less likely to take risks), this indicator was included in the regression analysis. However, are other factors less important? In order to carry out a comprehensive assessment of the factors affecting Lithuanian non-life insurance market, the following question was raised: "How to evaluate the influence of the factors which are not included in the econometric models?" In order to answer this question, the method of expert assessment was chosen.

3. Models describing the lithuanian non-life insurance market

The article includes correlation - regression analysis of the Lithuanian non-life insurance market and the factors that affect it. It was also separately analysed which factors have influence on the signed insurance contributions in the vehicle insurance and property insurance. Statistical data of the independent variables are taken from the Lithuanian Department of Statistics Indicators Database and from the database of the Bank of Lithuania. The data on signed

contributions are collected from the Lithuanian Insurance Supervisory Commission database of announced indicators.

Non-life insurance market model. The quarterly data of the signed non-life insurance contributions for the period from the fourth quarter of 2004 to the fourth quarter of 2011 are used in the analysis. The research was conducted applying an open source program - R. Hereinafter the following abbreviations are used:

- Y – signed non-life insurance contributions (million litas);
- X1 – Gross Domestic Product (GDP) per capita;
- X2 – the number of road traffic accidents;
- X3 – the unemployment rate in the country;
- X4 – the number of first time registered vehicles (except motorcycles and mopeds);
- X5 – consumer price index (the change in the same quarter of the previous year);
- X6 – newly built apartments;
- X7 – issued mortgage loans for households (million litas);
- X8 – educational level (the portion of young people (20-24 year old) with secondary and higher education);

According to the performed analysis, the correlation coefficients between non-life insurance contributions and each of the independent factors were calculated. Results are presented in Table 1.

Table 1: Correlation coefficients and their t statistics

Factor	Correlation coefficient	t statistics
X1	0,789	6,803
X2	-0,239	-1,303
X3	-0,278	-1,531
X4	0,593	3,906
X5	0,735	5,736
X6	0,423	2,474
X7	0,800	6,669
X8	0,330	1,850

When the correlation coefficient module is greater than 0,8-0,9, the correlation is considered to be very strong. In the investigated case, there is no correlation of such strength, however, it can be assumed that factors X1, X4, X5, X7 have a strong relation with the non-life insurance contributions. The correlation coefficient value of factor X6 indicates that the connection between the number of newly built apartments and the number of signed contributions is weak in the non-life insurance. However, these factors will be included in the further investigation of the model for a more detailed description of Y.

Table 1 highlights t statistic values that are statistically significant. Thus, a statistically significant relationship exists between the non-life insurance contributions and the following variables: GDP, the number of first time registered vehicles in the country, consumer price index and the remainder of issued mortgage loans for households. A statistically significant correlation, although not so strong, exists between among the non-life insurance contributions and the number of apartments.

Pair regression models with and without a free member were composed. In most of the models with a free member, it was statistically insignificant, therefore only three equations of these pair regression equations deserve attention, i. e. those, whose coefficient of determination is $R^2 > 0,4$. These equations are presented in Table 2.

Table 2: Pair regression models with a free member

Regression equation	R^2
$Y = 0,0414 * X1 - 14,006$	0,6231
$Y = 15,34 * X5 + 193,34$	0,5403
$Y = 0,031 * X7 + 129,50$	0,6402

Therefore, the second step was to compose pair regression models without a free member. In the models, presented in Table 3, the coefficients are statistically significant and the coefficient of determination R^2 is much better than in the aforementioned case.

Table 3: Pair regression models without a free member

Regression equation	R^2
$Y = 0,393 * X1$	0,973
$Y = 0,173 * X2$	0,803
$Y = 20,18 * X3$	0,691
$Y = 0,0055 * X4$	0,949
$Y = 43,506 * X5$	0,765
$Y = 0,123 * X6$	0,878
$Y = 0,056 * X7$	0,950
$Y = 2,962 * X8$	0,933

The obtained results coincide with the results of the correlation analysis, i. e. factors $X1$, $X5$ and $X7$ have the strongest connection. Pair regression equations, composed between these factors and the non-life insurance contributions, also have the highest R^2 statistics, i. e. these are the best models.

In order to compose a more accurate model, describing the non-life insurance market, more variables should be included. A multiple regression analysis defines a number of methods how to select the factors to be included in the regression equation. One of the proposed methods is to include all the available independent variables, and then to eliminate statistically insignificant ones. It also proposes to rely on the results of the correlation analysis and in the multiple regression equation to include only those factors that had the highest correlation coefficients. Referring to the results of the correlation analysis, $X1$, $X4$, $X5$ and $X7$ are included in the multiple regression equation. The statistics of the resulting regression equation is very high, however, neither a free member nor the coefficient of factor $X7$ is statistically significant. After the removal of these members from the equation, the final regression equation is obtained.

$$Y = 0,025 * X1 + 0,0012 * X4 + 8,042 * X5, \quad R^2 = 0,985,$$

This model, describing the non-life insurance market, is the best in respect of the coefficient of determination; in addition, the remainder of the model satisfies the regression model assumptions, therefore the model can be considered appropriate. The model was tested by calculating the sum of signed contributions in the third quarter of 2011 in accordance with the model and by comparing it with the actual sum. The calculated sum in accordance with the model was 11,28 percent higher than the actual one. Thus, although the obtained value differs from the actual one, it falls in the intervals of predicted confidence. For this reason, the model prediction can be considered satisfactory.

The model of vehicle insurance market.

The vehicle insurance is the second largest group of insurance contributions in the Lithuanian non-life insurance market. The tendencies of this group insurance contributions differ from the general non-life insurance contribution market, therefore a separate analysis was performed and the relationship between the vehicle insurance contributions and the selected factors, described in chapter 3.1., was identified. Two factors were removed from the general list

of factors, i. e. the number of apartments and the sum of issued loans, since, in author's opinion, these factors have influence not on the vehicle insurance but on the property insurance market.

Hereinafter K is referred to as signed vehicle insurance contributions (million litas);

Table 4 shows calculated t statistics in order to determine the significance of the correlation coefficient of each pair of variables.

Table 4: Correlation coefficients and their t statistics

Factor	Correlation coefficient	t statistics
X1	0,650	4,535
X2	0,233	1,268
X3	-0,725	-5,577
X4	0,775	6,496
X5	0,797	6,996
X8	0,579	3,764

Table 4 highlights t statistic values that are statistically significant. Almost all correlation coefficients not only show a stronger relationship than the average, but also are statistically significant.

The obtained results show that the strongest connection is between the vehicle insurance contributions and the number of vehicles in the country as well as the consumer price index. A strong inverse relationship is between unemployment and the vehicle insurance contributions. A strong positive correlation exists between GDP and the signed contributions in the vehicle insurance; it can be explained by the fact that the vehicle insurance is highly dependent on the economic situation in the country.

Pair regression equations, which define the relationship between the signed vehicle insurance contributions and each of the independent variables, were composed. As in the case of the signed non-life insurance contributions analysis, two types of pair regression equation were composed. It was found out that, after including a free member in the equation, in most cases it is statistically insignificant or their coefficient of determination R^2 is very low.

The only pair regression equation with a free and statistically significant member is $K = 49,176 + 5 \cdot X5$. The statistics of the coefficient of determination of this equation is $R^2 = 0,63$. In all other pair equations with free members, they are insignificant ones, therefore the pair regression equations without a free member were composed. They are presented in Table 5.

Table 5: Pair regression equations and R^2 statistics values

Regression equation	R^2
$K = 0,01068 \cdot X1$	0,951
$K = 0,04946 \cdot X2$	0,865
$K = 5,1145 \cdot X3$	0,583
$K = 0,0015 \cdot X4$	0,966
$K = 12,167 \cdot X5$	0,795
$K = 0,808 \cdot X8$	0,922

The performed analysis has showed that each independent variable has a greater or lesser connection with the signed contributions in the vehicle insurance. However, all these factors are operating simultaneously and have a respective impact on the insurance contributions. In order to find out which factors and how they influence, a multiple regression model was composed, which included several independent variables. For the construction of the model the methodology “from simple to complex” was applied, i. e. all independent variables with statistically significant correlations in the signed vehicle insurance contributions were included in the model. Then, referring to t statistics whether the coefficient at the independent variable is statistically significant or not, the independent variables, whose coefficients were statistically insignificant, were removed from the model, i. e. equal to zero. The resulting model is:

$$K = 0,0086 * X1 - 2,6021 * X3 + 0,0002 * X4 + 0,305 * X8, \quad R^2 = 0,9936;$$

This model is the best in terms of both the coefficient of determination, and model error. The model was tested by calculating the sum of signed contributions in the third quarter of 2011 according to the model and by comparing it with the actual sum. The calculated sum according to the model was 3,73 percent. higher than the actual one. The obtained result is great, i. e. the model perfectly describes the vehicle insurance contributions and it can be used for future predictions.

The model of property insurance market

The property insurance is another highly important group of insurance contributions in the Lithuanian non-life insurance market. When composing the model of the signed property insurance contributions, the factors, discussed in chapter 2.1., will be used; only two factors were removed, which, in author's opinion, have an impact on vehicle insurance categories, namely number of accidents on the road and the first time registered vehicles.

Hereinafter T is referred to as the signed property insurance contributions (million litas);

The calculated correlation coefficients and *t* statistics values, used to determine their significance, are provided in Table 6. The statistically significant (bold) correlation coefficients are between the property insurance contributions and X1, X5, X6, X7. The correlation coefficients between the signed property insurance contributions and GDP per capita as well as consumer price index and the issued loans are very strong and positive.

Table 6: Correlation coefficients and *t* statistics

Factor	Correlation coefficient	t statistics
X1	0,812	7,378
X3	-0,084	-0,448
X5	0,809	7,307
X6	0,456	2,718
X7	0,706	4,99
X8	0,311	1,733

The pair regression equations with a free member were composed. The resulting regression equations with significant coefficients are presented in Table 7. Although the coefficients are significant in the models, the values of the coefficient of determination indicate that the equations do not sufficiently well describe the independent variable, i. e. the property insurance contributions. Another step was to compose the pair linear regression equations without free members. The obtained coefficients of determination are much closer to one, thus a linear relationship between the property insurance contributions and the respective factor pair equations is better described without a free member.

Table 7: Pair regression equations and coefficients of determination

Regression equation with a free member		Regression equation without a free member	
Equation	R ²	Equation	R ²
T=0,121*X1 - 29,28	0,66	T= 0,0078*X1	0,94
Insignificant	-	T = 4,0193*X3	0,68
T=4,801*X5 + 29,96	0,656	T = 9,165 *X5	0,83
Insignificant	-	T = 0,0246 *X6	0,86
T=18,809 + 0,00777*X7	0,499	T = 0,0114*X7	0,93
Insignificant	-	T = 0,578 *X8	0,87

During the correlation analysis it was found out that GDP per capita, consumer price index, the number of newly built apartments and the issued loans for household have the strongest and

statistically significant relationship with the property insurance contributions,. These factors have been dealt with in the multiple regression equation. After having composed a model with all these variables, some coefficients were insignificant, therefore those factors were removed from the model.

The final multiple regression equation is as follows:

$$T = 0,0055 * X1 + 3,2844 * X5, \quad R^2 = 0,973 .$$

This equation is the best in terms of the coefficient of determination, moreover the remainder of its model corresponds the model assumptions. The actual value of the signed contributions in the property insurance in the third quarter of 2011 is 53,98 million litas, which is 15,58 percent less than it was estimated according to the model. In this case the interval of prediction confidence is [51,019; 67,09], thus with the application of the model to the actual data the obtained value falls within the interval of confidence and the model can be considered appropriate for prediction.

4. Expert assessment

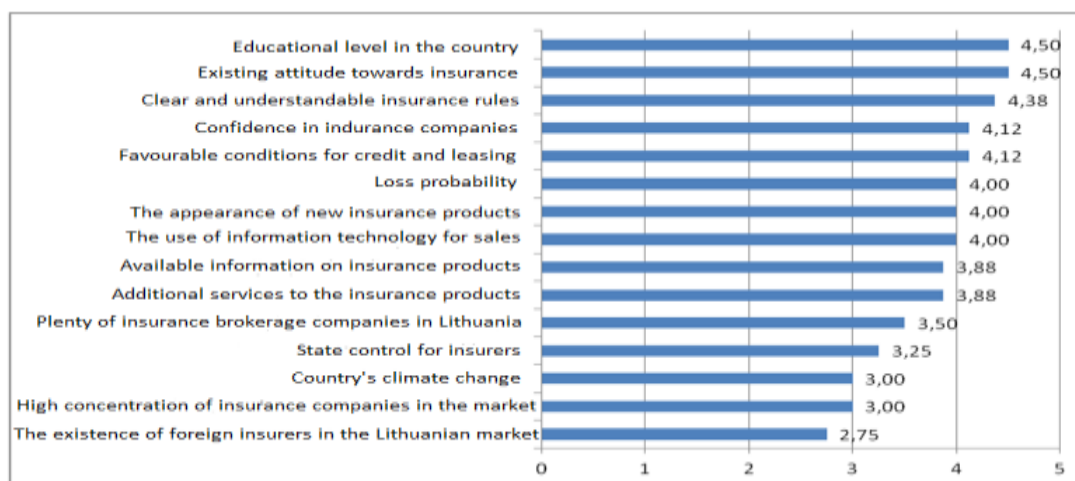
Referring to the regression analysis and the theory of econometric models, the models describing the Lithuanian non-life insurance market were composed. However, not all factors affecting the non-life insurance market can be measured statistically. It was decided to additionally carry out the expert assessment in order to determine what factors, not included in the regression analysis, have impact on the Lithuanian non-life insurance market. The individual assessment method was applied in this research, i. e. survey questionnaires.

The expert assessment was conducted in two stages. In the first stage, during the discussion with one of the selected experts, the list of possible factors was composed. In the second stage, the experts were provided with the questionnaire, including the listed factors set out in the first stage, and were asked to evaluate them according to a five-point scale.

The experts were selected on the basis of their work experience in the non-life insurance companies and the brokerage companies as well as their positions. The expert (E0) interviewed in the first stage has an extensive experience in the field of insurance sales, is well versed in the non-life insurance market. The experts, for many years engaged in sales of insurance products (E1, E2, E3, E6), the heads of the sales departments of the non-life insurance companies (E4, E5), the manager of the non-life insurance product marketing (E7), the assessor of the non-life insurance product risk (E8) were interviewed in the second stage.

In the second stage, the experts were asked to answer the following question: Are the following factors important to the growth of the Lithuanian non-life insurance market? (Please, evaluate: 5 - very important factor, 1 - not at all important factor). The average evaluation of each factor is presented in Figure 1.

Figure 1: Factors influencing the growth of the Lithuanian non-life insurance market: expert assessment



It was found that the experts consider the educational level and the existing attitude towards insurance as having the greatest impact on the growth of the non-life insurance market. In experts' opinion, another important factor is clear and understandable insurance rules and the confidence in insurance companies. The compatibility testing of experts' opinions was carried out and the obtained results show that their opinions are compatible, therefore the results of the research are reliable.

Conclusions

1. The non-life insurance market is influenced by various factors, which can be divided into economic, legal and social.
2. The performed analysis has showed that until 2008 the Lithuanian non-life insurance market was developing rapidly and had high growth potential. However, due to the global financial crisis in 2009, in Lithuania the non-life insurance market decreased by 29,5 percent, and in 2010 declined by 4,7 percent. Fortunately, the double growth of the non-life insurance market in 2011 shows that the downturn is in the past.
3. In order to determine what factors have impact on the non-life insurance market, correlation – regression analysis was carried out and the multiple regression equations were composed. The following was found out:
 - a) GDP per capita, the number of the first time registered vehicles in Lithuania and the consumer price index have the greatest impact on the non-life insurance market;
 - b) the signed vehicle insurance contributions depend on the GDP per capita, unemployment rates in the country for the first time, the number of the first time registered vehicles in Lithuania and the educational level in the country; the rising unemployment rate has a negative influence on the growth of the vehicle insurance contributions;
 - c) the property insurance contributions have a strong positive dependence only on the economic factors, i. e. GDP per capita and consumer price index.
4. The performed quantitative expert assessment helped to find out that the Lithuanian non-life insurance market is influenced by other factors, which were not included in the correlation – regression analysis. According to the experts, the following factors are the most important to the growth of the non-life insurance market: the educational level in the country, the attitude towards the insurance, clear insurance rules. The confidence in the insurance companies, the loss probability, favourable conditions for credit and leasing were mentioned as less important factors.

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2.

Financial Markets

Finance Management

THE DIRECTIONS OF FISCAL LEGISLATION IMPROVEMENT IN THE PROCESS OF UPGRADING THE TERRITORIAL BUDGETS CAPACITY

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Abstract. On the current stage, an important direction towards completion fiscal regulation is to regionalise economic and social processes, decentralize an important part of state functions on the local authorities. Herewith, to finance the expenditure by attaching appropriate income sources which will strengthen the role of local finances and assist the prosperity of regional economy. At the contemporary stage local budgets country, its separate regions development one of the most powerful leverage. Without them it is impossible political stability as in whole country, as in its separate regions. Local budget funds, social infrastructure forming are one of the major sources. Developed countries local budgets, density spare of social expenditures are higher than the state budgets. Local budget expenditures, especially on social provision spent funds promote in society social conflict softening that in contemporary conditions of each county's sustainable development stipulating factor.

Keywords: Fiscal police, territorial budgets

JEL classification: E62 - Fiscal Policy, H72 - State and Local Budget and Expenditures

Introduction

Regional economy peculiarity to some extent is determined by the country's regional policy which means on general understanding strategic social-economic purposes realization on individual territorial units. Proceeding from national interests and for the purpose of stimulation of economic development of the regions in terms of activation of mobilization of territorial budgets revenues the important problem of fiscal law includes its real placing into the frames of budget federalism. That is why, the matter of distribution functions between center and territorial units, as well as realization and consecutive observation of the principles of federalism in the process of exercising of interbudget relations is so actual.

Subject of research includes formation of territorial units budgets on the ground of optimization of revenues and the factors promoting socioeconomic development of territorial units.

The aim is to analyze the budget relations in the aspect of distribution of budget revenues between center and the regions in the period of transition; analyzing of the deficiencies typical for the existing order of distribution of revenues, which prevent formation of stable financial markets of territorial units budgets and further stabilization of their financial independence; proving of necessity of improvement of budget relations, their generalization and development of the appropriate proposals and recommendations.

Methods of research: Deduction, Synthesis, comparative analysis of scientific literature, statistical analysis, Historical approach.

Literature Review

This research is based on the methods and practical approaches, which are in practice and generalized in the Georgian and foreign economic writings and specially touch on the matters of budget relations and budgetary and tax policy, as well as the results of researches carried out in Georgia by international organizations. Informational background of this research includes legislative and normative acts adopted by the government of Georgia in the period of transition, information reported by the Ministry of Economic Development and Finances, National Service of Statistics of Georgia, Fiscal Committee of the Parliament, Ministry of Economic

Development and Finance of the Adjarian Autonomous Republic and ministries and agencies, legislative and normative acts, information reporting by ministries of finance and national services of statistics of the developed and developing countries.

Main Text

In the modern period it is important to emphasize the legal aspects, which have the great importance for harmonization of the interests and interactions between state ruling groups, because any actions, exercising any policy at higher or lower hierarchic levels are carried out in the existing legal environment. Just correct determination of this legal environment means avoiding of conflicts between the priorities of general welfare in the society, as well as conflict between general tactics and strategy of actions.

For the purpose of deepening of budget decentralization clear segregation of the authorities of central and local government bodies is required.

Legal norms shall be adopted resulted thorough socioeconomic analysis and that of society for the purpose of further receipt of the basis for reduction of social inequality between social level to maximum extent, what will make a basis for equality of final results between the representatives of society as well as creation of equal basis in starting conditions.

Just that kind of measures includes formation of the territorial units and appropriate municipal and self-governing system, which provide, first of all, becoming of poor stratum of society a part of middle class society. This latter presents the main support, pillar, strength of any developed country state.

Generally, state policy in the sphere of self-governing shall be developed in three main filed, namely:

1. Involving of maximum quantity of people in local authorities;
2. Transfer of state functions to local bodies to more and more extent;
3. Creation of unions, associations of self-governing units and stimulation of their activity development.

This is an official policy. But factually, state structures often impede achieving of these strategic aims, as they consider self-governing their competitors. Nowadays unfortunately, there is no policy successfully conducting all above mentioned.

In this aspect Charter of Local Government adopted 1985 in Paris is very interesting. Its principles are considered guidelines for the countries of European Council.

In this respect, in terms of experience the law of France “On distribution of competences between communes, departments, regions and state”, 1983, is interesting, as it finally strengthened the rights of communes (i.e. municipalities) autonomy, also, the analogical rights of departments were extended. Resulted this, position of Mayor of Paris became elective, besides the government appointed commissars instead of prefects to manage departments.

Certain reforms regarding self-government are being carried out also in Georgia from 90-s. But as a result we received only agglomeration of self-governing units, which strayed from the main object – human, for whom self-government became almost inaccessible.

Transfer of state functions to self-government is considered the most successful field among reforms of municipality, although in our country it could not give us the desired result as well. Setting up of associations also gave no results, as they remained without functions *per se*. That is why, groundless is the law provision, according to which central government before making decisions shall consult with the initiative groups of self-government, with associations concerning appropriate interesting matters, as they unify more than 60% of self-governing units.

Distribution of spheres between self-government and state may be understood mainly by means of distribution of private and social welfare. If we correctly divide these kinds of welfare in scientific respect, than even correlation of frameworks functions between self-government and

state gets balanced, if not, it remains unbalanced. So, correct dividing shall give us guideline for distribution of the functions of coordination between state, self-government and market.

According to opinion of some scientists (Babich, Pavlova, Pronin), hierarchy of real self-government shall begin from bottom, i.e. micro-territories, as organization caring of satisfaction of all kinds of consumer wants. The best mean for that is just binding of municipal reforms to consumers' society.

Nowadays, just state resolves the problems of social welfare delivery, even in the spheres, where these problems belong to self-government and presents its exclusive right, because municipalities (self-governments) are considered immediate appendix of public administration and try to fulfill the functions delegated from superiors.

All above mentioned takes place, because if state does not distribute the sectoral functions, its interests are infringed. For example, nowadays, municipality disposes of land and collects land tax as well, what just state is interested in. But it is not very effective, because it is required to develop such mechanisms, where self-government will have more rights and public interests be protected as well.

The main aim of regulation of delivery of social welfare includes elimination of market shortcomings. If they are not eliminated, market delivers society negative external effects, and fails to deliver pure social welfare, because market works according to principle of gaining income and this welfare is of no interests of market.

Generally, welfare delivery is regulated as per the following methods: 1. rendering service to state and municipality; 2. state and municipal subsidies; 3. government and municipal works (orders); 4. regulation of delivery by means of budgetary tax and money-and-credit instruments.

Proceeding from above mentioned, social protection strategy should be determined. For this purpose it is required to let each person act for satisfaction of its consumer interests and related economic ones, where self-government occupies strategic place and which shall merger with the two regulating forces: market and state. Factually, it is a mediator, interlink between market and state interests, which shall provide general social welfare, which is fulfilled with the regional united system and which key factors include economic and legal features:

1. preferences in the different territorial units and different stimulations between sectors;
2. activation of differenced prices mechanism after reduction of transactions costs;
3. subsidies of different sectors on regional and local levels; preferences, scholarships and subventions, establishing securities, including tax vouchers, tax vocations, i.e. amnesty etc.

It should be remarked, that distribution of taxes between the levels of governmental authorities may be fulfilled as per principle of decentralization of spending obligations, according to which distributing function of regional and local authorities includes proposing of state service to population of administrative territorial units. There are three variants of attaching of taxation authorities to subnational authorities:

1. Subnational authorities may be attached authority of regulation of all taxes collected at the territory located in the bounds of its jurisdiction. Besides, a part of revenues will be transferred to the higher level of budget system for satisfaction of spending obligation of state authority;
2. The second variant of distribution of taxation authorities in contrast to the first one provides transfer of all taxation authorities to state authority, as well as further transfer of money to lower bodies of government by the way of grants and transfers, also determination of standards of transfers of all/each taxes to lower level budgets. The main defect of this system is absence of relations between the level of government and that level of making decisions regarding bearing costs, on which territory this tax is collected, what is the main precondition for of setting up effective system of interbudget relations;

3. The third variant of distribution of taxation authorities includes transfer of concrete part of taxation authorities to local or regional authorities; in case of need insufficient revenue will be compensated by the way of transfer of share of regulating and attached revenues to local budget or by transfer. In implementation of such scheme of revenues distribution the key problem includes selection of taxes to be transferred to local or regional authorities (local or regional taxes), as well as state taxes, the concrete part of which is transferred to local or regional budgets, as regulating taxes.

As we consider, in respect of the problems of taxation authorities between the levels of state authorities in the bounds of traditional approach, the following rules of distribution of taxation authorities may be named:

1. intermediate, especially lower levels of subnational state authorities shall have authorities of taxation of tax base of more or less mobile type. Lower levels of management should be conferred authorities of collecting such kinds of taxes which are subject to moving between territories to minimum extend. Such distribution of authorities is effective in terms the interest of state and local authorities, because immobile tax base reduces potential of its penetration to the other administrative territorial units.
2. On the level of territorial unit progressive taxes on incomes of physical persons may be imposed in case of possibility of management of “global” tax base. As we pointed above, for the purpose of preclusion of distortion of distribution of recourses between territories income of individual or company shall be taxable to united rates and according to the rules of a territorial unit, to which this individual or company belongs. In terms of management the requirement of “globality” of tax base is difficult to meet towards income tax, but achievable while imposing income tax on physical persons, if the territorial unit is enough big.
3. While distribution of incomes between budget levels the authorities of taxation regulation should be attached on the national level of government. If adoption of policy of distribution of revenues on the national level, despite of belonging of individual to concrete territorial unit is a task of government of the country, the rules of taxation serving this task should be unitary on the whole territory of the country.
4. Authorities of those taxes regulation, which are able to carry out stabilizing function, should be conferred to government. Besides, subnational taxes should be circularly stable. Application of instruments of fiscal policy for the purpose of economic stabilization is a primary function of government. In conditions of its multilevel system application of stabilizing mechanisms on the subnational level may cause significant losses, resulted reduction of total demand. Besides, it is notable, that government has also priority of application of the mechanisms of monetary and credit policy. Effective subnational taxes may include the taxes having high stability to cyclic fluctuations (property tax and consumption tax).
5. If inequality of tax base is distributed at the territory of the country, the authority of its imposing should belong to national government. It is clear, that territory rich in national recourses makes subnational authority able to render state service with lower “tax prices” (i.e. at account of comparatively lower level of taxation), what may cause ineffective application of recourses. So, authority of taxation of natural recourses distributed unequally on the territory of the country shall belong to government, although this statement conflicts to the first rule given here above, according to which, different levels of government shall have authorities of taxation of tax base in accordance to their mobility.

As we think, in case of distributing of taxation authorities between the levels of government the following is required: 1. any political decentralization shall be followed by decentralization of spending and taxation authorities; 2. in case of distribution of taxation authorities between the state authorities of different levels, population of the territory shall take tax burden to such extent, to which it gains profit from social wealth offered by government.

Research of the problems of distribution of taxation authorities between the levels of state authority gives two opposite results: As per criteria of decentralization of spending authorities, a rule set determining distribution of taxation authorities between levels of state authority is in force. On the other hand, in terms of theory of social choice, analyzing of taxation authorities results necessity of strict conformity with spending and tax authorities on all levels of budget system.

The system of regulation of local budgets has the following positive features: it supplies local budgets with sufficient finances, creates network of cash drive and stimulates local authorities to maximize levy of local and central taxes.

Local budget revenues both in developed and developing countries are formed with secondary sources, mainly with property taxes. These revenues include also excises and dues. Definite part of local budgets is filled with municipal property revenues, namely, buildings rent, revenues from water supply and other communal services and various tax licenses. Revenues of federal budgets are different in various countries. For example, the main source of the USA states budget revenues include indirect taxes, i.e. sales tax and total gain (Ministry of Finance USA, official site: <http://www.treasury.gov/resource-center/sanctions/Pages/default.aspx>). As for land budgets of Germany, they mainly accumulate direct taxes, i.e. income tax, corporation income tax, property tax and succession duty (Ministry of Finance Germany, official site: <http://www.bundesfinanzministerium.de>). Issuing of loans is one of the important revenues sources of federal authority, that is why federal debt has a tendency of growth.

Self-governing unit has not stable and guaranteed financial recourses and poor revenue base of self-government causes serious problem. Besides, the revenues earlier belonging to self-government are completely taken by central authorities and factually, only property tax is remained with self-government. Collection of non-own taxes (target and special transfers and other risen finances) and their amount significantly depends on political decisions of government.

Government shall not confer many social categories justified or unjustified tax remissions at the expense of self-government. Remissions granted by resolutions of central government shall be financed from the central budget.

The local revenues which will be used for exercising of exclusive authorities and those required for application of competences delegated by central government shall be clearly separated.

In case of transfer of delegated authorities self-governing units shall be mandatory provided the required financing, because they cannot finance their authorities by means of their own pure recourses.

The lower limit of equalizing transfers shall be fixed by law (ex.: at least 5% of state budget revenues). Such provision does not provide dependence of amount of transfer on subjective decisions.

At least 70% of budget deficit of self-government units is given to them from state budget by the way of equalizing transfer (Budget code of Georgia, official site: www.mof.ge). Formula for calculation of equalizing transfer:

$$T_i = (R - R_i) \times P_i \times K \times 70\%$$

where T_i – equalizing transfer;

R - average annual revenue of all local self-governing units per head;

R_i - average annual revenue of concrete local self-governing unit per head;

i - quantity of population in self-governing unit

K – correcting coefficient, $K = K_1 + K_2$, where K_1 – coefficient of highland; K_2 – coefficient of underpopulated territorial unit. For calculation of coefficient of highland (K_1) we shall take quantity of population of self-governing unit and population residing in territorial units. Based on these data we calculate specific share of populations residing in highlands given in percents to the total population of self-governing unit, but the given volume is differentiated

according to its growth. Coefficient of underpopulated territorial unit (K2) is determined according to quantity of population and privilege is conferred to undepopulated self-governing unit. Government of Georgia issued Resolution approving above mentioned coefficients. Particularly, as per named Resolution, coefficient in the formula of calculation of transfer is determined as follows:

Highland coefficient

K1=0,5 – if 30% of population of self-governing unit resides in highlands;

K1=1,0 - if 30-70 % of population of self-governing unit resides in highlands;

K1=1,5 - if 70% of population of self-governing unit resides in highlands.

Coefficient of underpopulated territorial units

K2=1,8 – if population of self-governing unit does not exceed 25 thousand; K2=0,4 – if population of self-governing unit is 25-30 thousand; K2=0,1 - population of self-governing unit exceeds 50 thousand.

For successful realization of the principle of equalizing of regional economy we shall necessary differentiate levels of socioeconomic development of regions introducing the appropriate methods. The funds are transferred to the lower level of budget if it regularly and completely participates in formation of revenues of state budget, but has lack of own financial recourses. Only for this reason the superior budget transfers the sums to budget unit of lower level. The first aim includes maximum filling of state budget with revenues, after that sometimes the next budget level may not receive or partly receive planned transfer, although transfers are planned in all territorial units. If budget of any region having potential ability is more or less planned with hope of further transfer, then prospective of economic progress and development of this region is not stable. Besides, we have impression, that economic equalizing of the regions is only formality and its practical fulfillment is not priority, as in case of introducing of the principle of transfer, as we think, it is automatically kept in mind, that it is done not for economic progress of the region, but for elimination of economic lag in comparison to the other, more developed regions. *Ex facte*, it is good, if social programs are implemented in economically lagging regions without delay, but, as we think, it would be better, to use significant part of total transfer recourses planned by state budget of Georgia for progress and development of economically lagging regions, but in comparatively less lagging regions only necessary social expenses should be financed. For this purpose it is possible to allot special fund of transfers for progress of lagging regions, from where less-developed regions will be financed in order of extent of their economic lagging, what will gradually enable us to approximate the levels of development of territorial units by means of transfers.

For regions having potential abilities it is purposeful to be dependent on filling with budget transfers to less extent. Usually, when in comparatively more developed region non-fulfillment of revenues in any kind is fixed, the appropriate mechanism should be developed for resolving the problem. The measures are planned for maximum mobilization of revenues, efforts to find additional courses, determination of new relations and spheres of activity. i. e., authorities of region care of self-rescuing and self-affirmation. For the purpose of comparison, the best example of above mentioned the fact is, that on the modern stage importance of federal subsidies, grants and credits in the USA gradually reduces, what points to growth of the share of self-financing of local budgets.

Separately, we shall point to the difficulties typical for determination of transfer volume. Many opinions concerning improving of transfer mechanism have been expressed. Scientists offer various formulas for its distribution. For example, professor I. Meskhia (Abuselidze, 2006) offers the simple rule for determination of volume of transfer with use of the following formula:

$$T = S - H1 + H2 + H3$$

where T – volume of transfers from central budget to region; S – mandatory cost to be born by local budget; H1 – revenue received from local taxes and duties; H2 – local non-tax revenues; H3- revenue received with long-term economic standards.

According to other opinions, on this stage it is purposeful to determine volume of transfer for each region in accordance with quantity of population residing within its territory. Besides, parameters received with such approach shall be considered average constant, which shall be corrected taking into consideration urgent tasks rising before concrete region. As we consider, if necessity of transfer rises, it is purposeful to take into consideration not only such indexes, as density of population, natural climatic conditions, poverty level, per capita income, regions' demand of financial recourses for resolving of current socioeconomic problems, level of participation of region in formation of budget revenues and budget institutions credit arrears. This list shall be added such significant index, as the sum required for economic potential of region and internal spare reserves, which will really improve regions development level and resulted further economic growth resolve problem of equalizing of their economic and social development levels. According to such approach the formula may be added index R – which covers sums required for activation of local spare reserves, but difficult to be provided due to pure revenues of local budget. Resulted, above formula receives the following look:

$$T = S - H1 + H2 + H3 + R$$

But if state budget cannot bear additional costs for at least minimum financing of such programs, it would be better, if central authorities stimulate local tax initiatives by the way of maximum decentralization of functions and authorities of local authorities.

Conclusion

In the socio-economic development of the territorial units of the most important is the division of competences between the center and the regions. We believe competency should be solved in three ways: a) special competence center, and b) issues relating to the special powers in the region (territorial units), and c) issues relating to a single management. Here as it should be noted that the Constitution of Georgia clearly formulated questions, relating to a special central government, but said nothing about the competence of national and territorial units (Abuselidze, 2006).

In our opinion, such a model is acceptable demarcation of competencies, which will provide the definition of specific competences of central and local authorities, and those powers that are not within the purview of any one of them, refer to the issues of unified management.

In our opinion, the basis for demarcation of the financial powers of the center and regions, we can put two basic principles: according to the first principle must delimit the financial center and the ratio of the region, which is primarily meant for each of them the existence of an independent budget and stable sources of replenishment orders and the possibility of an independent their own finances. But the problem of maintaining the economic balance, which is the guarantor of national independence and the main factor in the socio-economic development, should not fall out of the daily routine. It previa ideology is the basis of the second principle of delimitation of central and regional finance, according to which the state within its territory have to ensure that financial equalization of territorial units, starting with low development, with the average of the country.

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- Ministry of Finance Canada, official site: <http://www.fin.gc.ca/fin-eng.asp>

LITHUANIAN FINANCIAL SECTOR DEVELOPMENT OF POST-CRISIS PERIOD

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Abstract. The article gives an overview of the Lithuanian financial sector, analyzing its evolution, structure and perspective. Analysis consists of the financial crisis influence and the impact of the Lithuanian financial sector after the crisis, in rising Lithuanian economy. Analysis shows how much decreased the relative weighting of the financial sector and the contribution to economic development. The analysis is based on key indicators of Lithuanian banking sector and economy, and leads to conclusions about needs to develop financial sector. Moreover, the article discusses the evolution of the future in the financial sector, improvement of the supervisory and regulatory perspective.

Keywords: the financial sector, the banking sector performance.

JEL classification: G14 - Information and Market Efficiency; Event Studies. O16 - Financial Markets; Saving and Capital Investment; Corporate Finance and Governance.

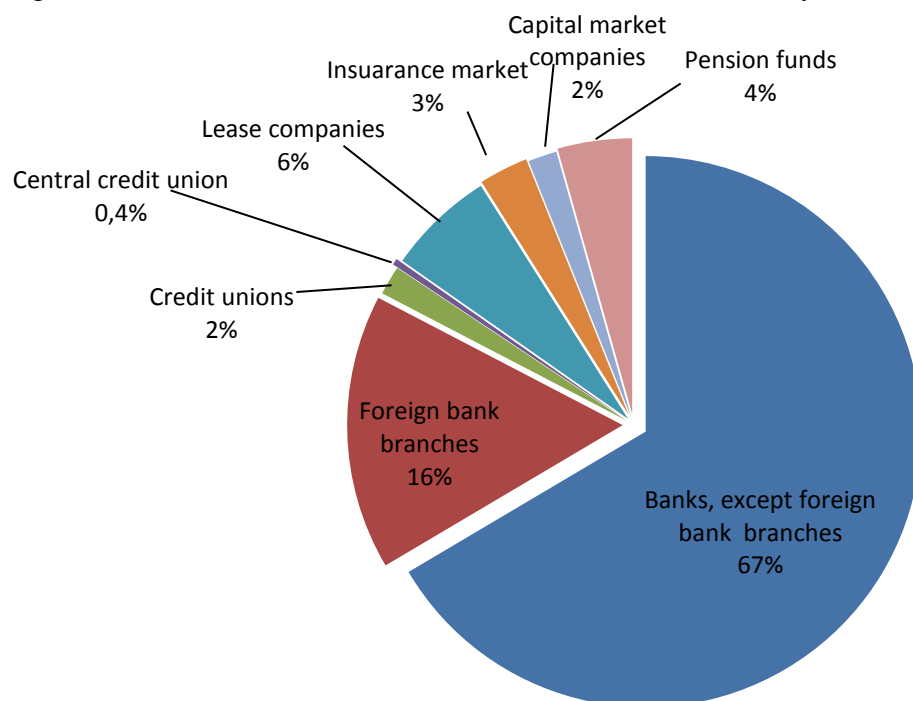
Introduction

In the article is represented an overview of developments in the financial sector, the importance of the composition. After detailed analyzes of financial intermediation supply and demand for their development. It analyzes the evolution and structure of the financial sector in the development of the Lithuanian economy recovers. Lithuanian banks have become the core of the financial system. There are other financial intermediation (for example: securities market, pension funds, insurance, etc.), it penetrates behind the banks, but their value in the long term must increase. The analysis **focused** on three financial constituents – the assets, credits and deposits. The analysis of the bank's main indicators and GDP evolution in 2005-2011 has a goal, set the dependencies, correlations and trends. Using relative indicators, such as the depth of the financial sector, allow better to study and see the dependencies. Banks' relative indicators better reflects the weight of the financial sector and the impact on the national economy. The financial crisis revealed important shortcomings in financial supervision, it appeared that the existing supervisory measures are insufficient to prevent and overcome the crisis. The analysis of financial sector development in the period 2005 and 2011, was made using published statistical and analytical data of the Bank of Lithuania, the Lithuanian Department of statistics, the European Central Bank, Euro stat, the International Monetary Fund, and the material in various articles.

The evolution and structure of the financial sector

In Lithuania, the banks are major part of the financial system. The banking assets consists of 78, 97 billion Lt, and was 74, 5 per cent of GDP, and more than 80 per cent of the total financial system assets in 2011 (1Fig.) Lithuanian banks, except foreign bank branches, consists of 67 per cent of the total financial system assets. Foreign bank branches have 16 per cent of total financial system assets. Other players in the financial sector relatively recent. Pension funds makes 4 per cent, leasing company makes 6 per cent, the insurance market makes 3 per cent, credit unions - 2 per cent, and the capital market participants – 2 per cent.

Figure 1 Lithuania financial sector structure (at the end of the year 2011)



Sources: AB NASDAQ OMX Vilnius, Lithuania's Banking Association, the Lithuanian Statistics Department, and Bank of Lithuania

In comparison with the EU's old Member States, Lithuania's financial sector is very small. The German financial sector assets consists of about 322 per cent of GDP, the Belgian - 324% of GDP, in the United Kingdom financial sectors amount about 550% of GDP, while Lithuania - 90,1% of GDP. Another important indicator of banks' loan-to-GDP ratio, which amounts of about 160% of the EU average, Luxembourg-255%, Belgium-242%, Finland-170%, while in Lithuania, only 51% of GDP, where we need to grow.

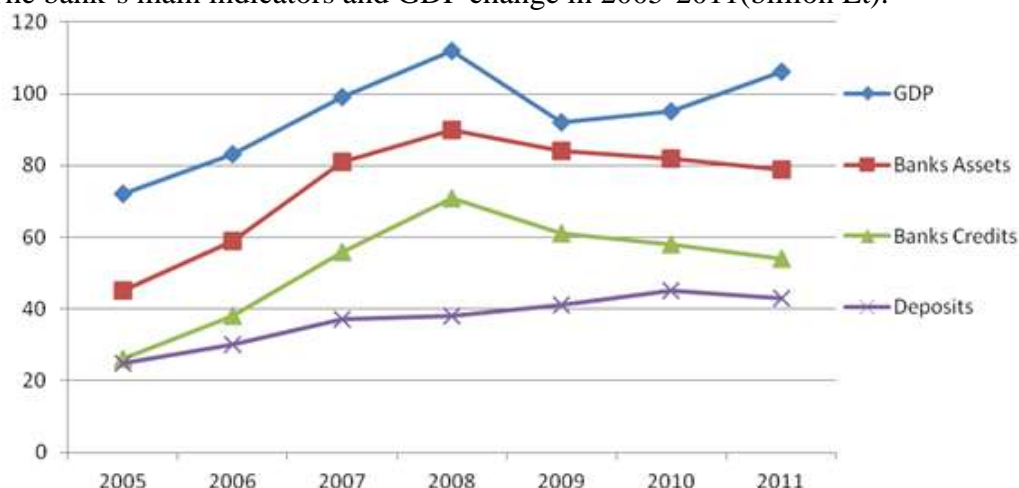
The banking sector is characterized by a high concentration of the three largest banks, which controls about 60 percent of the market. This increases systemic risk, because of the large bank bankruptcy dramatic repercussions for the entire sector and reduce competition.

In the autumn of 2008, the Central and Eastern Europe faced a global financial crisis like a fireplace (Aslund, 2011). The new ten European Union (EU) Member States from Eastern Europe faced a huge economic overheating. All new members perceived significantly increased inflation: in Bulgaria, Estonia, Latvia and Lithuania it became double. The financial crisis is already well estimated, it was a great blow on 15 September 2008, and the United States (US) investment bank Lehman Brothers went bankrupt. Suddenly the world decreased financial liquidity, and Eastern Europe faced "sudden stop" – it was left without credit, and liquidity. Although, free monetary policy has been a global phenomenon, so these small and very open economy countries were difficult to prevent.

The bank's main indicators evolution

The analysis of the bank's main indicators and GDP evolution in 2005-2011 (Fig.2) shows, that the loans are granted by the banks and GDP growth in 2005-2008 continue rise very similar, a linear dependency.

Fig. 2. The bank's main indicators and GDP change in 2005-2011(billion Lt).

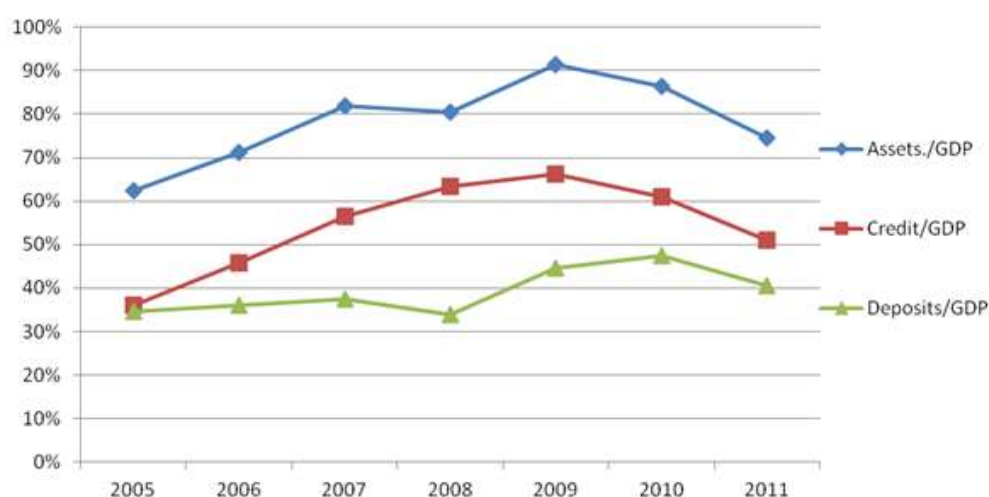


Source: Lithuanian Statistics Department, and the Bank of Lithuania

The economy decreased during the period 2008-2009, GDP fell sharper than loans. However, the loans declined at the beginning of the economic dynamics in 2010-2011, and the GDP contrary increased. Deposits with banks grew slower in GDP rise time, fall time did not decrease but even increased in 2009 and 2010. It was unexpected for crises time.

Economic growth in the financial sector and economic development (Levine, Rioja) is best visible analyzing the correlation between the banks loans and GDP, as claimed (Kendall, 2009), but this does not apply at the time of the fall (Fig.2). Often, scientists studying the dependencies using relative indicators, such as the depth of the financial sector (measured by the ratio of credit to GDP). Banks' relative indicators better reflects the weight of the financial sector and the impact on the national economy. We can see that 2011 banks relative indicators dropped to 2006 level (Fig.3). This shows how much the financial sector's contribution decreased to economic development.

Figure 3. Banks' relative indicators (in relation to GDP) change 2005-2011



Sources: Lithuanian Statistics Department, Bank of Lithuania, and the author's calculations

Banks do not take it easy this day bank stabilization indicators (assets, deposits, loans), but rather the relative indicators and banks weight loss in Lithuanian economy.

A fall in Bank loans supply and demand, as confirmed by the Bank of Lithuania carried out information for enterprises and banks in the survey in 2012. Banks relative asset curve is similar to deposits curve, which shows the relationship, especially in the period 2007-2011m.

Banking analysts have long been talking about the real estate bubble risk, but banks continue to irresponsible lending to construction companies and individuals. Banks' loan portfolio growth was about 50 percent per year and individuals to real estate even more than 60 per cent in 2005, 2007. Rapid growth in the loan portfolio and the Bank of Lithuania had to cause a concern.

Non-financial corporate and commercial banking survey (Bank of Lithuania 2012) show that most of them do not see a need to have the external resources, or borrowing too expensive. Companies that have all the financial needs of the business entirely from internal sources of funding accounted for nearly three-quarters of the survey respondents. Improving the performance of non-financial firms, borrowing from banks demand could be constrained because is their business tends to be financed from internal financial resources (the Bank of Lithuania 2012).

The financial sector Future

Financial sector collapse has given a clear signal about the market economy has changed significantly and the banking industry must take responsibility not only for a profitable business, but also for the banking activities of the possible consequences economy as a whole (Martinaityte 2011).

The financial crisis revealed important shortcomings in financial supervision, it appeared that the existing supervisory measures are insufficient to prevent and overcome the crisis. This problem is considered in both the United States (IMF 2012), and the European Union. Development of new banking regulation and control mechanisms in order to minimize the risks of crisis and limiting individual banking products profitability. It will take time; it appears all of the Euro system's special incentive measures and effects of the gain. The European Central Bank argues that on May, in 2012 it is very important that the banks would continue to strengthen its resistance to a variety of ways, and limited distributing it for profit (ECB 2012). In order to ensure the proper functioning of credits and a normalization of all sources of financing would be very important for the reliability of banks' balance sheets. It is proposed to limit or restrict guarantee and bond yields (Kuodis 2011).

The Bank of Lithuania, in order to achieve sustainable development in the financial market and for ways to effectively deal with the banks and their users' associations posed problems, was set up Consumer and banking Council and taken to coordinate its activities.

Lithuanian financial sector supervisory authorities transformed into a single supervisory agency the Bank of Lithuania in 2012. Created preconditions for achieving stability in the financial sector and expect a systematic, balanced approach to the financial sector harmonious development. A new monitoring system to ensure the market and its participant's transparency, market integrity and consumer protection - gaining weight.

Conclusions

Lithuania financial sector is very small. At the moment banking sector is the most important. The research results are based on the statistical data from 2005 to 2011 and indicate the financial market situation.

Economic growth in the financial sector and economic development is best visible analyzing in the correlation between the banks ' loans and GDP. However, this does not apply at the time of the economy fall.

Banks' relative indicators better reflect the weight of the financial sector and the impact on the national economy. We can see that 2011 banks relative indicators dropped to 2006 level. This shows how much the financial sector's contribution decreased to economic development.

Banks' loans demand fall down. Non-financial firms, borrowing from banks demand could be constrained because their business tends to be financed from internal financial resources. The confidence level of the banks fell as business partners.

The economic crisis has intervened in the banking system and has been surviving until now. Lithuanian financial sector supervisory authorities transformed into a single supervisory agency the Bank of Lithuania in 2012. Created preconditions for achieving stability in the financial sector and expect a systematic, balanced approach to the financial sector harmonious development.

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HEDGING AND SPECULATION AND MECHANISMS OF TRADING ON FUTURES MARKETS

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Abstract The aim off this this paper is to explain the mechanisms of trading on future markets using hedging and speculation. The instability on financial markets in post-crisis period , investments in commodities is the solution for elimination of the consequences of inflation and ensure the yield. The most important economic function of commodity markets is hedging. Almost everyone who tries to protection against adverse price changes in spot markets may use the term markets, thereby eliminating the risk of buying on the futures markets. This method of protection is called hedging and basically they are fixing prices against physical volatlnímu market. Speculation is the activity in the financial market, where speculator enters the market as a market participant in order to benefit the acceptance of risk in derivative market.

The obtained results of research evidenced the input of financial derivatives on financial markets expanded the portfolio of options of trading for institutional investors and retail investors. A significant place in this area has a rate futures market. Among the important features include hedging commodity markets. Hedging has the task of ensuring the operations against the large fluctuations in prices and creates a certain protection of investors. A group of traders, which is considered the most important experts call the speculators in the financial markets. Their importance for the financial markets is essential. The merchant does not need to wait for futures on the specific market conditions, profit can be achieved practically in all market situations, may buy and sell the commodity. Businessman analyzes markets and from the personal judgment then it yields its business decisions and interpret the solution. Own trading is a relatively simple.

Keywords: Commodities, futures, hedging, speculation, broker, investments

JEL classification:

G - Financial Economics,

G11 - Portfolio Choice; Investment Decisions,

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PROBLEMS AND PROSPECTS OF THE DEVELOPMENT OF UKRAINE STOCK MARKET IN THE CONTEXT OF FINANCIAL LIBERALIZATION AND INTEGRATION PROCESS

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Abstract. In this paper the rural problems and future prospects of domestic stock market of Ukraine are presented in the context of liberalization of capital movements and participation of Ukraine in the financial integration process. The main directions of reforming of Ukrainian stock market are provided in the frames of the improvement of financial policy and regulation. Consequences of liberalization of capital flow for the financial market participants in Ukraine are analyzed.

Keywords: stock market, financial markets, institutional investors, foreign investment, capital flow, financial regulation.

JEL classification: G20 – General G28 - Government Policy and Regulation

Introduction

For the most countries of the Commonwealth of Independent States (CIS) current stage of development is connected with the active phase of geopolitical reformation. The issues of strategic development in European or Asian vectors are urgent for Ukraine as well: assertion of multidirectional foreign policy certainly helps to smooth out arguments with western and eastern neighbors temporarily, but does not guarantee the positive prospects of cooperation for the both sides.

Possible cooperation between Ukraine and the Eurasian countries is restricted with the paternalistic relations imposed by Russia. Furthermore, the increase of the importance of membership in the World Trade Organization (WTO) is noticeable among the CIS countries, including Russia, which mean the lack of expected effect even for the leaders of the Eurasian integration.

Thus, the strategy of Ukraine to enhance the cooperation with the European Union (EU) seems by far the most attractive in terms of both political and ideological ambitions, as well as from the position of the expected economic benefits. During the 15th Ukraine-EU Summit of 19 December 2011 the leaders of the EU and Ukraine announced the completion of the negotiations on the Association Agreement, the aim of which is to move towards the political association and economic integration of the parties (European Union official site, 2012). In future, the new agreement will replace the Partnership and Co-operation Agreement which exists since 1998. Essential part of Association Agreement will be devoted to provisions for creation deep and comprehensive free trade area.

Also example of active participation of Ukraine in integration process is that in 2010 Ukraine signed Free Trade Agreement with European Free Trade Association (EFTA). Following ratification by all parties, it has become effective on 1 June 2012. EFTA-Ukraine Free Trade Agreement is expected to provide new opportunities to the EFTA member countries and Ukraine and enhance trade and investment relations between the both sides (The European Free Trade Association, 2010).

Of course, these steps also has ground for criticism, because the very nature of the EU enlargement stages has changed since the past years: the previous wave of enlargement occurred at much lower levels of integration, which allowed member countries to participate in shaping the strategy and the institutional structure of the Union, and the nature of relations was a compromise. Today, when the format of economic and monetary union is completely designed,

new countries are forced to accept it or reject it. Moreover, the expansion of the EU is increasingly becoming a vehicle for lobbying political interests, as opposition to the U.S., Russia, and China. In contrast, territorial expansion and population growth has its price - reducing the EU average GDP per capita.

Scientific studies show that economic benefits are also not guaranteed, in fact – adverse effects can occur in the short-term, leading to a negative perception of integration. Some skepticism of the public concerning the need for the accession to EU can be compensated only by concrete positive results of cooperation and minimizing the possible negative consequences for the domestic economy.

Thereby the current interest to the topic and controversial opinions concerning the impact of financial liberalization and integration on the financial markets of the developing countries shows its practical relevance and urgency for Ukraine specifically.

The aim of this research is the determination of the problems and main directions of reforming of Ukraine stock market in the context of integration and approximation to EU standards, as well as justification of probable economic benefits and negative consequences for the national economy from the implementation of procedures for the liberalization of the capital inflow.

During our research authors used the following **methods**: systematic (in determining and analyzing different views on the problem), economic-statistical, tabular and comparative (investigating the level of investment attractiveness of Ukraine itself and in comparison to other countries). Logical method, methods of analysis and forecasting were also used during the determination of the impact of capital movements' liberalization on the main economic units in Ukraine and introduction of prospect directions of the stock market development.

Investment climate and causes of poor performance of the domestic stock market

In recent years, the domestic stock market has showed relatively high growth rates. The capitalization of companies listed on stock exchanges at the end of 2011 was 13.9% of GDP, increased during the year by almost 5% (National Commission on Securities and Stock Market, 2012). However, the qualitative characteristics of the stock market are low, which decrease its performance and prevent from carrying out functions associated with the involvement and redistribution of investment resources to ensure sustainable economic development.

The problem of the stock market in Ukraine in the context of integration lies mainly in the creation of a favorable investment climate. Despite the growth of foreign investments by almost 5% per year (as of July 1, 2012 - \$52,426.7 million, including 78.8% of total investments from EU countries), this fact can hardly be comfortable, given that over 31% of them are coming from offshore areas, and, in fact, this is hidden repatriation of the domestic capital (Ministry of Economic Development and Trade of Ukraine, 2012; National Bank of Ukraine, 2012). Moreover, Ukraine will be deprived of decent prospects in the international allocation of labor if there are no significant changes in the practice and implementation of mechanisms to improve the investment climate. Most of the investments are distributed among companies of the energy sector, in which Ukraine has no objective advantages; furthermore the prospect of privatization of state enterprises as a source of investment attraction is limited in the short term period. Unpromising are also hopes to win the competition using the low cost of labor advantages, since this factor is effective in the attraction of investment only into raw materials and low-tech sectors.

A number of activities which raise the readiness of Ukraine to meet the conditions of the Association Agreement and EFTA Free Trade Agreement provide the measures aimed at intensifying cooperation in the field of financial services, including those which have significant and immediate impact on the stock market – improvement of regulatory system and legislation in the field of investor protection.

Meanwhile, despite substantial efforts in forming appropriate organizational, economic and legal framework to strengthen the investment climate, international experts observe a decline of investment attractiveness of Ukraine. Thus, according to World Bank and International Financial Corporation, Ukraine is ranked 152 among 183 countries in terms of quality of business environment in 2012 (World Bank and International Financial Corporation, 2012). Consequently, further attraction of foreign investment in Ukraine will depend on elimination of unnecessary operational costs, risks and barriers to competition, stimulation of investors to invest.

Of course, the implementation of the favorable investment climate has systematic nature and covers a significant range of issues in the areas of national strategy, taxation regime (consistency, reducing pressure), international image and so on. Problems which are directly related to the improvement of the stock market as a sphere of foreign capital attraction may be categorized as follow:

1. Legal barriers in investment in the corporate sector and the market valuation of the share capital (International Centre of Prospective Research, 2010). As of early 2011, among nearly 30,000 of joint stock companies there was only 9,600 which existed in the open form. And even in the process of restructuring activities in accordance with the Law "About Joint Stock Companies", the trend are not so optimistic: from 150 companies only 100 were reorganized into public companies during 2011, almost all of them were banks (National Commission on Securities and Stock Market, 2012).

2. Incapability of market mechanisms to ensure the rights and freedoms of investors as well as the low level of investor protection (Holdnyuk I. et al., 2012). Despite the presence of important assumptions, including macroeconomic stability, trade liberalization, international capital flows and the recovery of the financial sector there is still exist such systemic threats to investors as political instability, unpredictable legal field, disadvantages of public justice administration (particularly in the areas of property rights protection and spread of "raiding", discipline of fulfillment of judicial decisions), high levels of corruption, significant share of shadow economy. In the rating of property rights (IPRI - Index Property Rights Alliance), Ukraine is ranked 118th place among 130 countries and is behind all the countries of Central and Eastern Europe and Central Asia (average index of Ukraine - 4, against the regional average - 4,78). The main criteria of backlog are judicial independence, public trust in courts, corruption, protection of intellectual property rights, copyrights, etc. (Property Rights Alliance, 2012).

3. Low efficiency level of legislation on corporate management (Holdnyuk I. et al., 2012). The gap between Ukraine and the countries OECD in the issue "EU standards" is quite significant especially in the area of corporate law and management (Table 1). The most important problems are the opacity of the registration system and the possibility of distortion of information on shareholders, dilution of equity sizes due to additional emission of shares, blocking the meetings of shareholders and other. The question about minority rights which reduces property rights protection level and increases the risks for investment in Ukraine remains unregulated.

Table 1: Evaluation of business environment in Ukraine by the criterion of protecting investors in 2012

Index	Ukraine	Eastern Europe & Central Asia	OECD
Extent of disclosure index (0-10)	5	7	6
Extent of director liability index (0-10)	2	4	5
Ease of shareholder suits index (0-10)	7	6	7
Strength of investor protection index (0-10)	4.7	5.7	6.0

Source: World Bank and International Financial Corporation (2012)

Development of effective domestic stock market

Experience of successful stock markets of some CEE countries (Czech Republic, Poland, Slovenia, Hungary, Croatia and the Baltic countries), which operate on the basis of the consolidated stock exchange system, demonstrates an essential role played by the state in the formation of a liquid stock market. It should be emphasized that the specified policy has been implemented in several stages within the overall strategy to facilitate the development of the stock market in the context of the overall reformation of the domestic financial sector.

Based on the analysis of the experience of some CEE countries and considering individual features of Ukrainian economy, authors consider it appropriate to offer the following directions of the state policy in the developing of a functioning security market in Ukraine:

1) Ensuring the liquidity increase on the organized stock market (Yakubiyak M. et al., 2011) through consolidation and growth of the organized market. In order to reach this following practical steps should be taken:

- the introduction of strict rules about disclosure of information when getting listing on the stock exchanges and trading systems; to increase the demand for minimum equity capital volumes for stock exchanges, securities traders, registrars, custodians, depositories, trade organizers of collective investment institutions, asset managers, limiting the share participation of some shareholders in the share capital in others companies (to avoid creating a "pocket" companies);

- privatization through the initial public offering (privatization IPOs) on the organized stock market. This mechanism is well established in Poland, Hungary and the Baltic countries. It should be emphasized that during the selection of relevant stock exchanges there should be organized an open and transparent competition that will present the most important requirements for the organizer of trading.

2) Harmonization of legislation and regulatory infrastructure in line with EU standards (Yakubiyak M. et al., 2011). The main legislation acts in this area (Laws "About Securities and the Stock Market" and "About State Regulation of the Stock Market") generally correspond to EU principles, but the dynamic development of this segment has resulted in lack of such issues as:

- clear legislative regulation on the protection of shareholders' rights: participation of minority shareholders in the supervisory boards of joint ventures, granting benefits to shareholders in case of additional emissions, guaranteeing a minimum level of dividend payments from earnings, clear definition of the procedure of holding general meetings of shareholders;

- requirement for traders to join the investment guarantee fund;
- regulation of emission and turnover of derivatives that have critical importance in effective risk management and are able to lower risks that arise during the process of liberalization of capital flows and changes in the monetary regime;

- measures to develop the depository system: consolidation and integration custodians and registrars, creating of a centralized depository system by the market participants with limited participation of the state and taking into account the principles of the depository system in the EU, integration of the national depository system into the international depository structure;

- introduction of international disclosure standards of the International Organization of Securities Commissions (IOSCO) on the state level. Thus the disclosure of information about the financial market regulators is also one of the most important factors in the effective functioning of the market. First of all, information about the market and its participants, as well as the strategic directions of state policy should be regularly published to form expectations of market participants and to take timely steps aimed at ensuring stable functioning of the financial market.

3) Formation of institutional investors network (Holdnyuk I. et al., 2012). Private pension funds, investment funds, insurance companies are traditionally the most active

participants in the stock markets in developed countries. In Ukraine these institutions are still at an early stage of development and do not have significant financial resources to invest in securities. However, market development largely depends on the efficiency and size of institutional investors. One of the most urgent tasks for the development of institutional investors in Ukraine is to reduce incentives for their participation in shadow schemes and prosecuting illegal transactions such as "laundering" of financial funds. To do this, first, it is necessary to streamline the taxation of business profits (to liberalize allowable expenses, the convergence of tax and accounting) and to bring taxation of insurance companies into line with practices in developed countries.

Liberalization of foreign capital flows

The most controversial issue in the context of liberalization of financial markets is the mutual opening of markets for affiliates of financial institutions. The important feature of affiliates of foreign financial institutions is their direct subordination to the foreign entity and submission to the supervisory authority of another country. Key arguments against are reduction the effectiveness of national macroeconomic policies, losing control over capital, reduction of the share of domestic companies because of their non-competitiveness, the threat to "import" financial crises (Yakubyak M. et al., 2011). Advantages associated with the coming of foreign players on the domestic financial market - increasing capitalization and diversification of the stock market, improved service quality and management. Without analyzing the empirical evidence of the effect from the foreign affiliates of financial institutions, it should be noted that the experience of the EU shows that most financial institutions prefer to create holding companies or subsidiaries instead of branches: the regulatory field of the country in which expansion is occurred is usually more comfortable than in the country where the parent institution is situated.

Increased degree of integration in global financial markets and stock markets in particular affects the interests of all their participants. Identifying the main areas of influence on these interests and finding out the balance between them has become a necessary condition to unite all stakeholders in the process of moving toward free trade in financial services and getting maximum socio-economic benefits. The most significant impact of the process of financial liberalization and integration on the economic units including households, firms, state authorities and participants of the stock market is given in Table 2.

Table 2. Consequences of liberalization of capital movements for the economic units in Ukraine

Economic unit	Benefits	Adverse effects
Households	<ul style="list-style-type: none"> • increased range of financial services and institutions • improvement of the quality and safety of investments in securities • protection of minority investors 	<ul style="list-style-type: none"> • reduction of number of employees in the financial sector • increased competition among specialists in the stock market
Firms	<ul style="list-style-type: none"> • increased access to funding sources • reduction of transaction costs for fund raising • transparent and effective mechanism for setting the price for resources • expansion of the range of emission 	<ul style="list-style-type: none"> • increased funding requirements for transparency of ownership structure and activities • risk of losing control over the company • closer interdependence of the conjuncture of European and world capital markets

Financial institutions	<ul style="list-style-type: none"> • implementation of best management standards • access to European capital markets • improvement of the institutional development of the stock market 	<ul style="list-style-type: none"> • increased competition • threat of outflow of clients to foreign competitors • risk of losing control over business
State authorities	<ul style="list-style-type: none"> • improvement of the procedures of supervision and control • transparency of stock market 	<ul style="list-style-type: none"> • additional costs for training employees to harmonize procedures with EU standards • poor control over branches of foreign investment companies • loss of tax revenues from foreign subsidiaries

Source: Compiled using the results of research of International Centre of Prospective Research (2010)

To sum up the overview of the main consequences of the liberalization of the stock market to the national economy, it should be noted that most of the expected positive effects (increased investment volumes, lower cost of funding, volatility of prices for financial assets, etc.) have, in contrast to the negative, significant time lag. Thus, GDP growth comparable with the EU average is observed only in a few years (Greece, Portugal, Spain), foreign investment can grow in absolute volume, but the structure of investment in relative terms may even worsen (Poland) and so on (National Institute of Strategic Research, 2011).

But even taking into account all possible danger, the experience of countries that have already joined the EU shows that positive effects of increased access to financial markets begin to dominate (projected welfare growth due to enhanced cooperation with the EU is 4-7% in the medium term) (National Institute of Strategic Research, 2011). In addition, the long term prospects of EU membership gives Ukraine a chance to choose the most appropriate level of financial integration and harmonization of legislation from the point of economic efficiency and safety.

Conclusions

To conclude, it should be noted that such problems as decrease of the effectiveness of government regulation, decline of the profitability of domestic stock market operators, increase of the influence of global financial crises and other arise almost simultaneously with the integration and liberalization of capital market. Thus, the inevitable further liberalization of foreign trade will require from the state readiness to apply strategic levers to the challenges and risks connected with undesirable consequences of the foreign capital inflow. The share of domestic capital in the financial market of Ukraine will inevitably decline, which will enhance the possibility of influence of non-residents on the economic stability of the state. That is why the necessary strategic objective is to ensure an appropriate level of financial security when opening access to domestic capital markets.

On the other hand, analysis of the experiences of other countries in the field of financial integration with the EU shows that interest in the availability of tools to improve investment climate and reduce risks on the domestic financial market is mutual. So, along with the commitment to ensure equal access of foreign participants to capital markets and investment protection, it should be applied only to direct investment on the first stages, and the country should have the right to impose restrictions on the movement of short-term capital.

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PROBABILITY OF DEFAULT USING THE LOGIT MODEL: THE IMPACT OF EXPLANATORY VARIABLE AND DATA BASE SELECTION

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Abstract. The Spanish economy is suffering a severe financial crisis which is affecting all Spanish savings banks as well as some major banks. One of the triggers of the crisis is the high companies' default rate experienced in the last years due to a deficient credit risk management by financial institutions. Credit risk analysis is mainly undertaken using the logit model to calculate the probability of default of the companies. In this work we describe some problems that arise when using this model and that can have a negative impact on the quality of the results obtained.

Keywords: Credit risk, Default, Logit Model

JEL classification:

G21 - Banks; Other Depository Institutions; Micro Finance Institutions; Mortgages

G32 –Financial Risk and Risk Management

G33- Bankruptcy; Liquidation

D81 – Criteria for Decision-Making under Risk and Uncertainty

Introduction

Credit risk analysis is one of the most important tasks to be undertaken by financial institutions. The lack of a correct methodology to calculate the probability of default of the clients may lead to high losses in the banks, create systemic risk, and affect the whole economy of a country. An example of such an event can be seen in the Spanish case, where the economy is suffering because of the high default rates of the credits and the huge losses of the credit institutions since 2010. It has become obvious that the credit risk management undertaken by the Spanish banks in the previous decade has been inadequate. The aim of this paper is to make clear that the models employed to calculate the probability of default, as most models, have some *caveats* that must be considered when making use of the models. If the models are not correctly used, the results obtained can lead to inaccurate understanding of the situation and to bad decisions that can affect a whole country.

The origin of the study of the probability of default is attributed to Beaver and Altman. Using univariate analysis on 30 different ratios, Beaver (1966) showed that the value of certain ratios varied significantly between healthy companies and those in financial difficulties. Altman (1968) used linear discriminant analysis on various financial ratios in a multivariate context to develop insolvency prediction models. This study encouraged other researchers to look for new statistical and econometric techniques that would provide a method of predicting defaults, including the famous Z-score created by de Altman et al. (1977). Without being exhaustive, among the pioneering papers we can include: Jensen (1971), Gupta & Huefner (1972), who used cluster analysis; Vranas (1992) with a linear probability model; the work of Martin (1977), Ohlson (1980), Zavgren (1985), Peel (1987), Keasey et al. (1990) and Westgaard & Wijst (2001) on logit models; Zmijewski (1984), Casey et al. (1986) and Skogsvik (1990) with probit models; Luoma & Laitinen's study (1991) based on survival analysis and the work of Scapens et al. (1981) on catastrophe theory. In the last two decades, researchers have focused on artificial

intelligence and non-parametric methods, including: mathematical programming, expert systems (Elmer y Borowski, (1988); Messier & Hansen, (1988)), machine learning (Frydman et al. (1985)), rough sets (Slowinski & Zopounidis (1995); Dimitras et al. (1999), McKee (2000), neural networks (Wilson & Sharda (1994); Boritz & Kennedy (1995)) and multicriteria decision analysis – MCDA (Andenmatten (1995); Dimitras et al. (1995); Zopounidis & Doumpos (2002)). In many of these studies a high degree of precision was achieved in classifying and predicting business defaults.

It should be pointed out that although there are many methods of estimating the probability of a default, as stated above, at the present time the traditional methods, especially those based on the logit model, are still preferred by professionals in the field. However, one must be aware of certain robustness problems that can arise when using logit, especially in relation to the composition of the sample used to estimate the model. Researchers should pay close attention to three factors: the choice of variables to be used in the model, the influence of the sample on the model results and the cutoff point. Financial variables, especially accounting ratios, are normally used in this type of works and it is not usually advisable to mix absolute and relative variables. Since a choice can be made from a wide range of variables, a factor analysis is normally carried out to reduce their number, keep the degrees of freedom high and avoid multicollinearity problems, while ensuring that the principal financial dimensions (profitability, liquidity, solvency, etc.) are represented. Evidently, it is highly probable that the result of the factor analysis will be influenced by the sample of companies used; if these companies are changed, the variables selected after the factor analysis will also vary.

Whatever the variables used, the logit model finally obtained will depend on the sample on which the model is based. This means that only some of the preselected variables will actually be used in the model, since both the selection and the weighting of the variables will depend on the sample of companies.

Furthermore, whatever cutoff point is chosen, even though it will not modify neither the selected variables nor their weights, this cutoff point will affect the discrimination process and thus also the percentage of correct and incorrect predictions.

In the present study we will use the logit model to analyse credit risk on a sample of Spanish companies using financial information. Throughout the model estimation process we will see how the estimated models will in fact vary as the sample is modified. This point is of great importance for researchers and professionals, since it shows the high degree of dependence of the models on the sample used.

The rest of the paper is structured as follows: Section 2 describes the data base and the selection of the independent variables. In Section 3 the logit model is calculated on two different subsamples and the changes on the models obtained are commented. Finally, Section 4 concludes.

Selection of the Companies in the Data Base and the Independent Variables

In order to analyse the probability of default, the companies in the data base must be separated into two groups: defaulted and not defaulted companies. Identifying which companies have defaulted may be the first challenge. For this study we have considered both the legal situation (being subject to court proceedings) and net negative worth (technical bankruptcy) when classifying the financial situation of the companies in the sample.

The data base for our study consisted of Spanish firms belonging to Group A (agriculture, stock-farming and forestry), Group C (manufacturing, food processing and soft drinks) as classified by the Spanish National Classification of Economic Activities. The firms had total assets between €2m and €50m in 2007, the year with the lowest default rate in the last decade. The information for financial year 2007 was obtained from the SABI data base.

Out of the 622 companies analysed, 49 companies were defined as insolvent.

A set of financial and accounting ratios were selected from the firms' accounts as independent variables. These ratios belong to different categories such as liquidity, solvency, profitability and economic structure, and usually appear in the models mentioned in the literature.

Table 1: Ratios used in the empirical analysis

ROA	Operating income / Total assets
RAI	Pre-tax profits / Total assets
ORA	Ordinary profits / Total assets
FRA	Financial results / Total assets
ORS	Ordinary results / Sales
EC	Equity / Creditors
C1	Total assets / Creditors
C2	Assets / Creditors – Cash – Temporary investments)
L1	Cash / Short term creditors
L2	Cash / Assets
L3	Current assets / Short term creditors
L4	Operating income / Current liabilities
L5	Creditors / Short term creditors
OIFE	Operating income / Financial expenses
SA	Sales / Total assets
P1	Operating income / Sales
P2	Sales / Personnel expenses
P3	Sales / Financial expenses
P4	Pre-tax profits / Financial expenses
P5	Sales / (Financial expenses + Personnel expenses)
PFE	Profits before tax and interest / Financial expenses
CRSD	(Cash + Realizable assets) / Short term debt
EA	Equity / Total assets

Resource: Authors

When working with a list of interrelated ratios, normally a preliminary step is undertaken to reduce the number of variables and avoid statistical problems. In our study, principal components analysis and the Kaiser criterion were used. Table 2 gives the varimax orthogonal rotation of the factor matrix. Nine factors or groups were extracted and the first element of each group was selected as representative. So, the selected explanatory variables to be used in the models are: RAI, L3, P5, PFE, P1, FRA, L5, C2 and SA.

Table 2: Rotated component matrix

	Component								
	1	2	3	4	5	6	7	8	9
RAI	0.935	0.004	-0.076	0.030	0.062	0.230	-0.044	0.003	-0.092
ORA	0.930	-0.012	-0.056	0.032	0.069	0.224	-0.084	0.023	-0.062
ROA	0.912	-0.025	-0.037	0.047	0.063	-0.183	-0.043	-0.071	-0.135
L4	0.594	-0.137	-0.160	0.068	0.086	-0.401	0.101	0.306	0.208
EA	0.472	0.298	0.092	-0.013	-0.002	0.247	-0.089	-0.235	0.307
L2	0.345	0.283	0.007	0.088	0.008	0.297	0.009	-0.069	0.010
L3	0.055	0.907	0.013	-0.011	-0.009	-0.086	0.060	0.277	0.100
CRSD	0.057	0.905	0.010	-0.009	-0.006	-0.089	0.052	0.281	0.094
L1	-0.036	0.800	0.070	0.025	0.051	0.196	0.044	-0.216	-0.059
C1	-0.069	0.797	0.241	-0.052	-0.014	0.194	-0.099	-0.322	-0.093

Table 2: Rotated component matrix

P5	-0.058	0.090	0.987	-0.043	-0.034	-0.013	0.021	-0.026	0.024
P2	-0.035	0.134	0.844	-0.125	-0.016	0.130	-0.040	-0.150	-0.053
P3	-0.066	0.003	0.817	0.075	-0.044	-0.186	0.088	0.136	0.109
PFE	0.066	-0.008	-0.056	0.992	0.047	-0.010	-0.007	0.020	-0.007
OIFE	0.058	-0.002	-0.026	0.992	0.038	-0.003	-0.012	0.003	-0.015
P1	0.086	-0.024	-0.021	0.042	0.991	-0.022	0.000	0.022	0.015
ORS	0.091	0.047	-0.063	0.043	0.989	0.026	-0.011	0.005	0.003
FRA	0.193	0.059	-0.090	-0.028	0.009	0.860	-0.009	0.148	0.070
L5	-0.150	0.062	0.068	-0.016	0.000	0.008	0.739	0.064	0.079
EC	0.050	-0.017	-0.025	0.003	-0.014	-0.036	0.733	-0.089	-0.128
C2	-0.041	0.061	-0.006	0.013	0.019	0.103	-0.046	0.813	-0.106
SA	0.156	-0.100	-0.181	0.060	-0.084	-0.173	-0.297	0.057	-0.656
P4	-0.012	-0.032	-0.051	0.018	-0.034	-0.064	-0.203	-0.043	0.651

Resource: Authors

Using the Logit Model to predict Business Failures with different samples

Once the variables to be introduced in the model are selected, the logit model can be applied on the sample. The logit technique provides a linear combination of independent variables that makes it possible to estimate the likelihood of a firm belonging to either of two previously defined groups (not default/ default). Each firm can only belong to one group. The model calculates the probability “p” of the firm belonging to the insolvent subpopulation by expression (1):

$$p = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)}} \quad (1)$$

X_i being the selected ratios and β the estimated coefficients for each of the ratios used. If the probability is equal to or greater than 0.5, the firm is assigned to the group of not defaulted companies. If not, it is placed in the group of defaulted firms.

To obtain the prediction model to calculate the probability of default, two different analyses were carried out by logistic regression. First all the companies in the sample were used. Second, a balanced sample of defaulted and not defaulted companies was employed. When calculating the model, different cutoff points were considered. This is due to the fact that around 8% of the firms in the original sample were insolvent (49 out of 622), so different initial probabilities of belonging to one group or the other needed to be taken into account.

The Forward method (a new variable is introduced in each step) and the Wald statistic were used in all the models to select the subset of variables to be included in the model, being statistically significant.

Table 3 shows the model estimated by logit regression for the total sample of 622 firms from the Spanish food and agriculture sector using financial information as of 2007.

Table 3: Summary of the model of the complete sample (622 firms)

$p = \frac{1}{1 + e^{-(2,941 - 12,007RAI - 19,496FRA + 0,020L3)}}$				
Variable	Coefficient β	Wald statistic	Significance	Exp (β)
RAI	- 12.007	28.860	0.000	0.000
FRA	- 19.496	4.806	0.028	0.000
L3	0.020	6.891	0.009	1.021
Constant	- 2.941	153.805	0.000	0,053
0.5 cutoff point: % of correctly classified cases: 92.80% Non insolvent firms: 99.50% Insolvent firms: 14.30%				
0.2 cutoff point: % of correctly classified cases: 91.80% Non insolvent firms: 96.30% Insolvent firms: 38.80%				

Resource: Authors

As can be seen on Table 3, the calculation was repeated, changing only the cutoff point from 0.5 to 0.2. In this case, when the model assigns a value greater than 0.2 the firm is classified as insolvent. Another result to underlined is that the probability of being in the first group (non insolvent firms) is reduced, but on the other hand the probability of correctly predicting insolvency increases. In both cases, the models do not correctly detect most of the insolvent firms (14.30% and 38.80% for a cutoff point of 0.5 and 0.2 respectively).

The same analysis is repeated again, with a balanced sample, including an equal number of insolvent and non-insolvent firms. To do this analysis, as the sample of companies is different, new independent variables are selected. Using principal components analysis and the Kaiser criterion again, eight variables are selected: CRSD, EA, P1, PFE, RRF, L1, L5 and P4. The results for a 0.5 cutoff point is shown in Table 4. The new model has improved greatly the capacity for identifying the insolvent firms, up to 92.70%.

Table 4: Summary of balanced simple model (82 firms: 41 insolvent and 41 non insolvent)

$p = \frac{1}{1 + e^{-(1,368 - 6,081EA)}}$				
Variable	Coefficient β	Wald statistic	Significance	Exp (β)
EA	- 6.081	19.100	0.000	0.002
Constant	1.368	12.119	0.000	3.926
0.5 cutoff point: % of correctly classified cases: 89.00% Non insolvent firms: 85.40% Insolvent firms: 92.70%				

Resource: Authors

The model obtained only includes one independent variable, equity over total assets (EA).

It is noteworthy to observe that the selected variables in the two models are different. The variable EA was not even selected as independent variable after the principal components analysis when applied on the sample of 622 firms. Nevertheless, the second model, applied on a reduced sample of selected firms, can predict better than the first one.

Conclusions

In recent years the need for banking institutions to undertake a correct risk evaluation has become evident. Among the most important risks to consider, credit risk appears in a preferent place. A mistaken credit risk analysis can have a very negative impact on the balance sheets of

the financial institutions and may lead to big economic problems. An example of this can be recognized in the case of the present Spanish economic crisis, which is affecting the whole Euro area. As the number of defaulted credits is increasing, the number of bankrupt banks increases as well, creating a wave that affects the whole economy and the welfare of the citizens.

Credit risk has been a subject of study for many decades. There exist many different models to calculate the probability of default of the companies, such as those based on artificial intelligence, mathematical programming, expert systems, neuronal networks etc. The most widespread method nevertheless remains the analysis by the logit regression model, which is used, for example, by the most important rating agencies. Furthermore, this methodology is used as a benchmark in many of the studies in the literature. The use of the logit model is not completely free of difficulties, specially the correct selection of the explanatory variables and the appropriate sample to estimate the model. This issues should be borne in mind by researchers and investors who very often do not give it the attention it deserves. This lack of attention can lead to mistakes when interpreting the outcomes of the models, which results in bad investment decisions.

The present paper describes the credit risk analysis of a number of Spanish business companies by means of the logit model. After carrying out a factor analysis to select the explanatory variables, the logit model was estimated by Wald's forward method on two different samples of business companies. The first sample contained the entire population of selected companies and the second a balanced sample made up of one half insolvent and one half solvent companies.

The main conclusion that can be drawn from this work is the influence that the researcher can have on the models obtained. The researcher must pay special attention when selecting the database, as this database will conditionate all the results, such as the selection of the independent variables, the cutoff point or the final model obtained. Or, in other words, the researcher can modify the results just by changing the database, the sample to be used, the way of selecting the independent variables or the cutoff point.

Together with these problems, there are other important issues researchers must be aware of, as the quality and reliability of the data, and the survival bias.

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FACTORS FORMING IRRATIONAL LITHUANIAN INDIVIDUAL INVESTORS' BEHAVIOUR

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Abstract. The paper aims to identify factors forming irrational individual investors' behaviour in Lithuanian stock market. For this purpose and on the basis of the results of the scientific literature research, factors forming irrational behaviour of individual investors were identified and used for the preparation of questionnaire for individual investors, actively trading in the Lithuanian stock market. Also a complex research methodology for identifying irrational investor behaviour forming factors and investigating their impact on individual investors' decisions made in the stock market was developed. The study showed a logical relationship between the factors forming irrational behaviour of individual investors and decisions made in the stock market.

Key words: individual investor's behaviour, irrational behaviour, factors forming irrational behaviour, behavioural finance, cognitive and emotional biases.

JEL Classifications: G - Financial Economics, G1 - General Financial Markets, G11 - Portfolio Choice; Investment Decisions.

Introduction

Understanding of investors' behaviour starts from the investigation of its forming factors. Recognizing that economic behaviour is not limited only to qualitative analysis of market events and quantitative analysis of data, but it also reflects the understanding and evaluation of these events as well as data awareness of economic participants, at the same time the importance of subjectivity in making investment decisions is noted. Global financial markets pose new challenges for investors, and activities of all investors are based on continuous decision-making, which is not always rational, and, as a result, unexplained by the traditional economic theory, assuming that all investors operating in the market are rational, and the capital market is efficient. That is why behavioural finance theory, contradictory to traditional financial theories in their core provisions, was started to be actively developed. It holds that prediction of investment decisions cannot be based only on rationality, as far as significant influence on the investor decision is made by his/her provisions and subjective assessment of the situation.

Studying investors' characteristics and individual investment behaviour and its consequences for financial markets scientists from various countries in their analysis come to the conclusion that irrational factors affect the behaviour of investors. The global financial crisis of recent years has underlined the necessity to research more widely investor behaviour and its determinants as well as the consequences of irrational investor decisions on financial markets.

Currently researchers from various countries are interested in analysis of problems of behavioural finance, market uncertainty and inefficiency, market anomalies, and influence of investor psychology on their decisions in different aspects. The researchers of financial behaviour (Bodie, Kane and Marcus, 2007) state that real investor behaviour deviates from rational behaviour under the influence of various subjective factors such as information, awareness and assessment, risk tolerance and understanding, personal qualities and investor emotions, mood and expectations. Jordan and Miller (2008) assume that markets are not efficient, and they prove this assumption. Thus one of the basic financial theory concepts – the efficient market hypothesis of Fama (1970), defining a market as being efficient when prices of financial instruments reflect all available information and instantly change depending on new information - faces a challenge. However, it is noted that invoking the assumption that in an efficient market it is impossible to earn more than the market because of rational, profit maximizing investors, the classical theory does not reflect the real market situation.

It should be noted that researchers' interest in irrational investor behaviour and its consequences for financial markets is constantly growing. It could be illustrated by numerous studies dealing with one or more influencing investors' behaviour factors, investors' personal characteristics, the impact of cognitive or emotional biases on their behaviour and investment decisions (Campbell and Sharpe (2007), Lim (2006), Laibson and Madrian (2008), Pouget and Villeneuve (2009), Dave and Wolfe (2003), Biais and Weber (2008), Nyman (2006), Cipriani and Guarino (2008), Park and Sabourian (2009), Dasgupta and Prat (2007), Barber and Odean (2001), Glaser and Weber (2007), Drees and Eckwert (2005), Chiu and Wu (2009), Maymin (2009), etc.). Analyzing the problematic issues of the studies of the last decade we can notice that the influence of investors' personal characteristics on their behaviour and decisions have been more investigated.

Analysis of scientific literature of Lithuanian authors has shown that financial behaviour has been given very little and fragmentary in the studied researches. Bikas (2008) analyzed the saving behaviour of Lithuanian inhabitants and presented a model of forming individual savings. Jurevičienė and Stonkutė (2010) analyzed the peculiarities of efficient markets hypothesis and financial behaviour, saving and investment measures. More extensive scientific empirical studies were made by Uzdžilo (2010), Baleišytė (2011), and Grigaliūnienė (2011).

The *scientific problem* is identified by two questions: What are the factors forming irrational behaviour of individual investors? and How their influence reflects on decision-making depending on investors' personal characteristics?

The *object* of the research is factors forming irrational behaviour of individual investors. The *aim* of the research is to identify factors forming irrational investor behaviour, to prepare a methodology for their complex research, and to investigate the impact of irrational behaviour of Lithuanian individual investors on their decision-making in the stock market. In order to reach the aim of the research the following *objectives* of the research have been formulated:

1. To recognize factors forming irrational behaviour of individual investors analyzed in scientific researches.
2. To develop a complex research methodology for identifying irrational investor behaviour forming factors.
3. To identify the factors forming irrational behaviour of Lithuanian individual investors and to find out their impact on investors' decision-making depending on their personal characteristics.

Research methods: Analysing the factors forming irrational behaviour of individual investors and their impact on investors' decisions the author used the methods of literature analysis, comparison of theoretical insights, networking, benchmarking, analogy, and generalization. In order to substantiate the methodology for determining the occurrence of irrational behaviour in stock markets and testing options for assessment of the factors forming irrational behaviour of individual investors and their impact on their decisions, analysis of Lithuanian and foreign research methodologies used in scientific studies and assessment of suitable scientific research methods for possible evaluation of the research object were performed. The methods of statistical and systematic comparative analysis and survey were used in the empirical research. The received data was processed using the software Microsoft Excel.

Research limitations: During the research of factors forming irrational investors' behaviour only individual investors (members of the Lithuanian Financial Analysts' Association and subscribers and readers of the journal *Invest*) were interviewed. The author does not propose that anomalies appearing in the stock market are connected only to individual investors' irrational behaviour, because trading volumes and managed investment sums of institutional investors are significantly higher in comparison to individual investors operating in the market. But decisions made by institutional investors are correlated with their accepted investment strategies, their decisions are usually made collegially, so in order to investigate whether and how irrational behaviour of institutional investors occurs it is necessary to perform additional

research. In the paper the causes of the factors forming irrational behaviour of individual investors were not analyzed, it was intended merely to identify them and determine their effects on investor behaviour and stock market decisions.

Research of Lithuanian Individual Investors: Methodological Approach

The research of Lithuanian investors' behavior was divided and held in 2 stages. During the first stage for the investigation of irrationality of individual investors pilot research was made. The target of the research was to identify the influence of cognitive and emotional biases to the individual investors of Lithuania. For this purpose the author of the paper used the questionnaire prepared by combining possible influence of these biases into closed-end questions without stating the bias itself. Each question was compounded to evaluate one specific bias and at the final stage of the questionnaire the investor was asked to identify himself/herself. During the research the survey target group of actively trading Lithuanian individual investors (20 people) was considered. The results of the pilot research showed that individual investors in Lithuania suffer from the majority of biases, such as anchoring, mental accounting, confirmation and hindsight bias, herd behavior, overconfidence, overreaction and availability bias.

During the second stage after the evaluation of the results of the pilot research in the first stage, necessary changes in the questionnaire were made and survey was broadened to more than 5000 individual investors invited to take part in the research. As the target group of the research were actively trading investors, the questionnaire was sent to the Lithuanian Association of Financial Analysts (it unites 90 members and the majority of them are investors) and to the journal “Invest”, which edition in 2011 is 5000 copies. The editorial office of this journal collaborated with the authors of the research by distributing the link to the questionnaire among the subscribers and placed the questionnaire on their page in Facebook. This helps the researchers to insure the complex approach of individual investors.

Survey was held in March-April 2011. 404 individual investors filled the questionnaire completely. Taking into consideration the requirements insuring the validity for such researches, they all were completed, the results are statistically significant and reflect current situation in Lithuanian financial market.

After the medication of pilot research questionnaire, the survey form consisted of 3 basic parts:

1. *identification of the respondent as investor* (investors were asked to specify their investing experience, their investing skills, investing results and their attitude towards risk, name the markets where they invest most);
2. *investors' situation evaluation and behavior preferences* (investors were asked to select the answer from the list that illustrates the most possible behavior and valuation of the current situation);
3. *investors' personal identification* (investors were asked to present themselves (their age, sex, education, current employment and marital status).

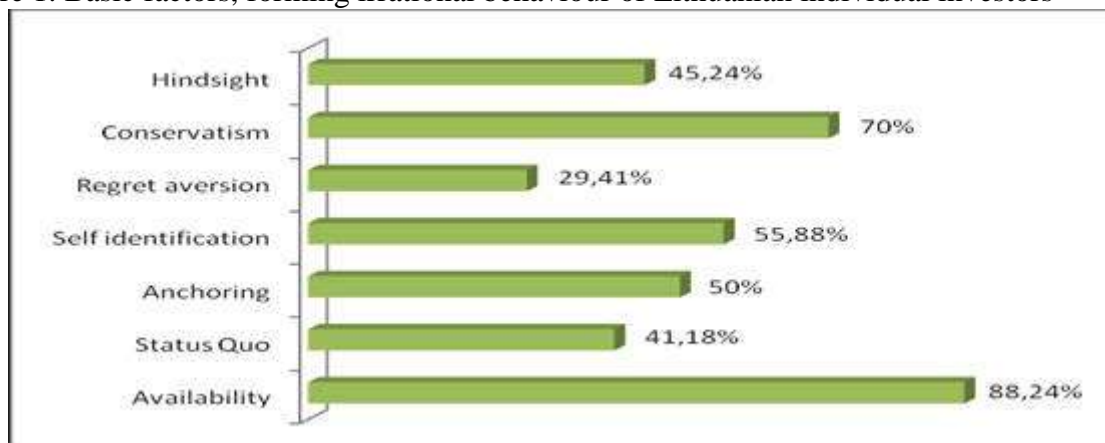
Final questionnaire allowed deeper evaluation of investors' behavior with the intent to analyze how these above mentioned personal characteristics could influence their decision-making. The total number of questions in the survey was 25 and individual investors were asked to answer them online by providing a link to the questionnaire. This allowed insuring anonymity and the safety of data provided by investors. The questionnaire in Lithuanian is available at <http://www.apklausa.lt/f/iracionalia-investuotoju-elgsena-formuojanciu-veiksniu-tyrimas-lw8asug/answers/new.fullpage>.

Based on the developed research methodology, the data collected were processed by Excel and basic results and findings are provided in the next section.

Research of Lithuanian Individual Investors: Results and Basic Findings

Empirical research showed that basic factors forming irrational behaviour of Lithuanian individual investors are overconfidence, conservatism, representativeness, and crowd behaviour. These identified biases of irrational behaviour of individual investors allow accepting the assumption that behaviour of Lithuanian individual investors could be treated as irrational in some situations and stating that Lithuanian individual investors show irrational behaviour when making decisions in the stock market. The basic factors forming irrational behaviour of Lithuanian individual investors are summarized in Figure 1.

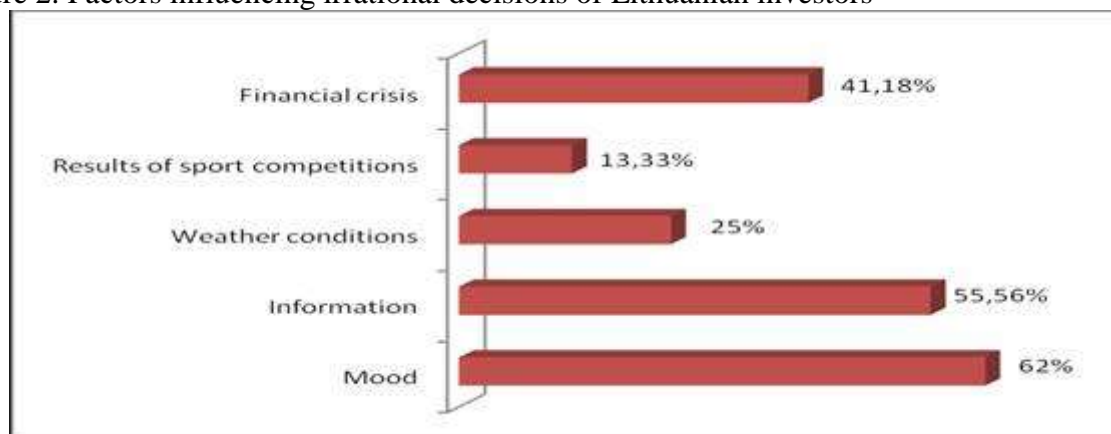
Figure 1. Basic factors, forming irrational behaviour of Lithuanian individual investors



Source: prepared by the author (2012)

During the research it turned out that emotions and intuition also influence Lithuanian individual investors' decisions. Basic factors influencing investors' mood and, as a consequence, their decisions are presented in Figure 2.

Figure 2. Factors influencing irrational decisions of Lithuanian investors



Source: prepared by the author (2012)

The relationship between personal characteristics of Lithuanian individual investors, such as investment experience, age, gender, and profession, and stock market decisions was discerned (see Table 1). According to the research results women are more influenced by their mood when making decisions. Meanwhile investors-men are more willing to take risks, and their decisions are influenced by the confirmation bias. Older investors are more exposed to external information and less confident of their own investment decisions made. Younger investors are less influenced by the confirmation and Status Quo biases. Economist-financier specialty investors tend to be more confident and assess their investment skills with optimism. These

investors are more confident in their decisions and are less likely to change them under the influence of new information. Behaviour and decisions of investors of other specialties are more affected by the recency bias when compared with economists and financiers.

Table 1. Different personal individual investors' qualities and factors influencing decision-making

Investors' personal characteristics Behaviour / decisions forming factors	Investment experience				Gender		Age		Specialty	
	<i>Up to 1 year</i>	<i>1-3 years</i>	<i>4-5 years</i>	<i>More than 5 years</i>	<i>Men</i>	<i>Women</i>	<i>Younger investors</i>	<i>Older investors</i>	<i>Economist-financier specialty</i>	<i>Other specialty</i>
Availability	X				X		X			X
Willing to take risk	X	X			X	X	X	X	X	X
Anchoring		X				X		X	X	
Impulsive decisions		X				X	X			X
Risk aversion			X			X		X	X	
Regret aversion	X		X		X		X			X
Mood			X			X	X			X
Overconfidence				X		X		X	X	
Conservatism				X						

Source: prepared by author (2012)

The mood impact is minimal on experienced investors. Investors-beginners have a tendency for impulse decisions, which can be affected by external data, weather conditions, and results of sports games. It is possible to conclude that the impact of factors forming irrational behaviour of investors depends on investors' personal characteristics. According to the research results investors could evaluate the right time for portfolio formation and transactions depending on the chosen investment strategy. The obtained results may be particularly important for investors-speculators. Taking into account market seasonality, return changes tendencies, and the risk during different periods, it is possible to develop a high return-oriented portfolio. Recognition of irrational behaviour symptoms would help investors to increase the effectiveness of their managed portfolios by choosing the appropriate risk and profitability level.

Evaluating the results obtained, some limitations should be taken into account. The study was conducted according to the Lithuanian stock market index changes, and the research was performed involving only actively trading Lithuanian individual investors. The author did not raise the goal to quantify the influence of irrational behaviour of individual investors on the Lithuanian stock market. The purpose of the research was to identify the irrational behaviour of individual investors, its forming factors, and to assess their impact on the decisions of investors made in the stock market. The study showed a logical relationship between the factors forming irrational behaviour of individual investors and decisions made in the stock market.

Despite these limitations results obtained reveal basic factors forming irrational behaviour of individual investors, the impact on their decisions, their reflection on the stock market, and they are significant for further development of irrational investors' behaviour and its impact on the financial market research.

Conclusions

In order to analyze the tendencies of Lithuanian stock market, the questionnaire was prepared and distributed among individual investors of Lithuania. The questionnaire was distributed among members of Lithuanian association of financial analysts and with the help of editorial office of investors' magazine “Invest” among its subscribers and readers. The authors combined psychological biases into closed-end questions without stating the bias itself and check whether the investors felt the influence or not.

According to the results, women are more overconfident investors than men. Also the direct connection between the investment experience and influence of overconfidence was noticed (the more experience investor has, the more overconfident he/she is).

It is interesting, that investors who have economic-finance education say that their investment skills are good or very good. So, it is possible to conclude, that education and experience give the background for overconfidence bias to appear. The most risky investors are the beginners and investors at the age 30-45 years.

Single people are also more risky than married. Almost a half of researched investors notice the influence of their mood on their investment decision. The strongest factors that could influence the investors' mood turn to be mass media information, weather conditions and results of sport competitions.

The results of the research showed that individual investors in Lithuania suffer from all basic biases, but overconfidence, anchoring, mental accounting and herd behavior make the strongest influence to their financial decision-making process. Also it should be noticed, that the influence of factors forming irrational individual investors' behaviour depends on their personal characteristics such as age, experience, gender and profession.

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VALUATION OF IMPACT OF COMPANY’S RESTRUCTURING: ECONOMIC VALUE ADDED

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Abstract. In this paper, methods of valuation of restructuring impact on company’s financial results are analyzed and the research is carried out in Lithuania. The economic value added method is used to measure the mentioned impact on companies being in following stages of restructuring: 1) restructuring is completed, 2) restructuring is terminated and a company is continuing its activity, and 3) restructuring proceeds. The obtained results evidenced an impact of restructuring process: it was established that restructuring affects an economic value added of companies in a negative way as this indicator decreased in restructured companies and increased in companies where restructuring was terminated. The negative impact of restructuring was conditioned by the fact that companies have reduced or refused debt capital after restructuring thus limiting potential of business development; moreover, the operating profit after tax became lower than the capital costs.

Keywords: restructuring, corporate value, economic value added

JEL classification:

G32 - Financing Policy; Financial Risk and Risk Management; Capital and Ownership Structure; Value of Firms

G34 - Mergers; Acquisitions; Restructuring; Corporate Governance

M19 - Other

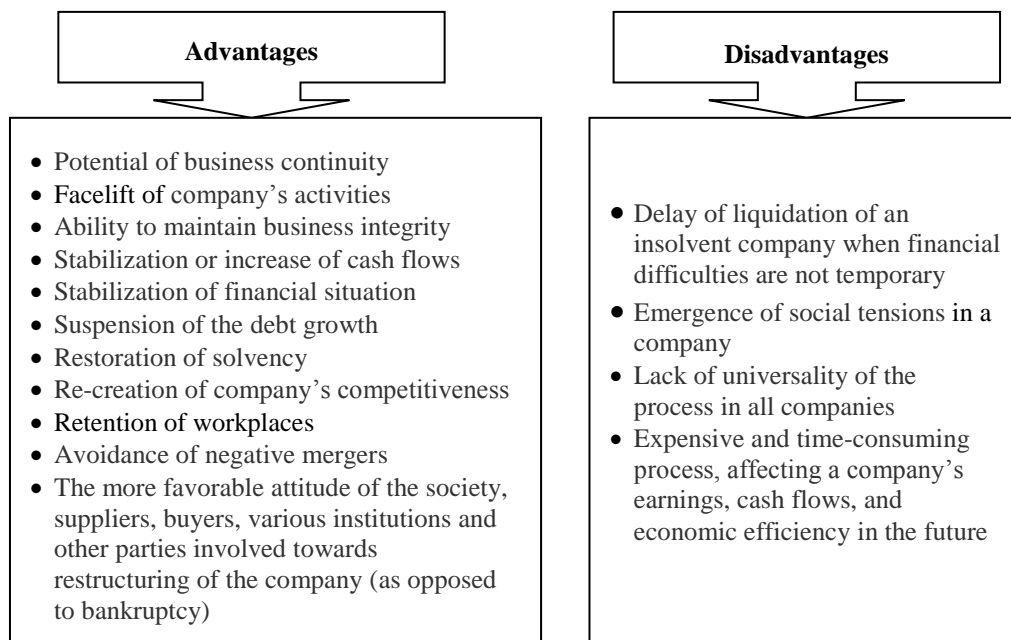
Introduction

Restructuring has been used in business since 1980, however major attention to it was attracted only in the last decade. Interest in this process occurred through the rise of number of mergers and acquisitions. Changing business environment is denoted as the main reason for popularity of restructuring because it is one of the means to improve performance results (Beixin et al., 2006); it helps to retrieve solvency and financial stability and to capacitate for retaining and continuity of company’s activity. Number of authors considers restructuring of companies in several aspects: from determinants of restructuring and its consequences to the use of experience in restructuring process (Beixin et al., 2006; Bergh, Lim, 2007). L. Beixin et al., (2006), D. D. Bergh, E. N. K. Lim (2007) noted that scientific research is focused on the characteristics of a company that cause problems, in other words, determinants of restructuring. However, impact of restructuring on a company’s value is analyzed only in a small number of recent studies (i.e., Makhija, 2004). Also, there are only a small number of Lithuanian studies related to restructuring and these studies usually provide an overview and approach of foreign researches. The studies of C. Purlys (2005), S. Grigaravicius (2002), J. Bivainis et al., (2002) may be set down to the major works. However, there is not any more detailed study, which analyzed restructuring process and measured the impact of this process on corporate value. Therefore, **the purpose of this article** is to carry out the investigation of the impact of restructuring on the economic value and financial results of a company in Lithuania. **The object of the research** is the companies in which the restructuring is completed, in which the restructuring is canceled and activity is continued, and in which the restructuring proceeds. **The research methods** are following: systematic analysis of scientific literature; logical, comparative and mathematical analysis.

The restructuring processes in Lithuania

The restructuring process is defined in the Law on Restructuring of Enterprises of the Republic of Lithuania (2001) as “... the totality of procedures ... which aim to maintain and develop the activities of an enterprise, settle its debts and avert bankruptcy through securing assistance of the creditors of the enterprise and application of economic, technical, organisational and other measures”. C. Purlys (2005), S. Grigaravicius (2002), D. Berzinskiene and R. Virbickaite (2006), J. Bivainis et al., (2002) in their studies define restructuring slightly differently, but all definitions contain similarities. In particular, restructuring process is associated with various structural changes in business environment, whose main goal is to increase efficiency in company’s performance. Generally it can be stated that restructuring contributes to the rational use of available financial, material and human resources. Appropriate restructuring strategy enables transformation, retaining and successful expansion of company’s activity, restoration or enhancement of its competitiveness, restoration of income balance, and solution of social problems in a company. However, the restructuring process has some negative aspects as well. Systematized advantages and disadvantages of the restructuring process are presented in Figure 1.

Figure 1: Advantages and disadvantages of the restructuring process



In summary it can be said, that despite both positive and negative sides of the restructuring process, in most cases it is a better alternative as compared to the company’s bankruptcy. The main advantages of the restructuring process, identified by various authors are oriented to one main direction: business recovery and succession.

The Law on Restructuring of Enterprises functions since 2001 in Lithuania and during ten years, 125 processes of restructuring were started. Most of the restructuring processes were started in 2009 (71), while in 2010 their number decreased to 13. The increase in the number of the restructuring processes in 2009 could be stipulated by economic stagnation and the need for companies to review their priorities. However, there are not much of successful restructuring examples. During ten years, just five companies have been restructured completely. So during the entire period, the ongoing restructuring processes make the biggest part (66 percent) and terminated restructuring processes finished with bankruptcy proceedings make the second biggest (26 percent). Meanwhile, the completed restructuring processes take only 2 percent in the overall structure. Lawyers explain small number of restructured

companies by confusing law and rather frequent malicious disruption of a company. Statistics show that the successfully completed restructuring processes lasted about 2,6 – 5,4 years; these companies continue to operate successfully at present. Meanwhile, the terminated restructuring processes when companies continued their activity lasted 1,9 years on the average (0,4 to 6, 4 years). These findings confirm that the restructuring decision must be made only taking into account the long-term outlook and evaluating the impact of restructuring on the financial results of a company.

Evaluation methods for financial performance of a company

Financial ratios. The study of C. Christauskas and V. Kazlauskienė (2009) evidenced that mostly Lithuanian companies used traditional values (such as revenue, net profit, profit before taxes) for evaluation of activities; rather seldom activity is assessed in respect of return on investment (ROI), return on capital. However, ratios are advantaged to absolute values, since they outline performance efficiency more precisely (Sakiene, Puleikiene, 2009). Financial ratios are not less important for evaluation of impact of restructuring, since managers often base performance analysis on them. Foreign scientists also use financial ratios to evaluate performance of a company or the effect of different decisions (including restructuring) on performance results (Leepsa, Mishra, 2012; Lukason, 2012; Fedier, 2011). Various groups of ratios are used for performance analysis of a company. The most common indicators belong to groups of profitability, solvency, turnover, capital structure (financial stability), and market value.

The main advantage of financial ratios is simple calculation, where outside information of a company is enough (if a company is listed on the Stock Exchange) (Dagiliene, 2008). In addition, both closed and public companies may be evaluated using them. However, a number of limitations also can be identified: ratios are sensitive to possible accounting errors, some of them (indicators of market value) can be calculated only for listed companies, it is important to compare ratios with those of the closest competitors or the industry because otherwise they will not be informative. Therefore, financial ratios can be used as informative, showing performance cracks; however more modern systems should be used for a more profound evaluation.

Cash flow methods. In estimating value of a company, a great attention is also given on methods of discounted cash flow (Jennergren, 2011; Zaptorius, Garbanovas, 2007), where following models can be distinguished: discounted cash flow (DCF), discounted dividend (DDM) and discounted free cash flow (FCF). The main difference among the methods is that different cash flow and discount rates are used. These methods can be modified depending on the particular situation and it is possible to appraise the effect of time also the life cycle of a company or product (Dzikevicius et al., 2008). Models of FCF are suitable for use when a company does not pay dividends. There can be noted models of discounted free cash flow (FCFF) and discounted free cash flow on equity (FCFE). The methods determine the value of a company through value of share price; therefore it is difficult to evaluate companies whose shares are not traded. In summary, the main problem with cash flow methods is that these methods are stochastic because forecasting is based on assumptions that alter when business environment is changing; moreover, it is difficult to settle a discount rate and internal information is required.

Value based methods. Traditional methods are insufficient to determine value of a company under today's dynamic business conditions, therefore modern valuation systems become increasingly popular. Value based methods are not new and are used since 1990 (Petravicius, 2008); but more common in Lithuanian companies is only economic value added (Christauskas and Kazlauskas, 2009).

The essence of the *Economic value added (EVA)* method is that value is created when revenue of a company overpass economic costs, which include expenditure from the profit and loss statement and cost of capital. As compared with traditional valuation methods, EVA is advantaged because it measures value created to shareholders in cash rather than other units. T. Petravicius (2008) indicates that EVA can be used to evaluate mergers, thus also the effect of restructuring. EVA is calculated by following formula (Nthoesane, 2012):

$$EVA = NOPAT - (C \times \text{Capital}) \quad (1)$$

Here: NOPAT – operating profit after taxes; C – rate of capital cost.

Economic value added is calculated in following succession:

$$1. \text{Capital (at the beginning of the year)} = \text{long- and short-term financial debt} + \text{Equity} \quad (2)$$

$$2. \text{NOPAT} = \text{operating profit} - \text{taxes (if they are paid)} \quad (3)$$

$$3. \text{Cost of capital} = \text{Weighted average cost of capital (WACC)} \times \text{Total capital} \quad (4)$$

WACC is calculated by following formula:

$$\text{WACC} = W_d \times K_d \times (1-T) + W_n \times R \quad (5)$$

Here: W_d – stake of liabilities in capital structure; K_d - interest rate; W_n – stake of equity in capital structure; R - equity cost.

When calculating WACC in companies with issued preference shares, the part of those shares in capital structure and their cost are included.

Cost of debt (interest rate) can be obtained from the information provided in financial statements of a company. If such information is undeclared, cost of debt can be calculated:

$$\text{Cost of debt} = \text{Interest paid} / \text{average financial liabilities} \quad (6)$$

Equity price (R) is determined by the CAMP model:

$$R = R_f + \beta (R_m - R_f) \quad (7)$$

Here: R_f – nominal rate of return on government securities; β – measure of systemic risk for securities; R_m - the average rate of return in the market.

When companies are not listed on stock exchange, the calculation of the average equity price is simplified as coefficient of systemic risk is excluded:

$$R = R_f + (R_m - R_f) \quad (8)$$

The main advantages of EVA are simple calculation, inclusion of all current and foreseen costs, applicability to any type of a company, no need to forecast, possibility to monitor and control usage of invested capital more effectively, and suitability for reasoning of corporate decisions. However EVA also has following limitations: it shows the result of only a specific year, it is based on accounting estimates, therefore it may be affected by accounting distortions, and it requires not only public but also internal information of a company.

Another value based method is *Market value added (MVA)*. It is the difference between the market value of stock and book value of equity (or the present value of future EVAs) (Petravicius, 2008). A positive value of MVA evidences that an extra market value is created to shareholders. MVA demonstrates efficiency of decisions at all levels of management and public information is sufficient for calculation. However, it must be used together with other methods, since the majority of management decisions would be made considering only short-term outlook if based on MVA method alone and a long-term growth of a company would not be ensured.

One more method, *Cash flow return on investment (CFROI)*, is an average return on projects of a company (Petravicius, 2008). Value to the shareholders is created when CFROI rate is higher than the cost of capital. This method evaluates return on investment and includes the period impact on cash flow; moreover, cash flow corrections are possible

considering the inflation rate, it estimates impact of activities on maximizing value for shareholders in the long run and public information is sufficient for its calculation. However, rising and possessing cost of financial resources is not included and calculation itself is rather complex.

The latter two value based methods measure value of a company according to share price movements, therefore they are suitable only when a company is listed on the stock exchange. This condition is optional only to one of those methods – EVA. As this indicator can be calculated for companies of various legal forms and not only listed companies are restructured in Lithuania, EVA is suitable to estimate value of a restructured company.

The research of impact of restructuring on economic value added of a company

Data sample. Data of 7 companies are used to estimate an impact of the restructuring process on EVA of a company. Companies are chosen on the basis of financial data availability; all of them are related by the common objective of restructuring – debt restructuring. Information about the analyzed companies is presented in Table 1.

Table 1: Data of companies of the research sample

Stage of restructuring	Name of a company	Field of activity	Period of restructuring	Estimation period during the process	Estimation period after the process
Restructuring is completed	UAB Sidabra	Animal husbandry, aviculture	2001 – 2005	2004	2005 - 2009
	AB Senoji Baltija	Fishery, fish products	2002 – 2006	2004 – 2005	2006 - 2009
	AB Warta Glass Panevėžys	Glasswork production	2001 – 2007	2004 – 2006	2007 - 2009
	UAB Gargždų mida	Production of roofing, construction services	2003 – 2006	2004 – 2005	2006 - 2009
Restructuring is terminated	AB Lifosa	Production of fertilizer	2002 – 2004	2004	2005 – 2009
	AB Išlaužo žuvys	Fishery	2003 – 2004	2004	2005 – 2009
Restructuring is ongoing	AB Agrowill group	Vegetable growing, animal husbandry	2010	2007 – 2010 ¹⁴	-

Information about the process of restructuring and companies is obtained in web portal of the Lithuanian Department of Enterprise Bankruptcy Management. Cost of debt is settled using the information of companies. Cost of equity is equal to the average profit rate in the market (factor β is eliminated).

Until 2011, the restructuring process was completed in only five Lithuanian companies; all of them (and AB Išlaužo žuvys) were not listed on stock exchange. This aggravates access to data because financial information of those companies is not presented publicly. Therefore data for research (financial statements) were obtained from the Centre of Registers.

Research methodology. The analysis of valuation methods evidenced that the majority of them are based on share price movements. As only two of all analyzed companies (AB Lifosa and AB Agrowill group) are listed on stock exchange, the impact of restructuring will be measured using the EVA method. Since the effect of restructuring in this research is valued with reference to data from the past, the methods of discounted cash flow are not used. For more accurate estimation, EVA is calculated during the period of 2004 – 2009 for the companies where restructuring is completed, where restructuring was terminated but the companies continue their activity, and where restructuring is ongoing. In order to determine the impact of restructuring on value of a company, it is important to evaluate the company's activities before the start of a process and after it. Due to lack of data, in this research the

¹⁴ The company started restructuring process in 2010, so it is not possible to compare the results with other restructured companies. Average means of all indicators till beginning of the process will be compared with those of 2010 and considering results of other valuated companies, the possible trends of indicators will be established.

impact will be estimated at the moment of the restructuring process and after it. EVA for each company will be estimated individually because start and end times of the restructuring processes are different. Estimation periods during the process and after it, are presented in Table 1.

EVA is calculated in order to determine when this value was greater: during restructuring or after it. EVA and required components are calculated by following formulas: EVA – 1; capital at the beginning of the year – 2; NOPAT – 3; cost of capital – 4; WACC – 5; R – 7. The results are presented in Table 2.

Table 2: The results of EVA indicator (in thousands LTL)

Company	2004	2005	2006	2007	2008	2009	2010
UAB Sidabra		-1.832.654	535.336	-1.167.963	-630.943	-5.464.843	
AB Senoji Baltija		11.666	-158	-3.676	-4.574	-6.588	
AB Warta Glass Panevėžys		-55.735	-128.224	-112.602	-111.750	-118.306	
UAB Gargždų mida		-31.893	-67.752	-73.520	-60.616	-63.618	
AB Lifosa	26.381	63.777	16.952	203.021	184.636	-57.752	
AB Išlaužo žuvys		200	434	400	-964	-1.125	
AB Agrowill group				26.806	-17.128	-55.788	-3.644

The data obtained evidence that EVA went down significantly in cases of all restructured companies (it decreased about three times during all the period for each company). UAB Sidabra had negative EVA the year after the restructuring and positive – on the second year. However afterwards, this indicator decreased to -5,5 milliards LTL. EVA in AB Warta Glass Panevėžys decreased from -55,7 to -128,2 million LTL during the process of restructuring and slightly improved just after it. However on 2009, it decreased again. EVA in AB Gargždų mida also was negative during all the analysis period and decreased from -31,9 to -63,6 million LTL. AB Senoji Baltija was the only restructured company with positive EVA at the last year of the process (11,8 million); however after the restructuring was finished, EVA in this company decreased constantly from -158 thousands LTL to -6,6 million LTL. Different case was with companies where the restructuring process was terminated: their EVA increased constantly after the process and became negative only on the last years of the analysis. The reasons for negative indicator may be discussed but one of them may be changes in economic situation. The case of AB Agrowill group shows that EVA turned from positive (26,8 million LTL) to negative (-55,8 million LTL) before the restructuring. The negative value significantly decreased (to -3,6 million LTL) on the year of the process. However pursuant to the findings in other companies, this improvement may be temporary if the process of restructuring will be continued. Thus, restructured companies had EVA below 0 at the end of restructuring process and did not create additional value for shareholders. The main reason for the negative indicator was refusal or limitation of borrowed financial resources. The companies, which terminated restructuring, create additional value to shareholders, because EVA is higher than 0. Although the amount of debt was also reduced in capital structure of those companies, but their operating profit after tax grew faster than cost of capital.

Estimation of the impact of restructuring process according to EVA evidenced that economic value added of restructured companies decreased during the period of 2004-2009; however, EVA indicator increased after the termination of restructuring in companies where the process was terminated. The economic value of the company where restructuring is ongoing increased at the beginning of the process. Summarizing, it can be stated that the process had a negative impact on economic value added of the companies and the value of companies has increased after well-timed termination of the process. The biggest impact on this may have a change of capital structure, because most companies were almost completely refused debt capital; this means that a company does not take advantages of potential for effective business continuity. Decrease of EVA in restructured companies confirmed the

research results of V. Makhija (2004): value of restructured company is lower than that of not-restructured and the negative impact is caused by the lack of debt capital in capital structure. Our results also confirm findings of other researches and outcomes declared by companies itself (Fieder, 2011; Bivainis et al., 2002).

Conclusions

Despite both positive and negative sides of restructuring, in most cases it is a better alternative as compared to company's bankruptcy because the main advantages of this process, identified by various authors, are oriented to business recovery and succession. The impact of restructuring on company's financial results can be measured using various methods: financial ratios, cash flow or value based.

The analysis of EVA in Lithuanian restructured companies and in those that have terminated restructuring evidenced that the impact of restructuring on value of the companies is negative. The negative impact was caused by the fact that the companies have reduced or even refused debt capital after the restructuring this limiting potential of business development; moreover, operating profit after tax became lower than the capital costs.

The problems of accessibility to financial information were faced during this research therefore application of other valuation methods was not possible. If use of more exhaustive financial and internal data of companies would be possible, the research can be expanded by the comparison of values of restructured companies calculated using different valuation methods.

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AN ANALYSIS OF INSURANCE COMPANIES FINANCIAL STABILITY AND ITS MEASUREMENT

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Abstract. This study presents theoretical and practical aspects of insurance company's financial stability and its measurement. As this financial stability conception is prone to changes due to forthcoming Solvency II and IFRS 4 “Insurance contracts” phase II requirements, the author employs deductive and inductive methods to evaluate how these changes could influence insurance market situation and what challenges should be overcome to get the clear picture of insurance companies financial position. Presenting the main practices applied today for measuring solvency capital in insurance market, the study also highlights the interconnectivity between solvency capital and sufficient insurance liabilities to guaranty sound financial stability measurement practice. The study also analyses practice of solvency capital and technical provisions measurement in Lithuania insurance market and presents how much it will be influenced by foreseen changes.

Keyword - insurance liabilities, Solvency II, risk-based capital, solvency capital

JEL classification:

G22 - Insurance; Insurance Companies

G28 - Government Policy and Regulation

Introduction

Financial stability of insurance companies is the objective which is often highlighted not only by market supervisors, but also by companies' owners, stakeholders and managers. (O'Brien, 2006). After recent financial crisis, it is especially important, but still rarely is analysed in national and global scientific researches. Only the separate aspects of it – solvency calculation, prudent management etc – were more deeply researched there.

As the term financial stability has many meanings, it is often a problem to define its conception for insurance companies and to find common accepted principles for its measurement. Usually this term is applied together with opposite term financial instability, which was first time more emphasized in 1957 by H.M.Minsky, who has argued that advanced capitalist economy with developed financial institutions is fundamentally unstable and liable to fall into depression in the aftermath or a period of debt-financed “euphoria”.

The causes of the instability of the insurance company emanates from the nature of its activity and uncertainty related to insurance risks. Works of Williamson (1970), Akerlof (1970) and Mishkin (1991) affirm that the increase in informational asymmetries encourages the agents to resort to the financial institutions and especially to insurance companies in order to reduce the unfavorable selection and the moral hazard. Therefore A. Crockett (1997) defines financial instability by incapacity of the financial institutions to honour their contractual engagements. This conclusion corresponds with the opinion expressed in paper “Insurance and Financial Stability” prepared by International Association of Insurance Supervisors (2011, p.10), where IAIS concludes that insurer needs to withstand severe yet plausible events and therefore should have sufficient technical provisions and capital on its balance sheet.

For this reason, the aim of this research to define commonly accepted conception of insurer's financial stability. Seeking that, the first and second sections of this study have the objective to critically analyse regulatory approaches in this regard and using deductive and inductive methods to present their main weak and strong points. The third section using

comparative analysis evaluates how insurance technical provision measurement could change insurer's financial stability after introduction of projected Solvency II requirements in Lithuanian insurance market.

Regulatory approach to insurer's financial stability

The supervisory authorities apply various tools to monitor insurer's financial position and forecast possible financial instability issues. This practice together with permanent monitoring assure that the time gap between the identification of potential problem in insurer's operations and regulator's action to minimize the negative consequences is as short as possible. Many researches in this sphere (Barth, 2000; Pitselis, 2008) confirm that insurer's financial stability mostly depends from sufficient insurance liabilities and solvency capital. The other insurance activity factors also should be taken in consideration, but usually play only secondary role defining insurer's financial strength.

From the other side, the financial stability of insurance company could be understood as smooth, continuous and profitable long-term insurer's activity development (Wen et al, 2008), which could assure owners' interest to invest in insurance company and participate in its management. Using this approach many researchers in the past measured the financial soundness of insurer's activity by analysing general profitability ratios (RoE, RoA, EPS etc.) using public financial report data. The insurance regulators also used this kind of ratios to build so called early-warning systems (ex. US IRIS system) that were supplementing their regulatory instruments and helped to define insurers with deteriorating financial position. Such countries as Denmark, Germany or Finland had especially strong methodology based on this general financial ratios analysis and used it to build the particular traffic-light system, where the weakest insurers were marked with red colour and the strongest of them with green colour. This and similar regulatory systems are still used as the tools helping regulators to define the weakest chain ring in the insurance market which could potentially jeopardize the financial stability of the whole market.

Looking at modern international principles to measure insurance financial stability defined by the IAIS in 2011 and broadly accepted regulatory practices in this regard, we could define four main financial stability measurement approaches:

- *fixed ratio approach*. The EU Solvency I system and FAST measurement in US. Till 2002 this approach was applied measuring non-life insurance companies' financial strength in Canada.
- *risk-based capital approach*. This financial stability measurement is applied in US and Japan.
- *scenario based approach*. The method applied in UK and Canada.
- *probabilistic approach*. The method applied in Switzerland and Australia.

All these measurement approaches are based on different principles, require different resources to evaluate insurer's financial position (see table 1) and are even calibrated with different confidence level. Despite all these differences, the investigation performed by author shows that EU applied methodology for insurer's solvency measurement (Solvency I) today is not flawless (Linartas, 2003) and could not predict the significant number of companies' failures. This methodology deficiency is related not only with its rough insurance risk measurement based on insurance premiums and claims outstanding amounts, but also with its out-dated factor based formula which is not precisely calibrated to particular time horizon. Therefore even the company that is financially sound according to this methodology could not guaranty that it will be able to pay all insurance claims after half a year or longer period. The solvency capital requirement in some selected countries could be seen though as intermediate

objective for developing more defined risk-based approach for financial stability measurement purpose.

Table 1. Solvency capital measurement approaches in some selected countries

	Australia	EU Solvency I	EU Solvency II	Japan	USA	Canada	Switzerland
Calculated risk exposures revaluation using more than one adverse scenario	X (for life insurance)			X (under review for solvency purposes)		X	
Factor based risk measurement	X (for non-life insurance)	X	X	X	X	X	
Measurement using stochastic model			X	X (for variable annuities)		X	X
Measurement using scenario testing			X				X
Confidence level	99,75% (for life insurance); >99,5% (for non-life insurance)	Not defined	99,5%	99% (for life insurance); 99,5% (for under non-life insurance), 98,6% (for flood risk).	95% (for life insurance); 92 - 96% (for different non-life insurance groups).	Varies depending upon the time horizon	99%
Time horizon	1 year	Not defined	1 year	Varies (mostly 1 year)	Varies	Varies	1 year
Risk measure	Effectively VaR	Not defined	VaR	VaR	Not defined	TailVar	TailVaR

Source: IAIS (2009), EIOPA (2012)

The solvency capital measurement

It could be said, that all here analysed jurisdictions adopt different solvency capital measurement approaches and accept varying degrees of standardisation. Some regimes recognise institution-specific circumstances within the standardised approach (for example the “Mortgage Experience Adjustment” and property / casualty underwriting risk components in the US Risk Based Capital (RBC) which adjust the capital requirement based on the company’s experience relative to the industry’s). The Swiss Solvency Test which is newly introduced in Switzerland is based on standardised approach that is different from the other jurisdictions. Usually all the solvency capital evaluation methods are using standardised formula or risk factors. The Swiss Solvency Test though is based on a prescribed standardised model rather than a standardised formula. That helps to increase this model’s adaptability to changing risk factors and does not restrict the insurer’s capability to upgrade the solvency calculation model.

All regimes have different forms and terminology to measure financial stability. In most cases this measurement relates with evaluation of so called prudent solvency capital requirement. Canada defines it in the form of a ratio of capital available to capital required. In general, that corresponds to Solvency I practice used now in EU territory (Linartas, 2003). In Australia, this requirement for non-life insurer is equal in terms of a multiple of the minimal capital requirement (MCR). The target criteria for the evaluation when insurance company is financial stable are not usually specified explicitly.

The different methodologies adopted do not allow easy quantitative comparison. For example, the capital required for life insurance liabilities in Australia requires a full revaluation of actuarial reserves based on prescribed adverse scenarios whereas in Canada, factors are applied on pre-defined measures of exposure. In addition, when comparing these approaches it should be not forgotten that even with the same confidence level applied in calculation, the risk measurement result could vary significantly depending on calculation method applied. For example, in Japan and Switzerland there is the same 99% confidence level used to value life insurance risks, but due to more strict risk calculation method in Switzerland (TailVaR) swiss companies are required to add to capital requirement the average tail claims amount over the set confidentially level.

Solvency II introduces an economic risk-based approach to insurance supervision in the EU and as primary objective sets the protection of policyholders. Having that in mind, we could question though the European Commission and EIOPA (2012) decision to use VaR method for main insurance risk measurement, as this creates regulatory arbitrage with neighbour Swiss market and from more broad view could put EU insurers in less favourable position with their American partners, as the latters will be required to have lesser amount of capital for the same life insurance business.

Financial stability issues related to evaluation of insurance liabilities

The valuation of insurance liabilities is a topic which keeps currently all insurance industry in apprehension. There are two factors that change insurance liabilities evaluation: Solvency II requirements which are supposed to be implemented from 2014 and IFRS 4 “Insurance contracts” phase II requirements (Duverne, 2009) which plan to emphasize the importance of time value in the measurement of insurance liabilities. The important element of this new approach is liabilities discounting using risk-free rate for each currency in which are denominated insurance liabilities.

As Linartas and Baravykas research (2010) shows EU Solvency II requirement to set discount rate for these currencies is difficult to achieve due to impeding small market restrains. For long term liabilities, which are paid out as insurance claims only after 5 or even 30 years, the discount rate should be chosen looking at the bonds with similar maturity. This matching requires checking if the discount rate has the corresponding quality, i.e. it is set in highly liquid market for all bond maturities (IAA, 2009). For such local government bond markets as in Lithuania, which have significant limitation in terms of availability and liquidity for the bonds with long-term maturity, this is nearly impossible to achieve (Linartas and Baravykas, p. 34-37).

This presents significant difficulties for the insurance company willing to establish a coherent interest rate term structure used for insurance liabilities discounting, which could be overcome only if interest rate term structure for such local currencies would be based on euro. The author has analysed the insurance liabilities evaluation practice in Lithuanian insurance market, seeking to identify how the forthcoming change in this sphere will influence the amount of technical provisions and financial stability of the whole insurance market.

The performed research has confirmed that the life insurance companies in Lithuania are more ready to accept this new practice than non-life insurance companies. In particular, according to the investigation, more than 37.27% of life assurance provisions are already valued using prudent discount rate and expected present value notion. The majority of other provisions consists of unit-linked liabilities (59.11%) and are measured on the assets-liabilities matching, i.e. fair value, principle.

Because the life assurance provisions in Lithuania are discounted since 2005 year using discount rate set below 2,6% level, the research confirmed that the foreseen increase in

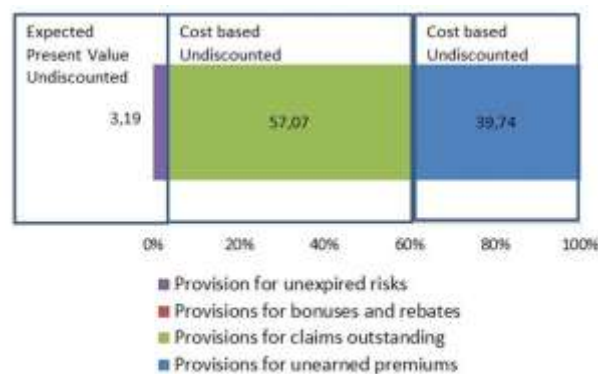
discounting rate (EIOPA, 2012) and change in insurance liabilities calculation methodology could decrease insurance liabilities amount from 8% (unit-linked) to 2% (life insurance without participation in profit). Based on the amount of the illiquidity premium risk sub-module in the Solvency II Solvency Capital Requirement (SCR), which corresponds to a reduction of 65% of the illiquidity premium included in the valuation of technical provisions, the introduction of the illiquidity premium in the valuation of technical provisions according to QIS5 data (EIOPA, 2012) could additionally decrease the value of technical provisions by 1%. Due to the tied relationship between provisions amount and SCR calculation, it could represent around 15% of SCR impact to individual insurer.

The foreseen 34 mil LTL down-turn on insurance liabilities amount will decrease the safety margin of life insurance provisions and therefore could destabilize insurer long term financial stability if it will not be hedged by corresponding increase in SCR requirements (Jurkonyte and Girdzijauskas, 2010).

The non-life insurance liabilities measurement will suffer even more changes. The draft IFRS 4 phase II project proposes to use expected present value model for all long-term insurance liabilities, therefore non-life provisions will be also valued by similar principle as life insurance liabilities. Nowadays the significant part of these in Lithuania consists of unearned premiums provision (39.74%) and provision for claims outstanding (57.07%) which historically were valued on cost basis. The majority of non-life insurance provisions in the near future will be valued using stochastic measurement, including all possible claims development scenarios and future insurance premiums cash flows. Neither unearned premiums provision, no provision for claims outstanding is valued according to such principles. The only non-life provisions that are typically build using similar approach is provision for unexpired risk, but this type of liabilities do not play significant role (see Figure 1).

To investigate how these changes will influence insurance companies, the author analysed non-life insurance market in Lithuania and found out that the technical provisions in this market are due to decrease from 37.2% to 9.2 %. The major decrease in provision amount is forecast in credit insurance and insurance for other financial losses. The forecast decrease in most popular car insurance group is also vast and is measured from 23.3% to 15.6% depending of insurance risk.

Figure 1. Non-life insurance liabilities structure



Source: Linartas (2012)

It should be mentioned, that this research did not encompass the residual margin valuation as this margin relates with possible insurance profit at contract inception and could be valued only by insurer itself. Despite that, due to the change in declared position of the International Accounting Standard Board, according to which residual margin after contract

inception will be recalculated with further development of claims profile, this margin could therefore play minor role in the future insurance liabilities measurement.

The author concludes his research by making a conclusion that changes in non-life insurance technical provisions calculation could have one-time 241.2 mil LTL positive impact for insurer capital. Together with the positive impact of change in life insurance liabilities amount this could increase the equity of insurers in Lithuania by 43.17%, but will still not mitigate the huge capital demand related to introduction of new SCR requirements, that could require 2.5-3.0 times increase in insurer's capital amount.

Conclusions

This research analyses the conception of insurance company's financial stability and its measurement. The financial stability measurement in insurance company depends of solvency capital and insurance liabilities valuation. If they are not sufficient, the further insurer's financial position evaluation could be pointless.

The Solvency I methodology is still applied in Lithuania, but is not enough efficient and not able to catch some particular insurance activity risks. The solvency capital requirement in some selected countries could be seen as intermediate objective for developing more defined risk-based approach for financial stability measurement purpose.

As technical provisions in insurance play also very important role valuing insurer's financial stability, the change in their measurement practice could influence to whole financial stability situation in the future. As example, the study concludes that non-life insurance liabilities in Lithuania are usually valued using retrospective and cost based methodology. Therefore these amounts with introduction of Solvency II requirements could decrease from 37.2 % to 9.2 %. Despite that 37.27% of life insurance liabilities are already valued using prospective methodology and discounted to evaluate time value of money, but the introduction of new discounting requirements could still significantly decrease technical provision amount. This study results show that the introduction of new technical provisions evaluation principles could significantly increase one-time capital amount for insurers, but that could not guaranty the long-term financial stability of insurers as the simultaneously increased SCR requirements will press the capital need to much higher amount.

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LIETUVOS POLITINIŲ PARTIJŲ FINANSAVIMO PROBLEMOS

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Santrauka. Šiuolaikinė demokratija yra neįsivaizduojama be politinių partijų, per kurias gyventojai įgyvendina savo interesus ir dalyvauja politiniame šalies gyvenime. Politinių partijų funkcijoms įgyvendinti yra būtinos piniginės lėšos. Praktiškai visose valstybėse, kuriose veikia šiuolaikinė demokratija, kyla skandalai dėl neteisėto politinių partijų finansavimo, todėl šis klausimas yra aktualus ne tik Lietuvoje. Politinių partijų finansavimo teisinė bazė yra nuolat tobulinama. Šiame straipsnyje analizuojamas dabartinis politinių partijų finansavimo reglamentavimas Lietuvoje, jo problematika bei atitikimas Europos Sąjungos rekomendacijoms. Literatūroje išskiriamos šios politinių partijų finansavimo rūšys: vidinis, išorinis ir valstybinis. Straipsnį sudaro įvadas ir trys dalys, iš kurių kiekviena yra skirta vienos politinių partijų finansavimo rūšies analizei. Yra aptariami kiekvienos rūšies privalumai ir trūkumai, analizuojamos galimos grėsmės, Lietuvos teisės aktų nuostatos lyginamos su Europos Sąjungos rekomendacijomis, daromos išvados ir teikiami pasiūlymai.

Raktiniai žodžiai: politinės partijos; politinių partijų vidinis finansavimas, išorinis finansavimas ir valstybinis finansavimas.

Įvadas

Vienas pagrindinių šiandieninės demokratijos elementų yra politinės partijos, kurios gali būti apibrėžiamos kaip grupė piliečių, susijungusių siekiant laimėti rinkimus, užimti valstybines pareigas, formuoti vyriausybę ir nustatyti valstybės politiką. Politinės partijos tiek teorijoje, tiek praktikoje atlieka pagrindinį vaidmenį šiuolaikinėje demokratijoje, sudarydamos gyvybiškai svarbų ryšį tarp valdančių piliečių ir politikų, kuriems laikinai yra patikimas valstybės reikalų tvarkymas (Luther, Muller-Rommel).

Politinės partijos atlieka ne vieną funkciją: dalyvauja vyriausybės formavime, politikos įgyvendinime, atlieka politinį švietimą, skiria savo atstovus į svarbias valstybines pareigas, rengia politines kampanijas ir kt. Šioms funkcijoms įgyvendinti reikalingi finansiniai ištekliai. Čia atsiranda pagrindinė dilema: kaip užtikrinti, kad politinės partijos turėtų pakankamai lėšų savo funkcijoms vykdyti, bet tuo pačiu išliktų skaidrios ir nepriklausomos?

Problematika, susijusi su politinių partijų finansavimu, yra ta, kad politinės partijos, būdamos valdžioje ir priimdamos sprendimus, ne visada atstovauja už ją balsavusių piliečių interesus, o priima jas parėmusiems fiziniams ar juridiniams asmenims palankius sprendimus. Šioje situacijoje įstatymų leidėjo užduotis būtų tinkamai reglamentuoti politinių partijų finansavimą.

Politinių partijų finansavimo tema yra aktuali praktiškai visose valstybėse, kuriose veikia šiuolaikinė demokratija. Jungtinės Karalystės Bendruosiuose Rūmuose dar 1908 metais buvo iškelta partijų finansavimo skaidrumo problema, nes politinės partijos neprivalėjo atskleisti savo finansavimo šaltinių (Ewing, 1987). Politinių partijų finansavimo klausimas nagrinėjamas Jungtinės Karalystės Oksfordo, Kembridžo universitetų leidiniuose. Jungtinėse Amerikos Valstijose politinių partijų finansavimas analizuojamas per kiekvienus rinkimus, atkreipiant dėmesį į tai, kad pagrindiniu pinigų šaltiniu išlieka turtingi aukotojai ir korporacijos, kurie partijas finansuoja tikrai ne vien iš dosnumo. Vokietijoje skandalas kilo 1999 m., kai paaiškėjo, kad buvęs Vokietijos premjeras Helmutas Kolis (*Helmut Kohl*) neteisėtai rinko lėšas Krikščionių demokratų partijai tuo metu, kai užėmė premjero pareigas. Į politinius skandalus dėl partijų finansavimo buvo įsivėlę ir Prancūzijos prezidentai Žakas Širakas (*Jacques Chirac*) bei Nikolia Sarkozi (*Nicolas Sarkozy*). „Per pastaruosius kelerius metus partijų finansavimo skandalai aštriau ar švelniau reiškiasi visuose

pasaulio regionuose. Tai didina visuomenės nusivylimą politikais bei partijomis ir labai pakerta visuomenės pasitikėjimą politiniu procesu". (Pečkys, 2011).

2004 m. Europos Taryba atkreipė valstybių dėmesį į šį aktualų klausimą ir išleido „Politinių partijų ir rinkimo kampanijų finansavimo gaires"¹⁵ (toliau – Gairės). Gairių tikslas yra išdėstyti skirtingas politinių partijų finansavimo ir jo kontroliavimo galimybes ir alternatyvas, teisinius principus bei metodus ir suteikti valstybėms galimybę pasirinkti tinkamiausią partijų finansavimo teisinį reglamentavimą.

Tenka apgailestauti, kad Lietuvoje politinių partijų finansavimo trūkumus dažniausiai nagrinėja žurnalistai, gilesnės mokslinės šio klausimo analizės trūksta. Ankstesniais metais ši tema Lietuvoje buvo aktuali dėl kylančių skandalų, susijusių su neteisėtu politinių partijų finansavimu ar korupcija. Šiuo metu temos aktualumą lemia ir tai, kad pagrindinis politinių partijų finansavimo šaltinis yra valstybės biudžeto dotacijos, t.y. mokesčių mokėtojų pinigai. Ypač šiuo sunkiu ekonomiškai laikotarpiu galimas gyventojų nepasitenkinimas, jei lėšos partijoms skirstomos neteisingai.

Didesnis dėmesys politinių partijų finansavimo analizei leistų efektyviau tobulinti Lietuvoje galiojantį reglamentavimą, tačiau mokslinių darbų šiuo klausimu nėra daug. Galima būtų paminėti Vidą Pečkę, kuris 2011 m. savo straipsnyje „Politinių partijų finansavimas: aktualijos ir problemos“ nagrinėja politinių partijų finansavimą iš šalies biudžeto. Taip pat Eleną Masnevaitę, kuri yra parašius keletą straipsnių šia tema ir 2010 m. apsigynusi daktaro disertaciją tema „Politinių partijų ir politinių kampanijų finansavimo teisinis reguliavimas Lietuvoje“.

Lietuvoje politinių partijų finansavimą reglamentuoja 2004 m. Lietuvos Respublikos Seimas priimtas Politinių partijų ir politinių kampanijų finansavimo bei finansavimo kontrolės įstatymą (toliau – PPPKFFKĮ). PPPKFFKĮ 1 straipsnis apibrėžia jo tikslą: užtikrinti politinių kampanijų demokratiškumą, politinių partijų ir politinių kampanijų finansavimo teisėtumą, skaidrumą ir viešumą, reglamentuoti politinių partijų ir politinių kampanijų finansavimo tvarką ir finansavimo kontrolę¹⁶. Įstatymo tikslas nuo pirmosios redakcijos išliko nepakitęs, o politinių partijų finansavimo tvarka buvo nuolat tobulinama. 2010 metais PPPKFFKĮ buvo išdėstytas nauja redakcija, taip pat svarbūs partijų finansavimo reglamentavimo pakeitimai buvo priimti 2011 metais.

Straipsnio tikslas yra išanalizuoti dabartinę Lietuvos politinių partijų finansavimo tvarką, atskleidžiant jos trūkumus ir privalumus bei remiantis Gairių nuostatomis, nustatyti, kiek PPPKFFKĮ ir jo naujausi pakeitimai atitinka Europos Tarybos rekomendacijas.

Straipsnio uždaviniai:

- išnagrinėti dabartinį Lietuvos politinių partijų finansavimo reglamentavimą ir jo atitikimą Gairėms;
- išanalizuoti PPPKFFKĮ nustatytus politinių partijų finansavimo šaltinius, grėsmes, kurias jie kelia ar galėtų kelti, įvertinti jų reglamentavimą PPPKFFKĮ;
- nustatyti, ar PPPKFFKĮ nuostatos užtikrina politinių partijų nepriklausomumą ir jų finansavimo skaidrumą;
- išsiaiškinti, ar dabartinis reglamentavimas užtikrina vienodas galimybes visoms partijoms veikti.

Tyrimo objektas yra dabartinis Lietuvos politinių partijų finansavimo reglamentavimas.

Literatūroje galima rasti skirtingą politinių partijų finansavimo šaltinių klasifikaciją. Šiame straipsnyje remiamasi Robbert Williams siūlomu politinių partijų finansavimo šaltinių skirstymu į tris grupes: vidinis, išorinis ir valstybinis finansavimas¹⁷. Lietuvos politinių partijų finansavimo šaltiniai yra nustatyti PPPKFFKĮ 7 straipsnio 3 ir 8 dalyse. Toliau jie bus nagrinėjami

¹⁵ Ingrid van Biezen Financing political parties and election campaigns – guidelines. Žiūrėta 2012 m. rugpjūčio 20 d. Prieiga per internetą: http://www.coe.int/t/dghl/monitoring/greco/evaluations/round3/Financing_Political_Parties_en.pdf

¹⁶ PPPKFFKĮ 1 str.

¹⁷ Williams R. Aspects of Party Finance and Political Corruption. Žiūrėta 2012 m. rugpjūčio 20 d. Prieiga per internetą: <https://www.palgrave.com/pdfs/0333739868.pdf>

skirstant į grupes pagal anksčiau pateiktą klasifikaciją. Pirmoje straipsnio dalyje analizuojamas vidinis partijų finansavimas, antra dalis yra skirta išorinio partijų finansavimo analizei, detaliai aptariant jo problematiką ir galimas grėsmes, trečioje dalyje yra išsamiai analizuojamas valstybinis partijų finansavimas, kurio reglamentavimas Lietuvoje radikaliai buvo pakeistas 2011 metų pabaigoje ir sulaukė daug prieštarinių vertinimų.

Straipsnyje autoriai naudoja pagrindinius teisinės analizės metodus: teisėtyros, lyginamosios teisėtyros, lingvistinę, analizės, apibendrinimo, sisteminės ir dokumentų analizės.

Vidinis finansavimas

Tai mažiausiai komplikauta politinių partijų finansavimo rūšis. Prie tokių šaltinių yra priskiriama: nario mokesčiai, pajamos, gaunamos iš partijai priklausančio turto ar partijos veiklos, tokios kaip publikacijos, leidyba.

Lietuvos politinių partijų vidiniai finansavimo šaltiniai yra politinės partijos nario mokesčiai; lėšos, gaunamos iš politinės partijos veiklos ir palūkanos už banko sąskaitoje esančias lėšas¹⁸.

Nario mokesčių dydžio nustatymo, mokėjimo ir naudojimo tvarka reglamentuojama politinės partijos įstatuose. Šio mokesčio surinkimas yra skaidriausias šaltinis – visada aišku, kas ir kiek sumokėjo partijai, kokie mokančio asmens interesai ir nekyla galimos išorinės įtakos grėsmė. Tačiau kokia bebūtų nustatyta nario mokesčio mokėjimo tvarka, akivaizdu, kad tokių sumų išlaikyti partijai niekaip neužtektų ir partijoms būtini dar ir kiti finansavimo šaltiniai. Be to, daugelyje valstybių pastebima tendencija, kad partijų išlaikymo kaštai didėja, tuo tarpu narių skaičius mažėja, ir nors nario mokesčiai yra didinamas, to neužtenka padengti atsirandančiam skirtumui.¹⁹

Antrasis vidinis partijų finansavimo šaltinis yra pajamos, gaunamos iš partijai priklausančio turto ar partijos veiklos. Gairės numato, kad tokiu šaltiniu galėtų būti partijos leidžiamos literatūros ar laikraščių pardavimas, pajamos iš partijai nuosavybės teise priklausančių leidybos kompanijų. Taip pat partijos gali turėti poilsio bazes, kurios yra nuomojamos, teikti socialines paslaugas, turėti savo kelionių agentūras, sporto komandas, bankus ar apgyvendinimo įstaigas.

Autorių nuomone, suteikus politinėms partijoms teisę vykdyti ekonominę veiklą, atsiranda daug didesnė rizika, kad partijos narius bus bandoma papirkti ar kitaip įtakoti jų veiksmus ir interesus. Tam tikra ekonominė veikla yra būtina partijos gyvavimui, pavyzdžiui yra būtinas partijos ideologijos, jos idėjų skleidimas ar pačios partijos populiarinimas, leidžiant leidinius, organizuojant paskaitas, rengiant partijos sąskrydžius. Tačiau bet kokia kita, partijai nebūtina, ekonominė veikla turi būti griežtai reglamentuota.

R. Williams teigimu, kai partijos vysto verslą, kuris jas neabejotinai susieja su likusiu verslo pasauliu, pasidaro labai sunku nubrėžti liniją tarp vidinio ir išorinio finansavimo, o partijų finansinė sėkmė gali paveikti jų ideologiją ir viešąjį įvaizdį.

Lietuvoje politinei partijai leidžiama gauti lėšas iš leidybos, spaudos ir atributikos platinimo, nuosavybės teise priklausančio turto valdymo, naudojimo ir disponavimo juo, politinių bei kultūrinių renginių (paskaitų, parodų ir kt.) organizavimo ir kitos veiklos, iš kurios gautos lėšos gali būti naudojamos tik politinės partijos įstatuose nurodytiems politinės partijos veiklos tikslams, bei palūkanas už banko sąskaitoje esančias lėšas.²⁰ PPPKFFKĮ suteikia politinei partijai teisę verstis praktiškai bet kokia legalia ekonomine veikla, apribojimas yra nustatomas tik gautų lėšų panaudojimui, tačiau ne pačių lėšų gavimui.

Toks reglamentavimas, autorių nuomone, kelia grėsmę, kad bus bandoma daryti įtaką partijos nariams per jos disponuojamą turtą ar vykdomą ekonominę veiklą, be to, patys partijos nariai, užimdami valstybinius postus, gali siekti gauti didesnę pelną pasinaudodami viešaisiais pirkimais ir įtakodami jų rezultatus ar priimdami savo partijos ekonominei veiklai palankius politinius sprendimus. Lietuvos įstatymų leidėjui siūlytina nustatyti aiškesnes politinių partijų

¹⁸ PPPKFFKĮ 7 str.

¹⁹ Luther K.R., Muller-Rommel F. Political Parties in the New Europe, 113 p.

²⁰ PPPKFFKĮ 9 str.

ekonominės veiklos sąlygas, nes dabartinis reglamentavimas nėra pakankamai aiškus, be to pernelyg liberalus, tokiu būdu sukurdamas didelę riziką politinei korupcijai.

Išorinis finansavimas

Išorinis finansavimas yra labiausiai diskutuotinas ir daugiausiai abejonių keliantis politinių partijų finansavimo šaltinis. Šiai grupei yra priskiriamos aukos, gaunamos iš fizinių ir juridinių asmenų. Išorinis finansavimo šaltinis turi teigiamų aspektų: gyventojai gali remti partijas, kurių ideologijai pritaria, partijos gauna jų veiklai būtinų lėšų ir jos nėra skiriamas iš valstybės biudžeto, tačiau šis finansavimas yra pavojingas, nes atsiranda grėsmė, kad asmenys, auکوjantys pinigus politinei partijai, tikisi jiems palankių sprendimų. Užsienio autoriai šią finansavimo rūšį taip pat įvardija kaip pačią problemiškesnę: kai politinės partijos ir jų lyderiai gauna pinigus iš privačių asmenų ar organizacijų, kyla klausimas, kas, kam, ir už ką turėtų būti dėkingas?²¹

Gairėse teigiama, kad privatus finansavimas yra svarbus politinių partijų finansavimo šaltinis, tačiau jis ypač dažnai gali sukurti nepageidaujamas galimybes korupcijai ir įtakos darymui, todėl valstybė turėtų įstatymais nustatyti apribojimus privatem finansavimui.

Lietuvoje dabartinis išorinio finansavimo reglamentavimas yra griežtas ir nustato didelius apribojimus. PPPKFFKĮ pakeitimai, smarkiai sugriežtinę politinių partijų finansavimą, įsigaliojo 2012 m. sausio 1 d. ir dar prieš juos priimant sulaukė daug diskusijų bei kritikos. Naujojo reglamentavimo tikslas – užkirsti kelią politinei korupcijai ir tobulinti politinių partijų bei politinių kampanijų finansavimo tvarką, tačiau jam nepritariančiųjų nuomone toks griežtas reglamentavimas tik dar labiau skatins partijas ieškoti būdų gauti paramą nelegaliai.

Nuolatinis, t.y. skirtas kasdieniui politinės partijos veiklai finansuoti, politinės partijos išorinio finansavimo šaltinis (diskutuotina, ar šis šaltinis galėtų būti vadinamas privatu, nes lėšos pervedamos iš valstybės biudžeto, tačiau fiziniai asmenys gali nuspręsti, kam jos yra skiriamos) šaltinis yra vienintelis: nuolatinio Lietuvos gyventojo savanoriškai skiriama 1 procento dydžio sumokėto metinio pajamų mokesčio dalis²². Šis šaltinis yra lengviausiai kontroliuojamas, ir yra visiškai skaidrus, nes lėšas politinei partijai pveda mokesčių administratorius, todėl yra žinoma kas ir kokią sumą skiria.

Juridinių asmenų aukos politinėms partijoms yra draudžiamos. PPPKFFKĮ pakeitimų rengėjai teigia, kad politinių partijų priklausomybė nuo juridinių asmenų aukų Lietuvoje yra labai didelė, rinkimuose turi varžytis politikai ir jų idėjos, tačiau esama finansavimo tvarka neskatina partijų konkuruoti idėjomis; šiuo metu Lietuvos politiniame gyvenime dominuoja konkurencija pinigais; interesų grupė partijas gali finansuoti apeidama maksimalias leistinas aukų ribas partijas finansuojant per įvairias giminingas įmones ir organizacijas²³. Politinės partijos politinės kampanijos metu turi teisę gauti aukas tik iš fizinių asmenų.

2012 m. sausio 1 d. įsigalioję PPPKFFKĮ pakeitimai praėjus vos 6 mėnesiams buvo vėl koreguojami. Autorių nuomone, tokia Lietuvos Respublikos Seimo (toliau – Seimas) taikoma praktika yra kritikuotina, ypač atsižvelgiant į tai, kad 2012 metais vyks parlamentiniai rinkimai ir keisdamas politinių partijų finansavimo tvarką, Seimas įvedė sumaištį bei nepaliko politinėms partijoms pakankamai laiko subalansuoti savo biudžetus.

Šių pakeitimų pagrindinis tikslas buvo įvesti naują sąvoką – mažos aukos. Pagal dabartinį reglamentavimą vienas fizinis asmuo per politinę kampaniją kiekvienam savarankiškam politinės kampanijos dalyviui gali paaukoti auką, neviršijančią 10 paskelbto praėjusių kalendorinių metų ketvirčio vidutinio mėnesinio darbo užmokesčio (toliau – VMDU), dydžių²⁴. Papildomai yra

²¹ Williams R. Aspects of Party Finance and Political Corruption. Žiūrėta 2012 m. rugpjūčio 20 d. Prieiga per internetą: <https://www.palgrave.com/pdfs/0333739868.pdf>

²² PPPKFFKĮ 7 str. 2 d.

²³ Aiškinamasis raštas „Dėl Lietuvos Respublikos Politinių partijų ir politinių kampanijų finansavimo bei finansavimo kontrolės įstatymo 7, 8, 10, 12, 14, 22 straipsnių pakeitimo ir papildymo įstatymo projekto“. Žiūrėta 2012 m. rugpjūčio 20 d. Prieiga per internetą: http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=405779

²⁴ 2011 m. IV ketvirtį VMDU nustatytas 2175 Lt., taigi vienas fizinis asmuo per politinę kampaniją kiekvienam savarankiškam politinės kampanijos dalyviui gali paaukoti auką, neviršijančią 21 750 litų.

nustatytas apribojimas, kad bendra vieno fizinio asmens aukų suma savarankiškiems politinės kampanijos dalyviams per kalendorinius metus negali viršyti 10 procentų fizinio asmens už praėjusius kalendorinius metus deklaruotų metinių pajamų. Į šiuos apribojimus neįskaičiuojamos mažos aukos. Lyginant su ankstesniu reglamentavimu aukoti leistina suma yra sumažinta dvigubai, be to, anksčiau nebuvo apribojimo dėl bendros aukų sumos.

Siekiant užtikrinti aukojimo skaidrumą PPPKFFKĮ nustato tvarką, pagal kurią fiziniai asmenys gali aukoti politinės kampanijos dalyviams.

Vertinant PPPKFFKĮ nustatytą išorinio finansavimo reglamentavimo atitikimą Gairėms, darytina išvada, kad Lietuva pasirinko griežtą reglamentavimą. Nustatytas baigtinis galinčių aukoti asmenų sąrašas, juridiniams asmenims apskritai nebeleidžiama aukoti, fiziniams asmenims leidžiama aukoti tik politinių kampanijų metu ir sumažinta maksimali galima aukos suma. Pagrindiniu šaltiniu lieka finansavimas iš valstybės biudžeto (bus nagrinėjamas kitame straipsnio skyriuje).

Autorių nuomone, teigiamai vertintina Seimo iniciatyva griežtai reglamentuoti išorinį finansavimą, nes ši finansavimo rūšis kelia didžiausią grėsmę partijų nepriklausomumui, o reglamentuojant pernelyg liberaliai atsirastų didelė korupcijos rizika.

Dėl anoniminių aukų leidimo PPPKFFKĮ pasirinktas tarpinis variantas, t.y. politinės kampanijos finansavimo kontrolę vykdančios institucijos turi galimybę nustatyti mažų aukų aukotojus, tačiau viešai duomenys apie šiuos asmenis nėra skelbiami. Be to, nustatyta maksimali suma tiek anoniminei aukai, gaunamai iš vieno asmens, tiek bendrai sumai, kokią politinės kampanijos dalyvis gali finansuoti mažomis aukomis²⁵. Toks reglamentavimas visiškai atitinka Gairėse nustatytas rekomendacijas.

Valstybinis finansavimas

Valstybė, siekdama užtikrinti politinių partijų nepriklausomumą nuo privačių subjektų, skiria paramą politinėms partijoms. Vidinį partijų gyvenimą nagrinėjančio Richard S. Katz teigimu, tiesioginės piniginės subsidijos politinėms partijoms iš valstybių buvo pradėtos skirti tik šeštojo dešimtmečio pabaigoje, tačiau ir iki tol Europos partijos jau gaudavo netiesioginę valstybių paramą, pavyzdžiui nemokamas laikas televizijos ar radijo eterįje, mokesčių lengvatos ir kt.²⁶

Valstybinis finansavimas leidžia partijoms išlikti nepriklausomoms nuo privačių subjektų įtakos, mažėja politinės korupcijos rizika, partijų finansavimas yra skaidresnis. Pagrindinis neigiamas aspektas: valstybės gyventojų – mokesčių mokėtojų – nenoras remti partijas, kurios neatspindi jų politinių interesų ir pažiūrų. Esant tik valstybinei paramai, daugiausiai sunkumų kyla susikurti ir įsitvirtinti naujoms partijoms, kurios dar neturi politinės gyventojų paramos.

Valstybės, skirdamos finansinę paramą politinėms partijoms, turi taikyti teisingus ir sąžiningus kriterijus. Gairėse teigiama, kad valstybė turi sudaryti galimybes naujoms partijoms susikurti ir vienodomis sąlygomis konkuruoti su jau anksčiau veikiančiomis partijomis.

Vidas Pečkys savo straipsnyje „Politinių partijų finansavimas: aktualijos ir problemos“ analizuoja partijų finansavimo iš biudžeto klausimus²⁷. Jis teigia, kad viešųjų finansų įtaka politinėms partijoms yra sviri ir turi tendenciją didėti. „Nors piliečių nepasitenkinimas dėl didėjančių valstybės injekcijų vis ryškesnis, daugelis šalių jau nusprendė, kad jos, teikdamos valstybinį finansavimą, ribotų šių lėšų panaudojimo sferas. Vyraujanti idėja tokia: privataus finansavimo lėšos turėtų užtikrinti partijų funkcionavimą tarp rinkimų, t. y. einamosioms reikmėms, o valstybės finansavimas turi būti nukreiptas rinkimų kampanijų ir pačių rinkimų organizavimui. Jei

²⁵ Mažomis aukomis savarankiškas politinėsa kampanijos dalyvis gali finansuoti ne daugiau kaip 10 procentų nustatyto didžiausio leistino politinės kampanijos išlaidų dydžio (PPPKFFKĮ 10¹ str. 10 d.)

²⁶ Luther K.R., Muller-Rommel F. Political Parties in the New Europe, 114 p.

²⁷ Atkreiptinas dėmesys, kad šis straipsnis buvo parašytas prieš priimant ir įsigaliojant PPPKFFKĮ pakeitimams, uždraudusiems juridinių asmenų ir apribojusiems fizinių asmenų aukas.

politinės partijos yra realus socialinis organizmas, turintis realius savo narius, tai privalo, iš vienos pusės, padengti savo einamąsias išlaidas, o iš kitos pusės, prisitaikyti prie realių galimybių²⁸.

Iki 2012 m. sausio 1 d. Lietuvoje politinių partijų finansavimas iš valstybės biudžeto buvo vienas iš finansavimo šaltinių. Uždraudus gauti finansavimą iš juridinių asmenų ir apribojimus fizinių asmenų aukas, valstybinis finansavimas tapo pagrindiniu politinių partijų finansavimo šaltiniu. Šiuo metu valstybė užtikrina ne tik politinių partijų dalyvavimą politinėse kampanijose, bet ir jų funkcionavimą tarp rinkimų. Pagrindinis tokių pakeitimų argumentas, be abejo, yra skaidrumo siekimas ir verslo subjektų įtakos politinių partijų veiklai mažinimas, tačiau tokio kraštutinio varianto pasirinkimas, kai partijų visa veikla yra finansuojama iš valstybės, t.y. mokesčių mokėtojų, lėšų, sulaukė nepasitenkinimo iš abiejų pusių: tiek iš pačių partijų, tiek iš Lietuvos gyventojų. Gyventojų nepasitenkinimą galima suprasti išanalizavus valstybės biudžeto asignavimų, skirtų finansuoti politinių partijų veiklą, kitimą 2000–2012 m. 2000 m. partijų finansavimui iš valstybės biudžeto buvo skirta 980 000 Lt. Tolesniais metais skiriama suma mažėjo, o 2004 m. jau buvo skirti 6 000 000 Lt, vėliau sumos didėjo, tik ekonominės krizės laikotarpiu skirta buvo mažiau. 2012 m. yra pirmieji metai, kai valstybinis politinių partijų finansavimas yra pagrindinis lėšų šaltinis, ir šiais metais politinėms partijoms valstybė skyrė 20 278 000 litų, palyginimui 2011m. – 4 123 500 litų buvo skirta iš valstybės biudžeto ir 8 011 932 – iš privačių aukotojų. Taigi, uždraudus gauti aukas iš privačių subjektų, valstybinis politinių partijų finansavimas padidėjo maždaug 5 kartus²⁹.

PPPKFFKĮ 15 str. nustato, kad valstybės biudžeto asignavimai politinės partijos veiklai finansuoti paskirstomi politinėms partijoms, kurios įstatymų nustatyta tvarka įregistruotos Juridinių asmenų registre ir atitinka įstatymų reikalavimus dėl politinės partijos narių skaičiaus ir kurioms nėra pradėta pertvarkymo arba likvidavimo procedūra ir kurios yra gavusios ne mažiau kaip 3 procentus visų rinkėjų balsų, paduotų už politinių partijų kandidatus tuose Seimo, savivaldybių tarybų rinkimuose, rinkimuose į Europos Parlamentą, pagal kurių rezultatus paskirstomi šie valstybės biudžeto asignavimai³⁰. Valstybės biudžeto asignavimai politinių partijų veiklai finansuoti yra skirstomi pagal paskutinių rinkimų rezultatus.

Seimo narių grupė kreipėsi į Lietuvos Respublikos Konstitucinį Teismą (toliau – LR Konstitucinis Teismas) su prašymu išnagrinėti, ar PPPKFFKĮ nuostata, nustatanti, kad valstybės biudžeto asignavimai skiriami tik partijoms, per rinkimus gavusioms ne mažiau kaip 3 procentus visų rinkėjų balsų, neprieštaruja Lietuvos Respublikos Konstitucijos (toliau – Konstitucija) 1 straipsnio nuostatai, kad Lietuvos valstybė yra demokratinė respublika, 29 straipsnio 1 daliai, 34 straipsnio 1, 2 dalims, konstituciniam teisinės valstybės principui. Jų teigimu, „ginčijamoje nuostatoje įtvirtintu teisiniu reguliavimu nepagrįstai suteikiamos privilegijos politinėms partijoms, kurios per rinkimus pasiekė 3 procentų rinkėjų balsų ribą, nes šioms politinėms partijoms yra teikiamos valstybės biudžeto dotacijos; toks teisinis reguliavimas yra diskriminacinis ir pažeidžia partijų lygias galimybes. Diskriminacinis finansavimo paskirstymas tik didina socialinę partijų atskirtį, nes visas finansavimas suteikiamas valdančiosioms, didžiosioms partijoms, surenkančioms daugiausia balsų, o mažesnėms partijoms neadekvačiai ir neprotingai mažinama galimybė dalyvauti valdant valstybę ir formuojant politiką. Mažai partijai, neturinčiai daug narių, be valstybės finansavimo egzistuoti ir aktyviai reikšti savo politines idėjas yra sunku, todėl su kiekvienais rinkimais jų galimybės gauti finansavimą tik mažėja, ir taip naikinamas pliuralistinės demokratijos modelis”.³¹ Analizuojant šį Seimo narių pareiškimą atkreiptinas dėmesys, kad įstatymų leidėjas dar 1990 m. buvo nustatęs, kad valstybinis finansavimas yra skiriamas tik tuometinėje Aukščiausioje Taryboje atstovaujamoms politinėms partijoms. Vėliau priimtas PPPKFFKĮ išlaikė ankstesnius valstybinio finansavimo

²⁸ Pečkys V. Politinių partijų finansavimas: aktualijos ir problemos.

²⁹ Lietuvos Respublikos Vyriausioji rinkimų komisija. Žiūrėta 2012 m. spalio 8 d. Prieiga per internetą:

<http://www.vrk.lt/lt/pirmas-puslapis/pppkfk/politines-partijos/dotacijos-irkompensavimas.html>

³⁰ PPPKFFKĮ 15 str. 1,2 d.

³¹ Lietuvos Respublikos Konstitucinio Teismo nutarimas „Dėl įstatymų nuostatų, kuriomis reguliuojami su rinkimų užstato sumokėjimu, kandidatų deklaracijų pateikimu, rinkimų slenksčio pasiekimu, sutarties su politinės kampanijos išdininku sudarymu ir valstybės biudžeto lėšų politinėms partijoms paskirstymu susiję santykiai”

skyrimo principus ir esminę nuostata, kad valstybinis finansavimas yra skiriamas tik Aukščiausioje Taryboje ir vėliau Seime atstovaujamoms politinėms partijoms, išliko nepakitusi.

LR Konstitucinis Teismas nutarė, kad įstatymų leidėjas, reguliuodamas su politinių partijų steigimu ir veikla, jų finansavimo būdais susijusius santykius, pagal Konstituciją gali nustatyti, kad ne visos įsteigtos ir veikiančios politinės partijos, bet tik tos, kurių kandidatai gauna atitinkamą rinkėjų pritarimą viešosios valdžios institucijų rinkimuose, gali gauti tikslinę paskirtį turinčių valstybės biudžeto lėšų, skiriamų politinėms partijoms paremti, todėl kvestionuojama PPPKFFKĮ nuostata atitinka Konstituciją.

Vis dėlto, autorių nuomone, tokia valstybės biudžeto asignavimų paskirstymo tvarka politinėms partijoms, yra kritikuotina, nes apsunkina naujų partijų galimybes gauti valstybės finansavimą ir dalyvauti politinėje veikloje. Pagal šį reglamentavimą valstybinis finansavimas yra tinkamai paskirstomas jau egzistuojančioms ir veikiančioms partijoms, tačiau nėra sudaryta galimybė naujoms partijoms gauti biudžeto dotacijas ir įsitvirtinti Lietuvos politinėje arenoje.

2012 m. vasario 27 d. Seime buvo įregistruotas „Lietuvos Respublikos Politinių partijų ir politinių kampanijų finansavimo bei finansavimo kontrolės įstatymo 15 straipsnio pakeitimo įstatymo“ projektas. Šio projekto tikslas – užtikrinti lygias galimybes visoms politinėms partijoms. Siūloma valstybės skiriamą finansavimą tolygiai ir proporcingai paskirstyti visoms politinėms partijoms (visų valstybės asignavimų, skirtų politinėms partijoms finansuoti, 15 procentų paskirstyti visoms įstatymų nustatyta tvarka registruotoms partijoms, kurios dalyvauja rinkimuose, o likusią 85 procentų dalį paskirstyti politinėms partijoms proporcingai pagal joms suteiktą rinkėjų pripažinimą).³² Šis PPPKFFKĮ pakeitimas Seime kol kas nėra priimtas.

Vertinant politinių partijų finansavimo iš valstybės biudžeto reglamentavimą įregistruotas PPPKFFKĮ pakeitimas labiau atitiktų Gairėse nustatytas nuostatas nei dabartinis reglamentavimas. Jei valstybė skiria finansavimą politinėms partijoms, ji turi gerai apsvarstyti galimus kriterijus, pagal kuriuos lėšos bus skirstomos, ir užtikrinti, kad visos politinės partijos, turinčios daug narių ar mažai narių, egzistuojančios ilgai ar neseniai susikūrusios, turėtų vienodas galimybes dalyvauti politinėje veikloje. PPPKFFKĮ 15 straipsnio pakeitimas leistų visoms partijoms gauti finansavimą iš valstybės biudžeto, tačiau tuo pačiu išlaikytų proporcingą finansavimą tarp populiarių ir mažiau populiarių politinių partijų.

Išvados

1. Politinės partijos – vienas pagrindinių šiuolaikinės demokratijos elementų. Valstybės užduotis – užtikrinti, kad politinės partijos gautų pakankamą finansavimą, bet tuo pačiu išliktų nepriklausomos ir neįtakojamos savo priimamuose sprendimuose. Lietuvoje politinių partijų finansavimą reglamentuoja Politinių partijų ir politinių kampanijų finansavimo bei finansavimo kontrolės įstatymo 2010 metų redakcija su tam tikrais pakeitimais ir papildymais. Dabartinį reglamentavimą galima vertinti kaip daugeliu nuostatu atitinkantį Europos Tarybos rekomendacijas, tačiau vis dar turintį keletą trūkumų.

2. Vidinis finansavimas didelės grėsmės politinių partijų nepriklausomumui nekelia, tačiau politinių partijų ekonominė veikla Lietuvoje yra pernelyg liberaliai reglamentuota, todėl atsiranda didesnė korupcijos rizika ir grėsmė, kad partijoms bus daroma įtaka iš išorės.

3. Išorinis finansavimas kelia didžiausią grėsmę, kad partijų priimamiems sprendimams įtaką gali daryti išorės subjektai. PPPKFFKĮ nustatytas griežtas išorinio finansavimo reglamentavimas: nustatytas baigtinis galinčių aukoti asmenų sąrašas, juridinių asmenų aukos yra draudžiamos, fizinių asmenų aukos apribotos lyginant su ankstesniu reglamentavimu (leidžiama aukoti tik politinių kampanijų metu ir sumažinta maksimali galima aukos suma), nustatyta atskira tvarka mažoms aukoms aukoti ir draudžiamos anoniminės aukos. Teigiamai vertintinos Seimo pastangos užtikrinti skaidrų politinių partijų finansavimą.

³² „Lietuvos Respublikos Politinių partijų ir politinių kampanijų finansavimo bei finansavimo kontrolės įstatymo 15 straipsnio pakeitimo įstatymo“ projektas. Žiūrėta 2012 m. rugpjūčio 20 d. Prieiga per internetą: http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=418947&p_query=&p_tr2=2

4. Valstybinis finansavimas leidžia partijoms išlikti nepriklausomoms nuo privačių subjektų įtakos, mažėja politinės korupcijos rizika, partijų finansavimas yra skaidresnis, tačiau yra ir neigiamas aspektas: valstybės gyventojų nenoras remti partijas, kurios neatspindi jų politinių interesų ir pažiūrų. Lietuvoje šis finansavimas yra istoriškai susiklostęs. Nuo 2012 m. sausio 1 d., uždraudus gauti finansavimą iš juridinių asmenų ir apribojimus fizinių asmenų aukas, valstybinis finansavimas tapo pagrindiniu politinių partijų finansavimo šaltiniu. Šiuo metu biudžeto dotacijos yra tinkamai paskirstomos jau veikiančioms partijoms, tačiau apsunkina naujų politinių partijų galimybes konkuruoti su didesnėmis ar seniau įsikurusiomis partijomis. Autorių nuomone, teigiamai vertintinas 2012 m. vasario 27 d. Seime įregistruotas „Lietuvos Respublikos Politinių partijų ir politinių kampanijų finansavimo bei finansavimo kontrolės įstatymo 15 straipsnio pakeitimo įstatymo“ projektas, kuris užtikrintų geresnį valstybės biudžeto asignavimų paskirstymą sudarant sąlygas susikurti naujoms partijoms ir joms konkuruoti su jau veikiančiomis.

5. Norminis politinių partijų finansavimo reglamentavimas Lietuvoje yra nuolat tobulinamas, paskutiniai pakeitimai harmonizavo PPPKFFKĮ su Europos Tarybos rekomendacijomis, tačiau autorių siūlymas būtų tobulinti valstybinio politinių partijų finansavimo skirstymą ir griežčiau reglamentuoti politinių partijų ekonominę veiklą.

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FINANCING PROBLEMS OF LITHUANIAN POLITICAL PARTIES

Annotation

Political parties are instrumental in today's democracy. They could be defined as established groups of individuals organized to compete in the electoral process with their main objective to elect government officials from within their political party, form the government, legislate and define state policy. Citizens play an important role in politics by being active in the respective political parties and this way they realise their interests – they vote during the elections for the party's program which reflects their ideas, they elect representatives of certain party, support party's ideology. Obviously political parties need financial recourses for their activities. And that's the main dilemma: how to assure that political parties represent the interests of the citizens who voted for them and not the interests of these who are supporting them financially?

Political parties financing sources may be divided into three main groups: internal, external and public financing. Each of these groups has its own good and bad sides.

Lithuanian political parties get their financing according to the rules established by the Parliament as stated in the Law on Funding of and Control over Funding of Political Parties and Political Campaigns. The objective of this law is to ensure democracy of political campaigns, legality, transparency and openness of funding of political parties and political campaigns, to regulate the procedure and control of funding of political parties and political campaigns. The law was amended twice during last 10 months and these amendments brought a chaos inside political parties before the parliament elections of 2012.

This article analyses Lithuanian political parties' funding regulation in comparison to the Financing political parties and election campaigns – guidelines published in 2004 by European Council. The objective of the article is to show the strong and the weak aspects of Lithuanian regulation in this area. The authors of the article analyse all of the political parties' sources of financing by adhering to recommendations of the European Council. In further analysis, the author comments on Lithuanian regulation by drawing comparisons to the European Council's recommendations, and concluding appropriately.

Key words: political parties; internal financing, external financing and state funding of political parties.

FINANCIAL DEVELOPMENT AND FINANCIAL SYSTEMS

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Abstract The evolution of real economic activity has come to be increasingly dominated by financial markets in industrial and developing countries alike. The fundamental benefit of financial markets is to help achieve higher standards of living. Financial markets also assess potential investment opportunities, facilitate risk management, including liquidity risk, and ease savings mobilization. However, the consequences of the global financial crisis have generated much academic debate about financial development and financial systems. In this context, the aim of this paper is to investigate the role of financial development on economic growth and the impact of different financial systems on markets.

Keywords: financial systems, financial development, market-based system, bank-based system

Jel Classification: G1 – Financial Market

Introduction

Financial systems play a vital role in economic development and countries must take a holistic view by identifying and improving long-term factors that are crucial to their development. Such a process would allow countries to encourage economic prosperity for all participants in the global economy (WEF, 2011).

Economists have debated the role of financial structure for more than a century. Especially, they debate the advantages and disadvantages of bank-based financial systems relative to market-based systems. Economists have constructed a vast number of theoretical insights into the comparative advantages of different financial systems (Allen and Gale, 1999).

The financial crisis of 2008 has put significant strain on the global financial system, and many questions regarding the role of financial development in countries. In the wake of the crisis, policymakers try to determine whether financial development can be good or bad for economic growth in the countries.

The aim of this paper is to investigate the role of financial development on economic growth and the impact of different financial systems on markets. This paper presented a literatur review. First section briefly reviews the role of financial development on economic growth. Second section evaluates the financial systems: bank-based system and market-based system. Third section discusses the other views on financial systems. Last section provides conclusions.

1.The Role of Financial Development on Economic Growth

Financial markets contribute to increased economic growth and aggregate economic welfare through their effect on capital accumulation and on technological innovation. First, greater financial development leads to greater mobilization of savings and its allocation to the highest-return investment projects. This increased accumulation of capital enhances economic growth. Second, financial development increases the rate of technological innovation and productivity growth, further enhancing economic growth and welfare (WEF, 2011).

Financial markets also benefit consumers and firms in many other ways that are not directly related to economic growth. Access to financial markets for consumers and producers can reduce poverty, as when the poor have access to banking services and credit. Microfinance access allows consumers to smooth consumption over time by borrowing and/or lending; in addition, it stabilizes consumer welfare in the presence of temporary shocks to wages and income (WEF, 2011).

Financial development also plays a crucial role in human and physical capital by effectively intermediating savings into investment, it can help raise the productive capacity of the economy; and by providing access to credit, it can also help smooth consumption when income fluctuates, in

turn supporting domestic demand and smoothing economic cycles. These vital functions of finance remain unchanged for emerging economies despite the global financial crisis (Lall, 2011).

The degree of financial development can be measured in terms of different components, namely the size, the structure and the efficiency of the financial sector (King and Levine, 1992). The higher the degree of financial development, the wider the availability of financial services that allow the diversification of risks. This increases the long-run growth trajectory of a country and ultimately improves the welfare and prosperity of producers and consumers with access to financial services (WEF, 2011). When the financial sector was analyzed by its size, structure and efficiency, it was observed that Turkish economy has been a remarkable performance after 2002 in financial sector in Turkey (Terzi and Reel, 2008). Similar results found for transition countries. Financial development provided a positive contribution for these countries (Aslan and Terzi, 2008; Terzi, 2009).

Demirgüç-Kunt and Maksimovic (1998) estimate a financial planning model to find that financial development facilitates the firm's growth. In this context an active stock, market and a well-developed legal system are crucial for the further development of the firms.

Atje and Jovanovic (1993) examine the role of stock markets on development, and conclude that there is positive effect on the level as well as on the growth.

Zhang et. al (2012) suggest that financial development are positively associated with economic growth. The size and depth of the financial sector spur economic growth. With more use of markets and profit-oriented financial transactions and mobilization of corporate deposits, the development of financial intermediation in China after the WTO entry positively influences economic growth in China.

Esso (2010) also shows that there is a long - run relationship between financial development and economic growth in five countries, namely, Cape Verde, Cote d'Ivoire, Ghana, Guinea and Liberia.

In addition, Johannes et. al. (2011) find that financial development has a positive effect on economic growth in the long run through efficient collection and allocation of financial resources. Also, they find a long term causality relationship running from financial development to economic growth.

Kargbo and Adamu, (2009) have examined the relationship between financial development and economic growth in Sierra Leone over the period 1970-2008. Their results imply that financial development feeds economic growth through the channel of increased investment.

The above studies show that financial development provides a contribution on economic growth and is helpful on firm's growth. In addition, financial development has a crucial role in allocation of financial resources.

2.Financial Systems

Financial systems can be classified in three different ways. A popular classification scheme focuses on the dominant source of external funding, distinguishing between bank-based and markets-based systems. A second popular scheme is based on the type of relationship between customers and financial institutions, distinguishing between relationship-based financial systems (RBFS) and arms-length financial systems (ALFS). A third classification within the broader varieties of capitalism literature distinguishes between liberal market economies and coordinated market economies (Wolf, 2011).

Financial systems across the world, and especially in advanced economies, moved from a relationship based system of intermediation to a more arms-length system. This shift to arms-length intermediation proceeded at different speeds in different economies, influenced by technological changes, the institutional environment, globalization, and the underlying needs of the economy. The relationship-based model was dominant at a time when lenders had an informational advantage about potential borrowers and their projects, and thus were able to provide financing based on the asymmetry in information. This model was dominant through much of the 19th and early 20th

centuries, when much of financing was related to building industries where technology and competition remained relatively stable for an extended period of time, sometimes spanning decades. Despite the rise in arms-length financing, this model continues even now to be effective and dominant in many economies around the globe (Lall, 2011).

In bank-based systems, the bulk of financial assets and liabilities consist of bank deposits and direct loans (Vitols, 2001). In a bank based financial structure, the banks have an intermediary role, collecting deposits and providing loans primarily to the corporate sector. In collecting deposits, they can largely rely on households, as their willingness to take risks is low, and they mostly prefer bank deposits to the various securities. The asset side, on the other hand, is dominated by corporate loans and by all means primary means of acquiring external funds. Market financing is only supplementary. This structure is typical mostly of Germany, France and the majority of EMU member states as well as Japan (Tamas, 2005).

The bank-based view highlights the positive role of banks in (i) acquiring information about firms and managers and thereby improving capital allocation and corporate governance (ii) managing cross-sectional, intertemporal, and liquidity risk and thereby enhancing investment efficiency and economic growth and (iii) mobilizing capital to exploit economies of scale (Levine, 2002).

The bank-based view also stresses the shortcomings of market-based systems. Stiglitz (1985), argues that well developed markets quickly and publicly reveal information, which reduces the incentives for individual investors to acquire information. Banks, however, mitigate this problem since they form long-run relationships with firms and do not reveal information immediately in public markets (Boot, Greenbaum, and Thakor, 1993).

Also, Boot and Thakor (1997) argue that banks – as coordinated coalitions of investors – are better than uncoordinated markets at monitoring firms and reducing post-lending moral hazard. Proponents of the bank-based view also stress that liquid markets create a myopic investor climate (Bhide 1993). In liquid markets, investors can inexpensively sell their shares, so that they have fewer incentives to exert rigorous corporate control. Thus, according to the bank-base view, greater market development may hinder corporate control and economic growth. Furthermore, Rajan and Zingales (1998) stress that powerful banks can more effectively force firms to re-pay their debts than atomistic markets, especially in countries with weak contract enforcement capabilities. Without powerful banks to force repayment, therefore, external investors may be reluctant to finance industrial expansion in countries with underdeveloped institutions. Thus, the bank-based view holds that banks can exploit scale economies in information processing, ameliorate moral hazard through effective monitoring, form long-run relationships with firms to ease asymmetric information distortions, and thereby boost economic growth.

Bank-based systems have a strong survival capacity. This interpretation of history provides support for the recommendation that developing countries follow the model of bank based development (Aoki and Patrick 1994). Stiglitz (1985) argues that since well-developed markets quickly reveal information to investors at large, this dissuades individual investors from spending much time and money researching firms. There is a basic free-rider problem. This problem is less severe in bank-based systems since banks can make investments without revealing their decisions immediately in public markets.

In a bank-based system, banks are the most important source of external financing for firms, although at a various extent. Bank-client relationships are close and the universal banking model is widespread. Informational barriers are more significant, as incumbent banks have informational advantages over new entrants (Hauswald and Marquez 2006). In countries where the universal banking model prevails, the share of foreign ownership is lower, consistent with the idea that entry is more difficult (Affinito and Piazza, 2008).

In market-based systems, securities that are tradeable in financial markets are the dominant form of financial asset (Vitols, 2001). In a market-based system, capital markets usually are the main sources of firm financing. Bank-client relationships are typically at arm's length and thus have less contractual flexibility than relationship-based finance. Even though universal banking activities

are allowed in all EU countries following the implementation of the Second Banking Directive (89/646/EEC), market-based systems tend to favour bank specialisation, either by law or tradition.

In addition, in market-based countries, non-bank financial intermediaries also play an important. Corporate governance is shareholders-oriented rather than stakeholders-oriented, ownership tends to be dispersed and the mechanism of management control relies mostly on market forces (Arnaboldi and Casu, 2011).

The market-based view highlights the growth enhancing role of well-functioning markets in (i) fostering greater incentives to research firms since it is easier to profit from this information by trading in big, liquid markets (ii) enhancing corporate governance by easing takeovers and making it easier to tie managerial compensation to firm performance and (iii) facilitating risk management (Levine, 2002)

Moreover, the market-based view stresses problems with banks. Specifically, powerful banks can stymie innovation by extracting informational rents and protecting established firms with close bank-firm ties from competition (Rajan, 1992). Furthermore, powerful banks with few regulatory restrictions on their activities may collude with firm managers against other creditors and impede efficient corporate governance (Wenger and Kaserer, 1998).

Competitive capital markets play a positive role in aggregating diffuse information signals and effectively transmitting this information to investors, with beneficial implications for firm financing and economic performance (Allen and Gale, 1999). Thus, proponents of the market-based view stress that markets will reduce the inherent inefficiencies associated with banks and enhance economic growth.

Market-based systems also tend to be more volatile but are better able quickly to channel funds to new companies in growth industries (Vitols et al. 1997). Stock markets also provide financial services by influencing information acquisition and corporate control, risk management, and savings mobilization. First, well-functioning stock markets may stimulate the acquisition and dissemination of information. As markets become larger and more liquid, agents may have greater incentives to expend resources in researching firms because it is easier to profit from this information by trading in big and liquid markets. Second, well-functioning stock markets ease risk diversification and the ability to avoid liquidity risk (Levine, 2000).

Saillard and Url (2011) use the cross country and time series variation from a panel of 19 industrial countries to support the idea that venture capital thrives within market-based financial systems and is confined to an ancillary role in bank-based systems. The positive relation between market-based financial systems and venture capital investment raises important policy issues. Well-functioning public markets improve the possibilities to exit from an investment, which in turn allows entrepreneurs to regain their highly valued independence from venture capitalists. It also allows venture capitalists and investors alike to realize capital gains from a venture.

Levine (2002) explores the relationship between economic performance and financial structure – the degree to which a country’s financial system is market-based or bank-based. In particular, this study assesses competing theoretical views of financial structure and economic growth. The bank based view holds that bank-based systems – particularly at early stages of economic development and in weak institutional settings – do a better job than market-based financial system at mobilizing savings, allocating capital and exerting corporate control. In contrast, the market-based view emphasizes that markets provide key financial services that stimulate innovation and long-run growth.

As indicated by the above studies, both bank-based system and market based system plays important role in financial markets. There is a complementary relationship between them. While bank based systems have strong survival capacity and is helpful in providing necessary information, market based system facilitates risk diversification and the ability to avoid liquidity risk.

3. The Other Views on Financial System

Merton and Bodie (1995) and Levine (1997) minimizes the importance of the bank-based versus market-based debate. It stresses that financial arrangements – contracts, markets, and intermediaries – arise to ameliorate market imperfections and provide financial services. financial arrangements arise to assess potential investment opportunities, exert corporate control, facilitate risk management, enhance liquidity, and ease savings mobilization. By providing these financial services more or less effectively, different financial systems promote economic growth to a greater or lesser degree. According to this view, the main issue is not banks or markets. The issue is creating an environment in which intermediaries and markets provide sound financial services. Conceptually, the financial services view is fully consistent with both the bank based and market-based views.

The law and finance view, which is a special case of the financial services view, argues that the legal system is the primary determinant of financial development. Thus, the law and finance view stresses the role of the legal system in boosting overall financial sector development and hence long-run growth (Levine, 2002).

Levine (2002) doesn't find evidence for the bank-based or market based views. Distinguishing countries by financial structure does not help in explaining cross-country differences in long-run economic performance. Rather, the cross-country data strongly support the financial services view. Distinguishing countries by their overall level of financial development helps to explain cross-country difference in economic growth. Countries with greater degrees of financial development enjoy substantially greater economic growth rates. Moreover, the component of financial development explained by the legal rights of outside investors and the efficiency of the legal system in enforcing those rights is strongly and positively linked with long-run growth. The legal system importantly influences financial sector development and this in turn influences long-run growth.

Levine and Zervos (1998) show that greater stock market liquidity implies faster economic growth no matter what the level of banking development. Similarly, greater banking development implies faster growth regardless of the level of stock market liquidity.

La Porta et. al (2000) highlight the role of the legal system in creating a growth-promoting financial sector. The law and finance view argues that finance is a set of contracts. These contracts are defined – and made more or less effective – by legal rights and enforcement mechanisms. From this perspective, a well-functioning legal system facilitates the operation of both markets and intermediaries. It is the overall level and quality of financial services that improves the efficient allocation of resources and economic growth. Authors clearly argue that laws and enforcement mechanisms are a more useful way to distinguish financial systems than focusing on whether countries are bank-based or market-based.

Sylla (1998) also stresses a potential complementarity between stock markets and banks. According to author, this interaction emerged due to the ‘federalist financial revolution’ in the US. It was a ‘jump starter’ of US economic changes such as the industrial revolution and the transportation revolution. Similarly, Song and Thakor (2010) propose a theoretical model showing that systems with a high degree of complementarity are more efficient, stressing the importance of this classification over the traditional market-bank based view. In an empirical investigation, Saillard and Url (2011) find that the degree of complementarity is positively and significantly correlated with efficiency in the financial markets.

According to Saillard (2012), the degree of complementarity between banking and stock-market finance is the key characteristic of the financial structure. The degree of complementarity generalizes the notion of bank-based and market-based economies prevalent in earlier literature on finance-growth nexus, and on the macroeconomic effect of financial architecture in general. Regression estimates on the likelihood odds of a major economic crisis shows that the higher the complementarity, the lower is the probability of a crisis.

Moreover, the overview of the literature on financial stability shows that both bank based and market based systems are susceptible to crises. Bank-based systems clearly face the possibility of banking crises. However market-based systems are also susceptible to crisis as well. The literature on bubbles and crises shows that markets can misvalue assets and this can cause substantial problems subsequently. Contagion and financial fragility can also occur in bank-based and market-based systems. In terms of stability neither system has a particular advantage (Allen, 2004). For example, the global financial and economic crisis of 2008 originated in the USA, a traditionally market-based economy, and spilled to the bank-based economies of continental Europe (Saillard, 2012).

The development of arms-length financing evolved over time from simple equity and debt securities to include a vast array of derivative instruments, a variety of credit risk transfer instruments, such as credit default swaps. Many of these instruments were at the heart of the crisis, which originated in the US subprime market and which also helped transmit the crisis quickly across institutions and borders. Risks turned out to be more heavily concentrated in financial institutions than was previously understood, magnifying the impact of the downturn in the US housing market (Lall, 2011).

The financial crisis offers several lessons to nations that seek to use financial development as an engine for economic growth. One is that prudent macroeconomic policies are critical. Fiscal, monetary, and exchange rate policies should not be overly aggressive—rather, these policies should focus on achieving growth targets that align with the particular economy’s potential. Macroprudential measures that focus on financial stability should both complement and reinforce broad macroeconomic policies. The systemic nature of certain industries and corporations should be factored into the policymaking process, and a solid regulatory framework must be developed in order to provide for proper oversight. The financial crisis has highlighted the integrated nature of the global economy. It is therefore essential that emerging markets not only understand the failures that led to the crisis, but also make the reforms necessary to achieve long-term sustainable growth (Lall, 2011).

Above studies emphasise the important of financial arrangements rather than bank-based system and market based system. Financial arrangements is necessary to assess potential investment opportunities, exert corporate control, facilitate risk management, enhance liquidity, and ease savings mobilization. In addition, a well-functioning legal system facilitates the operation of both markets and intermediaries.

Conclusions

Financial development is a crucial for countries. Both bank-based system and market based system has advantages and disadvantages for countries. So, there musn’t be a trade off between bank-based system and market based system. The important thing is a complementarity relationship between market based and bank-based financial system. In addition, the financial arrangements is more important than the type of financial system for an economic growth of countries. In this context, the legal system also should be supportive the financial systems.

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VYRIAUSYBĖS VERTYBINIAI POPIERIAI KAIP VALSTYBĖS SKOLINIMOSI PRIEMONĖ

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Anotacija. Vyriausybės vertybiniai popieriai (toliau VVP) yra neatskiriama finansų rinkos dalis. Valstybės funkcijoms įgyvendinti ne visuomet užtenka surenkamų piniginių lėšų, todėl trūkstamas lėšas tenka skolintis iš vidaus ir užsienio kreditorių, kurie sutinka savo laisvas pinigines lėšas paskolinti valstybei, tikėdamiesi gauti už suteiktą paskolą tam tikro dydžio palūkanas. VVP vaidina svarbų vaidmenį finansuojant valstybės biudžetą, siekiant išlaikyti likvidumą finansų sistemoje ir reguliuojant ekonominį aktyvumą. Moksliniame straipsnyje buvo apžvelga mokslinė - teisinė literatūra, reglamentuojanti Vyriausybės vertybinių popierių išleidimą tiek vidaus, tiek užsienio rinkose. Atskleisti esminiai Vyriausybės vertybinių popierių bruožai, jų platinimo Lietuvos vidaus ir užsienio rinkoje ypatumai.

Raktiniai žodžiai: vertybiniai popieriai, Vyriausybės vertybiniai popieriai, vidaus rinka, užsienio rinka, valstybės skola.

JEL classification:

H6 - National Budget, Deficit, and Debt

Įvadas

Valstybės funkcijoms įgyvendinti ne visuomet užtenka surenkamų piniginių lėšų, todėl trūkstamas lėšas tenka skolintis iš vidaus ir užsienio kreditorių, kurie sutinka savo laisvas pinigines lėšas paskolinti valstybei, tikėdamiesi gauti už suteiktą paskolą tam tikro dydžio palūkanas. Vadovaujantis Europos valstybių ir Lietuvos duomenimis apie valstybių skolas, galima teigti, kad paskutiniu metu valstybės daugiausia skolinasi leisdamos Vyriausybės vertybinius popierius.

Vyriausybės vertybiniai popieriai yra neatskiriama finansų rinkos dalis, vaidina svarbų vaidmenį finansuojant valstybės biudžetą, siekiant išlaikyti likvidumą finansų sistemoje ir reguliuojant ekonominį aktyvumą. Vyriausybės vertybiniai popieriai leidžia valstybei pasiskolinti pritraukiant įvairių subjektų lėšas. Lietuvos Vyriausybės vertybiniai popieriai yra patraukli investicija, nes tai patys saugiausi vertybiniai popieriai, kurių išpirkimas užtikrinamas visais galimais valstybės finansiniais ištekliais, tarp jų ir naujais valstybės turtais įsipareigojimais, todėl investuotojai visada atgaus investuotą pinigų sumą.

Lietuvos Respublikos Vyriausybė išleidžia įvairių rūšių Vyriausybės vertybinių popierių, kurie yra parduodami vidaus ir užsienio kapitalo rinkose. Lietuvos valstybė vidaus rinkoje leidžia litais denominuotus skolos instrumentus, kurie ir sudaro valstybės vidaus skolos pagrindą. Naudojant įvairius finansinius instrumentus siekiama užtikrinti veiksmingą poveikį valdant valstybės skolą ir jos struktūrą.

Viešojo valdžia išleisdama vertybinius popierius ir siekdama greitai ir pigiai pritraukti investuotojų lėšas nuolat leidžia patobulintus ir prie rinkos sąlygų pritaikytus skolos vertybinius popierius, kurių išleidimo sąlygos nuolat keičiasi, o tai sąlygoja būtinybę išnagrinėti tokių vertybinių popierių išleidimą ir platinimą tiek vidaus, tiek ir užsienio rinkose.

Ekonomiškai stipresnėse ir šiuo skolinimosi būdu seniai besinaudojančiose valstybėse analizuojama tema yra pakankamai išnagrinėta. Lietuvos mokslinėje literatūroje ši tema tyrinėta ne daug - išsamiausiai išnagrinėta Pauliaus Markovo, kuris 2005 m. apsigynė disertaciją „Vyriausybės ir savivaldybių vertybinių popierių apyvartos teisinis reguliavimas“.

Straipsnio objektas – Vyriausybės vertybiniai popieriai.

Straipsnio tikslas – atskleisti Lietuvos Respublikos Vyriausybės vertybinių popierių esminius bruožus ir jų platinimo Lietuvos vidaus ir užsienio rinkoje ypatumus.

Tyrimo metodai – literatūros mokslinė analizė ir apibendrinimas, statistinių rodiklių lyginamoji analizė.

1. Vyriausybės vertybinių popierių sąvoka ir rūšys

Valstybės išleisti į rinką skolos instrumentai yra labai svarbūs finansų sistemai. Valstybės skolos instrumentai padeda vystyti visai finansų rinkai visose šalyse. Vyriausybės vertybinių popierių emitentas yra tik vienas - valstybė, todėl tokie instrumentai yra labiau vienalyčiai. Išsivysčiusiose šalyse dėl kredito rizikos neturėjimo valstybės skolos instrumentai dažnai įtraukiami į bankų kapitalo formavimą, investicijų portfelį, pensijų fondai teisiškai privalo dalį lėšų investuoti į valstybės skolos instrumentus (Kancerevyčius, 2006).

Vyriausybės vertybiniai popieriai (toliau – „VVP“) , visų pirma, yra pirminiai vertybiniai popieriai. Pirminių vertybinių popierių sąvoka pateikta Lietuvos Respublikos civilinio kodekso³³ (toliau – Civilinis kodeksas) 1.101 straipsnio 1 dalyje. Pirminis vertybinis popierius – tai dokumentas, patvirtinantis jį išleidusio asmens (emitento) įsipareigojimus šio dokumento turėtojui. Ši sąvoka labai abstrakti ir apima skolos, nuosavybės ir prekinis vertybinius popierius. Tuo tarpu, Vyriausybės vertybiniai popieriai yra skolos vertybiniai popieriai.

Vyriausybės vertybiniai popieriai apibrėžiami ir Lietuvos Respublikos valstybės skolos įstatyme³⁴. Pagal šio įstatymo 2 straipsnio 21 punktą Vyriausybės vertybiniai popieriai yra valstybės vardu vidaus ar užsienio rinkose Vyriausybės išleidžiami vertybiniai popieriai, patvirtinantys jų turėtojo teisę numatytais terminais gauti jų nominalią vertę atitinkančią sumą, palūkanas ar kitą ekvivalentą. Analogiška VVP sąvoka pateikiama ir Lietuvos Respublikos Vyriausybės vertybinių popierių išleidimo ir apyvartos taisyklėse³⁵. Nors pastaruosiuose teisės aktuose pateikiama išsamesnė VVP sąvoka nei Civiliniame kodekse, tačiau ji neapima visų esminių Vyriausybės vertybinių popierių požymių. Tiek Valstybės skolos įstatyme, tiek ir Civiliniame kodekse pateiktuose apibrėžimuose nėra akcentuojami Vyriausybės vertybinių popierių perleidžiamumas, t.y., kad Vyriausybės vertybiniai popieriai gali būti antrinės vertybinių popierių apyvartos objektas, jei to nedraudžia emisijos sąlygos, ir šių vertybinių popierių suteikiamos neturtinės teisės, kurios yra ne mažiau svarbios nei turtinės teisės, pavyzdžiui, teisė gauti informaciją apie ketinamus įsigyti ar jau įsigytus Vyriausybės vertybinius popierius.

Vyriausybės vertybiniai popieriai gali būti skirstomi į rūšis pagal įvairius kriterijus. Vyriausybės vertybinių popierių rūšių įvairovė suteikia galimybę investuotojams nuspręsti, ar verta investuoti į šiuos vertybinius popierius, į kokius VVP investuoti, atsižvelgiant į galimą gauti pelną, į terminą, kurį investuotojas gali laikinai laisvas lėšas paskolinti valstybei bei į kitas jam svarbias aplinkybes. Iš kitos pusės suteikia galimybę valstybei skatinti investuoti tik į jos išleidžiamus vertybinius popierius ir tokiu būdu pritraukti įvairius investuotojus, turinčių skirtingų investavimo į vertybinius popierius interesų lėšas.

Vyriausybės vertybiniai popieriai leidžiami serijomis, nematerialia forma. Skiriamos šios VVP rūšys:

Valstybės išdo vekseliai – tai valstybės vertybiniai popieriai, kurie yra išleidžiami trumpesniam negu metų laikotarpiui ir naudojami tam, kad būtų padengiamos laikinos valstybės išlaidos. Išdo vekseliai gali būti įvairių nominacijų. Tai likvidžiausios pinigų rinkos priemonės (Kamal, Sunding, 2006).

Vyriausybės obligacijos – leidžiami ilgesniam nei vienerių metų terminui. Šiuo atveju skolinasi ne bendrovė, bet valstybė, ir būtent valstybė prisiima įsipareigojimą iš anksto sutartu terminu išpirkti obligaciją bei sumokėti nustatytas palūkanas. Laikoma, kad valstybės išleidžiamos obligacijos yra saugesnės ar net visiškai saugios, nes valstybė visada vykdo savo įsipareigojimus – tai yra laiku išperka obligacijas ir sumoka palūkanas. Tik išimtiniais atvejais dėl perversmų ar kataklizmų – valstybės obligacijų išpirkimas gali būti atidėtas. Kaip tik dėl to, kad valstybės

³³ Lietuvos Respublikos civilinis kodeksas // Valstybės žinios, 2000, Nr. 74 – 2262.

³⁴ Lietuvos Respublikos valstybės skolos įstatymas // Valstybės žinios, 1996, Nr. I– 1508.

³⁵ Lietuvos Respublikos Vyriausybės 1997 m. gruodžio 3 d. nutarimas Nr. 1329 "Dėl Lietuvos Respublikos Vyriausybės vertybinių popierių išleidimo ir apyvartos tvarkos patvirtinimo". Valstybės žinios, 1997, Nr. 112 – 2838; 2 punktas.

obligacijos laikomos saugiomis, už jas paprastai mokamos mažesnės palūkanos nei už įmonių obligacijas (Aleksnevičienė, 2005).

Vyriausybės taupymo lakštai – ne aukciono būdu platinami Vyriausybės vertybiniai popieriai, kurie parduodami tiek fiziniams asmenims, tiek ir juridiniams asmenims, išskyrus įmones, turinčios AB ir UAB statusą. Investuotojai, įsigiję taupymo lakštų, nemoka su jų įsigijimu susijusių vertybinių popierių sandorio sudarymo, taupymo lakštų saugojimo, vertybinių popierių sąskaitos atidarymo mokesčių – visa tai apmoka Finansų ministerija³⁶.

Vyriausybės euroobligacijos – dažniausiai išleidžiami užsienio valiuta tarptautinėse rinkose. Nors euroobligacijų emisijos registruojamos nacionalinėse biržose, didžioji sandorių dalis sudaroma užbiržinėje prekyboje. Šios obligacijos įtraukiamos į biržų listingus dažnai dėl atskirų institucinių investuotojų, kuriems draudžiama pirkti nelistinguojamus vertybinius popierius (Kancerevyčius, 2006). Renkantis Vyriausybės vertybinius popierius taip pat reikia pabrėžti jų privalumus kaip saugumas, lankstumas ir likvidumas.

2. Vyriausybės vertybinių popierių požymiai

Vyriausybės vertybiniai popieriai turi tam tikrus požymius, kurie leidžia atskirti šiuos vertybinius popierius nuo kitų vertybinių popierių rūšių. Galima išskirti tokius vertybinių popierių požymius:

- *tai skolos vertybiniai popieriai* – išleidžiant tokius vertybinius popierius yra siekiama pasiskolinti trūkstamų lėšų iš subjektų, kurie jų turi ir gali laikinai paskolinti (Markovas, 2005).

- *tai valstybės vertybiniai popieriai* – išleidžiami siekiant gauti lėšų, reikalingų įstatymuose nustatytoms valstybės reikmėms finansuoti. Valstybės skolos įstatymo 4 straipsnyje numatyta, kad Vyriausybė valstybės vardu išleisti vertybinius popierius gali tik šiems tikslams: valstybės biudžeto deficitui finansuoti bei valstybės piniginių išteklių srautams subalansuoti; valstybės investicijoms finansuoti; valstybės skolai dengti; valstybės socialinės apsaugos fondų skolinams įsipareigojimams dengti bei šių fondų pinigų srautams subalansuoti. Vyriausybė išleisdama Vyriausybės vertybinius popierius, privalo laikytis atitinkamų metų valstybės biudžeto ir savivaldybių biudžetų finansinių rodiklių patvirtinimo įstatyme nustatyto Vyriausybės grynojo skolinimosi limit³⁷.

- *emitentas yra Vyriausybė* – Valstybės skolos įstatymo 3 straipsnyje numatyta, kad Vyriausybės vertybinius popierius leidžia Vyriausybė, o jai skolinantis valstybės vardu atstovauja Finansų ministerija, kuri nustato šių vertybinių popierių charakteristikas bei išleidimo į apyvartą sąlygas, ir atlieka su jais operacijas vidaus ir užsienio rinkose.

- *gali būti platinami vidaus ir užsienio rinkose* – VVP išleidimą ir platinimą vidaus rinkoje reglamentuoja Vyriausybės vertybinių popierių išleidimo ir apyvartos taisyklės, o tarptautinėse rinkose – Lietuvos Respublikos VVP išleidimo užsienio rinkose, paskolų valstybės vardu ėmimo ir kitų įsipareigojamųjų skolos dokumentų pasirašymo taisyklės³⁸.

- *suteikia jų turėtojams tam tikras turtines ir neturtines teises* – VVP suteikia jų turėtojams dvi pagrindines turtines teises – teisę pasibaigus vertybinio popierio galiojimo terminui atgauti jo nominalią vertę ir teisę gauti palūkanas emisijos sąlygose nustatytais terminais (Laurinavičius, 2001). Kalbant apie vertybinių popierių turėtojams suteikiamas neturtines teises, Lietuvos VVP suteikia šių vertybinių popierių savininkams dvi neturtines teises – teisę gauti informaciją apie vertybinių popierių emisijos sąlygas, apie turimų vertybinių popierių apskaitą, atsiskaitymo sąlygas ir teisę pasirinkti vertybinių popierių viešosios apyvartos tarpininką (Markovas, 2004).

³⁶ Lietuvos Respublikos finansų ministro 2009 m. gegužės 6 d. įsakymas Nr. 1K-155 „Dėl Lietuvos Respublikos Vyriausybės taupymo lakštų išleidimo ir apyvartos organizavimo taisyklių patvirtinimo“, 2009 m. rugpjūčio 27 d. Nr. 1K – 278 Vilnius. I Bendrosios nuostatos.

³⁷ Lietuvos Valstybės skola // <http://www.finmin.lt/web/finmin/leidiniai/skola> [žiūrėta 2012 08 03]

³⁸ Lietuvos Respublikos Vyriausybės 2006 m. kovo 9 d. nutarimas Nr. 218 “Dėl Lietuvos Respublikos Vyriausybės 2001m. lapkričio 20 d. nutarimo Nr. 1377 “Dėl Lietuvos Respublikos Vyriausybės vertybinių popierių išleidimo tarptautinėse finansų rinkose, užsienio paskolų ėmimo ir kitų įsipareigojamųjų skolos dokumentų pasirašymo taisyklių patvirtinimo” pakeitimo”. Valstybės žinios, 2006, Nr. 29 – 982.

- gali būti pirminės ir antrinės apyvartos objektas - visi VVP yra pirminės vertybinių popierių apyvartos objektas, kadangi pirminė apyvarta – tai naujų vertybinių popierių siūlymas, išleidimas ir perleidimas investuotojų nuosavybėn, kai lėšos ar kitas turtas už parduotus vertybinius popierius pereina emitentui ar jo įgaliotam asmeniui³⁹. Skiriasi tik Vyriausybės vertybinių popierių platinimo būdai, t.y. Vyriausybės obligacijos ir valstybės išdo vekseliai yra platinami aukciono būdu Vertybinių popierių biržoje NASDAQ OMX Vilnius, o Vyriausybės taupymo lakštai – per Finansų ministerijos pasirinktus tarpininkus – Lietuvos pašto skyrius bei internetu. Tuo tarpu antrinė VVP apyvarta yra išleistų į apyvartą vertybinių popierių įsigijimas arba perleidimas kitiems investuotojams. Antrinės apyvartos objektais, paprastai, be jokių apribojimų, gali būti tiek Vyriausybės obligacijos, tiek valstybės išdo vekseliai.

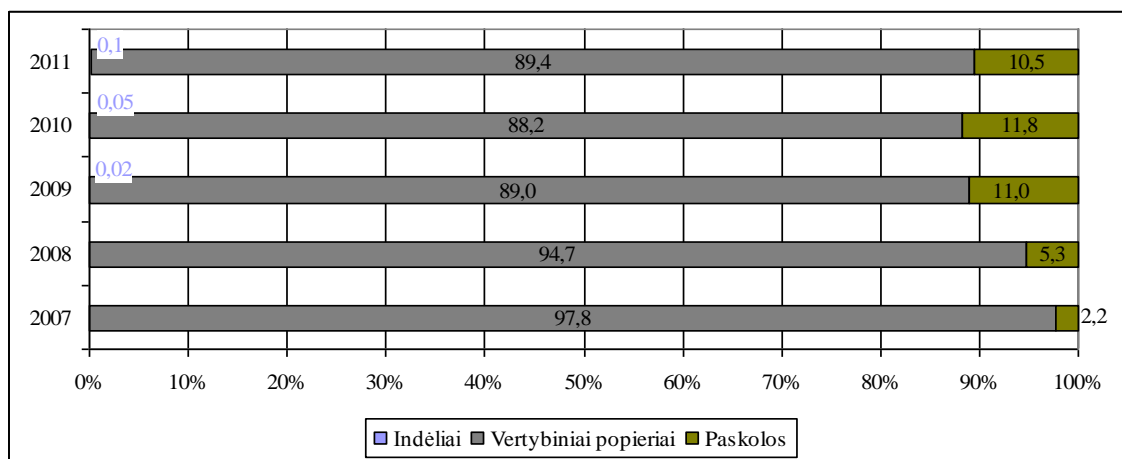
3. Vyriausybės vertybinių popierių cirkuliacija vidaus ir užsienio rinkoje

Vyriausybė, vadovaudamasi skolinimosi ir skolos valdymo gairėmis, didžiąją skolinimosi poreikio dalį finansuoja išleisdama vertybinius popierius vidaus ir užsienio rinkose.

Skolinimasis vidaus ir užsienio rinkose, išleidžiant Vyriausybės vertybinius popierius kai kurių mokslininkų vertinamas gana kontroversiškai. Kadangi Vyriausybės vertybinius popierius perka fiziniai ir juridiniai asmenys, vertybiniai popieriai sumažina paskolų fondą ir dėl to padidina palūkanų normą. Padidėjus palūkanų normai, mažėja investicijos bei vartojimo išlaidos. Taigi, Vyriausybės vertybiniai popieriai išstumia privataus sektoriaus išlaidas. Jie taip pat perskirsto pajamas tarp tų kurie perka vertybinius popierius ir likusių gyventojų, kadangi mokesčius moka visi, o palūkanas už vertybinius popierius gauna tik patys turtingiausi. Žinoma, išskiriamas valstybės skolos augimas, nes skolinimasis ypač privačiose užsienio rinkose yra gana brangus (Skominas, 2006).

Nagrinėjant statistiškai, vertybiniai popieriai Lietuvoje, kaip minėta, yra plačiausiai Vyriausybės naudojama skolos priemonė.

1 pav. Centrinės valdžios skolos struktūra pagal priemonės tipą 2007 – 2011 m.



Šaltinis: sudaryta autorės

Iš pateiktų duomenų matome, kad didžiausią dalį valstybė skolinasi išleisdama ir platindama vertybinius popierius, taip pat reikšmingesnę vaidmenį užima ir valstybės vardu prisiimtose paskolos. Finansų ministerijos teigimu, paskolos yra pagrindinė imamos svarbių valstybės visuomeninių projektų bei ilgalaikę vertę turinčių investicinių projektų įgyvendinimui, o tarptautinių finansų institucijų sąlygos (terminai, palūkanų norma) yra palankesnės, nei siūloma rinkoje.

³⁹ LR Vyriausybės 1997 m. gruodžio 3 d. nutarimas Nr. 1329 "Dėl Lietuvos Respublikos Vyriausybės vertybinių popierių išleidimo ir apyvartos tvarkos patvirtinimo". Valstybės žinios, 1997, Nr. 112.-2838; Lietuvos Respublikos Vyriausybės 2004 m. vasario 5 d. nutarimo Nr. 131 nauja redakcija. Valstybės žinios, 2004, Nr. 22 – 663.

3.1. Vyriausybės vertybinių popierių cirkuliacija vidaus rinkoje

Vertybinių popierių platinimo tvarką vidaus rinkose nustato Vyriausybės vertybinių popierių išleidimo ir apyvartos taisyklės. Šios taisyklės reglamentuoja išleidžiamų vidaus rinkoje Lietuvos Respublikos VVP pardavimo, atsiskaitymų, apskaitos, apyvartos ir išpirkimo organizavimą, taip pat vertybinių popierių viešosios apyvartos tarpininkų teises ir pareigas.

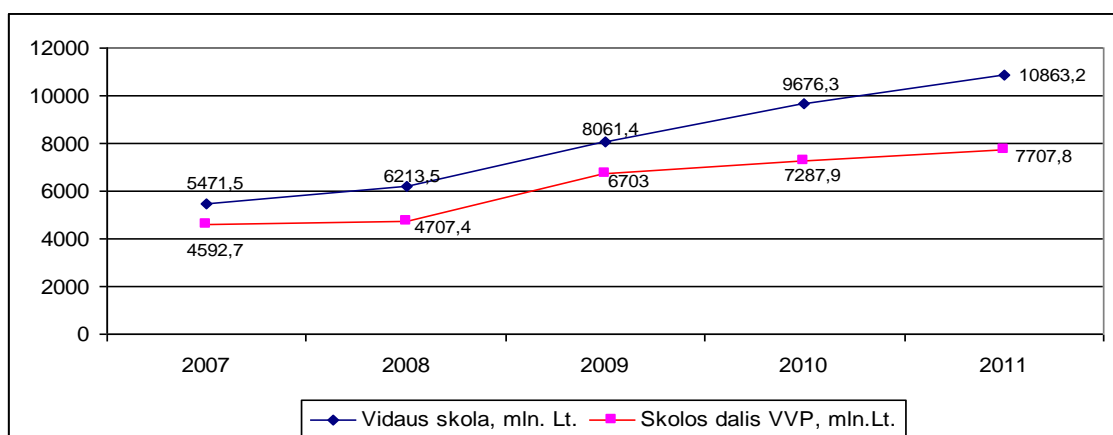
Pirminė vertybinių popierių apyvarta vykdoma vertybinių popierių aukciono arba kitu būdu, kurį nustato Finansų ministerija. Ji taip pat gali pasirinkti įgaliotus asmenis, kurie vykdytų vertybinių popierių išleidimo į apyvartą operacijas. Vertybinių popierių apyvartos tvarkymo reikalavimus, vertybinių popierių aukciono, kitų operacijų, susijusių su vertybinių popierių išleidimu į apyvartą, vykdymo tvarką nustato Finansų ministerija arba Finansų ministerijai sutikus jos pasirinktas įgaliotas asmuo. Priimdama sprendimą dėl vertybinių popierių emisijos, Finansų ministerija nustato jos sąlygas. Skelbiant emisiją yra nurodoma: emisijos numeris, vertybinių popierių rūšis, emisijos apimtis, vieno vertybinio popieriaus nominalioji vertė, vertybinių popierių galiojimo trukmė, apmokėjimo už pirktus vertybinius popierius pirminėje vertybinių popierių apyvartoje datos, išpirkimo datos, sąlygos ir tvarka, pelningumo, kainos riba, kai vertybiniai popieriai išleidžiami ne aukciono būdu – jų emisijos platinimo tvarka bei kitos sąlygos.

Investuoti į vertybinius popierius gali visi Lietuvos Respublikos bei užsienio fiziniai ar juridiniai asmenys. Tačiau Finansų ministerija emisijos sąlygose gali nustatyti ir tam tikrų apribojimų. Vertybiniai popieriai išleidžiami nematerialia forma, fiksuojant juos įrašais asmeninėse vertybinių popierių sąskaitose. Ši sąskaita atidaroma tik apmokėjus už vertybinius popierius.

Įsigytais vertybiniais popieriais pirminėje vertybinių popierių rinkoje investuotojai toliau jais gali prekiauti antrinėje vertybinių popierių rinkoje, jei Finansų ministerijos iniciatyva šie vertybiniai popieriai įtraukiami į vertybinių popierių biržų prekybos sąrašus.

Vertybiniais popieriais išpirkti ir palūkanoms sumokėti naudojami visi galimi valstybės finansiniai ištekliai, tarp jų ir nauji valstybės turtiniai įsipareigojimai. Vertybiniai popieriai išperkami ir palūkanos išmokamos tiems investuotojams, kuriems paskutinę darbo dieną iki vertybinių popierių išpirkimo arba palūkanų mokėjimo dienos nuosavybės teise priklausė vertybiniai popieriai. Pasibaigus vertybinių popierių išpirkimo terminui ir investuotojui laiku neatsiėmus jam priklausančių investuotų lėšų, investuotojas turi teisę į jam priklausančias investuotas lėšas, tačiau už laiku neatsiimtas lėšas naujos palūkanos nėra skaičiuojamos.

2 pav. Valstybės vidaus skola ir Vyriausybės vertybinių popierių dalis vidaus skoloje mln.Lt. 2007 – 2011 m.



Šaltinis: sudaryta autorės

Kaip buvo minėta anksčiau, didžiausią dalį valstybė skolinasi išleisdama ir platindama vertybinius popierius. Iš paveikslo galime matyti, kad vertybiniai popieriai, kaip skolos priemonė, užima apie 80% visos valstybės vidaus skolos. Taip pat pastebima tendencija, kad tiek valstybės

skola, tiek skola už VVP kiekvienais metais turėjo tendenciją augti ir per visą 2007 – 2011 m. laikotarpį išaugo apie 2 kartus.

3.2. Vyriausybės vertybinių popierių cirkuliacija užsienio rinkose

Užsienio rinkoje leidžiami Vyriausybės vertybiniai popieriai – tai VVP, kurie leidžiami ne juos išleidžiančio subjekto valstybės rinkoje. Iš esmės VVP, leidžiami užsienio rinkose skiriasi nuo vidaus rinkoje leidžiamų VVP tuo, kad investuotojai, įsigyjantys užsienio rinkos VVP, yra iš skirtingų valstybių ir labiau patyrę finansų rinkose, o jų įsigijami VVP būna denominuoti užsienio valiuta. Taip pat paprastai skiriasi tiek vidaus, tiek ir užsienio rinkų VVP apskaitos sistemos (Wood, 2008).

Jei vidaus rinkoje leidžiami VVP reglamentuojami daugiausia nacionalinių teisės aktų, tai leidžiant VVP užsienio rinkoje daug svarbesni reglamentavimo šaltiniai yra tarptautiniai teisės aktai, finansų rinkos tarptautinių organizacijų aktai, tarptautinės prekybos vertybiniais popieriais principai. Reikia pabrėžti, kad yra daug skirtingų nacionalinių VVP rinkų, kuriose VVP išleidimas reglamentuojamas nacionalinės teisės aktų, tuo tarpu vieningos rinkos leidžiant VVP ne vidaus rinkoje nėra, kaip ir vienos teisės sistemos, kuri reglamentuotų VVP išleidimą užsienio rinkose.

Valstybės skolinimosi tvarką užsienio rinkose reglamentuoja 2001 m. lapkričio 20 d. Vyriausybės nutarimas Nr. 1377 „Dėl Lietuvos Respublikos Vyriausybės vertybinių popierių išleidimo užsienio rinkose, paskolų valstybės vardu ėmimo ir kitų įsipareigojamųjų skolos dokumentų pasirašymo taisyklių patvirtinimo. Šios Taisyklės nustato Vyriausybės vertybinių popierių išleidimą užsienio rinkose, paskolų valstybės vardu ėmimą vidaus, užsienio rinkose ir iš tarptautinių finansų organizacijų, kitų įsipareigojamųjų skolos bei kitų su Vyriausybės skolinimusi valstybės vardu vidaus ir užsienio rinkose susijusių dokumentų.

Finansų ministerija, atsižvelgdama į Vyriausybės skolinimosi valstybės vardu politikos nuostatas ir būklę vidaus ir užsienio rinkose, nustato vertybinių popierių charakteristikas, išleidimo į apyvartą sąlygas, derina su kreditoriais paskolų ėmimo, kitų įsipareigojamųjų skolos dokumentų ir kitų su skolinimusi susijusių dokumentų pasirašymo sąlygas, Vyriausybės vardu derasi su potencialiais vertybinių popierių platintojais ar paskolų teikėjais. Taisyklėse yra nurodyta, kad Finansų ministerija turi kreiptis į ne mažiau kaip tris potencialius finansinių paslaugų teikėjus, prašydama raštu pateikti pasiūlymus dėl finansinių paslaugų suteikimo⁴⁰.

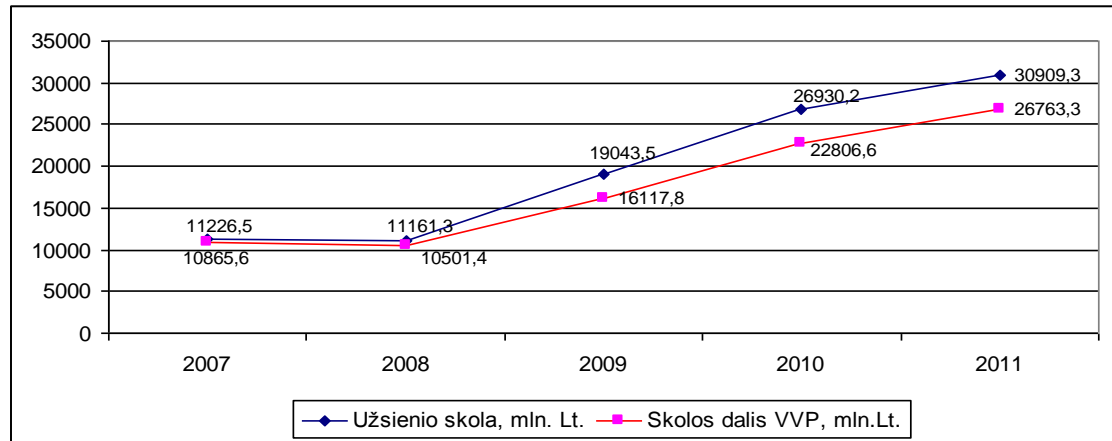
Gautus finansinių paslaugų pasiūlymus vertina komisija ir priima sprendimą dėl geriausio pasiūlymo. Komisijos sprendimu gali būti atrinkti keli pasiūlymai, su kurių teikėjais gali būti deramasi dėl pasiūlymo sąlygų gerinimo.

Finansų ministerija parengia informacinį prospektą apie Lietuvos Respubliką, skirtą potencialiems investuotojams į vertybinius popierius. Finansų ministro arba kito Vyriausybės įgalioto asmens pasirašomame informaciniame prospekte pateikiama informacija apie Lietuvos Respublikos politinę ir finansinę padėtį, nurodomos investuotojų arba finansinių paslaugų teikėjų ir Finansų ministerijos teisės bei pareigos. Taip pat atsižvelgiant į užsienio rinkose už išleidžiamus vertybinius popierius siūlomą pelningumą, užfiksujamos išleidžiamų vertybinių popierių kaina ir palūkanų norma, pasirašant su vertybinių popierių platintoju atitinkamus su skolinimusi susijusius dokumentus.

Apžvelgiant valstybės užsienio skolą matomas tiek užsienio skolos didėjimas, tiek ir VVP spartus augimas. Per analizuojamą laikotarpį užsienio skola išaugo daugiau nei 2,7 karto, o įsiskolinimas už VVP padidėjo daugiau nei 2,4 karto (žr. 3 pav.).

⁴⁰ LR Vyriausybės nutarimas Nr. 1377 „Dėl Lietuvos Respublikos vyriausybės vertybinių popierių išleidimo užsienio rinkose, paskolų valstybės vardu ėmimo ir kitų įsipareigojamųjų skolos dokumentų pasirašymo taisyklių patvirtinimo“ // Valstybės žinios. 2005, Nr. 29-982.

3 pav. Valstybės užsienio skola ir Vyriausybės vertybinių popierių dalis užsienio skoloje mln. Lt.



Šaltinis: sudaryta autorės

Lyginant valstybės užsienio skolą ir kokią dalį joje užima Vyriausybės vertybiniai popieriai reikia paminėti, kad visi užsienio skolos įsipareigojimai yra tik ilgalaikiai, skirtingai nei valstybės vidaus skola, kuri susideda tiek iš ilgalaikių, tiek ir iš trumpalaikių įsipareigojimų. Valstybės užsienio skola ir skolos dalis Vyriausybės vertybinių popierių yra ženkliai didesnė nei kad valstybės vidaus skola ir skolos dalis už Vyriausybės vertybinius popierius.

Išvados

Valstybės išleisti į rinką skolos instrumentai yra labai svarbūs finansų sistemai. Valstybės skolos instrumentai padeda vystyti visai finansų rinkai visose šalyse. Kadangi vyriausybės vertybinių popierių emitentas yra tik vienas - valstybė, todėl tokie instrumentai labiau vienyčiai.

Vyriausybės vertybinių popierių sąvoka pateikiama daugelyje šaltinių, iš kurių tiksliausiai Vyriausybės leidžiamus skolos vertybinius popierius apibrėžia Valstybės skolos įstatymas. Tačiau ir šiame teisės akte įtvirtinta Vyriausybės vertybinių popierių sąvoka neapima visų esminių šių vertybinių popierių požymių.

Vyriausybė, vadovaudamasi skolinimosi ir skolos valdymo gairėmis, didžiąją skolinimosi poreikio dalį finansuoja išleidama vertybinius popierius vidaus ir užsienio rinkose. Jei vidaus rinkoje leidžiami VVP reglamentuojami daugiausia nacionalinių teisės aktų, tai leidžiant VVP užsienio rinkoje daug svarbesni reglamentavimo šaltiniai yra tarptautiniai teisės aktai, finansų rinkos tarptautinių organizacijų aktai, tarptautinės prekybos vertybiniais popieriais principai. Reikia pabrėžti, kad yra daug skirtingų nacionalinių VVP rinkų, kuriose VVP išleidimas reglamentuojamas nacionalinės teisės aktų, tuo tarpu vieningos rinkos leidžiant VVP ne vidaus rinkoje nėra, kaip ir vienos teisės sistemos, kuri reglamentuotų VVP išleidimą užsienio rinkose.

Pastebima, kad vis didesnę vaidmenį užima ir valstybės vardu prisiimtose paskolose iš tarptautinių finansinių institucijų, dėl savo palankesnių terminų, palūkanų normų.

Vertybiniai popieriai, kaip skolos priemonė, sudaro apie 80% visos valstybės vidaus skolos. Tiek valstybės skola, tiek skola už VVP kiekvienais metais turėjo tendenciją augti ir per 2007 – 2011 m. laikotarpį išaugo apie 2 kartus. Tokį augimą lėmė krizės metu sparčiai sumažėjęs šalies bendrasis vidaus produktas, kuris sumažino mokestines įplaukas ir padidino valdžios sektoriaus fiskalinį deficitą. Dėl šios krizės išliko padidėjusios skolinimosi sąnaudos ir skolinimosi poreikis, ir siekiant subalansuoti valstybės piniginių išteklių srautus, vidaus rinkoje buvo leidžiami VVP.

Lyginant valstybės užsienio skolą reikia paminėti, kad visi užsienio skolos įsipareigojimai yra tik ilgalaikiai, skirtingai nei valstybės vidaus skola. Valstybės užsienio skola ir skolos dalis VVP yra ženkliai didesnė nei kad valstybės vidaus skola ir skolos dalis už VVP. Apžvelgiant valstybės užsienio skolą matomas tiek užsienio skolos didėjimas, tiek ir VVP spartus augimas. Per analizuojamą laikotarpį užsienio skola išaugo daugiau nei 2,7 karto, o įsiskolinimas už VVP padidėjo daugiau nei 2,4 karto.

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GOVERNMENT DEBT SECURITIES AS A STATE LENDING FACILITY

Abstract

Government securities allow the state to borrow money by attracting different subjects. Lithuanian Government securities are an attractive investment because it is the safest securities with redemption guaranteed to all available public financial resources, including new commitments to proprietary, so investors always recover the invested money.

Government of the Republic of Lithuania issued by various types of government securities that are sold to domestic and foreign capital markets. Lithuania in the domestic market allows litas - denominated debt instruments that make up the foundation of the domestic debt. Using a wide range of financial instruments to ensure the effectiveness of the management of public debt and its structure.

A research paper was to review the scientific - the legal literature, which regulates the release of government securities in both domestic and foreign markets. To reveal the essential features of government securities, the distribution of Lithuania's domestic and foreign market characteristics.

Key words: securities, Government debt securities, domestic market, foreign market, public debt.

3.

Economics and Sociality Development

International Trade and Services

DEVELOPING COUNTRIES IN INTERNATIONALISED WORLD – DIFFICULT ASPECTS OF TAXATION

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Abstract. The article focuses on main aspects of developing countries' fiscal policy and presents problems and challenges of the taxation area. Developing countries in their attempts of increasing tax revenues face various constraints – both at domestic and international level. The article brings closer the issue of tax incentives offered by developing countries in order to attract the foreign capital. After presenting the natural order of deduction, which assumes that tax incentives enhance foreign direct investments and as such have a positive influence on economic growth, which – as a consequence – strengthens the development, the author reverses the order of deduction and asks question, whether such instruments are really efficient solutions in the process of strengthening the states' competitive position. To answer the question, the author analyses chances and threats of including tax incentives into fiscal policy, identifies the main restrictions, and tries to list some solutions which can be of help in the process of implementing such instruments into the tax systems of developing countries. The article also examines the role of double/multinational tax treaties in the process of stimulating the developing economies. It also underlines the changing attitude of international organisations which have noticed the importance of ensuring that the developing countries benefit from described instruments and – moreover – that they will have capacity to manage them.

Keywords: international fiscal issues, developing countries, tax systems, tax incentives, double tax agreements, foreign direct investments

JEL classification:

H20 – General Taxation

H30 – Fiscal Policies and Behavior of Economic Agents - General

H87 – International Fiscal Issues; International Public Goods

Introduction

Last year witnessed a substantial reduction of poverty in emerging economies, both BRICS (e.g. Brazil, Russia, India, China and South Africa) and smaller developing countries. At the same time the nature of poverty has changed as poor groups are present within more countries, also including the OECD ones. The other phenomenon in modern world is huge increase of inequalities in income and wealth. According to OECD, most of last years' growth went to the top 1% of the population and over 2010 the gap between rich and poor countries has doubled. The fact that for last 20 years most of the 30 developed OECD countries have experienced this same drift towards higher inequality proves that it is a problem happening across the globe; nevertheless the stratification in wealth and income in poorer economies is much more severe and visible⁴¹.

There are also some positive aspects of last years' changes in developing world – a growing role of BRICS economies, dynamic development in South and Latin America, much more optimism about the future in Africa. Especially Africa is experiencing greater stability, much sound economic policies, less poverty. It seems that there is a big potential in developing countries for stimulating their economies through fostering the state-building. It is also a room for tax reforms and

⁴¹ *A World of Difference: Why Some Australians Keep Getting Richer*, Knowledge@Australian School of Business, 05.02.2012.

developing fiscal issues, which for a long time have been an obstacle in creating modern investment environment in less developed territories⁴².

The aim of the research is the presentation and analysis of main aspects of developing countries' fiscal policies. In *Section 1* the author draws attention to the lack of a clear definition of developing territories. She also brings closer different approaches of international institutions to the classifications of developed and developing countries. *Section 2* presents problems and challenges of taxation, faced by less developed territories in the process of implementing modern tax solutions. Developing countries in their attempts of increasing tax revenues suffer various constraints – both at domestic and international level. In *Section 3* the author focuses on the problem of tax incentives offered by developing countries in order to attract the foreign capital. She asks the question whether the effectiveness of tax incentives is not an illusion and whether they are really good solution for described territories. She also points at the controversial role of double/multinational tax treaties in the process of stimulating the developing economies. In the article the author has used following research methods: analysis of available source materials (literature review papers, reports and statements of international organisations, professionals and non-governmental organisations, scholars' research papers) and interviews with academics and professionals.

1. Developing countries – in search of the definition

In the common meaning developing countries are those territories, which have not achieved a significant degree of industrialisation relative to their population, and which offer lower standard of living for their citizens. The shortest definition of developing states includes all countries that are in the way from developing to a developed economy. Some several countries with transition economies are sometimes grouped with developing countries based on their low or middle levels of per capita income, and sometimes with developed countries based on their high industrialisation.

The World Bank's main criterion for classifying economies is gross national income (GNI) per capita. According to the institution 90 countries belonging to the groups of “low income” and “lower and middle income” (with GNP per capita below USD 4,035) are classified as developing ones, but the Word Bank notes that *“the use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. Classification by income does not necessarily reflect development status”*⁴³.

The main criteria used by the International Monetary Fund (2012) to classify the world into advanced and emerging economies are: (1) per capita income level; (2) export diversification; and (3) degree of integration into the global financial system⁴⁴. IMF's World Economic Outlook (2012) lists 150 emerging and developing economies, dividing them according geographical breakdown to: Central and Eastern Europe, Commonwealth of Independent States, Developing Asia, Latin America and the Caribbean, Middle East and North Africa, and Sub-Saharan Africa. Worth mentioning is the fact that on the IMF list there are EU-Member States like Latvia, Lithuania, Hungary and Poland – countries which for last years have been treated by economists as advanced economies.

In the absence of a consensus of how to classify countries based on their level of development, some international organisations have used membership of the Organisation of Economic Cooperation and Development (OECD) as the main criterion for developed country status. As OECD membership is limited to a small subset of countries (34), this approach results in

⁴² Owens J., *The role of tax in promoting development*, Conference From Tax Havens to International Tax Coordination: A Focus on Non-OECD Countries & Development, Florence, 2-5.05.2012.

⁴³ *How we Classify Countries*, The World Bank, www.worldbank.org (retrieved 23.08.2012).

⁴⁴ *World Economic Outlook: Growth Resuming, Dangers Remain*, International Monetary Fund, April 2012, p. 178. <http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf> (retrieved 23.08.2012).

the designation of about 80-85% of the world's countries as developing and about 15-20% as developed⁴⁵.

The most popular assumption states that over 80% of the world's population lives in more than 100 developing territories. Nowadays economists treat as developing countries the poorest territories, recipients of financial aid, having development and funding of basic needs as the main priority. Most of them are located in Africa, Asia and Pacific. They are generally characterised by subsistence agriculture and varying degrees of lack of competitive industries and exploitable natural resources. Many of them suffer from natural disasters, dependency on external aid and no ability of significant improvement in economic prospects in the foreseeable future. The author, in next sections of the article, will focus on such territories, by analysing the most crucial issues of their taxation systems.

2. Taxation issues in developing economies

Taxation as an important element of economic policy, if wisely projected and implemented, can be effectively used by governments of developing territories. Fiscal policy can become a tool not only to provide predictable state revenues, but also to encourage the state-building and to create tax-responsible society. More advanced fiscal aspects, like enhancing transparency, fighting corruption and tax evasion, strengthening the fiscal cooperation and developing tax agreements with third countries can also improve the state's position in the international arena. As such, the development goals and the goals of taxes start to be complementary in the process of strengthening economies.

A common feature of many developing countries is lack of resources, expertise and capacity for building up and improving an efficient civil service. That is the reason that makes the quality of their tax collection systems weaker than in case of more developed economies. Losses in revenues due to the capital flights and illicit financial flows are identified as a major obstacle to mobilisation of domestic revenue for development – illegal money flows from developing countries are estimated at 641 to 979 billion USD, which gives a number at least seven times higher than official development assistance⁴⁶.

The next problem is the sustainable provision of public services necessary to strengthen the economic development. The tax-to-GDP ratio in developing countries ranges between 10 to 20% as opposed to 25 to 40% in developed ones. Increasing domestic revenue would not only create additional space for supporting the economic growth, but would also allow the state to assume the ownership for its policy choices⁴⁷.

Developing countries, in their attempts to increase their domestic tax revenues, face several constraints, linked both to domestic and international factors. At the domestic level developing countries are confronted with three groups of problems: (1) the weak structure and competitiveness of the economy; (2) the political and macro-economic instability; (3) the inefficient tax system.

Constraints in the economy's structure and competitiveness are manifested in the predominance of agriculture over industry and services (or sometimes disproportionately large role of extractive industry), and in very high level of informal sectors. Political and macro-economic instability, accompanied by poor governance and deficient rule of law results with poor public service delivery, low quality of public finance management, and the significant problem of corruption.

Tax systems themselves face problems of the scale not known in more developed regions. The narrow tax base often leads to an uneven distribution of fiscal burden between economic factors and

⁴⁵ Nielsen L., *Classifications of Countries Based on Their Level of Development: How it is Done and How it Could be Done*, IMF Working Paper, February 2011, p. 4.

⁴⁶ *Tax Havens and Development - Status, Analyses and Measures*, Norwegian Government Commission Report, 18.06.2009, p. 64.

⁴⁷ *Cooperating with Developing Countries on Promoting Good Governance in Tax Matters*, Communication from the Commission to the Council, the European Parliament and the Economic and Social Committee, SEC(2010) 426, 21.04.2010, p. 2.

taxpayers, as a relatively small part of the population is subject to income tax. As corporate income tax (CIT) is paid by small number of companies, and PIT's role is very rarely significant (often paid only by civil servants) the tax system does not meet the task of reducing inequalities. The insufficient balance between direct and indirect taxation does not reflect appropriately the structure of the economy.

The lack of capacity of tax administrations to operate and supervise the tax system often results in low tax compliance and tax collection. All those problems, together with insufficient links between tax policy and tax administration sum up to weaknesses of the tax system and its management in developing countries. There is also an issue of onshore tax evasion, especially in case of value added tax (estimates show that 30-60% of potential VAT revenues can be lost in America)⁴⁸ and the problem of true costs for companies entering the developing territories. Enterprises interested in investing money face the uncertainty of the environment in which they are to operate. Although the official tax burden is not heavy, the unofficial cost which has to be paid is much higher. Because of lack of consistency in rules, predictability within country and among states, perspectives of creating the balanced tax structures are not too strong.

Improving taxation goes beyond reaching the competitive tax rates. It requires governments to strike a balance between providing solid taxation to governance structures and improving domestic resource mobilisation. A growing number of developing countries consider fundamental reforms to increase their revenue and to address inefficiencies of the current system. Tax reforms need to be promoted to widen the tax base and bring a larger part of the population into the formal economy⁴⁹.

As mentioned before, tax systems of developing countries also face international constraints. At the international level developing countries have to deal with the increasing integration of international markets and the economic globalisation. That also affects the effectiveness of their tax systems, as implementation of domestic tax rules becomes difficult in a world with an increasing geographical mobility of taxpayers and capital flows (especially combined with the use of new technologies). The transition from national tax systems largely dependent on customs to broader and more modern ones creates serious adjustment issues. Developing countries might be tempted to encourage the foreign financial flows through too costly tax incentives and derogations which often fail to attract real and sustainable investment. And – last but not least – the existence of non-cooperative jurisdictions and harmful tax practices, both in developed and developing countries, is detrimental also to developing countries. The harmful tax competition not only has a negative impact on states' revenues, but also undermines the good governance and institutional development.

3. The illusion of tax incentives and double tax treaties – are they really good for developing countries?

Tax incentives are special elements of the tax code designed to compete for corporate site selection projects and to encourage a certain types of behaviour. Developing countries introduce incentives in order to attract capital and support the economic growth. Incentives are often treated as a counterweight to the investment disincentives inherent in the general tax system. They can also be treated as an offset to disadvantages that investors may face, such as a lack of infrastructure, complicated and antiquated laws, bureaucracy and weak administration, both in the tax area and elsewhere. In theory the inflow of foreign capital, attracted by tax incentives, can support reforms of the existing, problematic laws and help building the necessary administrative capacities.

Tax incentives can be grouped into a four categories: (1) tax holidays; (2) investment allowances and tax credits; (3) timing differences; (4) reduced tax rates. With a tax holidays, new companies are exempted from the burden of income taxation for a period of time. Sometimes, this grace period can be extended to a subsequent period of taxation at a reduced rate.

⁴⁸ Owens J., *The role of tax in promoting development*, Conference From Tax Havens to International Tax Coordination: A Focus on Non-OECD Countries & Development, Florence, 2-5.05.2012.

⁴⁹ *Political Economy of Taxation in Africa: Fiscal Legitimacy and Public Expenditure*, OECD, 2007.

Investment allowances and tax credits are forms of tax relief, based on the value of expenditures on qualifying investments. They provide tax benefits over and above the standard depreciation allowed for the asset. The tax allowance is used to reduce the taxable income of the company, whereas the tax credit results direct reduction of the amount of taxes to be paid.

Timing differences can arise in two ways: through the acceleration of deductions or the deferral of the recognition of income. The most common form of accelerated deduction is accelerated depreciation, where the cost of an asset may be written off at a rate that is faster than the standard economic rate of depreciation. It can take the form of either a shorter period of depreciation or a special deduction in the first year. Important timing differences can occur also in more technical areas, when income may not be realised until there is a sale of an asset, whereas certain costs are recognised immediately.

General tax rates' reductions can be provided for income from certain sources (or to business entities) satisfying certain criteria. It can be a criterion of size (small enterprises etc.), sector (agriculture etc.) or the origin of money (foreign direct investment etc.). Tax reductions differ from tax holidays as the companies' tax liability is not entirely eliminated, only the benefit is extended beyond new enterprises to include income from existing operations, and the benefit is not time limited⁵⁰.

According to Y. Brauner (2012) tax incentives, as pervasive, universal and standardised, create a predictable set of encouragements for multinational enterprises (MNEs), searching the optimal location for their investment and often using tax optimisation practices⁵¹. In analysing the issue of this kind of fiscal instruments one usually takes the natural order of deduction: tax incentives enhance foreign direct investments and as such have a positive influence on economic growth, which strengthens the development. This way of thinking is currently criticised by international economic organisations, which perceive tax incentives both inefficient (as they intervene with the market), and ineffective (as multinational enterprises in reality do not care about such incentives). The international institutions quote that tax incentives are probably harmful for development as they often cause the race to the bottom. In this context tax incentives would not be the case of stimulating the development but rather developing the tax competition.

The next difficult issue is the lack of the information about the real costs and benefits of implementing tax incentives into the tax systems due to problems with data availability. In countries with weak political systems and powers it is difficult to check if (and how) tax incentives work. No cost/benefits initiatives cause that the developing countries do not really control their tax incentives policies. In fact it seems they are being drawn to use them by the developed part of the world – to develop themselves they have to create incentives in order not to be uncompetitive towards other territories.

Important problem connected with such measures is the fact that for real developing countries tax incentives are very heavy burden, additionally strengthened by the exploitive competition between neighbouring countries. Attracting foreign capital does not automatically mean bringing the newest technology and ensuring the economic growth. MNEs with their FDIs indeed invest money and bring some technology into developing countries, but very often as the next step they choose squeezing the market, elimination of local entrepreneurs and tightening the local competition. As a consequence the importance of tax incentives proposed to MNEs seems to be overestimated.

The developing countries in adjusting their tax policy have to be conscious that the changing policy has to reflect their true priorities. There is a necessity to put more emphasis on developing tax administration, restructuring its structures and training and better paying people hired in tax structures. Also working on the set of incentives in order to attract foreign capital is a complex issue facing a lot of challenges. There is a strong need for developing countries to bear in mind the

⁵⁰ Holland D., Vann R. J., *Income Tax Incentives for Investment*, in: V Thuronyi (ed), *Tax Law Design and Drafting*, Volume 2, International Monetary Fund, 1998, p. 2-9.

⁵¹ Brauner Y., *The future of tax incentives in developing countries*, Conference From Tax Havens to International Tax Coordination: A Focus on Non-OECD Countries & Development, Florence, 2-5.05.2012.

necessary conditions when giving the tax incentives: (1) making sure that the incentive is transparent and the cost of its implementation is known; (2) identifying tax payers who benefit from the incentive; (3) analysing how effective the benefit is; (4) making sure it is not harmful for the system. The above mentioned issues seem to be the biggest challenge is situation of weak administration, corruption and poor, undertrained and underpaid tax personnel. All those constraints have to be overcome, as at present as they now constitute large ballast to emerging economies⁵².

In the area of international taxation and international relations there is also an important issue of tax treaties. Double tax treaties (DTTs) are designed to mitigate the effects of double taxation, which can arise in transnational business relations, by creating a fair share of tax base between two treaty partners. The DTTs' aim is promoting communication between countries, helping to counteract tax avoidance and evasion, encouraging the elimination of tax measures which distort international trade and investment flows and promoting mutual assistance between countries. Tax treaties may cover various types of taxes, mainly the direct ones (income taxes, inheritance taxes or others), but also the indirect fiscal burdens (VAT). Double tax treaties help developing economies in attracting foreign capital, as they prove the governments' will to create competitive and stable environment for foreign investments.

In the process of treaty negotiations countries often use as their base model tax treaties, prepared by international institutions. The main tool which aims at supporting the tax policies of developing countries, is the UN Model of Double Taxation Convention between Developed and Developing Countries (1980, revised 2001). Among the Convention's general objectives there are: protection of taxpayers against double taxation, prevention of the potential discouragement for free flow of international investment, prevention of discrimination between taxpayers in the international field, and provision of legal and fiscal certainty as a framework for carrying international operations⁵³.

This is something what theory says. According to Y. Brauner the reality is quite different. Solutions included in the UN Model Tax Treaty are not very often used in treaties with developing countries, as usually it is the other partner – not the developing state – which has the stronger voice in treaty negotiations.

And there is also transnational capital, which plays a significant role. Multinational enterprises often stimulate the process of signing double tax treaties in countries they want to invest; in fact they are the real persons taking advantage from tax agreements. It seems that thinking that the treaties are designed to create the fair share of tax base and stimulate the development of weaker and poorer economies is no more but “illusion” in the world of big transnational companies. Multinational enterprises, in the process of choosing the location, ask each of neighbouring developing countries for proposals of incentives. By using its dominant position MNEs force the developing countries to proposed solution harmful for their systems, causing real “race to the bottom”.

Conclusion

The problem of multinational enterprises and their real influence on situation of developing countries was noticed by developed territories and international organisations. From their perspective there is a strong need of bringing developing countries to double/multinational agreements, to stimulate dialogue and to help them in implementing reasonable systems of tax incentives. This opinion has remained unchanged for years. But the growing role of transnational corporations and the scale of “race to the bottom” caused the modification in the main stream. According to J. Owens, Head of the OECD's Centre for Tax Policy Administration, nowadays very crucial in the process of attracting the foreign capital through tax incentives and the network of tax

⁵² Owens J., *The role of tax in promoting development*, Conference From Tax Havens to International Tax Coordination: A Focus on Non-OECD Countries & Development, Florence, 2-5.05.2012.

⁵³ *United Nations Model Double Taxation Convention between Developed and Developing Countries*, Department of Economic & Social Affairs, United Nations, New York, 2001 (ST/ESA/PAD/SER.E/21).

treaties is making sure that the developing countries will benefit from such instruments and – moreover – that they will have capacity to manage them⁵⁴.

It must be also remembered that taxes are very political issue, so that will always be a threat of aggressive practices on the side with stronger position. The challenge for developing countries is being consistent in the whole process of negotiations with treaty partners. Emerging territories need not only to identify what is important for their policy, but also to keep it in mind during the tax treaties’ negotiations. That will help to create a tax system and the net of international tax agreements which would serve not only as a tool for attracting foreign direct investments, but as a consistent element of their tax and development policy.

Reaching out for more than purely political solutions can be difficult, especially in the reality of weak administration and poor state-building. But looking at the experience of other developing territories, being some steps ahead in implementing tax reforms, can be a significant help. Learning from others’ experiences is not the only thing which can be done. Other recommended solution is enhancing the mutual cooperation between developing countries. Building a consistent position by a group of states will have an influence on the balance of power in the contacts with the transnational enterprises – speaking with one voice will significantly strengthen the developing countries’ negotiation position.

In the new reality, with new players on international taxation arena, there is also a need of rethinking the role of international organisations, especially the United Nations. The UN ought to put more tension on developing countries and their real goals, with special emphasis on helping the emerging economies in working out one coherent position in tax treaties’ negotiation process. There will be also a growing role of international fora, discussing the issues of international tax relations, treaties and tax administration. For international organisations there is a need to remember about the necessity to take into account the aims and possibilities of smaller and less developed territories, as at present there is no real voice for developing countries in those international initiatives. The most significant will be the change in the attitude of international organisations from “we know what is best for them”, to “we know what is best for us” due to stronger engagement of developing countries in international tax discussions.

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⁵⁴ Owens J., *The role of tax in promoting development*, Conference From Tax Havens to International Tax Coordination: A Focus on Non-OECD Countries & Development, Florence, 2-5.05.2012.

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THE DIGITAL EXCLUSION IN POLAND IN THE CONTEXT OF GLOBALIZATION

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Abstract. The article presents that in the era of a developing information society there is a danger of social exclusion, more specifically digital exclusion. Digital exclusion is lack of or limitation of opportunities for participation, or lack of willingness to use modern techniques of information transmission, i.e. the benefits of information society. It is important to prevent this phenomenon.

Key words: Information society, social exclusion, globalization

JEL classification:

A10 - General

Introduction

Social exclusion consists in deviation from the normal way of life or falling out of it. The phenomenon of social exclusion is difficult to define. This is because of the different dimensions of marginalization overlapping this phenomenon.

In a situation where globalization processes now play a major role, the state lost very much of its traditional role. Many decisions are made at the level of supranational organizations. Important state decisions are taken into account, particularly in terms of: ensuring macroeconomic stability, low inflation, balance of payments, appropriate budget deficit and interest rates and exchange rates policies. The contemporary nature of interdependence of relationships between markets and firms leads to the permeating of phenomena from one region to another or from one country to another. Events in one region can have a huge impact on the situation in another region. Information (and knowledge connected with it) becomes, next to land, labor and capital, the fourth very important factor of production. Possession of knowledge opens the access to other resources and allows actions that bring that bring wealth. "Only people are able to create added value hidden in resources (Rojek, 2001).

The universal aspect of globalization is developing the information society, and with it comes to social exclusion. By analyzing the electronic communications market appears concept of digital exclusion.

According to this the objectives of the article are: to present the status and the development trends of the Polish market for access to the Internet, to present the status and causes of the emergence of social exclusion, in particular the digital exclusion.

The realization of the above mentioned objectives requires the use of the following methods: analysis of studies concerning on globalizations, induction and deduction as well as the observation of the Polish market.

Globalization

Under conditions of globalization, it is not only possible, but even necessary to constantly care for a country's own national interests. No matter how far a country opens to economic relations with the rest of the world, it still can and must take care of its own "backyard" (Kołodko, 2001). Despite the desire to conform to global politics, it must be remembered that there is also a place for socio-economic policy subordinated to national priorities.

Globalisation causes that firms, if want to develop on the national market they must be strong also on European and world market.⁵⁵ Attempts have been made to explain escalating economic difficulties as originating from the ongoing process of globalization. This is a misunderstanding. Globalization is not only inevitable but necessary. It brings with it far more good than harm, especially by opening the other parts of the world market for domestic products, giving access to others' savings in the form of foreign investment flowing into the country, transferring modern technologies from the economically more advanced countries. Therefore, it is important to exercise a state policy, which relies on an appropriate development strategy, appropriate growth policies and its adequate co-ordination with market economy and globalization processes. Risks that arise as a result of globalization are mainly due to ineffective policies, and because the occasions to accelerate growth have not been exploited optimally.

One of the threats of globalization is that globalization excludes from participation in the global marketplace people and companies that are not competitive enough to undertake the global struggle. Struggle for survival on the market takes place all the time, except that now it is a struggle on a global scale.

Changes in the functioning of the global economy take place. Often this is due to far-reaching technical and technological progress in telecommunications and ICT. This progress has manifested in the recent years in the implementation of the, already widely adopted, term "information society", which already functions as an economic and social category, in the development of low-cost technology of fast access to the end user, and in the de-monopolisation of telecommunications services.

When considering the globalization process, it should be observed that the problems which may arise from this phenomenon:

- are the objective consequence of economic development or a result of the existing disparities in economic development,
- can lead to changes in living conditions,
- relate to the whole world,
- occur simultaneously, are interrelated and depend on a large number of factors,
- require appropriate action in many areas of social life if they are to be solved,
- necessitate undertaking of worldwide projects, which is impossible without the cooperation of all countries (Grzywacz, 2001).

Proponents argue that globalization not only increases the areas of wealth, but also is the only way to eliminate poverty. Opponents see it as the manifestation of neo-colonialism and a way to increase the exploitation of the third world by the richest. Globalization trends are regarded as the main driving force leading to the state ceasing to control the economy. The market acquires control and imposes rules on the society.⁵⁶

Social exclusion

Social exclusion is the lack or limitation of opportunities to participate, influence and use basic public institutions and markets, which should be available to all, especially for the poor, which also includes the benefits of the information society.

Social exclusion refers to people who:

- live in adverse economic conditions — material poverty,
4. were not equipped with adequate life capital to enable them to: have a normal social position, reach an appropriate level of qualifications, enter the labor market, have features which deter them from enjoying the universal social resources due to the existence of: disability, addiction, long-term

⁵⁵ A. Drab-Kurowska: The Polish Postal Market in the light of liberalisation. Scientific journal nr 499, Service Management vol. 3, Szczecin University Press, Szczecin 2008, s. 12.

⁵⁶ More on this topic: H.P. Martin, H. Schumann: *The trap of globalization. The attack on democracy and prosperity*. Published by Wydawnictwo Dolnośląskie, Wrocław, 1999.

illness or other individual characteristics, are subject to the destructive actions of others, e.g., violence, blackmail, indoctrination.

Social groups most vulnerable to social exclusion are:

- persons with disabilities,
- long-term unemployed persons,
- older single persons,
- homeless persons,
- persons with low qualifications,
- persons leaving the prison.
- In literature, there are three approaches to explaining social exclusion. These include:
 - the British approach,
 - the American approach,
 - the French approach.

According to the British approach, social exclusion is discrimination and lack of basic rights caused by underdeveloped public institutions that limit the capacity of individuals, which means that the exclusion may be the result of improper functioning of the system. The consequence is to deprivation of the excluded persons of the possibility to change their situation. The American approach focuses on interpreting social exclusion as individual behavior and on its moral evaluation. In line with this approach, under a welfare system, individuals have weaker ability to act on their own initiative and take responsibility for their own lives.

The third is the French approach, which emphasizes the role of the institutions of the system, which protects the public in the process of evolution from the welfare state to the post-industrial era and globalization. In line with this approach, development of society is based on the idea of an open society (Golinowska, Tarkowska, Kopińska, 2005). Social exclusion is not only a lack of access to electronic communication services, but also lack of the ability to use high-quality services.

Digital exclusion

An ageing population and low level of professional activity of elderly people is important for the future development of a country and should become one of the major issues in socio-economic policy of Poland. In this context we should also consider the social aspects of the development of knowledge-based economy and building the information society. In the current conditions, the level of professional competence required for the use of information technology (IT) becomes crucial for professional development and improving the quality of life. For this reason, the problem of participation of elderly people in the information society requires special attention of the state and regional authorities. Especially that insufficient skills in the use of information technology and computer and e-administration and e-business cannot only lead to the exclusion of large part of society from the labor market, but also to the digital exclusion of elderly people.

Elderly people should be included into processes of active creation and development of the information society, organization and support of trainings that improve professional and non-professional computer skills of the elderly should be focused on.

Analyzing the number of people who use the computer an upward trend can be noticed. A large number of people who use the computer and the dynamic development of the infrastructure that facilitates the use of the Internet have caused a significant percentage growth of households with the Internet access in the period examined. In 2006 the Internet access was in fewer than 36% of households with at least one person aged 16-74 years old in Poland, while in 2010 the figure was over 63%.

The situation of Polish households in the use of ICT has an upward trend. In recent years there has been a significant increase in the proportion of families who have a computer – from 45% in 2006 to 69% in 2010.

The largest increase in households with access to broadband in 2010 compared to 2006 took place in rural areas – by 378.57% and the smallest in large cities – by 102.22%. However, it does not change the fact that the link is still the most available in big cities.

An intense growth was observed in both urban and rural areas. The largest percentage of households with the Internet access characterized large cities (31.5% in 2006 and 63.7% in 2010). In rural areas, household access to the Internet is still at a much lower level. But in 2010 there were twice as many households with access to the Internet than in 2006. Such high growth rates may soon lead to an equalization of the percentage of households with the Internet access in cities and villages.

The distance between households from large cities and rural areas is smaller too. While in 2006 16.5% fewer rural households had a computer than in cities, in 2010 this percentage had fallen to 9.2%. These observations allow to conclude that the threat of digital exclusion of rural areas is declining. However, a low percentage of retired and professionally inactive people regularly using a computer is worrying. In this group in 2010, only 21.2% were regular computer users – to compare: 57.7% of the population regularly used a computer in 2010. The same ratio in the group of students was 98.7% (Information society in Poland, 2010).

The fewest Internet users are in the group of people aged 55+ (Polish Internet 2008/2009, Gemius S.A., Warsaw 2009.). Among those who do not use the Internet, 73% are over 45 years old, as presented in Table 1.

Table 1. Use of new technologies in different age groups (%)

Group	Computer	Internet	Non-users
Men	57.1	52.8	16,8
Women	53.3	49.2	21,3
Age 16-24 years old	90.2	86.8	1
Age 25-34 years old	79.8	73.7	1,8
Age 35-44 years old	67.7	62.1	5,3
Age 45-59 years old	43.5	39.5	19,1
Age 60-64 years old	23,6	20,6	35.1
Age 64 and more years old	7,5	5,8	66.2
Pensioners	22,5	20,3	42.9
Living on social benefit	15,9	13,3	52.5

Source: (Czapiński, Panek (ed.): 2009)

Intergenerational digital divide is very strong, which can lead to many negative social phenomena, because with increasing importance of information technologies in various areas of life people who do not use them will be excluded to a greater extent (Czapiński, Panek (ed.), 2009). A socio-professional status, especially education, is very important for social activity in the use of the Internet, as shown in Table 2.

Table 2. Structure of socio-professional status of internauts and non-users (%)

Socio-professional status	Non-users	internauts
Workers of public sector	6,5	20,2
Workers of private sector	16.0	30,2
Private entrepreneurs	1,7	6,6
farmers	6,5	2,1
pensioners	12,6	3,1
Living on social benefit	36.3	5,4
students	1,4	19,7
unemployed	7,2	4,8
Other professionally inactive	11,9	7,9

Source: (Czapiński, Panek (ed.), 2009)

People with primary education and vocational education have a low level of use of the computer and the Internet. This phenomenon is clearly evident among farmers, unemployed people living on social benefit and pensioners.

Keeping in mind the growing importance of knowledge and information technologies in economy, there is a small chance of returning to professional activity for people who do not use the computer. In a situation of weak public finances and crisis of social security system, the phenomenon is undoubtedly a big social problem.

It should also be noted that Poland is a country with a relatively low ratio of professional activity which in 2009 amounted to 70.6%, while the EU average was 75.6%⁵⁷.

Conclusion

The last decades of the twentieth century were a lively debate over how far successive generations of ICT influence the societies of most economically and technologically advanced regions of the world. Questions have been raised about the nature of the information in the process of social development, trying to create a theory of information society. This is often due to far-reaching technical and technological progress in telecommunications and teleinformatics. This progress is manifested in recent years by implementation of the, already widely adopted, term "information society", which already operates as economic and social category, by development of cheap technologies of fast access to the end user and by de-monopolisation of telecommunications services. However, with this concept, as well as a phenomenon related to the information society the digital exclusion is connected, which part of the society may be subject to. It should be noted that limited access to information in the era of information society brings about many risks. One of the primary risks is a deterioration in competitiveness of Polish economy in comparison with other countries, and in an extreme situation – the danger of exclusion of individuals or social groups from participation in this society.

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A DEVELOPMENT MODEL FOR THE INTERNATIONALIZATION OF SMES AGRO-FOOD OF PUGLIA: THE “ISCI” PROJECT

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Abstract. The project targets the Axis 1 of the European territorial cooperation INTERREG program Greece-Italy 2007-2013. The project was born with the aim of strengthen the presence of the local agri-food SMEs on the foreign markets, enhancing innovation processes through an economic and coordinated cooperation so to ease the internationalization processes of the two targeted areas. After a literature review, we analyzed the economic context of Apulia Region; then we proceed to the definition of a model for the internationalization of SMEs Agro-food of Puglia through the constitution of scientific and technological incubators that will network to deliver innovative services for the internationalization of the agri-food system. The final aim is to develop innovative services of marketing intelligence (MI) to spread knowledge and information about the international markets and the creation and implementation of databases for the search and classification of informative sources.

Keywords: Internationalization; Innovation; Marketing Intelligence; Agro-food sector

JEL classification:

Q13 - Agricultural Markets and Marketing; Cooperatives; Agribusiness

Q17 - Agriculture in International Trade

O31 - Innovation and Invention: Processes and Incentives

Introduction

Aim of the cross-border cooperation is to integrate areas separated by national borders enhancing a joint approach to common problems. The firm is not a separate unit but can be conceived, studied and analyzed only as a piece of a puzzle that configures the socio-economic and geographical context and, above all, the network of relationships that links it primarily to territory and to its stakeholders, and to customers, suppliers and connected and associated businesses, at different levels of competition (Contò et Al., 2012). National boundaries still represent a substantial obstacle for a large share of small and medium enterprises (SME) to the enlargement of their activities, confining the SMEs within the respective national markets. Only a fifth of the EU SMEs, in fact, actually export and just the 3% own an agency, a branch or an affiliated enterprise abroad. Even more alarming is the fact that a significant percentage of the EU SMEs in not planning at all to extend their business abroad even if they are suffering the international competitive pressure within their domestic market. Several studies showed as for the SMEs the internationalization is directly related to larger profits: the internationalization strengthens the firm's growth, increases the firm's competitiveness and augments the chances of success in the long run period. However, internationalization is not merely being export oriented. Cross-border cooperation, participation in efficient economic trade networks, and the research of competitive suppliers or of new technologies are, for example, some of the main incentives for the SMEs to go internationally. Furthermore, internationalized SMEs combine several market approaches that reciprocally result in a coordinated internationally-oriented strategy. In an increasingly globalized world, for the region Puglia (Italy)

and the Ionian region (Greece) SMEs the internationalization process is thus shifting from being a basic requirement to being a basic resource (Santeramo, 2012).

This is particularly true considering the weaknesses of the two areas: a poorly developed secondary sector (industry); low investments in products with Denomination of Origin; few regional collaborations; absence of alternative forms of tourism, low level of public investments; low level of cooperatives; low skill level of human capital. Furthermore, the SMEs of the two areas involved, due to several changes in both the political, economical, normative and legislative contexts are actually fully exposed to the international competitive pressure. For these reasons, the project is finalized to the constitution of n. 2 scientific and technological incubators (in Puglia and in Corfù) that will be linked to deliver innovative services for the internationalization of the agri-food SMEs in the area “Greece-Italy”. Functional in this one, the ISCI partner are: the Chamber of Commerce of Bari (Lead Partner), the University of Foggia - Department of Economics, Mathematics and Statistics, the University of Salento, the Ionian Islands Development Agency Dsa⁵⁸, the Ionian University. The services that will be implemented are:

1. Innovative services of marketing intelligence (MI) to spread knowledge and information about the international markets and to support the internationalization of the agri-food SMEs.
2. Development of managerial software for the detection of weaknesses and strengths of the SMEs, under a supply chain perspective, with a specific focus for the internationalization processes.
3. Development of databases for the search and classification of informative sources, the information gathering and processing, and the collection of SMEs and stakeholders’ profiles to ease the constitution of trade partnership and relationships.

The present paper is divided as follows: paragraph 2 is a literature review about the role of internationalization processes on the competitiveness; paragraph 3, we focus on the economic context analysis of the Apulia region partner; in paragraph 4, we develop the project steps, describe the project methodology and highlight the innovation as crucial driver for internationalization. Finally, paragraph 5 draws the conclusions and proposes a path aiming at developing a new internationalization model.

A literature review

The main objective of the ISCI project is to combine the contents of the Lisbon and Gothenburg agendas with another crucial policy of the European Union, the CAP. It is actually defined in the Community mainstream that the issues concerning the ITC applied to the agri-food industry are fully integrated in the CAP (Reg. N° 1698/05). Such an integration may be pursued in different ways and at various levels (Contò, 2004). So the added value of this project may thus be identified in the attempt to combine, in several activities, the pursuit of different Community policies, defined within the European territorial cooperation. Both at national and regional level each Member State enforces some of the activities of the project within the rural development policy (Rural Development Plan - RDP, 2007-2013) as well as the structural funds programming (Operational Program FESR). The RD policy promotes sustainable development in EU rural areas addressing economic, social and environmental concerns. In this context, Leader approach is an important innovative approach within EU rural development policy; thus, the local actors become the main actors in their development (governance) promoting the integration of relations between firms, investment in infrastructure, training, research, food safety promotion, and enhancement of agricultural production in the framework of internationalization of markets and innovation of quality-oriented process and products (Contò et Al., 2010a). INTERREG projects take place within

⁵⁸ The ANION Agency was founded in 1999. The board of the agency is comprised by twelve municipalities of the Corfu Prefecture, the Communities of Othonoi, Ereikousa and Mathraki, Prefect Municipalities and Communities Union, Corfu Prefecture, Corfu Agricultural Union, Technical Secretariat of Corfu, the Cultural, Artist and Athletes Organization of Corfu ‘Laodamas’, the Environmental Protection Agency of Corfu, Corfu Electricians Union and the Petritis Fishery Organization. Anion has a well grounded experience in Leader II, Leader +, Agricultural and rural development. It works on: Agricultural Tourism; SMEs; Environmental protection and promotion of urban habitats; Cultural Activities; Festivals; Networking; Clusters and Cooperation; Promotion of Investments; Consulting Leader+ Investors; IT and Innovation Tech Assistance; Local Action Team.

the framework of the European Territorial Cooperation projects governed by EU Regional Policy or the Cohesion Policy, which aims to strengthen economic, social and territorial cohesion in order to reduce the development gap between regions and Member States.

European Territorial Cooperation projects have as their purpose:

- strengthen cross-border, transnational and interregional cooperation, based on previous Interreg
- promote the search for joint solutions to common problems between neighboring authorities, such as urban, rural and coastal areas and the creation of economic relations and networks of small and medium-sized enterprises.

So an important role in this purpose is assigned to SMEs internationalization; in fact, a further mainstream concerns the strategic decision ‘to go international’ (Dichtl et Al., 1990; Quintens et al., 2206a, 2006b) that is such as an ‘international global tendency’ (Brusco, 1989).

The internationalization process benefit from a spread acceptance in the literature (Bradley, 1991; Welch and Luostarinen, 1988); the internationalization of agriculture, and technological change biotechnologies provides the basis for a broad systemic explanation (Arce and Marsden; 1993) and the internationalization of food processing pursue the range of political, economic, and cultural issues surrounding the analysis of food from within the tradition of agrarian political economy (ibidem). Hence the internationalization processes still matter, perhaps increasingly so, as learning races increasingly become a basis for global competition (Barkema and Drogendijk, 2007; Berry and Brock, 2004).

Internationalization, innovation and knowledge have been and are central themes of research on the strategy of the firm; despite the scarce financial, human, and tangible resources these early internationalizing firms leverage innovativeness, knowledge, and capabilities to achieve considerable foreign market success early in their evolution (Knight and Cavusgil, 2004). The higher/lower level of socio-economic development could be a proxy for the higher/lower need to innovate. In particular, product innovation is influenced by the quality of human capital, the geographical context and, to a lesser extent, the age of the firm. By contrast, process innovations are more likely linked to the financial structure, to capital intensity and to the size of food firms. This result confirms that technological changes in the food sector are mainly related to the possibility of firms to invest in new technologies developed by upstream industries and also that process innovation mainly occurs through equipment and capital goods investments (Capitanio et Al., 2009; 2010). Furthermore, policy makers in countries need to actively consider ways of facilitating internationalization (Musteen et Al. 2010) such as network relationships too (Coviello and McAuley, 1999; Zain and Ng, 2006) and through social network (Zhou et Al., 2007) in order to share knowledge.

Nowadays, the internationalization can and have to be developed in special way as a cognitive phenomenon along science and technologic ways (Rullani, 2006); in fact, old and new models (Bilkey and Tesar, 1977; Johanson and Vahlne, 1977, 2003) see internationalisation as an incremental learning process.

Context analysis: the Apulia region Partner

The ISCI activities took place in the Ionian region of Corfù (Greece) and in Apulia region (Italy). Both regions present a population of SMEs whose structural and economic dimensions are too small to invest in R&D, innovation and in internationalization processes. The Italian and Greek Universities are jointly working to develop research projects whose outputs will deliver direct effects on the SMEs of both regions. At this first stage of the work we focus on context analysis of the Apulia region, as driver partner of the project.

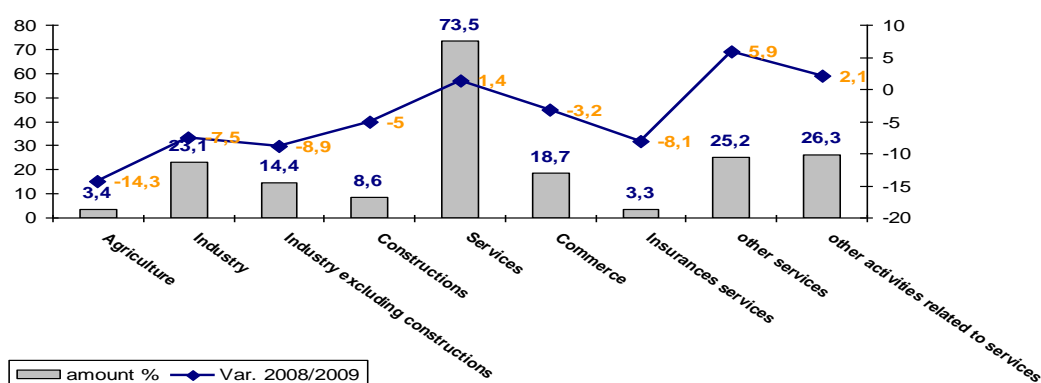
The Apulia region covers an area of about 2 million hectares, accounting for about 6,4% of the national territory. The Apulian territory is mostly flat with few hills and low mountains. The variety of local characteristics and climatic conditions influence the variety of productive situations of the agriculture in the region. The presence of disadvantaged areas to agricultural activity, mostly present in the inland and marginal areas, is in contrast with areas of intensive agricultural

production as the plains of the north and the coasts of the peninsula like the Jonian areas, producing irrigated crops of high added value.

The rural Apulia (according to OECD criteria) is approximately 50% of the total area and is an important economic resource for the region if we consider that 17% of the population occupies those areas while 14% live in areas significantly rural and that all of these areas produces about a third of regional Gross Domestic Product. As well as in the rest of Europe these areas are characterized by their socio-economic long delays when compared to urban or suburban areas. The presence of these areas, many of which are marginalized, provides important production niches in the region context, where local food production keep important characters of typical, considerably appreciated on the domestic and international market.

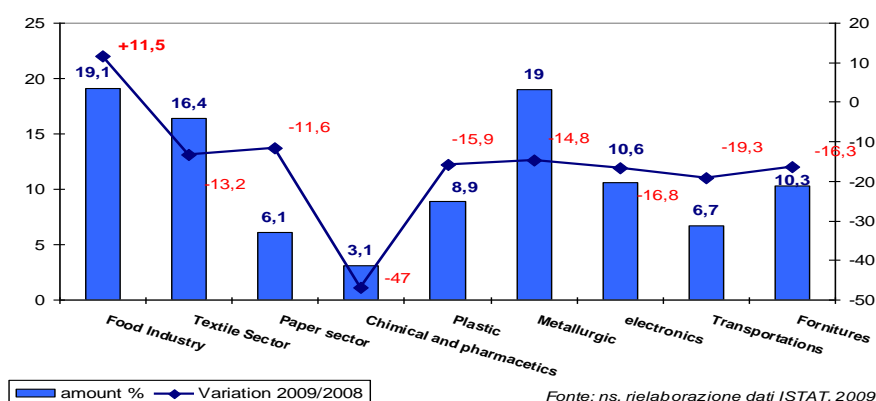
The Gross Domestic Product of Apulia at current prices in 2010 amounted to 71.446 billion euro, the 4,9 % of National GDP.

Figure 1: Composition of Added Value per sector in Apulia region



The 2009 was the year in which the effects of the financial crisis were reflected in a stronger real economy. Italian GDP and other countries with advanced economies have suffered a major setback compared to other countries with emerging economies, partly as a result of fiscal policies often aggressive, aiming at the reduction of the public debt, impacting negatively on growth and investments.

Figure 2: Added Value per branch of manufacture industry



Apulia cannot be considered distant from this scenario since it sees his wealth going down by 4,1% year on year change in line with that of other regions of the South of Italy and slightly low compared to the national rate of 5,1 %.

The analysis by macro aggregates returns a picture of the importance of different sectors on the composition of Added Value of the region and the effects they have suffered as a result of the economic crisis.

The economy of Apulia is characterized by the dominant presence of the service industry in the composition of Added Value (73,5%), while the industrial sector participates in the formation of the AV with 23,1%. Confirming an economy heavily devoted to agriculture and to agro-processing sector, the region contributes with 23,7% to the added value of the agro-food industry in the South of Italy and 4,87% at the national level.

Despite other areas of the country, the region is characterized by a considerable weight of the primary sector on the regional economy with about 5% of total added value, and a modest contribution to the food industry (2,06%). The amount of the production of the agricultural sector in 2010, with a production value of 3.7 billion euro at current prices, which represented 14% of the gross marketable output of the country.

Table 1: Importance of the Agro food Sector

	Apulia	Italy
Agriculture, fishing and forestry	5%	2,60%
Food Industry	2%	1,50%

Source: data ISTAT (Italian Bureau of Statistic, 2009)

The agricultural sector is presented as a sector with a strong production specialization (grapes, olive oil, fresh vegetables and durum wheat), albeit compromised by a highly fragmented production system (average size of firm id about 4,6 hectares), widespread subcontracting and high age of farmers. The level of education of farmers is still very low. The latter factor influence not poorly their methods consisting in traditional technologies and aversion to adopt any innovation process or product, except for purely imitative processes. The reduction in the number of farms by about 20% over the last ten years (data Italian Bureau of Statistics, ISTAT 2011) heralds a process of restructuring of the Apulian agriculture, which would allow larger firms to cope more effectively instability and strong competitiveness characterizing domestic and international markets. The increase in the average size of the company since 2000, however, is objectively too small (about 1 hectare) to justify the assumption that there is a process of restructuring going on, although it is to be observed a tendency in this direction. A process of reform of the structural characteristics of agriculture and the processing industry has already taken place considering the influence of Community Policies to support investment in marketing and processing of agricultural products and innovation.

The field of industrial processing of agricultural products maintains a leading position in the whole industry (19% of VA), and keep a certain resistance to the crisis in terms of trading their production abroad. The specialization of the sector, often aimed at production quality food, the positive perception of the latter on foreign markets and the geographical proximity of the emerging markets are key factors in maintaining the exporting role of the Apulian agro-food sector on the international markets. Nevertheless many are still weaknesses that afflict the agro food system. Just think of the reduced size of the processing and trading companies, the prevalence of small businesses unbranded, local brand or *private label*, the presence of a few international or multinationals companies and the difficulties in accessing the credit and high rate of borrowing in the last years (+ 256% in 2011 - AIDA, 2011).

Innovation as crucial driver of internationalization: an hypothetic model

The ISCI project's overall objective is to strengthen interaction between research, innovation institutions, agri-food Small and Medium Enterprises (SMEs) and public authorities by providing the agri-food SMEs of the targeted areas with innovative marketing and management services that are able to ease the SMEs internationalization process, so to increase the SMEs' competitiveness and propensity toward innovation. One of the most important features of the project consists in the joint development, implementation, staffing and financing of the project by the Greek and Italian universities, the representatives of the productive and of the public institutional world, and stakeholders of both areas involved in the project.

The role of cooperation between the company and its stakeholders is revealed in many cases, indispensable to the development of smaller especially in the context of the wider market, where small size is particularly vulnerable (Rullani, 1997).

The principle of diffusion of information and knowledge on technology and innovation among food businesses represent a key concept and this access to information lies in the ability of a system and to share the experiences of local businesses, whether small or large, join them in the denominator of the product quality and recall that the quality of the products of Puglia has on international markets. The internationalization process of firms that are embedded in a context of cooperation and innovation in laboratories are often favoured because the company is facilitated in obtaining resources (especially information) and the opportunities for contact with foreign operators.

The SMEs will be then involved in cooperation and innovation laboratories with a twofold objective: (1) to increase the SMEs competitiveness by direct knowledge transfer and by easing the approach of the SMEs with ICTs; (2) to enhance the presence of the SMEs on the international markets by creating new trade relationships and opportunities. In fact, the web-communications and new ICT technologies have significantly reduced, if not eliminated, the importance of physical proximity (Contò et Al., 2010b).

The laboratories will provide enterprises with a natural information circuit that not only monitor product innovations or process innovation, carried out from inside or from outside, but that allow names and information about potential customers, new markets and services for internationalization circulate.

Moreover, the reduction of the costs of communication, transportation and the gradual opening up of international markets make possible the realization and construction of organizational structures between geographically dispersed individuals with intense circulation of information, logistics and human resources flows. This reduces the “psychic distance” between markets, which is even more than the “physical distance”, a barrier to internationalization precesses.

Also, the marketing services provided by the two incubators will be tested over a sample of SMEs. This on-site implementation of R&D actions and project, and of systemic innovation actions, both involving the local and cross-border agri-food SMEs will ensure the achievement of tangible and intangible results (growth of SMEs' turnover, increase in youngsters and women access to the job market, SMEs internationalization, new cooperative relationships with R&D institutions and stakeholders) that, by their same nature, will concretize longer term effects. All the partners will jointly develop the program by identifying and sharing knowledge and experience.

Based on these premises the partnership will enforce, strengthen and develop strategic innovative marketing and cooperation services among the SMEs and between the SMEs, the Universities and the public authorities concerned. The project will reach the following sub-objectives:

1. to develop innovative scientific and technological tools in order to enhance cooperation between the cross-border SMEs and to strengthen their ability to access the international markets;
2. to develop of two scientific and technological innovation incubators for the SMEs' internationalization in the area Greece-Italy;

3. to develop, to share and to spread knowledge for the improvement of competitiveness of the agri-food SMEs’;
4. to strength the services to enhance innovation of the SMEs.

The first step of the methodology consists of a preliminary context analysis and detection of the SMEs' needs for the internationalization processes. Basing on this study the development of services for the SMEs internationalization will enable the realization of real innovative and effective tools o Marketing Intelligence to support internationalizations and connect together businesses and customers (Andersen at al., 1996). This second stage of the project consists in: a study for the development of a software for the research, gathering not structured and semi-structured information from WEB based sources informative sources and information, firms and stakeholders profiles and databases; a software for the information processing and management; a database of SMEs suppliers and customers’ profiles (buyers, brokers etc); a software for trade partners’ matching; the design and implementation of a e-marketing service platform.

All together these facilities will provide information access to SMEs’ weaknesses and strengths analysis, benchmarking analysis, trade profile matching and e-marketing services. All the joint researches and activities will be the basis for the implementation of two innovative scientific and technological incubators.

The last stage of the project consist of actions concerning the keeping of the SMEs cooperation and SMEs joint internationalization actions realizing cooperation laboratories with a consistent sample of SMEs and marketing strategies on the international markets.

Results and feedbacks will be discussed together with the SMEs and the stakeholders, that all along the project will have the chance for networking and participate in R&D and cross border cooperation activities. At the very end of the project the partners will issue a strategy for the sustainable future development. The project’s results, in fact, will pose, by their same nature, the basis for a future development due to the long term targeting concerning a significant increase of the percentage of SMEs involved in internationalization and innovation processes, an improvement of the SMEs productivity and the access to the international market leading to an expected significant growth in the SMEs’ turnover, the reduction of the transactional costs. Moreover, the expected results are directed to pose the conditions to call firms for an upgrade in their human capital, increasing the access of youngsters and women to the job market with new mid-term occupation and create new trade contacts and relationships.

Conclusion

Witnessing the emergence of economies that rely on cheap labour force and easily maintain their production in labour-intensive sectors, the strategies of product differentiation require more than others, the circulation of information in obtaining a competitive advantage.

In order to develop processes of SMEs internationalization aiming to innovation and competitiveness of the cross border economic systems, cooperation and definition of a sharing strategy aiming at implementation of a model represent a crucial step. An important role can be assigned to the Chamber of Commerce present on the local territories, an independent public body promoting and helping the development of the local firms, closely related to the territorial economic activities and able to interpret the latent needs and to offer real services. Placed within the network of the national and international chambers of commerce, the Chamber of Commerce is well integrated with other national and international organizations.

In this context, our paper is a working in progress directed to develop a specific network model that captures all the various dimensions of relations between firms. The model will be used at different levels of complexity from the realization of contractual agreements for production, up to the creation of relations aimed to generate contexts of shared underlying developmental pathways.

In particular the transferring of competences and knowledge and the diffusion of innovative marketing services to the local development agencies will support an integrated and sustainable development of local agri-food production system. At the end of the project, after the implementation of this Net-model, there will be the constitution and the activation of a network of

local development agencies which will facilitate the integration processes between cross border SMEs. The 20 SMEs case studies for the testing of the marketing services provided by the innovation incubators together with the cross border cooperation laboratories will ensure the application of innovative strategies and procedures elaborated during the project, and will aim to acquire knowledge and competences on further marketing and internationalization initiatives.

The increased level of competences acquired by the public authorities and by the Universities will be applied on the planning and management of territories and will be fundamental to define and address the next development policies and a more efficient allocation of public resources in favor of the implementation processes of innovation in the context of internationalization of local supply chains.

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DEVELOPMENT OF INSTITUTE OF LOCAL TAXES IN LITHUANIA AFTER JOINED IT TO EU

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Abstract. The article deals with the possibility of developing the institute of local taxes in Lithuania. The concept of local taxes and its place in state is considered. Experience of modern democratic states and interwar Lithuania in the sphere of local taxes is presented. The budget's structure of Lithuanian municipalities from the point of view of local taxes is analyzed in the period after joining Lithuania to the EU. The comparative analysis budget structures of the Vilnius and other capitals of the Baltic countries are performed. The means are proposed that will enable us to develop the institute of local taxes up to the European level, i.e. the taxes allocated to the self-government to legalize as a local tax, rendering an opportunity to set its tariffs within the statutory limits and some new local taxes, could be legalized.

Keywords: fiscal decentralization, local taxes, budget of local government

JEL classification: G280, D310

Introduction

Local taxes are one of the major conditions of fiscal decentralization, as well as extension of independence of self-government. The significance of independent activities the self-government to modern democracy is also emphasized by the European Charter of Local Self-government (1985), stating that “the institutions of self-government are the basis of any democratic system”. In the countries of EU or any other countries of western democracy the institution of local taxes is developed enough. In Lithuania this problem is still waiting for the solving. The problems, connected with the local taxes, were considered by both foreign, and the Lithuanian scientists, basically in the fiscal decentralization aspect. Between of foreign and Lithuanian authors it is worth mentioning. (Bird 1998; Musgrave 1989; Oates 1993; Rosen 1998; Stiglitz 2000; Astrauskas, Strizkaite 2003; Davulis 2007, 2008, 2009; Rimas 2005; Staciokas 2003; Staciokas, Rimas 2004), etc. The general problems of fiscal decentralization and state local finances are considered in (Daflon 2002; Fiscal federalism and state local finance 1998; Baltuskiene 2004; Buskeviciute 2008; Rimas 1999).

In this article the situation in the sphere of local taxes in Lithuania and the foreign experience in this sphere are discussed. The article offers solution to improve this situation, with regard a further integration of Lithuania with the European Union.

The principles of the tax distribution between levels of the state governing

The major function of the state public sector is to provide of public goods to the inhabitants of the country both the state level and that a local governing. However, to realize these activities the adequate resources are necessary on both levels. The main principle of distribution of financial resources at different levels of governing is expressed in the rule of fiscal decentralization. Thus based on the concept of fiscal decentralization that justifies the separation of the central and local government, we should build such a structure of the public finance in which each level of government would have sufficient resources of income for fulfillment of the functions entrusted to it. This financial structure includes allocation of tax sources both to the central and local level of government. The taxes assigned to local level of government, are treated as local taxes.

The distribution of taxes between the central and local government levels is based on the fact that delegation of the most part of right to the central government is inefficient, because fiscal independence and responsibility of the local government is limited. On the other hand, delegation of

too extensive autonomy to local authorities can also be unacceptable from the point of view of macroeconomic stability and effective resource allocation. These are main principles on the basis of which taxes are attributed to the state level of governing and to the level of local governing. Income from the latter taxes falls to the local budgets.

Analysis of the national budget has shown (Davulis, 2007), that development of the institute of local taxes is much lesser and, consequently, the level of the fiscal centralization is much higher in Lithuania than in the western countries of the modern economy. Such a result is no surprise, because the traditions of self-government in the western countries have been created for decades, and so they have a wide autonomy in the sphere of economy. Lithuania, in this sense, lags behind from western countries. However, after its integration into the European Union, it is necessary to develop the independence of institutions of self-government.

Local taxes in contemporary democratic states and inter-war Lithuania

The institution of local taxes is well developed in foreign countries and local taxes there are legalized. In different countries there can be a different structure of local taxes. In some countries one local tax is established, in others some local taxes are combined. In case of self-government where the public sector is more developed, some local taxes are usually introduced. In self-government with a less developed public sector, where the level of responsibility is minimal, it suffices one kind of local taxes. In order to determine which system of local taxes suits this or that local government better, it is necessary to take into account many factors: capability of local authorities to administer local taxes, the volume of providing public services financed by local taxes, and even the conventional culture of tax payment.

In foreign countries we can distinguish three basic kinds of local taxes providing the greatest part of incomes in budgets of the local government: a profit tax, a property tax and a tax on economic activities (Davulis, 2007). In different countries these taxes have different significance. The profit tax is rather enough widespread as one of the major financial sources for local authorities. This tax dominates, for example, over the structure of local taxes in the Scandinavian countries. On the other hand, in the countries such as France, Ireland, the United Kingdom, Holland profit taxes are attributed to the central government. In the Anglo-Saxon countries including Australia, the USA, Holland and others, the property taxes dominate in the structure of local taxes. The tax on economic activities dominates in the structure of local taxes of Austria, France, USA.

The analysis of local taxes in foreign countries (Davulis, 2009) made has shown that there is no local tax that would be preferred in all the countries. Which local tax (or taxes) would be the most suitable for any country also depends on the economic situation, the power system and traditions. Quite weighty arguments can be for the property tax as the basic local tax because it meets the requirements of a good tax, for example, its base is easily determined and rather stable. On the other hand, the profit tax can be taken into account as well. Both the profit tax and that of economic activities have good properties from the fiscal point of view. Both taxes are paid not only by the local residents, but also by the arriving people. The taxes are flexible and they can be easily administered.

In the framework of government of inter-war Lithuania local governments took a clearly defined place and their role in the solution of local significance problems was very important. The self-government managed different spheres of a public and economic life specified by laws - education and culture, healthcare services, management of the municipal economy, and others.

In the inter-war Lithuania the institutions of central government established sources of income to the budgets of the local government. Income of the local governments consisted of rather a small part of the state taxes, other minor taxes, and the different charges (Rimas, 2005). The law on local government taxes, which was valid with some amendments and supplements all the inter-war time in Lithuania, determined the sources of the income as well as the common principles of taxation in the territory controlled by the local government. The larger part of local budgets was formed of the tax income and charges. The tax income consisted of the extra pays to the state taxes

which, in line with laws, were included to the local budgets and of the independently collected taxes. The majority of the local taxes in inter-war Lithuania were not separate taxes of the local government, but the supplement to the other state taxes. The state institutions collected the part of the local government taxes in the same order as well as the state taxes. Local government organized the collections of all other taxes and charges. However the local government had no uncontrolled liberty in this sphere since the Ministers of domestic affairs and finances had great influence on the tax rate and the order of their charge as well as district administration that set and approbated the maximal tax rate.

As mentioned above, the largest part of the local government incomes was received in the form of fixed percentage of the state taxes. But such a system did not correspond to financial needs of local governments and their economic opportunities. The financial equalization of income was indispensable. The central government solved this problem by giving needed additional disposable subsidies for local budgets (Rimas, 2005).

The review of local government taxes of inter-war Lithuania allows us to state that the system of taxes was rather progressive and did not lag behind all taxes systems of the developed countries. Besides, the experience obtained in the inter-war years can also be useful in Lithuania at present.

Situation in the sphere of the local taxes in today's Lithuania.

As it has been shown in the modern democratic countries the institution of local taxes is developed well enough. Local taxes in foreign countries make up a significant part of income in local budgets, and taxes are legalized by the laws. Meanwhile in the regulation in Lithuania there is no a clear concept of local taxes. On the other hand, a certain part of tax income is given to local budgets according to regulations and other legal acts binding in the Republic of Lithuania. Taxes aimed at local governments (except the inhabitants' income tax) in some sense can be treated as local, but the right of the self-government to influence their amounts is not great. The state tax institutions collect the inhabitants' income tax and distribute it between the state and local budgets in compliance with rules set by laws. The local authorities do not have possibilities to influence this tax. Thus the inhabitants' income tax can not be treated as a local tax.

The following taxes and payment are connected with local budgets by laws and other legal acts in the Republic of Lithuania:

- the inhabitants' income tax
- the tax on pollution of environment
- the taxes on state natural resources
- the tax on lottery and gambling games
- the tax on income obtained from hunted animals
- the tax on the incomes received from any activity that requires business certificates
- the real estate tax
- the inherited property tax
- the ground tax
- the taxes on sale and lease of the state ground that is not used for agriculture
- the payment for the lease of the state ground and reservoirs of the state water fund
- charges.

The local government can set the tax on the incomes received from activities that require business certificate, the charges, real estate tax, tariffs for the state land lease in limits set by laws or decisions of the Government. In all other cases the local government can reduce the tariff of the tax or, in general, to refuse the tax by covering the financial losses by means of the budget. On the other hand, these taxes and payment attributed to local governments make up a small part of income of the local budgets.

A local government has no freedom in imposing taxes on the income of inhabitants, on pollution of the environment and on natural resources of the state. These taxes are so-called distributive ones because incomes from these taxes are divided between the state and local

government budgets in proportions set by the laws. In accordance with the law of taxes on natural resources of states a fixed share (70 percent) of income obtained from hunted animals and the same share of income obtained from the tax on pollution of the environment are attributed to local budgets. In accordance with the law of the tax on lottery and gambling games only incomes from small lotteries are attributed to local budgets. All taxes except the payment for the lease of the state ground, which directly goes to the local budget, are collected by the state tax inspectorates. Territorial state tax inspectorates transfer to municipal budgets all tax revenue attributed to them.

The main part of financial resources of local authorities is counted up in their budgets. Legal acts set the following kinds of budgeted receipts for local authorities:

- tax revenue comprised of taxes assigned to local authorities and a part of common taxes set by law,
- non-tax revenue received from the property of a local authority, local charges, fines, and other non-tax sources,
- subsidies and grants of the state budget.

The first two kinds of income can be relatively called as the own income of local authorities. The ratio between the own income of local authority and state subsidies characterizes the independence degree of the local authority. Contrary to foreign countries where the own resources completely depends on the decisions made by local government, Lithuanian local authorities have limited possibilities to control this kind of resources. Thus the own resources of Lithuanian local authorities do not quite correspond to their conception.

State subsidies to local budgets are indispensable so that financial resources of local governments were adequate to the functions assigned to be performed by them. Subsidies are attracted directly and are distributed into the common and purposive ones. The order of attracting subsidies is regulated by the law of the Republic of Lithuania on the methodology of municipal budget income estimation. A common subsidy of the state budget is attracted to local budgets for equalization differences between income and expenditure structures, determined by factors not dependent on local governments. Purposive subsidies to municipal budgets are attracted in order to perform state functions prescribed to them, as well as to realize the programs approved by the Seimas and Government. Amounts of subsidies for local governments are approved by the law on state and municipality budget financial indices of the corresponding budgetary year. Obviously, state subsidies, especially the purposive ones, are related with more rigid obligations of local authorities.

All the three kinds of income: tax income, non-tax income, and subsidies – in local government budgets have a different comparative weight. The analysis of statistic data in 2005-2011 showed that tax income and subsidies comprise the largest share of municipal budget income. Meanwhile non-tax income, which can be mostly influenced by local governments, comprises but an insignificant share of all local governments income and its significance is not great. The volume of state subsidies for budgets of local authorities comprises more than a half of their total revenues, except for 2008 years (41 %) and 2009 (49 %) (<http://www.stat.gov.lt>). This fact testifies rather a low level of fiscal decentralization in the country. The income tax of inhabitants makes up the largest share (over 80 %) of the aggregate tax income of all local government budgets. The other taxes, i.e. local taxes, do not play an important role in municipal budgets, because these taxes comprise but a small share of municipal budgets.

Lithuanian municipalities have a greater influence on establishing the amount of local charges. Though according to the law on charges, municipal councils have the right to determine eleven types of local charges, the institute of local charges is poorly developed. Incomes from local charges approximately comprise only 1% of all the municipal budget revenue. In accordance with the Law of charges, the common council has a right to set local charges in its territory for giving permissions.

Thus as it is shown in the works (Davulis, 2007, 2008), the degree of financial independence of local governments and level of development of the institution of the local taxes in Lithuania are

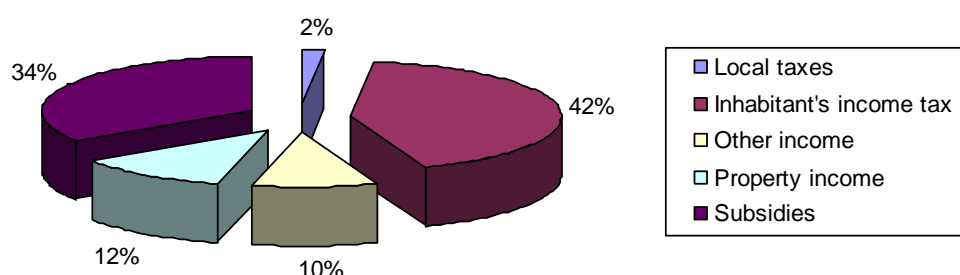
insufficient and lag behind the European level. So, after integration of Lithuania into the European Union, it is necessary to strengthen and develop the institution of local taxes.

The comparative analysis budget structures of the Vilnius and other capitals of Baltic countries

The budget of the Vilnius municipality is the largest of all the budgets of municipalities in Lithuania, however, in terms of financial independence the situation in this municipality is analogous to other Lithuanian municipalities. Let us analyze the budget structure of the Vilnius municipality and compare it with that of other Baltic countries municipalities – Riga and Tallinn, in terms of fiscal decentralization and local taxes. The statistical data of Vilnius, Riga and Tallinn municipalities are used for the analysis. The degree of financial independence of municipalities is shown by the volume of subsidies from the state budget. The high level of grants in the total income structure means a relatively lesser financial independence of local governments, because state budget grants are associated with concrete obligations.

The analysis shows, that both - subsidies of state budget (34 %) and inhabitants' income tax (42 %) make up a considerable share of the Vilnius municipality budget revenues. Meanwhile, the non-tax revenue that can be influenced by the municipality at most as well as local taxes (i.e., taxes attributed by laws to local governments) makes up a very small share in the total budget revenues. This fact indicates that financial independence of the Vilnius municipality is rather limited. The budget structure of Vilnius city in 2010 is represented in Fig. 1 (in percentage).

Figure 1: Budget revenue structure of the Vilnius municipality in 2010

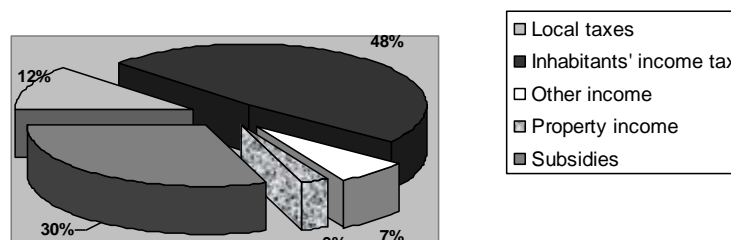


Source: <http://www.vilnius.lt/newvilniusweb/index.php/233/?itemID=1098>

We see that subsidies and inhabitants' income tax that cannot be influenced by the municipality make up 76% of all income of budget. Only 24% of budget revenues can be influenced by the municipality to a larger or smaller extent. The main taxes, attributed to local governments by laws that can be treated as local, included real estate, ground and inherited property taxes as well as the one on state natural resources and environment pollution. The share of all property taxes (real estate, ground, inheritance) in the Vilnius budget 2010 made up 12% of the total budget revenues. Thus the share of all rest local taxes in Vilnius budget in 2010 comprised only 2% of the total budget revenue.

As shows the Fig. 2, the income structure of the Vilnius municipality insignificantly differs before and past economic crisis.

Figure 3: Budget revenue structure of the Vilnius municipality in 2007

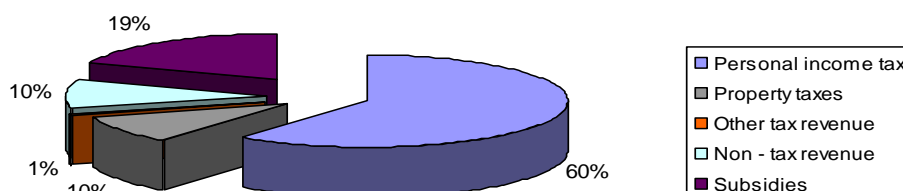


Source: <http://www.vilnius.lt/newvilniusweb/index.php/52/?itemID=29>

Similar situation is observed by comparing Vilnius and Riga municipality budgets. The following financial resources comprise budget revenues of Riga municipality:

- personal income tax;
- property tax;
- other tax revenue
- non – tax revenue;
- subsidies.

Figure 3: Budget structure of Riga municipality in 2010



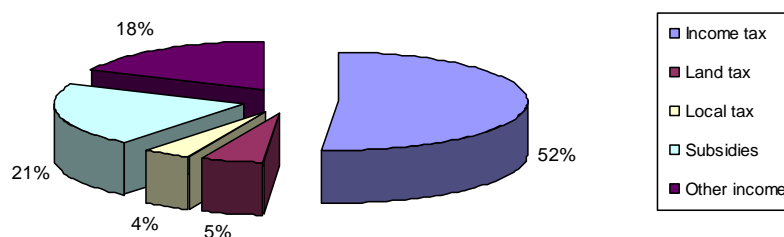
Source: http://www.riga.lv/EN/Channels/Riga_Municipality/Annual_Report/annual-report-2010.htm

As it can be seen in Fig. 3, the personal income tax and property tax made up the largest share, - more than 70 % of the total budget revenues of Riga in 2010. Subsidies make up not a small – about 19 % of the total budget revenue of Riga. And non – tax revenue makes up a small share of income, - only 10 % of the local budget revenues.

Tallinn’s city budget is another budget, which will be comparing with Vilnius city budget. The following financial resources comprise budget revenues of Tallinn municipality:

- income tax;
- land tax;
- local tax;
- subsidies;
- other income.

Figure 4: Budget structure of Tallinn municipality in 2010



Source: <http://www.tallinn.ee/est/g3672s55843>

As it can be seen in Fig. 4, more than half of Tallinn budget revenue comes from tax revenues (about 61 %.) , of which the importance of income tax is 52 % of the total budget revenue. And only 4 % comes from local tax. Subsidies make up not a small – about 21 % of the total budget revenue of Tallinn in 2010.

Consequently, the financial independence of the Riga and Tallinn municipality are similar like a Vilnius city.

Opportunities to develop the institution of the local taxes in Lithuania

As it has been shown in the modern democratic countries the institute of local taxes is developed enough. Local taxes in the budgets of local government of foreign countries make up a significant part of income, and taxes are legalized by the laws. Meanwhile in the laws of Lithuania there is no definition of the concept of local taxes. On the other hand, a certain part of tax income is assigned to local budgets by the laws of the Republic of Lithuanian and other legal acts. The taxes assigned to local governments (with exception the income of inhabitants tax) can be treated as local in the some sense, but the rights of the self-government to influence their amounts are not great

We think that strengthening of the institution of local taxes needs to be started from the legalization of local taxes, passing the corresponding law. Today there are all conditions for the property tax to become basic local tax in Lithuania (including the ground). As it has been shown by expert, the taxation of the real estate of the inhabitants used only for business had no big influence. Therefore it is necessary to expand the base of taxes and to change the tariffs. To this end, it is necessary to charge all the property belonging, both to legal, and natural persons under the property right. On the other hand, it is necessary to determine the maximum ceiling of nontaxable property in order that inhabitants having the small or average property could avoid the tax. With the growth of the living level, this ceiling could be reduced. The value of property, exceeding the nontaxable amount, is taxed by decision of the council of the local government. As local taxes it would be expedient to introduce taxes on property of juridical persons and luxury property of inhabitants as local taxes. Realization of these proposals would not refer to the majority of inhabitants, but it would have a positive effect on the income of budgets of local governments. On the other hand, these means would also have a positive side effect – they would help to settle the market of the real estate that today is obviously distorted in Lithuania.

In the light of experience of the countries of modern democracy and inter-war Lithuania, it would be expedient to treat a part of the inhabitants' income tax, transferable to the budgets of local governments as a local tax with the established the right of the local government to change the tariffs within the limits set by laws. Since the part of the inhabitants' income tax, transferable to the local government, makes up a significant part of income of their budgets, such local taxes would essentially expand the financial independence of the local governments.

The input of some smaller-sized taxes is possible today. The taxation of vehicle parked in the streets and court yards, even in the largest cities of Lithuania would be useful in many cases. Such a

tax would not only supplement income of budgets, but also would allow us to solve the problem of transport congestion in cities without any expensive projects and as well as would reduce the air pollution and noise. Thus, the living conditions in the cities would improve this way and affect the health of inhabitants positively.

Thus, the present conditions in Lithuania allow us to solve in principle the problem of financial independence of self – governance by consolidation and expanding the institution of local taxes corresponding to the European level. On the other hand, the degree of such independence should also depend on some specific conditions. Financial independence of the local government is only a condition for an increase in the efficiency of the public sector of the economy. The fulfillment of this condition also depends on how effectively the financial resources of the local government are used, which also means that qualification of local government workers and a level of corruption are important as well.

Conclusions

The analysis budget structures in Lithuanian municipalities showed that subsidies and inhabitants' income tax, which can be treated as state subsidies of a special kind, comprise the largest share of municipal budget income. Meanwhile the rest taxes and non-tax income, which can be mostly influenced by local governments, comprises but an insignificant share of all local governments income. Similar situation is in the level of individual municipalities. The comparative analysis budget structures of the Vilnius and other capitals of Baltic countries showed that situation in Vilnius, Riga and Tallinn municipalities is similar and characterizes by low degree of financial independence of municipalities.

Thus being integrated into the European Union further Lithuania should develop the institute of local taxes as one of the major elements of fiscal decentralization. We propose such means to develop the institute of local taxes in Lithuania: legalization of local taxes by means of the corresponding law, legalization of the real estate tax as the main local tax expanding its base and the rights of the local government to set its tariff in greater limits, introduction of the part of the inhabitants' income tax into local budgets as a local tax, authorizing local governments to set its own tariffs within the statutory limits, legalization of new local taxes, for example, the taxes on property of legal persons and on luxury property of natural persons, as well as the tax on the means of transport that would make a useful by-effect, apart from fiscal effect.

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AVERAGE SALARY IMPACT RESEARCH TO THE VALUE OF PRIVATE INCOME AND ANNUAL REVENUE IN LITHUANIA VIDUTINIO DARBO UŽMOKESČIO LIETUVOJE POVEIKIO PRIVAČIŲ IR VALSTYBĖS PAJAMŲ VERTEI TYRIMAS

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Santrauka: Nors statistikos departamento duomenimis vidutinis darbo užmokestis Lietuvoje nuo 2005 m. kasmet padidėjo vidutiniškai 8,2 proc. per metus, tačiau tai, nepagerino nei dirbančiųjų žmonių gyvenimo kokybės, nei visos šalies ekonominės būklės.

Atliktas tyrimas parodė, kad pinigine išraiška skaičiuojamo vidutinio darbo užmokesčio augimo tempai ženkliai atsiliko nuo faktinės to užmokesčio perkamosios galios kritimo tempo. Per 2005-2011 metų laikotarpį dėl lito nuvertėjimo gaunamo vidutinio darbo užmokesčio Lietuvoje perkamoji galia ir vertė sumažėjo vertinant atitinkamai pagal standartinę infliacijos koeficientą ir pagal „Aukso standartą“.

Taip pat šis tyrimas atskleidė dar vienus Lietuvos makroekonomikos vystymosi ypatumus: vidutinio darbo užmokesčio didinimas atsiliko nuo sukuriamos pridėtinės vertės darbo vietoje didėjimo tempų, nepakankamai įtakoją valstybės BVP vertės augimą ir sumažino vidutinį įmonių pelną.

Šie tyrimo rezultatai leidžia manyti apie nepakankamą darbo veiklos šalyje efektyvumą, apie netinkamus jos vertinimo kriterijus ir neproduktyvių išlaidų blogą valdymą beveik visose Lietuvos ūkio srityse.

Raktažodžiai: Pinigų vertė ir nuvertėjimas, pajamų vertės skaičiavimas, vidutinio mėnesinio darbo užmokesčio vertė, infliacijos poveikis.

Įvadas

Statistikos departamento duomenimis darbo užmokestis Lietuvoje 2012 m. II ketvirtį padidėjo visose apskrityse, kurį lėmė padidėjusi gamybos apimtis apdirbamosios gamybos, statybos ir kitose įmonėse. Šis faktas suteikia daryti prielaidą, kad dirbantieji tampa labiau motyvuoti ir aktyviau dirbdami gali gerinti veiklos rezultatus, įtakojant tiek verslo, tiek Valstybės pajamas. Yra nustatyta, kad pagrindinis darbuotojus motyvuojantis veiksnys yra darbo užmokestis, ir kylant asmeninio vartojimo prekių ir paslaugų kainoms, paprastai darbuotojai tikisi darbo užmokesčio augimo, atsižvelgiant į kainų lygio didėjimą (Žiogelytė, 2010). Ekonomikos ekspertai nagrinėja faktinius arba santykinius darbo užmokesčio, vertinamus nacionaline valiuta, dydžius (Žukauskas, 2008; Raškinis, 2005). Atsiranda publikacijų ir tyrimų, kuriuose pradedama vertinti brangstančių prekių, pingančių pinigų problemas (Žukauskas, 2011). Kokią įtaką, ekonominiu vertinimu, daro vidutinio mėnesinio darbo užmokesčio poveikis privačioms ir Valstybės pajamoms, *mokslinėje literatūroje nagrinėta nepakankamai*. Analizuojant 2005-2011 m. laikotarpį, nuo 2005 m. kasmet vidutinis darbo užmokestis padidėjo vidutiniškai 8,2 proc. per metus, tačiau tai, daugelio nuomone, nepagerino nei dirbančiųjų žmonių gyvenimo kokybės, nei visos šalies ekonominės būklės. Faktų analizė rodo, kad pragyvenimo išlaidos Lietuvoje didėja sparčiau, nei darbo užmokesčio ar Lietuvos bendrojo vidaus produkto (BVP) padidėjimas. Šis tyrimas apsiriboja vidutinio darbo užmokesčio poveikiu privačių ir Valstybės pajamų *vertei* ir perkamajai galiai, atitinkamai pagal „Aukso standartą“ ir pagal standartinę infliacijos koeficientą sąlygojančios, analize.

Tyrimo tikslas: kiekybiškai įvertinti vidutinio darbo užmokesčio vertės praradimo mastą Lietuvoje bei poveikį privačių ir Valstybės pajamų *vertei*.

Tyrimo uždaviniai:

1. atskleisti pinigų vertės skaičiavimo ypatumus;
2. nustatyti vidutinio mėnesinio darbo užmokesčio nuostolius dėl infliacijos ir nuvertėjimo;

3. koreliacijos–regresijos analizės būdu įvertinti vidutinio mėnesinio darbo užmokesčio įtaka pridėtinei vertei, bendrajam vidaus produktui, pridėtinės vertės mokesčiui, grynajam pelnui.

Analizuojant mokslinę literatūrą, publikuotus 2005-2012 metų laikotarpiu, nustatyta, kad L. Žiogelytė vertino darbo užmokesčio pokytį Lietuvos darbo rinkoje (Žiogelytė, 2010), E. Paužinskaitė nagrinėjo gyventojų darbo užmokesčio apmokestinimo Baltijos šalyse ypatumus (Paužinskaitė, 2012), V. Gerikienė ir I. Blažienė analizavo Valstybinio sektoriaus darbuotojų darbo apmokėjimo reguliavimą Lietuvoje (Gerikienė, Blažienė, 2009), o A. Baležentis ir kiti vertindami darbo užmokesčio pokyčius Lietuvos žemės ūkio sektoriuje ekonominio nuosmukio laikotarpiu, išskyrė tik konkretų sektorių (Baležentis, Misiūnas, 2011). Pasigendama mokslinių straipsnių, kurie nagrinėja darbo užmokesčio *vertės* pokyčius. Šios problemos nagrinėjimas ir pateikimas mokslinėje literatūroje papildys moksliniais argumentais uždirbamų pajamų nuvertėjimo nustatymą bei Vidutinio mėnesinio darbo užmokesčio įtaką Lietuvos ekonomikos ir verslo pajamų rodikliams: Bendrajam vidaus produktui (BVP), Valstybės surenkamam pridėtinės vertės mokesčiui (PVM), verslo sukuriama pridėtinei vertei bei grynajam pelnui. Kadangi gyventojų perkamoji galia priklauso ne tik nuo turimų pinigų absoliučios apimtys, bet ir nuo jų vertės, ypatingas dėmesys tyrime yra skiriamas pajamų *vertės* pokyčių vertinimui.

Pajamų vertė ir jos vertinimas

Straipsnyje lito *nuvertėjimas* buvo vertinamas pagal Pasaulines aukso kainas, kurį lėmė globalios finansų sistemos faktoriai. *Infliacija* Lietuvoje buvo vertinama pagal Lietuvos statistikos departamento pateiktus kainų indeksus, kurį labiausiai lėmė vietiniai faktoriai esantys Lietuvoje.

Kai pajamos gaunamos pinigine išraiška, jų vertę atspindi tokia formulė (Jasinavičius, 2012):

$$P_{vi} = N_{pi} \cdot p_{vi}, \quad [1]$$

čia P_{vi} – pajamų vertė *i*-tuoju momentu; N_{pi} – piniginių vienetų skaičius, gautas duotuoju momentu *i*; p_{vi} – piniginio vieneto vertė duotuoju momentu *i*.

Pagrindinis reikalavimas tikriesiems pinigams yra toks, kad jų vertė ilguoju periodu privalo būti nekintama:

$$p_{vt} = p_{v0} = \text{const}, \quad [2]$$

čia: p_{vt} , p_{v0} – piniginio vieneto vertė duotuoju momentu *t* ir 0.

Tik tokiu atveju pinigų skaičius vienareikšmiškai atspindės mainomų į juos prekių ir paslaugų vertę. Per visą pinigų egzistavimo istoriją tokiais pinigais visada buvo auksas ar/ ir kitų tauriųjų metalo gabalai (monetos, luitai). Ilgą laiką popieriniai jų pakaitalai – banknotai – buvo susieti su konkrečiu aukso kiekiu. Šis mainuose naudojamų piniginių vienetų susiejimas su konkrečiu aukso kiekiu yra vadinamas – „Aukso standartu“, reiškiančiu, kad gryo aukso uncija turi konkrečią ir pastovią pinigų kainą, išreikštą pasirinktu piniginiu vienetu (Jasinavičius, Ganiprauskas, 2012). Pinigų vertės pokytį aukso atžvilgiu F_A , toliau vadinamą pinigų nuvertėjimu pagal „Aukso standartą“, per nagrinėjamą periodą *t* galima įvertinti išraiška:

$$F_A = \frac{A_0}{A_t} - 1, \quad [3]$$

čia F_A - infliacijos koeficientas pagal „Aukso standartą“,

A_0 ir A_t - aukso uncijos kainos pradinio momentu 0 ir nagrinėjamu momentu *t*.

Pažymėtina, kai $F_A > 0$, tai šis rodiklis tampa pinigų defliacijos aukso atžvilgiu koeficientu.

Pinigų vertės pokytis gali būti skaičiuojamas atsižvelgiant ir į kitų vertybių kainų pokyčius: žemės sklypų, žaliavų, kasdienio vartojimo prekių ir paslaugų. Pastarosios naudojamos standartiniam infliacijos koeficientui nustatyti. Remiantis statistikos departamentu, infliacija apibūdinama kaip tęstinis bendrojo kainų lygio didėjimas, dėl kurio mažėja pinigų perkamoji galia

(Statistikos departamentas). Siekiant įvertinti gaunamų pajamų tikrosios vertės pokyčius, privaloma atsižvelgti į pinigų vertės pokyčius: infliaciją arba defliaciją skaičiuojant pagal bazinių vertybių kainų pokyčius, t.y. statistikos departamento sudarytą prekių ir paslaugų krepšelį (statistinį krepšelį), kurį sudaro 902 reprezentatyviosios prekės ir paslaugos. Į statistinio krepšelio sudėtį įeina prekės ir paslaugos, kurios reprezentuoja šalies namų ūkių vartojimo išlaidas (Statistikos departamentas).

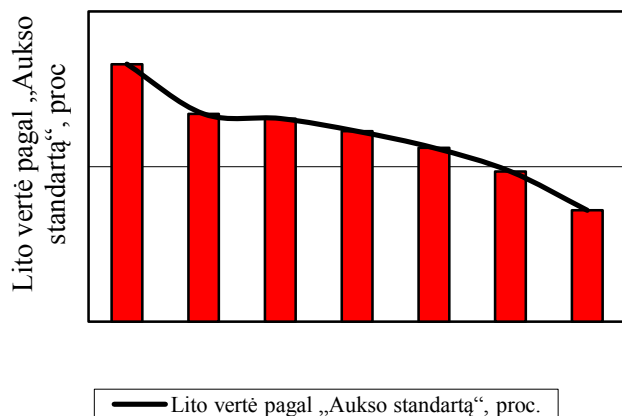
Vidutinio mėnesinio darbo užmokesčio perkamoji galia ir vertė nagrinėta tokiais požūriais, atitinkamai pagal sandauginį standartinį infliacijos koeficientą bei „Aukso standartą“, kuomet pinigai buvo padengti auksu ir kiekvienas pinigus galėjo pakeisti į auksą. Remiantis pajamų vertės skaičiavimo metodika, kurios dėka nustatytas pinigų nuvertėjimo dydis, nagrinėjamas vidutinio mėnesinio darbo užmokesčio nuvertėjimo mastas 2005-2011 metų laikotarpiu (žr. 1 ir 2 paveikslus), (Jasinavičius, Ganiprauskas, 2012).

Lito vertė priklausė ne tik nuo aukso kainos pokyčių, bet ir nuo valiutų kurso tarp lito ir JAV dolerio. Kadangi pinigai nebeteri materialios vertės pavidalo, tad pinigai virto tik juos atspausdinusią valstybių *skoliniais įsipareigojimais* (Jasinavičius, Ganiprauskas, 2011).

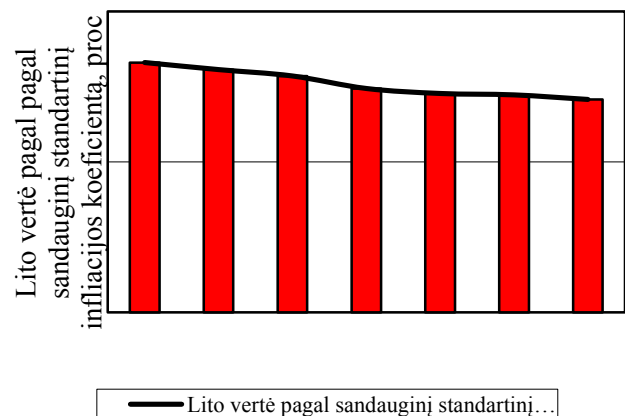
Remiantis 1 paveikslu, Lito vertė p_{v2011} m. pagal aukso kainą biržoje (4.175,84 Au oz/ Lt) nuo 2005 m., nuvertėjo 3,7 kartus. Tai reiškia, kad 2005 m. už turimą 10.000 Lt sumą buvo galima įsigyti 251 g aukso, o 2011 m. – tik 68 g. Atlikti skaičiavimai patvirtina, kad 10.000 Lt pajamų vertė P_{v2011} , palyginus su Lito verte P_{v2005} pakito -73 proc. Tai akivaizdus pinigų nuvertėjimas, nes, jei sąlygos nekinta, $p_{v2011} = p_{v2005} = const$, tai už tuos pačius 10.000 Lt nagrinėjamu laikotarpiu būtų galima įsigyti tokį patį kiekį aukso – 251 g. Tačiau už 10.000 Lt sumą nagrinėjamu laikotarpiu buvo galima įsigyti 3,7 kartais mažesnę aukso kiekį.

Remiantis 2 paveikslu, Lito perkamoji galia p_{Fv2011} 2011 m. pagal sandauginį standartinį infliacijos koeficientą nuo 2005 m. nuvertėjo 1,4 kartais. Tai reiškia, kad 2005 m. sukaupytą 10.000 Lt atsargų perkamoji galia Lietuvoje sumenko ir sudarė 7.117 Lt.

1 pav. Lito vertė pagal „Aukso standartą“



2 pav. Lito perkamoji galia pagal sandauginį standartinį infliacijos koeficientą



Šaltinis: sudaryta pagal Lietuvos banko ir www.measuringworth.com duomenis

Tai akivaizdus pinigų nuvertėjimas, nes, jei sąlygos nekinta, $p_{Fv2011} = p_{Fv2005} = const$, tai turimos 10.000 Lt santaupos nagrinėjamu laikotarpiu būtų išlikusios tokios pat vertės.

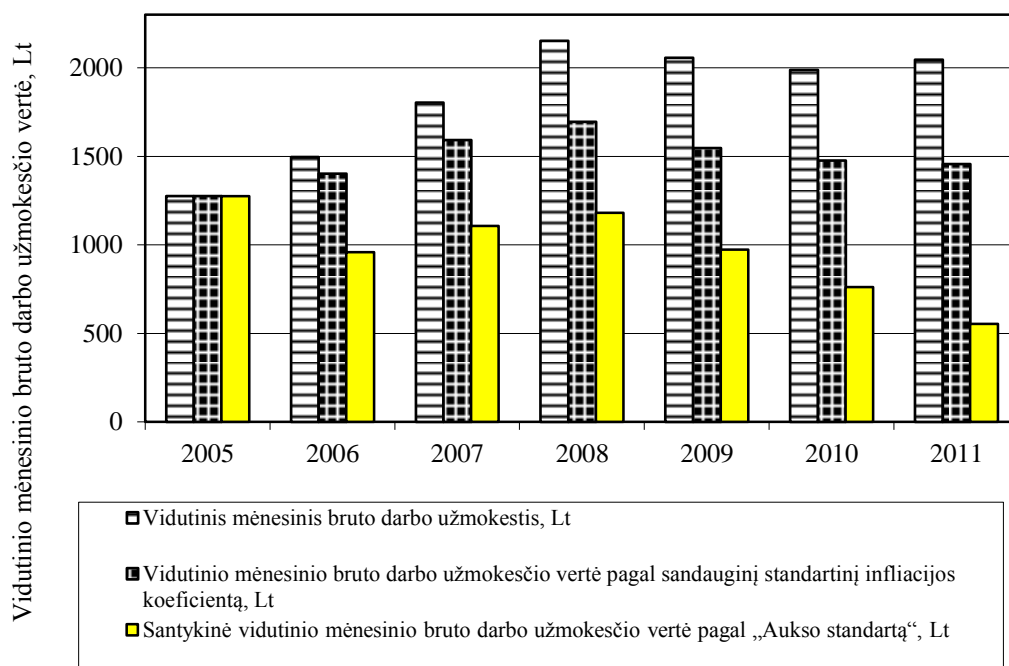
Vidutinio mėnesinio darbo užmokesčio vertės analizė 2005-2011 metais

Daugelio žmonių pagrindinis poreikių tenkinimo šaltinis yra darbo užmokestis ir jis atspindi vidutinę šalies gyventojų uždirdamų pajamų tendenciją. Tyrimo metu vidutinis mėnesinis darbo užmokestis buvo nagrinėtas 2005-2011 metų laikotarpiu Lietuvoje. Vidutinio mėnesinio darbo

užmokesčio (VDU) įtaka Valstybės ir verslo pagrindiniams pajamų rodikliams buvo vertinamas 2005-2011 metų laikotarpiu Lietuvoje. Statistiniai duomenys paimti iš www.measuringworth.com, Lietuvos statistikos departamento bei Lietuvos banko.

Remiantis 3 paveikslu pastebima, kad VDU kitimas susideda iš 2 etapų: 1) 2005-2008 m. VDU vidutiniškai padidėjo 9,1 proc. kasmet; 2) 2008-2011 m. VDU vidutiniškai sumažėjo 1 proc. kasmet. Tuo tarpu, atlikus statistinę lyginamąją analizę, absoliutus VDU per 2005-2011 m. padidėjo vidutiniškai 8,2 proc. kasmet. Pagal 4 paveikslo duomenis, 2011 m. VDU N_{2011} sudarė 2.046 Lt/mėn., o nagrinėjamo laikotarpio VDU perkamoji galia, įvertinus sandauginį standartinio infliacijos koeficiento poveikį, P_{v2011} sudarė tik 1.456 Lt/mėn. 2011 m. VDU vertė pagal „Aukso standartą“, lyginant su absoliučiu VDU, nuvertėjo 73 proc. Absoliutus VDU dydis sudarė 2.046 Lt/mėn., o VDU vertė P_{vA2011} pagal „Aukso standartą“ sudarė tik 554 Lt/mėn. Taigi, VDU vertė ir perkamoji galia mažėja. Tai reiškia, kad už tą patį VDU, nagrinėjamu momentu, buvo galima įsigyti mažiau prekių bei paslaugų, o ateityje, esant Pasaulinės aukso kainos didėjimo tendencijai, už tą patį VDU dydį bus galima įsigyti dar mažiau prekių bei paslaugų. Esant iki šiol buvusioms sąlygoms, absoliutus pinigų dydis gali sudaryti vis mažesnę pinigų vertę bei perkamąją galią.

3 pav. Vidutinio mėnesinio darbo užmokesčio vertė ir perkamoji galia ir jų kaita, įvertinus atitinkamai „Aukso standartą“ ir infliacijos poveikį



Šaltinis: sudaryta pagal Lietuvos banko ir www.measuringworth.com duomenis

Atlikus vidutinio darbo užmokesčio vertės kitimo Lietuvoje tyrimą, nustatyta, kad dirbančiojo vidutinis mėnesinis darbo užmokestis vidutiniškai kasmet padidėja 8,2 proc., tačiau toks pajamų padidėjimas neatsveria nei pajamų perkamosios galios mažėjimą pagal sandauginį standartinį infliacijos koeficientą, nei pajamų vertės nuvertėjimą pagal „Aukso standartą“.

Vidutinio darbo užmokesčio koreliacinė–regresinė analizė

Siekiant nustatyti įvairių statistinių rodiklių tarpusavio sąsajas, svarbu atlikti koreliacinę–regresijos analizę. Šios analizės skaičiavimai tyrime atlikti kompiuterinės programos „Microsoft Excel“ statistinėmis funkcijomis.

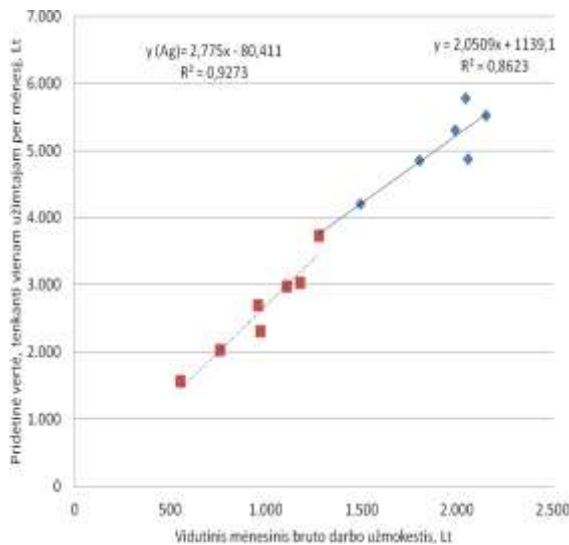
Yra nustatyta, kad pagrindinis darbuotojus motyvuojantis veiksnys yra darbo užmokestis, ir kylant asmeninio vartojimo prekių ir paslaugų kainomis, paprastai darbuotojai tikisi darbo užmokesčio augimo, atsižvelgiant į kainų lygio didėjimą (Žiogelytė, 2011). Statistinės lyginamosios analizės dėka nustačius kasmetinį VDU 8,2 proc. padidėjimą 2005-2011 metų laikotarpiu, svarbu įvertinti kaip tai įtakoja įvairius pagrindinius statistinius Lietuvos ekonominius ir verslo pajamų rodiklius. Analizėje faktoriniu (nepriklausomuoju) kintamuoju pasirinktas bendrasis žmonių pajamas atspindintis dydis – vidutinis mėnesinis bruto darbo užmokestis (Lt), o rezultatiniais (priklausomaisiais) kintamaisiais pasirinkti įvairūs statistiniai Lietuvos ekonomikos ir verslo pajamų rodikliai: Bendrasis vidaus produktas (BVP), Valstybės surenkamas pridėtinės vertės mokestis (PVM), verslo sukuriamą pridėtinę vertę bei grynasis pelnas. Regresijos koeficientą galima apskaičiuoti tada, kai yra apskaičiuotas tiesinės koreliacijos koeficientas. Jis gali kisti intervale $[-1;1]$. Kuo regresijos koeficiento reikšmė artimesnė 1 arba minus 1, tuo ryšys yra stipresnis. Esant minusinei regresijos koeficiento reikšmei, ryšys tarp nagrinėjamų kintamųjų yra atvirkštinis (Valkauskas, 2005, Pabedinskaitė, 2005).

Paveiksluose statistinių rodiklių tarpusavio kintamųjų rezultatų taškai pažymėti kvadratiniais taškais, o visumos koncentracija pagal tiesę pažymėti vientisa linija. Analizuojant koreliacinį ryšį, papildomai įvertintas ryšys atsižvelgiant į „Aukso standarto“ poveikį vertinamų pajamų vertei. Paveiksluose šio poveikio kintamųjų rezultatų taškai pažymėti trikampių taškais, o visumos koncentracija pagal tiesę pažymėti punktyrine linija.

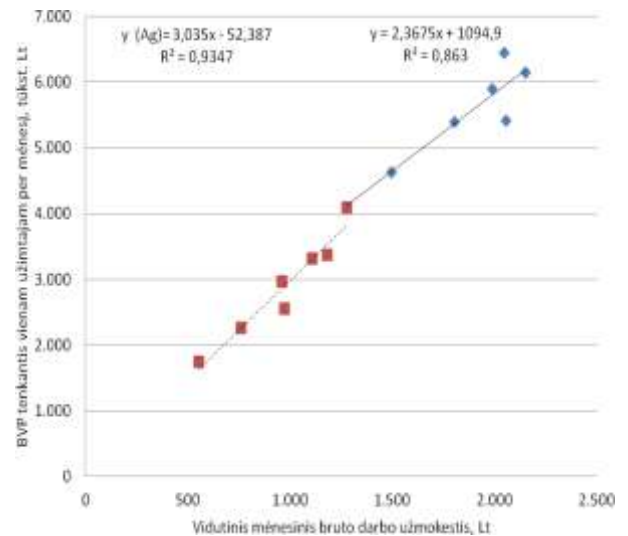
Nors darbdaviai verslo įmonėse darbo užmokestį darbuotojams moka iš gautosios pridėtinės vertės, svarbu įvertinti kokių mastu darbo užmokesčio pokyčiai įtakoja pridėtinę vertę.

Vertinant vidutinio mėnesinio darbo užmokesčio (VDU) pokyčių įtaką pridėtinei vertei, tenkanti vienam užimtajam per mėnesį (toliau – pridėtinė vertė) nustatyta, kad ryšys tarp šių dviejų kintamųjų yra tiesioginis ir labai stiprus, nes tiesinės koreliacijos reikšmė ($r=0,93$) patenka tarp 0,91 – 1,0 intervalo. Remiantis regresijos lygties analitine išraiška ($y = 2,0509x + 1139,1$) tarp VDU ir pridėtinės vertės, galima teigti, kad 1 Lt padidėjęs VDU, pridėtinę vertę padidina 2,05 Lt. Akivaizdu, kad padidėjęs VDU menka dalimi padidina pridėtinę vertę, iš kurio dalies ir yra mokamas darbo užmokestis darbuotojams, įvairiems valstybės renkamiems mokesčiams, darbo vietų palaikymui. Gautasis elastingumo koeficientas ($E=0,79$) rodo, kad VDU padidėjus 1 procentu, pridėtinė vertė padidėja 0,79 procento. Koreliacijos indeksas ($R^2=0,8623$) parodo, kad ryšys tarp VDU ir pridėtinės vertės yra stiprus. Apskaičiuotasis determinacijos koeficientas ($D_x=0,84$) rodo, kad VDU kitimas veikia pridėtinę vertę 84 procentais.

4 paveikslas: Vidutinio mėnesinio darbo užmokesčio ir pridėtinės vertės koreliacinis laukas su pavaizduota regresijos tiese



5 paveikslas: Vidutinio mėnesinio darbo užmokesčio ir bendrojo vidaus produkto, tenkančio vienam užimtajam koreliacinis laukas su pavaizduota regresijos tiese



Šaltinis: sudaryta autorių pagal Lietuvos statistikos departamento duomenis

4 paveiksle pateiktas koreliacinis ryšys įvertinus „Aukso standarto“ (paveiksle lygtyje pažymėta Ag) poveikį. Abiem atvejais galima išvelgti tiesioginę VDU ir pridėtinės vertės priklausomybę, o taškų, atitinkančių nagrinėjamus rezultatus, visuma koncentruojasi pagal tiesę. Galima teigti, kad VDU didėjimas tiesiogiai, bet menkai didina pridėtinę vertę tiek pagal absoliučius dydžius, tiek įvertinus „Aukso standarto“ poveikį.

Žmonės, uždirbdami atlyginimą, įsigyja tam tikrų prekių ir paslaugų, tokiu būdu įtakodami bendrąjį vidaus produktą. Bendrasis vidaus produktas buvo vertintas, tenkantis vienam užimtajam per mėnesį (toliau – BVP). Analizės metu nustatyta, kad ryšys tarp šių dviejų kintamųjų yra tiesioginis ir stiprus, nes tiesinės koreliacijos reikšmė ($r=0,93$) lygi 93 procentais. Šių kintamųjų ryšys pateiktas 5 paveiksle.

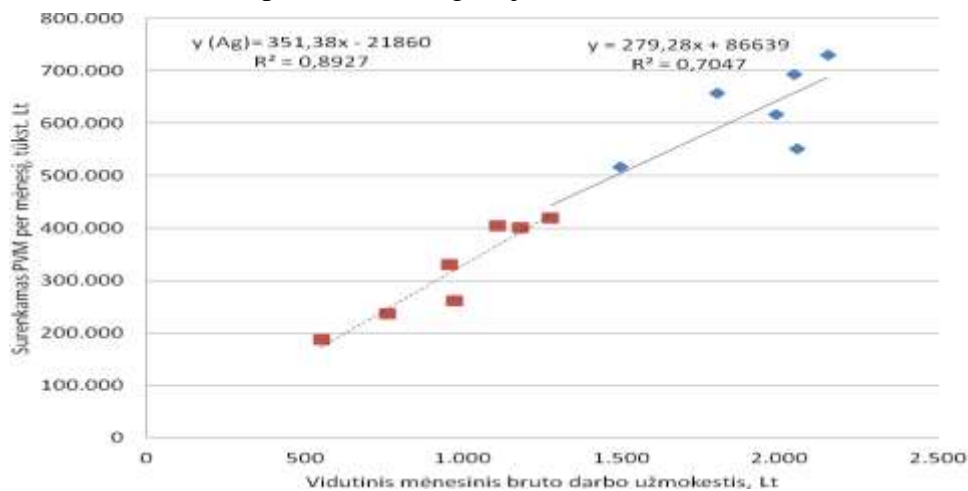
5 paveiksle išvelgiama tiesioginė VDU ir BVP priklausomybė, o taškų, atitinkančių nagrinėjamus rezultatus, visuma koncentruojasi šalia tiesės. Regresijos lygties analitinė išraiška ($y=2,3675x+1094,9$) tarp VDU ir BVP rodo, kad, VDU padidėjimas 1 Lt, BVP padidina 2,37 tūkst. Lt.

VDU padidėjus 1 procentu, BVP padidėja 0,82 procentu, kurį rodo elastingumo koeficientas. Koreliacijos indeksas ($R^2=0,863$) rodo stiprų ryšį tarp VDU ir BVP. Determinacijos koeficientas ($D_x=0,74$) rodo, kad VDU kitimas lemia BVP 74 procentais.

5 paveiksle pateiktas koreliacinis ryšys įvertinus „Aukso standarto“ (paveiksle lygtyje pateikta Ag) poveikį. Abiem atvejais galima išvelgti tiesioginę VDU ir BVP priklausomybę, o taškų, atitinkančių nagrinėjamus rezultatus, visuma koncentruojasi pagal tiesę. Galima teigti, kad didėjantis VDU mažiau įtakoja BVP nei pridėtinę vertę.

Vertinant VDU įtaką valdžios surenkamam pridėtinės vertės mokesčiui per mėnesį (toliau – PVM), tarp jų nustatytas tiesioginis ir labai stiprus ryšys, nes tiesinės koreliacijos reikšmė ($r=0,84$) lygi 84 procentais. 6 paveiksle pateikta tiesioginė VDU ir PVM priklausomybė, o taškų, atitinkančių nagrinėjamus rezultatus, visuma koncentruojasi šalia tiesės.

6 paveikslas: Vidutinio mėnesinio darbo užmokesčio ir pridėtinės vertės mokesčio koreliacinis laukas su pavaizduota regresijos tiese



Šaltinis: sudaryta autorių pagal Lietuvos statistikos departamento duomenis

Regresijos lygties analitinė išraiška ($y = 279,28x + 86639$) tarp VDU ir PVM rodo, kad, VDU padidėjimas 1 Lt, PVM padidina 279,28 tūkst. Lt. Elastingumo koeficientas rodo, kad VDU padidėjus 1 procentu, PVM padidėja 0,95 procento. Koreliacijos indeksas ($R^2 = 0,9274$) rodo labai stiprų ryšį tarp VDU ir PVM. Determinacijos koeficientas ($D_x = 0,86$) rodo, kad VDU kitimas lemia PVM 86 procentais. 6 paveiksle pateiktas koreliacinis ryšys įvertinus „Aukso standarto“ (paveiksle lygtyje pateikta Ag) poveikį. Abiem atvejais galima išvelgti tiesioginę VDU ir surenkamo PVM priklausomybę, o taškų, atitinkančių nagrinėjamus rezultatus, visuma koncentruojasi arčiau tiesės. Įvertinus VDU pokyčių įtaką PVM, nustatyta, kad VDU didėjimo tendencija didina Valdžios sektoriaus pajamas surenkamo PVM atžvilgiu.

Analizuojant kaip VDU pokytis įtakoja įmonių grynąjį pelną, nuostolį (-), nustatyta, kad ryšys tarp VDU ir įmonių grynojo pelno yra atvirkštinis ir vidutinis, nes tiesinės koreliacijos reikšmė ($r = -0,35$) lygi -35 procentai. Regresijos lygties analitinė išraiška ($y = -0,6732x + 1678,1$) tarp VDU ir įmonių grynojo pelno rodo, kad, VDU padidėjimas 1 Lt, įmonių grynasis pelnas tampa nuostoliu ir patiriamas 0,67 Lt nuostolis. Gautasis elastingumo koeficientas ($E = -2,57$) rodo, kad VDU padidėjus 1 procentu, įmonių grynasis nuostolis sudaro 2,57 procento. Koreliacijos indeksas ($R^2 = 0,1247$) rodo silpną ryšį tarp VDU ir įmonių grynojo pelno, nuostolio. Determinacijos koeficientas ($D_x = 0,01$) rodo, kad VDU kitimas lemia įmonių grynąjį pelną 0,01 procentais. Galima teigti, kad didėjantis VDU didina įmonių nuostolius. Didėjant įmonių nuostoliams, įmonė gali imtis veiksmų, mažinant darbo užmokesčio sąnaudas, atleidžiant dalį darbuotojų.

Išvados

Nuolatinis, beveik visų prekių ir paslaugų, kainų didėjimas Lietuvoje liudija apie nacionalinio pinigų – lito – vertės ir perkamosios galios mažėjimą.

Tyrimo metu jų vertės santykinis pasikeitimas skaičiuojamas „Aukso standarto“ principu (pagal aukso kainos kitimą) parodė, kad lito vertė nuo 2005 iki 2011 sumenko 3,7 karto. Šio reiškinio priežastis – lito susiejimas su euru, kuris nėra padengtas jokiais materialiomis vertybėmis ir jo vertė sparčiai krinta dėl per didelės jų emisijos ir pasitikėjimo juo mažėjimu.

Skaičiavimai parodė, kad lito perkamoji galia Lietuvoje, vertinama pagal sandauginį standartinį infliacijos koeficientą, per tą patį laikotarpį, sumažėjo tik 1,4 karto. Tai 2,6 kartus mažiau, nei tikrosios lito vertės kritimas. Šio fenomeno priežastį galima paaiškinti Lietuvos rinkos subjektų nepakankamu suvokimu apie tikrosios gaunamų pajamų vertės smukimo tempus.

Vidutinio mėnesinio darbo užmokesčio Lietuvoje tikrosios vertės pokyčių analizė parodė, kad per 2005-2011 metų laikotarpį, vertė sumažėjo minus 73 proc., o jo perkamoji vertė – minus 29 proc. Tai akivaizdžiai parodo, kad šalies darbuotojai faktiškai buvo skurdinami.

Koreliacijos-regresijos analizė parodė, kad vidutinio darbo užmokesčio didinimas Lietuvoje, kaip motyvacinis veiksnys, nepakankamai įtakojo visos šalies ekonominių rezultatų augimą, nes didėjantis vidutinis mėnesinis darbo užmokestis mažiau įtakoja valstybės BVP nei privačių verslo įmonių pridėtinę vertę, o padidėjęs vidutinis mėnesinis darbo užmokestis tik menka dalimi padidina pridėtinę vertę, iš kurio dalies ir yra mokamas: 1) darbo užmokestis darbuotojams; 2) įvairiems valstybės renkamiems mokesčiams; 3) darbo vietų palaikymui. Taip pat vidutinio mėnesinio darbo užmokesčio didėjimas didina įmonių nuostolius. Didėjant įmonių nuostoliams, įmonė gali imtis veiksmų, mažinant darbo užmokesčio sąnaudas, atleidžiant dalį darbuotojų.

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AVERAGE SALARY IMPACT RESEARCH TO THE VALUE OF PRIVATE INCOME AND ANNUAL REVENUE IN LITHUANIA

Abstract. The average salary increased approximately 8,2 percent during the year since 2005 yearly according to the Department of Statistics in Lithuania. But for most it did not improve the quality of life neither for working people nor for all the country's economic condition and situation.

The research showed that the average salary growth significantly lagged behind the falling of the same salary actual purchasing power in monetary value in Lithuania. Due to the depreciation of the litas, the average salary purchasing power decreased as measured by both a standard rate of inflation as well as a „Gold standard“ during the 2005-2011 period.

Also, this research revealed other Lithuanian macroeconomic development characteristics: moderate average salary increases lagged behind value added growth rates, less contributed to GDP growth and reduced average corporate profits.

These results suggest the lack of efficiency in work activities, unsuitable use of the assessment criteria and unproductive mismanagement of spending in almost all areas of the Lithuanian economy.

Keywords: monetary value and depreciation, income value calculation, value of the average monthly wages, the effect of inflation.

JEL classification:

E31 - Price Level; Inflation; Deflation

E24 - Employment; Unemployment; Wages; Intergenerational Income Distribution; Aggregate Human Capital

CROSS BORDER PROJECT COLLABORATION: THE CASE OF GREECE AND BULGARIA

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Abstract. In this paper, we study the collaborative projects initiated by partner organizations from Greece and Bulgaria in order to understand the collaborative status of the two nations, their priorities and targets. In our work we analyze the 90 research project proposals funded by the European Territorial Cooperation Program Greece-Bulgaria 2007-2013, (Interreg IV) with 329 partners in order to examine data relevant to the project's priority axis, the number of the partners involved, the type of the partners and their nationality. Our analysis provides insights on the regional and organizational strategies for the internationalization and the development of bilateral collaboration between the organizations of the two countries.

Keywords: cross border cooperation, international entrepreneurship, Greece, Bulgaria

JEL classification:

O32 - Management of Technological Innovation and R&D

O22 - Project Analysis

O52 - Europe.

Introduction

Greece and Bulgaria are two countries with long and interesting financing history. Although neighboring countries and both members of the EU, Greece and Bulgaria have very different social and economic environments in which entrepreneurial activities take place (Katsikis et al., 2012). Bulgaria has always been one of the one of the first investment objectives and destinations, initially for small and then for large and international Greek companies, whose gradual growth and expansion in market played an important role in the process of economic development of both countries. There is strong history coherence between the two neighboring countries, as their economic transactions, due to their regional proximity but also the multiple effects in Greek economy such as a dynamic impetus to exports, increased competitiveness and entrepreneurship, contribution to emergence of Greece to another outflow of investment capital.

In this paper, we study the collaborative projects initiated by the organizations of the countries in order to understand the collaborative status of the two nations, their priorities and targets. Thus, we analyze the 90 research project proposals with 329 project partners funded by the European Territorial Cooperation Program Greece-Bulgaria 2007-2013, (Interreg IV). More analytically, we perform a project and partner analysis in order to examine data relevant to the project's priority axis, the number of the partners involved, the type of the partners and their nationality. Our analysis provides interesting results for the specific organizations, the conditions and the targets of the projects for which they choose to collaborate under the specific EU funded scheme. Furthermore, our research sheds light on the competences and the competitive advantages for the partner's selection process. Based on those results, our paper concludes by providing insights on the regional and organizational strategies for the internationalization and the development of bilateral collaboration between the organizations that could contribute positively in responding to the current economic crisis in Greece.

The paper is structured as follows: in the first part we discuss the role of cross border collaboration in the case of Greece and Bulgaria. In the second part we present the case of the European Territorial Cooperation Program in general and the specific instruments for the Operational Program Greece-Bulgaria 2007 – 2013 which we focus our detailed study. In the third part of the paper we analyse the methodological approach of our study. In the fourth part we briefly present the findings of our analysis regarding the characteristics of the projects and of the partners involved. The paper concludes with a summary of our results and some ideas for future research.

The Role of Cross Border Collaboration

The Role and the Importance of Cross Border Collaboration in the Frames of the European Territorial Cooperation - ETC

According to the European Commission (2012) cross-border cooperation helps transform regions located on either side of internal or external borders of the European Union into strong economic and social poles. In particular, cross-border actions are encouraged in the fields of entrepreneurship, improving joint management of natural resources, supporting links between urban and rural areas, improving access to transport and communication networks, developing joint use of infrastructure, administrative cooperation and capacity building, employment, community interaction, culture and social affairs. Cross-border cooperation is essentially about “filling the gaps” through agreed cross-border “analysis and response” strategies, specifically formulated and tailored for each border region.

The European Territorial Cooperation programs also include a transnational cooperation through which they promote cooperation among greater European regions, including the ones surrounding sea basins (e.g. Baltic Sea Region, North Sea, Mediterranean and Atlantic Area) or mountain ranges (e.g. Alpine Space) and facilitates coordinated strategic responses to joint challenges like flood management, transport and communication corridors, international business and research linkages, urban development and others. Special attention is given to outermost and island regions (e.g. Indian Ocean, Caribbean Area or Northern Periphery).

In our case the program which we shall analyse is a typical case of interregional cooperation. A scheme offering a framework for the exchange of experiences between local and regional actors from across Europe in order to contribute to the EU's strategies on growth, jobs and sustainable development. In addition, it aims at reducing disparities by matching less experienced regions with more advanced regions in the various policy fields such as innovation, demographic change, energy supply and climate change.

The Case of the ETC Program Greece-Bulgaria 2007-2013, (Interreg IV)

Interreg IV is an EU initiative which aims to stimulate interregional cooperation in the EU between the years 2007-13. It is financed under the European Regional Development Fund (ERDF). The cross-border European Territorial Cooperation Programme “Greece-Bulgaria 2007-2013” was approved by the European Commission on 28/03/2008 by the Decision C (2008) 1129/28-03-2008. The total budget (ERDF and national contribution) for the European Territorial Programme “Greece-Italy 2007-2013” is €132,318,963. The total financing consists of €112,471,118 (85%) funding from the ERDF and €19,847,845 (15%) of national contribution from the two neighboring countries: Greece and Bulgaria. This phase of the Interreg initiative is designed to strengthen economic and social cohesion throughout the EU, by fostering the balanced development of the continent through cross-border, transnational and interregional cooperation. Special emphasis has been placed on integrating remote regions and those which share external borders with the candidate countries.

The eligible areas of the programme in the case of Greece and Bulgaria, contains seven Regional Units (former Prefectures) on the Greek side (Evros, Kavala, Xanthi, Rodopi, Drama, Thessaloniki and Serres) and four Districts on the Bulgarian side (Blagoevgrad, Smolyan, Kardjali,

Haskovo), covering an area of 40.202 km² and 2.812.236 inhabitants. More analytically, the eligible area of the programme consists of Region of Eastern Macedonia-Thrace (Prefectures of Evros, Kavala, Xanthi, Rodopi and Drama) and Region of Central Macedonia (Prefectures of Thessaloniki and Serres) in Greece and the South-West Planning Region and South-Central Planning Region (Districts of Blagoevgrad, Smolyan, Kardjali and Haskovo) in Bulgaria. The Prefecture of Kavala has been included as adjacent area.

The strategic goal of the Operational Program for Cross-Border Cooperation “Greece – Bulgaria” for the Programming Period 2007 – 2013 is “to promote the cross-border area by ensuring regional cohesion and enhancing competitiveness”. This strategic goal is expected to be achieved through the two distinctive strategic objectives: 1) Strengthening the attractiveness of the area by upgrading the quality of life and improving accessibility structures and 2) Enhancing competitiveness by promoting entrepreneurship, establishing networks of cooperation and investing in human resources. These two strategic objectives are defined in the relevant Priority Axes, with more special objectives for each one of them. These are summarized and presented on the following table (Table 1):

Table 1: Priority Axes and Objectives in the ETC Program “Greece-Bulgaria 2007-2013”

Priority Axis	Specific Objectives
1: “Quality of Life”	1.1: Protection, Management & Promotion of the Environmental Resources
	1.2: Protection, Management & Promotion of the Cultural Resources
	1.3: Cooperation and Networking on Health and Social Welfare Issues
2: “Accessibility”	2.1: Development of the Road and Railway Network
	2.2: Improvement of Cross-Border Facilities
3: “Competitiveness and Human Resources”	3.1: Support and Valorisation of Human Resources - Support of Preparatory Actions in view of the Open Labour Market
	3.2: Encouragement of Entrepreneurship & Actions that Cope with the Restructuring of the Economy
	3.3: Promotion of Cooperation between Research, Technological and Academic Institutions and Business Organizations
4: “Technical Assistance”	4.1: Core Programme Management Activities
	4.2: Project Generation and Information & Communication Activities of the Programme

Methodology

In order to materialize our intentions we formed a unified dataset of the projects undertaken within the frames of the European Territorial Cooperation Programme “Greece-Bulgaria 2007-2013”. We managed to collect information covering 90 research projects that are implemented through the collaboration of 327 project partners. In this dataset we included information on the project title, the partners involved and their role in the project (lead partner, ect), the priority axis, the intervention within which the project lies, project number, the final budget and the name of the partner, its nationality and its type. For the needs of our analysis we distinguish and categorized the different type of partners into six (6) categories: 1) Public Organizations, 2) Local Administration Authorities, 3) Non-Governmental Organizations - NGOs, 4) Universities, 5) Research Centres, and 6) Private Companies. In the following sections we present the results of our analysis. The list of the projects is available in the Appendix of this paper.

Analysis of the Results

In this section we present the results of our analysis. Here, in the first section we focus on reporting some preliminary results on the descriptive statistics of our study. In the second section we focus on an analysis of the demographics of partners involved.

Descriptive Statistics and Project Type Analysis

Here we present some descriptive statistics on the demographics of our sample. The findings reveal interesting facts on the structure and the organization of the projects approved. As shown on the following table (Table 2), the majority of the projects are located under the “Quality of Life” priority axis. Second comes the priority axis number 3: “Competitiveness and Human Resources” while there is a limited only number of projects in the priority axis 2: “Accessibility”.

Table 2: Priority Axis, Objective per Project

Priority Axis	Frequency	Percent	Objective	Frequency	Percent	Cum. Percent
<i>Priority Axis 1: Quality of Life</i>	53	58,9%	1.1	23	25,6%	25,6%
			1.2	12	13,3%	38,9%
			1.3	18	20,0%	58,9%
<i>Priority Axis 2: Accessibility</i>	8	8,9%	2.1	7	7,8%	66,7%
			2.2	1	1,1%	67,8%
<i>Priority Axis 3: Competitiveness & Human Resources</i>	29	32,2%	3.1	11	12,2%	80,0%
			3.2	8	8,9%	88,9%
			3.3	10	11,1%	100,0%
Number of Projects	90	100,0	Total	90	100,0	

Within the above priority axis, the majority of the projects, as exhibit on the above table (Table 2) are located under the 1.1 objective: “Protection, Management and Promotion of the Environmental Resources”. The second most important is the 1.3 objective: “Cooperation and Networking on Health and Social Welfare Issues” and then the 1.2: “Protection, Management & Promotion of the Cultural Resources”. Generally, priority axis 1: “Quality of Life” is the most important field since the 58,9% of the projects are in the first priority axis, with the 25,6% to be under the 1.1 objective.

The result of the above analysis indicate the importance of the improvement of the quality of life for the regions of the two countries. Moreover, the improvement of the quality of life is thought to be achieved through the activities for the protection, management and the promotion of the environmental resources and secondly through the cooperation and networking on health and social welfare issues rather than the protection, management & promotion of cultural resources.

Analytics: The Demographics of Partners involved

The findings of our study reveal interesting facts on the population of participants in the the projects undertaken within the frames of the European Territorial Cooperation Programme “Greece-Bulgaria 2007-2013”. In the table below (Table 3) we illustrate the origin of partners involved in relation to their role in the project. Our data show that the majority of partners come from Greece (173: 52,9%), and 154: 47,1% from Bulgaria. Additionally, Greek partners hold a more important role in the project implementation since the majority of lead partners (LP) come from Greece (65) and only 25 from Bulgaria. Probably, the large experience of Greek partners in undertaking

European projects, due to the long history of participation of Greece in European settings could be an explanatory factor for the above mentioned phenomenon.

Table 3: Country * Role Cross tabulation

Count	Role										Total	Percent
	LP	PP1	PP2	PP3	PP4	PP5	PP6	PP7	PP8	PP9		
Bulgaria	25	35	41	18	12	8	7	5	2	1	154	47,1
Greece	65	30	24	23	15	5	5	2	3	1	173	52,9
Total	90	65	65	41	27	13	12	7	5	2	327	100,0
Percent	27,5	19,9	19,9	12,5	8,3	4	3,7	2,1	1,5	0,6	100	
Cumulative Percent	27,5	47,4	67,3	79,8	88,1	92	95,7	97,9	99,4	100		

In the following table, we illustrate the dissemination of the partners based on their type and in relation to their origin. The majority of partners, almost half of them (47,4%), come from the local administration authorities, emphasising thus the role of local administration in the development of cross-border cooperation activities. Additionally, an important number of partners (31,8%) comes from Non-governmental organizations (NGOs). The participation of other type of partners, such as universities (10,4%), research centres (4,6%), private companies (4,9%) and other public organizations (0,9%) is only minimal.

Table 4: Country * Type of Partner Cross tabulation

Count	Type of Partner						Total
	1) Public Organizations	2) Local Administration Authorities	3) NGOs	4) Universities	5) Research Centres	6) Private Companies	
Bulgaria	2	81	48	15	5	3	154
Greece	1	74	56	19	10	13	173
Total	3	155	104	34	15	16	327
Percent	0,9	47,4	31,8	10,4	4,6	4,9	100
Cum. Percent	0,9	48,3	80,1	90,5	95,1	100	

Additionally, the presence of local authorities in the projects is more important for the Bulgarian partners than it is for the Greek ones, while the presence of NGOs from Greece is more intense than for the Bulgarian ones. A large difference exist on the participation of private companies from the two countries. Although there are 13 private firms from Greece the number of the Bulgaria ones is only limited to three. It seems that the local authorities of the region are the ones that mostly exploit the opportunities provided through the European Territorial Cooperation Programme “Greece-Bulgaria 2007-2013” in order for them to expand or / and to integrate their scope of activities through the use of the financial resources gained and the development of collaborative projects with other organizations. The same happens for the NGOs from both the Greek and the Bulgarian side who see the ETCP funding as an important opportunity to further expand their activities. In the following table (Table 5), we view the type of partners in relation with the thematic priority axis.

Table 5: Type of Partner * Priority Axis Cross tabulation per Project

Type of Partner	Priority Axis / Project Number			Total Number of Partners	
	1: <i>Quality of Life</i>	2: <i>Accessibility</i>	3: <i>Competitiveness & Human Resources</i>		
1) Public Organizations	0	0	0	3	
2) Local Administration Authorities	38	8	10	155	
3) NGOs	8	0	12	104	
4) Universities	4	0	3	34	
5) Research Centres	1	0	3	15	
6) Private Companies	2	0	1	16	
Total Number of Projects	53	8	29	90	327

As we see on Table 5, local administration authorities undertake projects mostly in the first priority axis: “Quality of Life”. The third priority axis: “Competitiveness & Human Resources” is also an important one both for the local administration authorities and for the NGOs. What is interesting to mention is the fact that under the second priority axis “Accessibility” we see only the operation of local administration authorities and the lack of any other partner, a case rather problematic for the sustained development of the specific target.

Conclusion and Discussion

Greece and Bulgaria are two countries with long and interesting financing history. Although neighboring countries and both members of the EU, Greece and Bulgaria have very different social and economic environments in which entrepreneurial activities take place. Bulgaria has always been one of the one of the first investment objectives and destinations, initially for small and then for large and international Greek companies, whose gradual growth and expansion in market played an important role in the process of economic development of both counties. In this empirical paper, we study the collaborative projects initiated by the organizations of the countries in order to understand the collaborative status of the two nations, their priorities and targets. Thus, we analyse the collaboration activities of 329 participants forming 90 research project proposals funded by the European Territorial Cooperation Program Greece-Bulgaria 2007-2013, (Interreg IV) financed under the European Regional Development Fund (ERDF).

Within the framework of the European Territorial Cooperation Program 2007-2013, (Interreg IV), cohesion policy encourages regions and cities from different EU Member States to work together and learn from each other through joint Programmes, projects and networks. During the Programming Period 2007-2013 the ETC has been introduced as a fully-fledged objective of cohesion policy, along with convergence and regional competitiveness and employment and provides a framework for exchanging experience between regional and local bodies in different countries.

The purpose of our study is to offer a first analytical view on the relations and the network developed through the development of collaborative partnerships within the frames of European Territorial Cooperation Programme “Greece-Bulgaria 2007-2013” program. In order to materialize our intentions and as a first step towards the social network analysis, for our analysis we collected analytical information on 327 projects approved through the ETC “Greece-Bulgaria 2007-2013” program. Here, we present a first descriptive analysis of the demographics of the project and partners involved in the “Greece-Bulgaria 2007-2013” program. In our analysis we emphasize on

the characteristics of the projects and on the type of the partners involved. Although, these analytical efforts are necessary steps towards a more coherent social network analysis, which would be the final outcome of this research, our first results from the descriptive analysis provide interesting outcomes of autonomous value.

The result of the above analysis indicate the importance of the improvement of the quality of life for the regions of the two countries. Moreover, the improvement of the quality of life is thought to be achieved through the activities for the protection, management and the promotion of the environmental resources and secondly through the cooperation and networking on health and social welfare issues rather than the protection, management & promotion of cultural resources.

Our data show that the majority of partners come from Greece (52,9%), and 47,1% from Bulgaria. Additionally, Greek partners hold a more important role in the project implementation since the majority of lead partners (LP) come from Greece (65) and only 25 from Bulgaria. Probably, the large experience of Greek partners in undertaking European projects, due to the long history of participation of Greece in European settings could be an explanatory factor for the above mentioned phenomenon. Additionally, The majority of partners, almost half of them (47,4%), come from the local administration authorities, emphasising thus the role of local administration in the development of cross-border cooperation activities.

The presence of local authorities in the projects is more important for the Bulgarian partners than it is for the Greek ones, while the presence of NGOs from Greece is more intense than for the Bulgarian ones. A large difference exist on the participation of private companies from the two countries. Although there are 13 private firms from Greece the number of the Bulgaria ones is only limited to three. It seems that the local authorities of the region are the ones that mostly exploit the opportunities provided through the European Territorial Cooperation Programme in order for them to expand or / and to integrate their scope of activities through the use of the financial resources gained and the development of collaborative projects with other organizations. The same happens for the NGOs from both the Greek and the Bulgarian side who see the ETCP funding as an important opportunity to further expand their activities. In the following table (Table 5), we view the type of partners in relation with the thematic priority axis.

Finally, what is interesting to mention is the fact that under the second priority axis “Accessibility” we see only the operation of local administration authorities and the lack of any other partner, a case rather problematic for the sustained development of the specific target. In our analysis we also had an analytical look inside the structure of the programs by studying natural result having in mind that those programs are usually offered outside the typical structures of education and thus allow for a better flexibility to emerge.

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HIGHER EDUCATION IN THE MARKET PLACE: MILESTONES FOR THE LONG-TERM INSTITUTIONAL COMPETITIVENESS

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Abstract. Higher education institutions face a number of challenges in the context of globalisation, joint political priorities, and growing international competition. In order to react to these challenges universities must rethink their strategies for service provision. This article discusses provision of educational services in four dimensions: innovativeness, entrepreneurship, creativity, and flexibility, and it analyses their implications on institutional competitiveness. Competitiveness in this article is mainly discussed through service quality and price but other parameters such as attractiveness for students and international visibility are touched as well. On the theoretical level the article highlights how different institutional initiatives impact competitiveness from a student’s perspective.

Keywords: higher education, competitiveness, entrepreneurship, flexibility, creativity, innovations.

JEL classification:

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Introduction

The environment of higher education has faced a number of challenges during the recent years. They can be summarised as globalisation, policy, and market driven issues. Globalisation enables students to choose higher education institutions (HEIs) all over the world without significant historical barriers as for example mobility constraints, language issues, and even physical presence in an exact place. Examples of policy are much easier recognition of foreign qualifications, international and national subsidies and grants for advanced students from all over the world, easy transfer of degrees. The most significant market driven forces are quality and price of education.

Capaldi and Abbey (2011) as well as a number of other researchers analysing higher education management recognise that in the context of the current financial crisis colleges and universities need to focus on improving performance within their available resources while maintaining quality. Students are a source of revenue; at the same time each additional student also generates expenses (Capaldi and Abbey, 2011), student numbers may impact service quality as well.

This article discusses how universities can achieve sustainable competitiveness offering courses of high standards for affordable prices. This dilemma is very important for most of the universities but especially for non top-rated universities, which means that they are not being dealt with as priorities by default for potential students. Such institutions can achieve competitive advantage only by offering courses of reasonable quality for lower prices than the leaders in different rating systems. The discussion becomes especially important when according to Coates (2007) higher education markets are becoming more open and competitive with increasing calls for information about quality and effectiveness. In such a context students become very mobile on a global level, and the importance of the geographical place of a university decreases significantly.

Of course competitiveness of a university should be measured in at least two dimensions – teaching and research, but in this article the discussion is limited to educational issues and is more linked to a “teaching university” than to a “research university”. In this context four dimensions for institutional competitiveness are discussed: innovativeness, entrepreneurship, flexibility, and creativity that all together are merged into the concept of competitiveness.

The *aim of this paper* is to discuss the pillars of innovativeness, entrepreneurship, creativity, and flexibility in higher education institutions and to analyse what means in the following areas may influence institutional competitiveness positively. In order to achieve this aim, the following research *tasks* have been set up:

- To identify what actions may describe institutional innovativeness, entrepreneurship, creativity, and flexibility in higher education;
- To analyse how these pillars may influence HEI competitiveness on the theoretical level;
- To Develop a framework for HEI competitiveness.

The *object* of this paper is the competitiveness of higher education institutions. The *methods* of analysis, systematisation of scientific literature, generalisation, and graphical presentation of outcomes were used in this research.

HEI Innovativeness

According to the analysis of the stage of economic development of the countries reflected in “The Global Competitiveness Report 2010-2011”, conducted within the framework of the World Economic Forum, the EU countries have either innovation-driven economies or are in the transition stage from efficiency-driven to innovation-driven economies (Oganisjana and Koke, 2012). Naturally this direction is obvious in universities, as they are understood as being key contributors to the economic and social development.

Innovations are often linked to advanced technologies. Universities are not an exception. Innovations in education could be achieved through, for example, innovative teaching methods as real situations, simulation, teaching in a work place, and others. Such activities are often delivered or coordinated using information technologies. These curricula linked innovations in many cases are closely related to distance learning and the concept of e-portfolio for educational activities.

An E-Portfolio (also known as Webfolio, digital folio, e-folio) following Mautadin, Santally and Boojhawon (2012) can be defined as a digital collection of works, artefacts, resources, including demonstrations, projects, art works in the form of graphics (2D, 3D), accomplishments that represent an individual or a group, community, organization, or institution.

E-learning following Leem and Lim (2007) offers: 1) less limitation in time and space compared to traditional offline classes; 2) the possibility of providing multiple learning practices based on self-regulated learning for adults; 3) individualized learning based on personal needs and the possibility of project-based teaching, which allows for more effective and interactive teaching and learning strategies; 4) diverse educational information and services; 5) a high assurance of information accuracy; 6) interactivity in the process of communication; and, 7) cost effectiveness compared to traditional classroom-based teaching and learning. All of these issues are related to institutional competitiveness through the dimensions of service quality, price and cash flow from a greater client audience.

E-learning can be organised combining several overlapping e-portfolio modes described by Mautadin, Santally and Boojhawon (2012):

- A developmental e-portfolio is a record of everything that the owner has done during a period of time, such as in achieving an undergraduate degree;
- A reflective e-portfolio includes personal reflection on the content such as the impact the learning has had on the owner’s development;
- Representational e-portfolios show the owner’s achievements in relation to a particular task, like getting a job, or developmental goals, and it is therefore selective. Owners control the selection of and access to the content depending on the intended viewing audience.

Distance learning can influence institutional competitiveness in several ways. One of them is that a university may attract foreign students, who cannot or do not prefer to spend significant time abroad. In such cases such students may arrive for short periods, for example, for workshops and examinations or even spend all their study period without physical presence at a university. The second option is to target already working students, who traditionally were treated as extramural ones or were attending evening classes. The main advantage here is that most of theoretical classes can be delivered on-line, and students must arrive at the university only for workshops, practical classes, and examinations. Such a case benefits both sides – a university may attract additional

students, and students can shorten physical presence at a university, and at the same time they are given an opportunity to feel “the climate of higher education”.

The third option is delivery of classes for “traditional” students by recognised experts, who would not be able to arrive, for example, for a one-hour lecture.

Does it affect quality or price? The answer is yes for both in the majority of cases. And only a university is responsible if it gives a plus or a minus in the mentioned parameters. So what should be done to enable innovations to decrease the price of course delivery (or increase student flows) and to sustain or increase quality comparing with the classical approach to a study process?

According to the OECD (2006) many incumbent telecommunication operators are announcing a transition to the so-called Next Generation Networks (NGN) to replace their existing circuit-switched networks. It is believed to have an impact on the longer-term nature and scope of universal service obligations (USOs). What does this mean for higher education?

The OECD (2006) defines the NGN as a concept rather than a single network and describes it as a packet-switched network providing a range of communications services, which uses transport technologies for several bandwidths and classes of service and in which service-related functions are independent of the underlying transport technologies. NGN covers multiple networks and layers in serving fixed, mobile, and “nomadic” users. This statement also may be used to define students – fixed (in class students), mobile (students physically not present at a university for the majority of their study period), and “nomadic” (exchange students, evening classes). The OECD (2006) also states that NGN are a means of providing services across a range of technologies giving users unrestricted access to different service providers. That approach is easily applicable to universities allowing students to use in-class and extramural tools, even fulfilling duties for several universities at the same time – for example, an exchange student participates in classes at a host university and at the same time participates in a work group for a specific case study at a home university. According to the OECD (2006) the essence of the NGN concept is the integration of existing separate voice and data networks into a simpler and more flexible network using packet switch and IP protocols that will enable voice, text, and visual messages to be carried on the same network and for each type of message to be responded to in any of these formats on that network. This idea might be very important for course delivery at universities.

The OECD (2006) analyses NGN in three dimensions that can be transferred to higher education as a service: availability, affordability, and accessibility.

The discussion on innovations in course delivery through distant methods can be summarised by a conclusion of Leem and Lim (2007) that the strategies for enhancing university competitiveness through e-learning are as follows: 1) establishing support strategies according to the types of universities; 2) developing quality assurance systems for e-learning; 3) enhancing support systems for professors and learners; 4) developing knowledge sharing systems between schools and industry; 5) enhancing international collaboration for e-learning; and 6) developing and supporting e-communities of knowledge for research and education.

In other words a competitive university must have clear strategies with defined resources; have reliable quality assurance; be an attractive place to work for top teachers through staff support systems; participate in a network allowing to access top quality knowledge (including external staff) in all offered fields; and foster on-line networks with external stakeholders.

The pre-conditions to ensure top quality contents for students may be defined by the thought that universities should: 1) move beyond the roles of research, education, and service and be a knowledge server engaged in producing, conserving, distributing, and applying knowledge to different contexts; 2) serve as learning communities for teachers, learners, and graduates by preparing them to engage in life-long learning; and 3) change organizations into learner-centred systems wherein learners determine and control what, when, where, how, and with whom to learn (Duderstadt, 2000, Leem and Lim, 2007). Leem and Lim (2007) believe that this can only be achieved through the provision and application of information and communication technology (ICT) designed to establish universities as both knowledge servers and learning communities.

Unless e-learning or its combination with in-class learning seems to be an attractive and necessary option, a university must deal with a number of challenges in this field as well. Leem and Lim (2007) include, among them, the development and maintenance of infrastructure; stabilisation, enhancement, and standardization of operational systems; management of academic records and policy issues; quality and management of course contents; increased faculty workload; and the general lack of support for learning, to name a few. These issues are much linked to quality and cost issues and may have direct impact on a course or even university competitiveness.

Table 1 summarises impacts of the so-called “innovative” or “partially innovative” course delivery tools for a service price (P), quality (Q), and attractiveness (A) from a student’s perspective.

Table 1. Impact of innovative course delivery methods on quality, price, and attractiveness of the service for different kinds of students

Issues Students	Traditional (in-class)		Combination of in- class/distant and exchange		Distant	
Top speakers through on-line classes	Q	↑	Q	↑	Q	↑
	P	↑↓	P	↑↓	P	↑↓
	A	↑	A	↑	A	↑
Virtual work groups	Q	↑	Q	↑	Q	↑
	P	=	P	=	P	↖=
	A	↑=	A	↑=	A	↑
Teaching materials on-line	Q	=	Q	=	Q	↑=
	P	↓=	P	↓=	P	↓
	A	↑	A	↑	A	↑
Theoretical classes on-line (pre- recorded)	Q	=	Q	↖=	Q	↑
	P	=	P	↓	P	↓
	A	=	A	↗↖=	A	↑
Duties for more than one university at the same time	Q	=	Q	=	Q	=
	P	=	P	=	P	=
	A	=	A	↑=	A	↑=
Option to ask questions live during on-line classes	Q	=	Q	↖=	Q	↑
	P	=	P	↓	P	↓
	A	=	A	↗↖=	A	↑
On-line asked questions answered and placed on-line	Q	=	Q	↖=	Q	↑
	P	=	P	↓	P	↓
	A	=	A	↗↖=	A	↑
Virtual practical work in external bodies	Q	↑=	Q	↑=	Q	↑
	P	↓=	P	↓=	P	↓
	A	↑=	A	↑=	A	↑
More options for individual teaching plan	Q	=	Q	↑=	Q	↑
	P	=	P	↓	P	↓
	A	=	A	↑	A	↑
On-line consultations with teachers	Q	=	Q	↖=	Q	↑
	P	=	P	↓	P	↓
	A	=	A	↗↖=	A	↑
Minimisation of travel and living costs	Q	=	Q	=	Q	=
	P	=	P	↓	P	↓
	A	=	A	↖↑=	A	↑

Meanings of symbols: = - no impact; \uparrow increase; \downarrow decrease; \nwarrow slight decrease; \nearrow slight increase.

Source: conducted by the author

Three types of students are analysed: traditional, spending most of the time for in-class activities; combination of in-class/distance learning (not full-time students, exchange students), and distant students spending minority of their time for in-class activities.

Entrepreneurship in HEIs

Mars and Rios-Aguilar (2009) conclude that over the past several decades higher education scholars have conducted a significant amount of research aimed at understanding the implications of enhanced interactions between the academy and the private marketplace. Accordingly, voluminous literature that includes conceptualizations and discussions of academic entrepreneurship has emerged. During this period researchers of higher education have also increasingly applied entrepreneurial terminology and frameworks to studies on a wide range of market-oriented phenomena that include academic capitalism (e.g., Mars 2007; Mars et al. 2008; Slaughter and Leslie 1997; Slaughter and Rhoades 2004), technology transfer (e.g., Bercovitz and Feldman 2006; Bercovitz et al. 2001; Colyvas 2007; Colyvas and Powell 2007; Feldman et al. 2002; Owen-Smith 2005; Owen-Smith and Powell 2003; Owen-Smith and Powell 2001), and university contributions to economic development (e.g., Etzkowitz 2002; Geiger 2004, Matthew M. Mars and Cecilia Rios-Aguilar, 2009).

An entrepreneurial university could be defined and described as a dynamic system, which includes special inputs (Resources, Culture, Rules and regulations, Structure, Mission, Entrepreneurial capabilities, and Expectations of the society, industry, government and market.), processes (Teaching, Research, Managerial processes, Logistical processes, Commercialization, Selection, Funding and financial processes, Networking, Multilateral interaction, and Innovation, research and development activities), outputs (Entrepreneur human resources, Effective researches in line with the market needs, Innovations and inventions, Entrepreneurial networks, and Entrepreneurial centres), and aims to mobilise all of its resources, abilities and capabilities in order to fulfil its “Third Mission” (Salamzadeh, Salamzadeh and Daraei, 2011).

Also many researchers (Murray, 1981; Simmonds, 1986; Davis *et al.*, 1991; Miles & Arnold, 1991; Smart & Conant, 1994) recognise the commonality between market-orientation and entrepreneurship. Nkamnebe (2008) concludes that a market-oriented university could be approximated to an entrepreneurial university, and description of such an institution derives from the market-oriented approach, in which a market-oriented firm must have a clear picture of its customer. Today we hear a lot about a growing student-oriented approach in most of the leading universities.

Following Tjeldvoll (2011) the intensified competition of the global, market-based knowledge economy requires changed leadership practices in universities and colleges everywhere in the world in order to meet these challenges. Nowadays competition shifts rapidly to an international arena that stimulates universities to be entrepreneurial in many areas. Academic entrepreneurs could be viewed as those higher education actors, who leverage internal and external opportunities innovatively not only in order to generate economic resources for their own profit or in support of their academic units and institutions, but also to create social and political change platforms within the academy (Matthew M. Mars and Cecilia Rios-Aguilar, 2009).

At the core of organisational change is the quest for a renewed capacity to make relevant decisions about visions and missions, find adequate strategies for production, marketing and ways of restructuring available resources, in other words – a need for adequate leadership and management practices (Tjeldvoll, 2002; Welle-Strand & Thune, 2003; Welle-Strand & Tjeldvoll, 2002, Tjeldvoll, 2011). Following this approach competition requires two-directional transformations in higher education institutions. The first one is specialisation through concentration of financial, human, and managerial resources in specific areas. In most cases these

are the leading discipline areas of universities. On the other hand, the specialisation may be oriented to develop currently weaker sides that have strategic importance for an institution. The second direction is the strengthening of the competitive position through international visibility. In many cases at the first glance this requires twofold decisions. Shortly it may be summarised as competition through cooperation. In the globalising market of higher education universities face increasing competition. But they must cooperate in order to compete successfully. Nowadays competition shifts to a different level when not separate institutions but networks compete. This means that a university must have access to top-level knowledge, teachers, and partners, which are often a big challenge even for strong universities if they are alone. Following this entrepreneurial view a modern successful university becomes a part of a cluster, which merges strongest competences of several HEIs, ensures close dialogue with the market through business partners, giving instant feedback on study programmes, teaching quality and offering internship positions for students, where research organisations give more options for teachers to raise professional competence through participation in business-university research projects. In such a way a university becomes an institution that hears external demands and may react to them much faster than a self-oriented institution with weak external boundaries.

Olsen (2005) suggests that when university operations and dynamics are governed by environmental factors, the institution has the following characteristics: it is governed through implementation of predetermined political objectives; its functions are delegated and based on a relative efficiency; the university recognises itself as part of a system of market exchange and price systems; its duties are oriented towards community demands, economy, efficiency, flexibility, and survival; the university is responsive to stakeholders and external exigencies.

Hardre and Cox (2009) agree that the balance of intent to retain faculty and the need to adjust personnel subject to the needs of the organisation (department and institution) is a critical tension in any business, and it has implications for collegiality and trust. This principle is discussed through collegiality that, according to the researchers, is a two-way issue – (1) top-down: the department’s role includes intent to retain and provide resources to faculty to promote their expected success; and (2) bottom-up: the individual faculty member’s role includes the willingness to cooperate and consider departmental and organisational goals and needs along with personal interests and individual desire for academic freedom and autonomy. This idea could be transferred to the concept about a cluster-based entrepreneurial university when top-down approach is realised through a cluster or similar structure steering committee decisions, and bottom-up initiatives are seen as ideas coming from separate members or even they structural departments.

Table 2 analyses impacts of different levels of cooperation for institutional service quality.

Table 2. Impact of different levels of cooperation for institutional service quality

Issues University	Traditional “independent” university	University with a number of academic partners	Cluster-oriented university
Access to top teachers from other institutions	↓	↗	↗
Student exchange opportunities	↓	↑	↑
Student internship opportunities	=	↗	↑
Access to knowledge from non-academic organisations	=	↗	↑
Rapid feedback from labour market on study programmes	=	=	↗
External funding for study programmes from business partners	=	=	↑
Ability to concentrate on the strongest expertise areas, leaving weaker areas for partners that are strong in them	=	↑	↑
Joint funding for actions of interest for several institutions	=	↗	↑
Local and international visibility	=	↗	↑

Meanings of symbols:

= - no impact; ↑ increase; ↓ decrease; ↘ slight decrease; ↗ slight increase.

Source: conducted by the author

HEI Flexibility

According to Milthers (2011) one of the main characteristics that universities – as institutions – share is that all change takes time – a lot of time. The researcher provides educational programmes as an example. Between the moment when an idea for a new study field or programme emerges and when the first students on that programme graduate, it takes at least five years, if not seven to ten (Milthers, 2011).

On the one hand, such trend is natural, and there is not much we can do. On the other hand, a university should increase its flexibility to changing market demands, and these changes in some cases appear to be very rapid ones.

Hosseini (2010) believes that future oriented educators will teach the next generation how to think through three important stages:

- Teaching students to think directly;
- Teaching students to use basic analytical skills such as predicting, developing and testing questions, and problem-solving;
- Creating the necessary conditions in classes to teach thinking and to reflect on the thinking and action that has occurred.

In many cases such an approach requires more flexibility and creativity comparing to teaching oriented towards one subject. Today students are expected not only to know a subject but also to have a well-developed set of transferrable skills, that's why usually universities are required not to limit teaching activities to a small pool of academic teachers and also to involve out-of-class activities to a much greater content. Here we can define two types of flexibility: study programme content and form. Study programme content flexibility can be expressed in several ways:

- Seminars led by external teachers with careers outside the university – this enables students to meet eye-to-eye leading business persons, policy makers, and other experts that deliver most up-to-date information;
- Constantly updated case studies and examples used during the teaching period;
- In-class teaching combined with learning at a work place through mandatory student internships;

- Incorporation of external experts in study programme committees to get rapid feedback on programme quality and get in-advance information about future trends in the labour market. To avoid “one person” opinion on a specific topic it is suggested that such external persons would be representatives of clusters or business associations having a picture of the whole the sector and not of a specific company;

- Individual study plans for students.

Study-form linked flexibility can be expressed through:

- Combination of in-class/on-line activities allowing students to work and study;
- Short courses and thematic summer schools;
- Parallel study programmes;
- Student exchange programmes.

Table 3 compares the impact of different course delivery methods on quality of the provided service: presentation of different opinions, most recent information, development of practical skills, and extended understanding of a subject.

Table 3. Impact of different course delivery methods on quality of provided service

Issues University	Different views on the same issue	Most recent information from labour market	Develop-ment of practical skills	Extended understand-ing of a subject
Seminars led by external teachers with careers outside university	↑	↑	↗	↑
Constantly updated case studies and examples used during the teaching period	=	↗	↗	↗
In-class teaching combined with learning at a work place through mandatory student internships	=	=	=	=
Incorporation of external experts in study programme committees	↗	↗	=	=
Individual study plans for students	=	=	=	=
Combination of in-class/on-line activities allowing students to work and study	=	=	=	=
Short courses and thematic summer schools	↗	=	=	↑
Parallel study programmes	↗	=	=	↗
Student exchange programmes	↑	=	=	↗

Meanings of symbols:

= - no impact; ↑ increase; ↓ decrease; ↘ slight decrease; ↗ slight increase.

Source: conducted by the author

HEI Creativity

Siegel, Veugelers and Wright, (2007) agree that in recent decades almost all research universities in the USA and Europe have established technology transfer offices (TTOs) to commercialize their intellectual property and define TTOs goal to serve as an ‘intermediary’ between suppliers of innovations (university scientists) and those, who can potentially (help to) commercialize them, i.e. firms, entrepreneurs, and venture capitalists. Looking from a student’s perspective, the same principle should be used for teaching activities. If it is considered that competitiveness of a university from a student’s perspective is expressed through service quality and price we should raise a question if we can improve these parameters. In many cases we cannot do much about the study price that mainly consists of teachers’ salaries, administrative and infrastructure costs. We can replace some in-class activities with an on-line or distant form but

without significant improvements in the quality parameter this will not have a sufficient effect. Looking at quality from a narrower perspective as teaching quality we cannot do much in many cases, too, especially that, according to Batory and Lidstrom (2001), national frameworks move toward convergence, and we can see much more comparable higher education systems in most of the Bologna process countries.

The most recent literature, constantly updated study programmes, high quality teachers, and visiting experts from external environments are common features of many universities. These issues are necessary to become an “elite” player, they might be not sufficient. Looking from a student’s perspective we need more creativity assigning additional values to our study programmes and university services. Coates (2007) indicates that measures of “improvement” or “value added” are the most powerful indicators of educational performance. As mentioned before TTOs have made strong input on such additional values in research, and we must transfer these principles for “teaching TTOs” that in most cases are career centres or similar university departments.

Following this approach institutional creativity delivering other value added services besides study programmes can be expressed in the following ways:

- Mediation finding student internship places according to students’ study programmes;
- Management of information about current or planned vacancies in partnering organisations (especially business companies) and delivery of such information to students and alumni for a period of several years after graduation;
- Delivery of information to partners about perspective students;
- Consultancy for students and alumni (several years after graduation) about launching a start-up;
- Instant consultations with partners about planned study programmes;
- Instant market analysis for demand of new or updated study programmes.

Such activities could be performed merging capacities of different faculties and applying Hellman’s (2005) defined advantage of a TTO that it has, compared to individual scientists or teams, in terms of lower costs of searching for potential buyers, due to specialization and/or lower opportunity cost of time.

A conception for university competitiveness

It is possible to make a conclusion from the discussion in this article that quality and in many cases price of university services are much linked to organisational resources like staff, access to knowledge, supporting services, and infrastructure. If agreed that price and quality make the most significant effect on institutional competitiveness, what concept should we take for a background for strategic institutional development? Can we describe competitiveness of a university through the resource-based view? Organisations following this theory perform well and create value when they implement strategies that respond to market opportunities by exploiting their internal resources and capabilities. The resource-based view suggests that organizations can earn sustainable supra-normal returns if, and only if, they have superior resources (Daud et al., 2011). In such a context we can make an assumption that strong universities will continue strengthening their competitive positions, and less visible institutions will exist in their shadow.

Organizations’ resources include all tangible and intangible assets such as capabilities, organization processes, organization attributes, information, knowledge, physical structures, etc., that are controlled and owned by the organization and that enable it to implement strategies for improved efficiency and effectiveness, which lead to improved organization performance (Jones, 2009, Daft, 2008, Wernerfelt, 1984, Daud et al., 2011). Such a description leaves very little space for development for smaller institutions but practice shows that quite a number of relatively small universities are awarded with high international rankings and can be given as examples of competitiveness development. In such a context the alliance theory that makes an assumption that institutions can collaborate merging the resources for achieving common goals should be much more relevant for competitiveness development. Following this idea network- or cluster-oriented

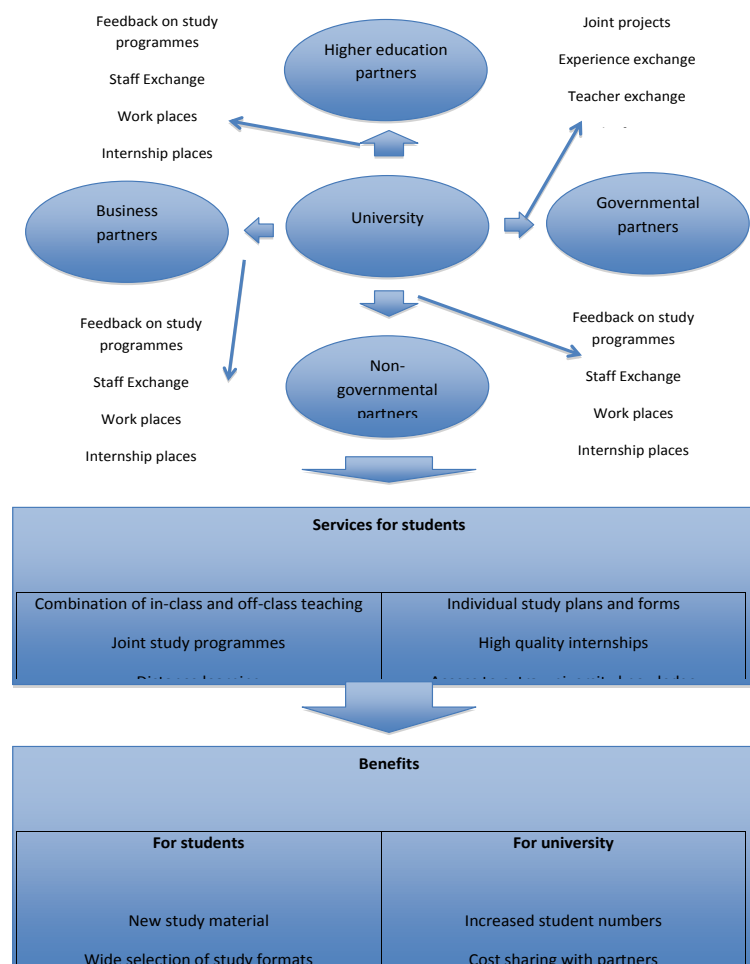
organisation has much more options to increase its international visibility. This idea is much supported by Daud et al., 2011, who state that universities need to create alliances with industry practitioners in order to obtain information on current industry requirements and needs. Forming alliances is viewed as a means of acquiring resources and capabilities that are expensive to develop internally or that are not readily available in the organization (Daud et al., 2011). According to Elmuti and Kathawala (2001), partner selection in an alliance is the main contributing factor to the success of the alliance. The relationship between partners tends to be more effective if they share similar goals, have comparable products or service lines, share similar cultures, and can help fill strategic gaps in either capabilities or market offerings (Rich, 2003, Daud et al., 2011). This approach is much linked to the already discussed role of a university as a moderator of a knowledge network realised through a cluster or a similar structure. Cooperation between higher education institutions is a common policy and strategic instrument for reorganising higher education (Tirronen, 2007). Through such extended partnerships we can implement other competitiveness-oriented goals described by Tamashiro (2011) much more easily:

- Commitment to a clear mission;
- Global education programs;
- Diversity of students;
- Personalised learning;
- Embedded technologies.

Ensuring of a long lasting cooperation allows a university to have access to external resources as well as to develop course delivery methods described in the Innovativeness, Entrepreneurship, Flexibility and Creativity chapters much more effectively.

Figure 1 summarises the discussion on what kind of partners a network-based university have, and how such kind of a cluster can increase its competitiveness through a variety of high quality services.

Figure 1. A conception for university competitiveness



Conclusions

The survey of theoretical literature discloses that there is no consensus on what exact actions may be applied in universities to achieve long term competitiveness. Taking the alliance theory approach that an organisation may get access to vital resources through a high level of cooperation and thus gain institutional competitiveness as a foundation we may describe the pillars of innovativeness, entrepreneurship, flexibility, and creativity through several core institutional long-term goals.

Innovativeness in educational activities of HEIs may be achieved through more intensive use of information technologies allowing to invite top speakers through on-line courses, organise virtual work groups that integrate campus and distant students more, place teaching materials on-line, organise virtual discussions and on-line consultations. These actions create assumptions to attract more off-campus students and thus increase cash flows from teaching activities. As discussed above innovative methods may positively influence costs of some of the teaching activities without having negative impact on their quality.

Entrepreneurship of HEIs may be described through profiling of an institution (specialisation) and an ability to make long-lasting value added alliances with external partners, creating assumptions for access to top teachers from other institutions, more student and staff exchange opportunities, more student internship opportunities, access to knowledge from non-academic organisations, rapid feedback from the labour market on study programmes, more opportunities for external funding from business partners, and joint funding for areas of common interest.

Flexibility describes HEI ability to react quickly to student expectations and realise the client-oriented approach. This means that internal regulations do not create artificial limitations for institutional flexibility to develop and deliver models of study programmes integrating institutional and external resources. Examples are seminars led by external teachers with careers outside a university, constantly updated study programmes according to the most recent findings and trends, in-class teaching combined with learning at a work place, incorporation of external experts in study programme committees, combination of in-class/on-line activities, short courses, parallel study programmes, etc.

Creativity in HEIs is linked to the presentation of value added services for students besides classical activities like teaching. Examples of such activities are mediation finding student internship places according to students' study programmes; management of information about current or planned vacancies in partnering organisations (especially business companies) and delivery of such information to students and alumni for a period of several years after graduation; delivery of information to partners about perspective students; consultancy for students and alumni (several years after graduation) about launching a start-up; instant consultations with partners about planned study programmes; and instant market analysis for the demand of new or updated study programmes.

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MODERNIZATION OF INTELLECTUAL PROPERTY PROTECTION TO ENSURE THE CONSUMERS RIGHTS

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Summary

This article is prepared implementing the project of Science Council of Lithuania „Guidelines for Citizen and consumer perception of socio-economic justice-making “-the problem of the protection of final consumer of the product is analyzed.

Lithuania borders with economic areas (countries) with differing excise and pricing policies. It is a favorable environment for contraband and counterfeiting, negatively affecting public safety and security as well as economy. Intellectual property (IP) as a product of human creativity is protected by law and by other means. Trademarks (TM) and other commercial brands (CB) are specific objects of industrial property. They are also extremely important way to fight for leadership in the market and to protect the market from counterfeits.

A few decades ago IPR infringements were mostly harmful to the internal markets. Nowadays it is mostly harmful to the international trade and its development. The problem is that we cannot overcome challenges of modern times by using traditional methods. Problems in this article are based on statistics, analysis of practical experience, there is also a promotion to search for new models of management. One of these-cooperation of state, business and civil society in coordination of this activity-the guidelines of socially oriented model are presented.

Preface

Due to the fast development of innovations, every new product or service is inextricably linked to the concept of intellectual property [12, 7]. Intellectual property rights (IPR) are rights to a product of intellectual activity. The conditions must be set for the subjects of intellectual property to profit from individual creative activity. An item which reaches the market becomes a good (product). Every single object of buying or selling, including all kinds of services, works, securities is a good and trademarks are symbols used by tradesmen, which distinguish a product from its competitors and stands as a quality guarantee.

Trademarks (TM) are specific objects of industrial property. Compared to other objects of IP (e.g. inventions, industrial design), one of their peculiarities is that trademarks are limitless in time.⁵⁹ The exclusive rights of subjects of TM are reserved for 10 years with a possibility to renew for 10 more years unlimited number of times. The essence of branding is creation and maintenance of trust in product-a special way to express commitment to a final consumer *of product*. Other *commercial brands* (CB) such as geographical, origin, place of origin links are also important in ensuring the trust of consumers. The features show up in conditions of economic globalization, liberalization of international trade:

If there is a condition set for a good or intellectual product to take part in fair competition. Credibility of TM is both individual and social value. It explains why CB is obvious and unique manifestation of our time. In the world, full of slogans of competitors, where rational choice became almost impossible, TM embodies clarity, credibility, quality [23, 27].

1. *TM is an important way of creating opportunities for free and economically profitable intellectual⁶⁰, creative activities.* Everyone agrees that intellectual activity is a driving force for culture and civilization. In conditions of economic and cultural globalization the results of

⁵⁹ See the verdict of Court of Justice in case 192/73 *Van Zuylen Freres v. HAGA G (HAG I)* [1974] ECR 731 22.

⁶⁰ Intellect (*lot. intellectus* – perception, intelligence, sense), the capacity for understanding, thinking, and reasoning, as distinct from feeling or wishing. Traditionally considered to be a unique quality of human.

human creative activity gain international nature. Owners or successors of IP (IP subjects) have ownership of IP objects which is protected by IP law.

2. *TM is a trusty tool in fighting for leadership in market or securing the market from counterfeit, because TM are protected by legal measures by creating special institutes of norms and rules, establishing special institutions.* It should be noted that few decades ago IP law infringements were most harmful to the internal markets whereas today these infringements are mostly harmful to the international trade and the development of it [1, 238].

With a slight deviation from the main problem, let us remind you that international protection of IPR is not a new thing at all. At the end of XIXc. a new international regulatory mechanism was started to develop, international agreements (still important nowadays) were signed. Regulatory document which stand as an example for increased worldwide attention to IPR and CB protection is The Paris Convention ‘For the Protection of Industrial Property’⁶¹ held in 1883 (ratified by Lithuania in 1996). Rapid economic development and progress in technologies increased interest in IP protection. On the second half of XXc. this problem received even greater attention from the international community and important documents directly or partly speaking about CB protection were adopted. Unions which perform administration of IP are established on the grounds of international agreements. Particularly significant is year 1994 Agreement on Trade-Related of Intellectual Property Rights (TRIPS), regulating one of the fields of General Agreement on Tariffs and Trade (GATT). This agreement was signed after round of multilateral trade negotiations (started in Uruguay in 1986).

The introduction points out that IPR protection problem is still topical. Economic globalization, international trade liberalization are features of a new global civilization which extend creative and material potential of a human being. On the other hand, economic challenges cause new threats to creative activity. Everyone agrees that these are threats to safety of society, market and human rights. Scientific relevance is clear when we see that we cannot solve problems of IP protection using traditional measures for coexistence regulation. With this article the reader is invited to discuss conceptual approach to IP protection, the coordination of this action by using potential of state, business and civil society. Problems in this article are based on statistics, analysis of practical experience, there is also a promotion to search for new models of management.

Scale and threats of international trade, infringing IPR.

Common rule is that it is forbidden to transit, export or import goods to country’s economic or customs territory if these goods infringe IPR. Actions such as illegal labeling with CB registered by other companies, copying thus trying to mislead final consumer (society) and to profit from it are considered as an attempt to infringe IP. Various highly demandable goods are counterfeited: automotive parts or other devices, toys, clothes and footwear, electronics, music, sound and video recordings, beauty products, drugs, tobacco and alcohol beverages etc. There is worldwide increase in counterfeit. Counterfeit goods reach markets by using new and inventive ways. Supposedly *one-tenth of today’s international trade* consists of counterfeit products. For example, in 2010 in EU 1.110.052.402 € worth of goods were confiscated due to the infringement of IPR, in 2011- 1.272.354.795 € worth of goods. The damage of counterfeit products manifest in various aspects:

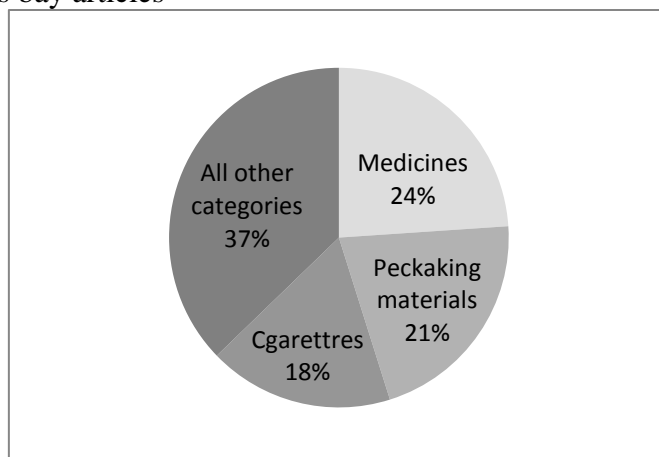
- IPR subjects does not get any profit event though his TM is used;
- original products are significantly expensive thus less popular in the market and the investments made to protect the goods does not pay off to the legal manufacturer; the customer is mislead and disappointed because after buying counterfeit good he does not get the expected quality and unjustly expresses his disappointment with legal manufacturer.
- distorts social relations because a person who buys counterfeit products becomes a moral hostage-unwittingly contributes to the increase of illegal capital;

⁶¹ The Paris Convention – 1883 March 20. Paris Convention For the Protection of Industriai Property, revised in Stockholm in 1967 July 14 and supplemented in 1979 August 28.

- Some of counterfeit goods (i.e. alcohol, tobacco, pharmaceuticals, automotive parts, toys, food) often poses a threat to the health of consumers, and in some cases—even life;
 –the turnover of counterfeit goods decrease economic power and public welfare of the country because infringers of IPR: do not pay taxes, do not invest in creating legal jobs, cause mistrust in quality of product, promoting illegal activities, Increases black economy etc.

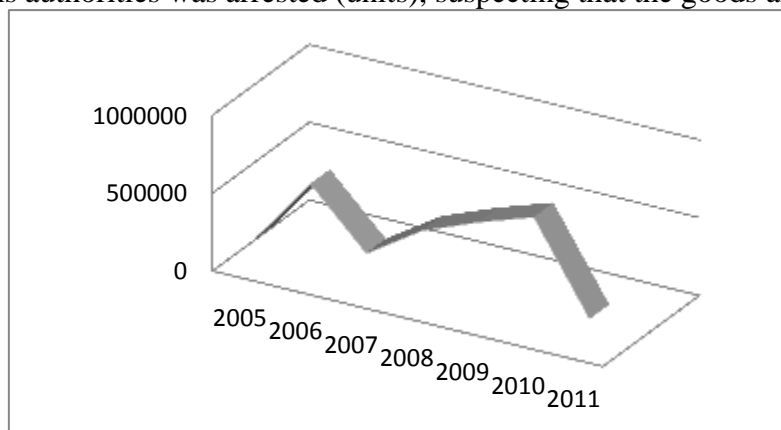
According to the statistics of evaluation of EU IPR protection, there are three the most common categories of counterfeit: medicines, packaging materials and cigarettes (see grap. 1).

Graph1. Top categories bay articles⁶²



Lithuania, due to its location, is a transit country. It borders three countries (the Republic of Belarus-720 km and Kaliningrad (Russian Federation)- 303km). We also have an exit to the sea thus we face a lot of problems when ensuring CB protection in international trade. For example, counterfeits of such well known brands as „Hugo Boss“, „Lancome“, „Kenzo“ and other are confiscated in port of Klaipeda, there are also large cargos of perfumery, counterfeit watches detained, using brands like „Bulgari“, „Eberhard“, „Rolex“, „Omega“ and other. According to the statistics of Custom of the Republic of Lithuania, there is a constant increase in the amount of confiscated goods (see grap. 2) and arrests (see grap. 3).⁶³

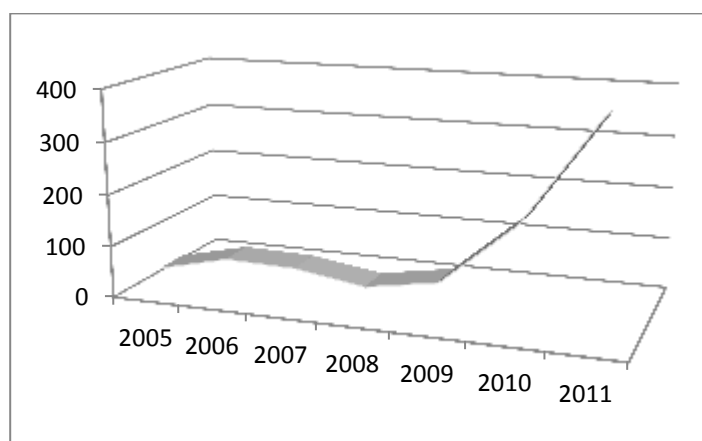
Graph 2. Customs authorities was arrested (units), suspecting that the goods are counterfeit



Graph 3. Number of detentions (cases) of goods suspected of infringing IPR

⁶² The graph is based on the Report on EU customs enforcement of intellectual property rights. Taxation and Customs Union. Results at the EU border – 2011. Publications Office of the European Union, 2012

⁶³ The Paris Convention – 1883 March 20. Paris Convention For the Protection of Industrial Property, revised in Stockholm in 1967 July 14 and supplemented in 1979 August 28.



It should be noted that the the EU member states force focused on the protection of the external borders gives significant effect and creates favorable conditions for further development of international trade principles. Nevertheless, customs and other institutions in control just partly protect IPR. For example, in 2012 at the end of August, during the general inspection in business park „Gariūnai” the officers of Vilnius Territorial Customs and Vilnius Economy police confiscated approximately one and a half thousand goods, suspected of infringing IPR of owners of registered brands such as „Spiderman“, „Barbie“, „Nina Ricci“, „Bakugan“, „Hello Kitty“, „Louis Vuitton“ and other. Estimated value of counterfeit goods is 250 thousand litas. The use of illegal pesticides in farming becomes more popular. According to unconfirmed statistics, approximately 30% of market consists of counterfeit goods. The difference in price between original and counterfeit products varies from 70 to 80 percent. There are plenty examples of similar kind.

It is an open secret that contraband of counterfeit original and excisable goods is one of the major problems of the economies of other members of EU. For example, after the evaluation of IPR protection in EU, it is assumed that illegal tobacco products fill up to 30% of EU market. Meanwhile, the situation in Lithuania is even worse. It is thought, that here illegal tobacco products fill up to 45% of market. Significant rise in counterfeit products in market was noted since the rise of the excise tax (since the 1st of March, 2008 increase in excise tax on cigarettes). State budget loses approximately one fourth of milliard of litas each year for this reason only [18, 47]. This means that illegal profit increases constantly and can make up to one fourth of milliard of litas. Counterfeit cigarettes reach Lithuania in various ways. Illegal factories are being established in neighboring EU countries, in Lithuania or in third countries. According to the responsible institutions, law enforcement authorities detain only a small percent (~10%) of counterfeit goods.

Attention must be drawn to another threatening circumstance prognosed by science. After assessing the extent of solved cases and latent illegal business, cases of IP infringements, it is presumed that international criminal gangs which harm not only business but also society tend to group. Criminal cartels threaten the foundation of modern economy by receiving great income which later can be used to finance other criminal activities such as drugs and arms trafficking, terrorism, this destructive activity cause social, ecological and other problems, increase threats to public safety, health, etc.

So, the question of the decrease of counterfeit goods comparative percentage in the overall IP infringements situation scientifically and practically remains open. Scientists and practitioners should be gathered to make a comprehensive study of markets of Lithuania and neighboring countries thus to get reliable data and to identify tendencies.

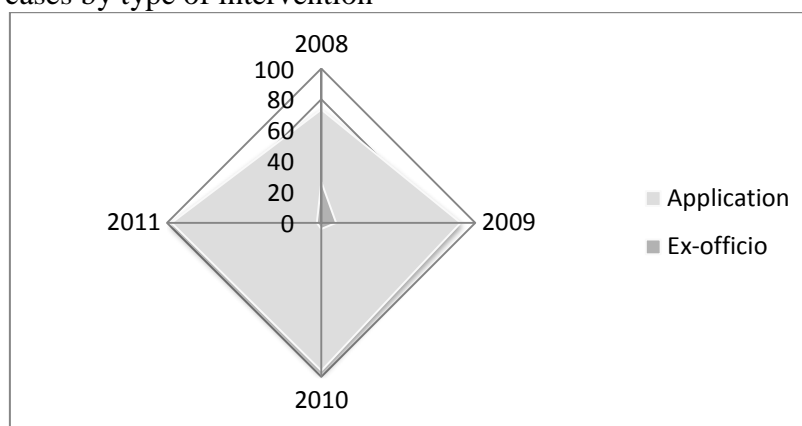
Another problem is that infringements of industrial property are very specific and traditional preventive methods do not lead to expected results. In our opinion, the situation could be changed by implementing innovative models of public relations management, improving market participants' social responsibility. Preliminary studies show that the input of such programmes or projects would be economically justified and socially significant.

2. Improvement of IPR protection implementing innovative models of public relations management.

The statistic data and practical experience suggests that the question of IPR protection became relevant at the end of XXc. and is considered to be one of the greatest challenges for XXIc. state, business and society in general. This lead to the improvement of national regulation and control mechanism, increase in organizational role of state in ensuring protection of IP, focusing on the fact that the number of people concerned with socially just activity increases [11, 63-71; 17]. State institutions establish contacts with business and civil society organizations. The main rule of the partnership between state and business is that the conditions must be set for the subjects of intellectual property to profit from individual creative activity-a guarantee of income for those who invest in the quality of product [3, 198]. From the viewpoint of international trade this means that CB subjects must be granted an exclusive right to IP objects and the responsibility for the implementation goes to the state institutions, other social groups and organizations responsible for implementing conventional objectives of the international community.

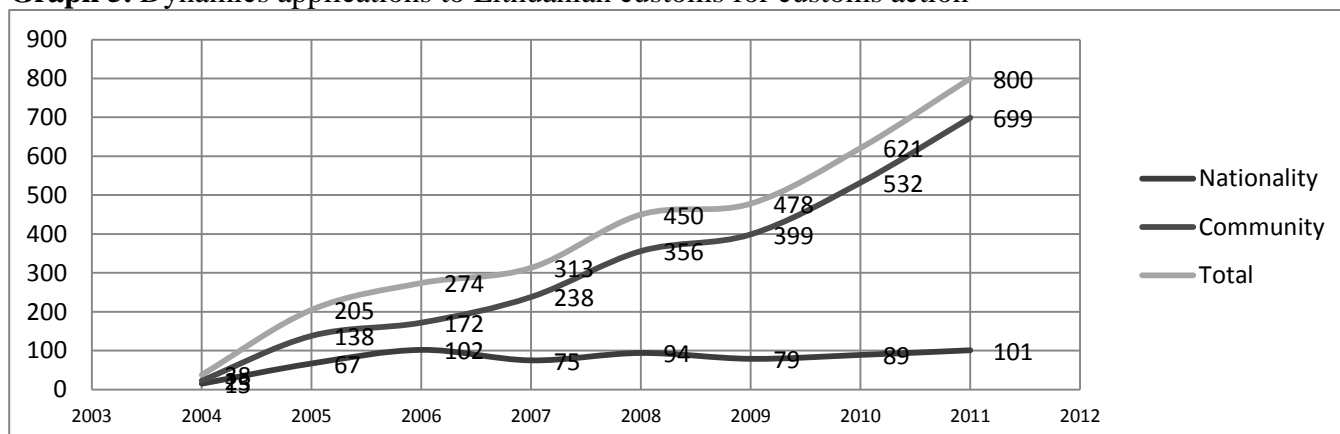
It is understood that new management tendencies are associated with legal preconditions for the development of process to occur. The first EU Council Directive (89/104/EEB) for the laws of Member States relating to trade marks was adopted in 1988. December 21. According to Directive 89/104/EEC, the majority of problems are solved at the national level, and cross-border arrangements require improving administrative capacity of institutions i.e. a democratic IPR validation and clear organizational framework for IPR protection is required from EU members.

Thematically it is important to mention *IP presence and implementation doctrine* formulated by European Court of Justice (ECJ). The ECJ stated that Article 295 of the Treaty retains the power for a Member State to declare the existence of IPR. EC Treaty rules do not affect the conditions or the order, according to which a Member State grants the IPR **because it is a question of an existing law.** *On the contrary*, the implementation of IPR is regulated by European Community law. For example, implementation when owners of IPR and economically and legally dependant subjects (licensees) make an agreement and common decision or take concerted action. However, in this area EC Treaty Articles 81-82 provide exceptions that allow protecting the values that are important in the national context if this does not interfere with integration of the markets of EU Member States. Legal regulatory tendencies require that the features of typical public relations management should be expanded and amended on the basis of efficiency and flexibility paradigm [27, 21-22]. Very important role in the protection of IPR in international trade has customs. In XXI c. economic globalization, modern international trade and such phenomenon as terrorism or contraband using the latest technologies dictate the change in functions of customs. This leads to the need to analyze input and prospects of customs in the implementation of international agreements, EU and national legislation [29, 31-33]. The customs is supplied with modern international trade flow control instruments and, having enough information on trademarks, can protect them; therefore higher numbers of business subjects contact customs for customs supervision (see graph. 4).

Graph 4. Breakdown of cases by type of intervention⁶⁴

The diagram clearly shows that only few percent of IPR infringements customs solve on its own initiative. The analysis of practical situation data suggests a relatively positive development of partnership between customs and business.

IPR protection in Lithuania, following Western traditions, became more applicable since 1993 June 3-after the adoption of Trademarks and Service Marks Law⁶⁵, which set the formation of regulatory model according to the standards of Directive 89/104/EEB. The partnership of customs and business overcame all obstacles and now meets almost all EU requirements. IPR subjects contact customs with requests for customs supervision and this improves IPR protection (see diagr. No 5).

Graph 5. Dynamics applications to Lithuanian customs for customs action

A much more complex situation remains in the inclusion of civil society in the process of IPR protection-there is very weak or no organizations of third sector, this means that there is no network of organizations, concerned with IPR, created; models promoting sustainable development are not implemented [10, 565-577]. According to modern public relations management principles, forces in support of PNO security should consist of State institutions, business and civil society structures [14, 11;256-258].

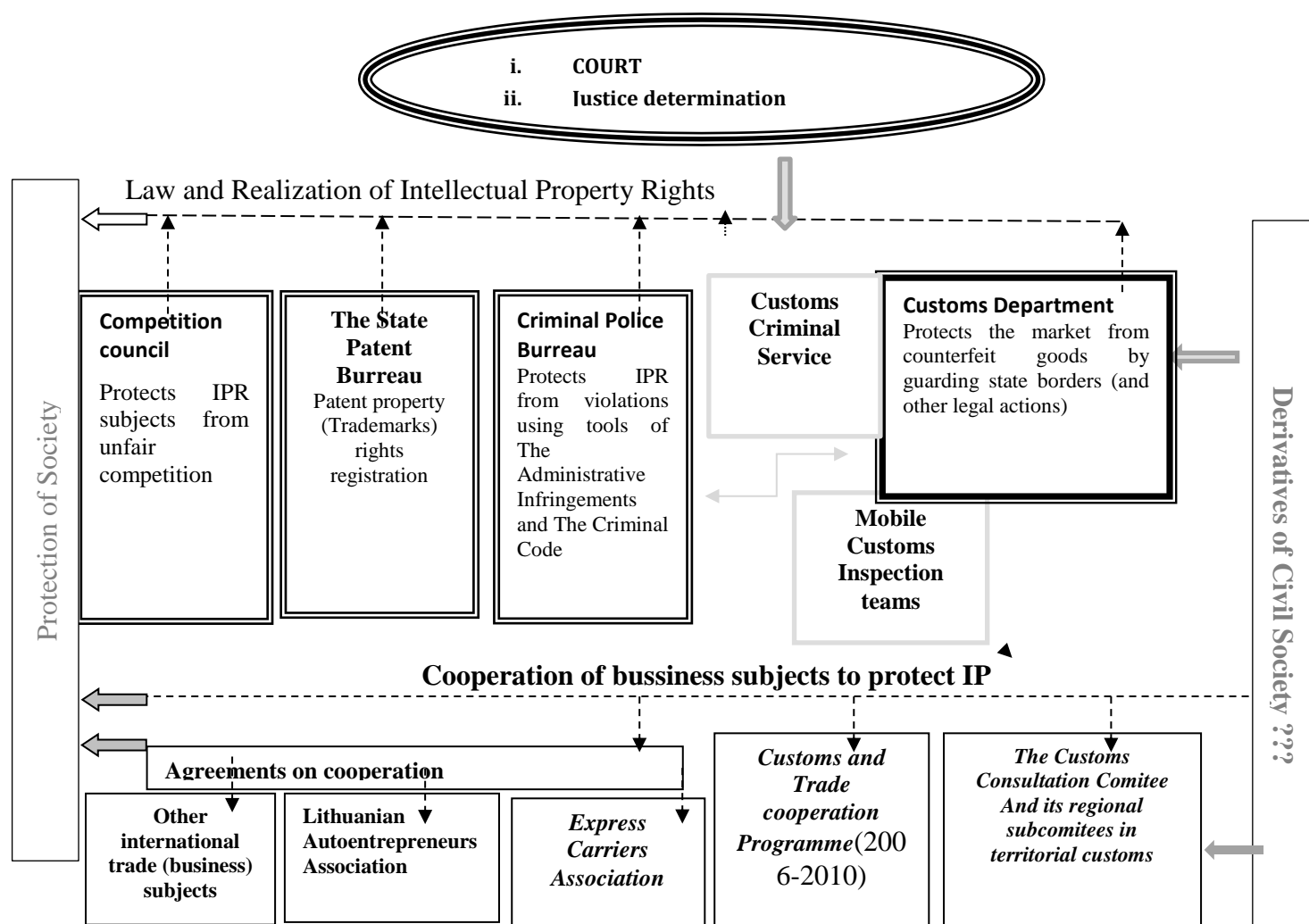
Scientific analysis of practice leads to a conclusion that in Lithuania IP protection system is flawed because of the weakness of III sector which represent the interests of final consumers of CB. The third sector is significant because it organizes society to act as a moral pressure. Therefore it is necessary in solving qualitative problems of international business, increasing social awareness of

⁶⁴ The graph is based on the Report on EU customs enforcement of intellectual property rights. Taxation and Customs Union. Results at the EU border – 2011.

⁶⁵ Trademarks and Service Marks Law of the Republic of Lithuania No. I-173 and later version (V.Žin., 1993, No. 21-507; 1994, No. 89-1722; 1997, No. 108-2733).

state, business and civil society organizations. Unlike political campaigns which are often politically motivated and set against business enterprises or corporations, their impact and pressure is more valued.

Graph. 6 Systematic fragment of Lithuanian organisations ensuring IPR protection



The systematic fragment of Lithuanian organizations, taking part in ensuring PNO protection (see ex. No 1) show structural (segments) diversity and helps to understand the complexity of the problem (research topics) and it also reveals the weaknesses and threats of public relations management. Preliminary studies of opinions of final consumers reveal that they do not usually think of the consequences of illegal activity and that because of the lower prices, majority of them are in support of contraband of counterfeit or original products. Social responsibility is an ongoing process-deliberately introduced value, oriented to the changes of social consciousness. This means that it is necessary to seek effectiveness and flexibility of all concerned, also using modern innovative management means. In other words, it is necessary to abandon irrational and groundless position ‘to moralize’ the business activity with the rules of moral or political philosophies, liberal egalitarian or social doctrines, popular in the past [4, 89].

Conclusion

Due to the limited size of this article the author attempts to reveal the relevance of the problem and to draw reader’s attention to the opportunities of applying modern management principles in IPR protection-spur practitioners and researchers to focus on the development of

socially aware and responsible society. To change the current situation firstly it is essentially to bring practitioners and scientists together to implement projects like listed below:

To analyze the perception of individuals interested in sustainable development, socio-economic justice; identify key-needs, their diversity and tendencies in developing social responsibility in the field of IPR protection;

To perform an analysis of the markets of Lithuania and neighboring countries to determine an extent of counterfeit products in circulating there.

Traditional techniques of public relations management do not meet the needs of the time; therefore, a new model of partnership based on an innovative management has to be developed. Its goal is to set conditions to increase country's responsibility in protecting INT by revealing counterfeit products threats to well-being, the economy and public safety.

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ANALYSIS OF DIFFERENCES IN UNEMPLOYMENT RATE BETWEEN REGIONS OF THE CZECH REPUBLIC

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Abstract. Since 2004 is the Czech Republic one of the countries of European Union. For the purposes of Statistical Office and Eurostat is its territory divided into territorial units using standard CZ-NUTS Classification of NUTS-3 is the division of the Czech Republic to a 14 regions. The aim of this paper is to analyse and describe individual regions of NUTS-3 in terms of unemployment rate. Two selected quarters are analysed, in both cases, the fourth quarter of the year (hereafter referred to only by number). In the first case we are talking about 2008 and in the second about 2011. 2008 was chosen because it is last year before the start of the global financial crisis. The aim of this paper is to show impacts of global financial crisis to differences between regions of the Czech Republic too. Analyses are based on the data of the Ministry of Labour and Social Affairs (MLSA). During the investigation of unemployment in regions of the Czech Republic was found that the lowest unemployment rate is standard in the Capital city of Prague. In all regions there was from 2008 to 2011 an increase in level of the unemployment rate, the largest increase occurred in the Olomouc region (4.5%) and the lowest increase was recorded in the Capital city of Prague (about 1.8%). Using ANOVA were identified pairs of regions in year 2008 and in year 2011, where the unemployment rate can be considered statistically significantly different. Ústí region has a consistently high level of unemployment and the lowest level has the Capital city of Prague. For further analysis of unemployment was used differentiation to regions. Due to two-step ANOVA were (with using informal criteria BIC and its modification) found three optimal groups of regions. We found, that differences between regions unemployment rate due the global financial crisis are not deepened, unlike in income distribution. We found, that differences between average income and median of income are increasing due the global financial crisis, unlike in unemployment rate. We calculated various characteristics for individual clusters of regions and we found, that regions with high level of share of people to 19 years and with high level of people with primary education have problems with high level of unemployment. These regions should have effort to development of education.

Keywords: Unemployment, analysis of Variance, regions.

JEL classification:

E24 - Employment; Unemployment; Wages; Intergenerational Income

C10 - General

Introduction

The issue of income distribution, inequality, poverty, unemployment and regional analysis is devoted to a number of research papers and articles, and not only in the Czech Republic, the Slovak Republic but also in other EU countries. Unemployment is a serious economic problem with many aspects of the whole economic process. This is evidenced by the number of works, such as in Megyesiová (1999), Megyesiová (2010), Miskolczi (2011a) and Miskolczi (2011b). From the ranks of economists is analysed a long-term unemployment due to its implications, see Pavelka (2011).

Analysis of regional unemployment

To obtain a more comprehensive picture of the labour markets is appropriate to analyse the unemployment rate in each region. As stated above, the issue of unemployment is dedicated to many economists and analysts. For example, in Čadil (2011) also addresses the impact of unemployment on public budgets, and it is also advisable to analyse unemployment by regions.

Values of regional unemployment rates for the 4th quarter of 2008 and 2011 are reported in Table 1. It is clear that in both phases is generally highest unemployment rate in the Ústí region that

in the two periods has reached a level more than 10%. Between the two years occurred in all regions of the increase in the unemployment rate, the highest increase was in the Olomouc Region (4.5%) and the lowest was in the City of Prague (about 1.8%).

Table 1: Unemployment rates (in %)

Region	Unemployment rate in 2008	Unemployment rate in 2011	Difference 2011-2008
South Bohemian	4,80	7,50	2,70
South Moravian	6,80	9,80	3,00
Karlovy Vary	7,60	9,80	2,20
Hradec Králové	4,80	7,50	2,70
Liberec	7,00	9,50	2,50
Moravian-Silesian	8,50	11,20	2,70
Olomouc	6,90	11,40	4,50
Pardubice	6,00	8,40	2,40
Pilsen	5,00	7,00	2,00
Capital city of Prague	2,10	3,90	1,80
Central Bohemian	4,50	7,10	2,60
Ústí	10,30	12,90	2,60
Highlands	6,30	9,40	3,10
Zlín	6,10	9,40	3,30

Source: MLSA CZ, own calculation

In terms of a more detailed analysis of unemployment in the regions, it is interesting to examine whether the unemployment rate is significantly affected by territory (region). This verification will be given to the nature of the data used analysis of variance (ANOVA), the output of which is shown in Figure 1.

Figure 1: ANOVA output from Statgraphics Plus in year 2008

ANOVA Table for mira_nezam08 by kraj					
Analysis of Variance					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Between groups	0,0229502	13	0,0017654	5,24	0,0000
Within groups	0,021239	63	0,000337127		
Total (Corr.)	0,0441892	76			

Source: own calculation

The above output shows that the unemployment rate in 2008 is at 5% significance level significantly affected by region (p-value in the last column of this output is less than the 5% significance level, so we tested the hypothesis of conformity mean values of individual measurements unemployment in regions reject).

Note: Condition of using ANOVA about the same group variance is at the 5% significance level are met, tested the hypothesis Bartlett test of conformity of group variances is not rejected (Bartlett's test: 1,32284 P-Value = 0,182651).

Figure 2: ANOVA output from Plus in year 2011

ANOVA Table for mira_nezam08 by kraj					
Analysis of Variance					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Between groups	0,0229502	13	0,0017654	5,24	0,0000
Within groups	0,021239	63	0,000337127		
Total (Corr.)	0,0441892	76			

Source: own calculation

A similar conclusion can be made for the rate of unemployment in 2011 and at 5% significance level it is possible to say that the unemployment rate is statistically significantly affected region.

Note: Condition ANOVA using the same group variance in 2011 at the 5% significance level are met, tested the hypothesis Bartlett test of conformity of group variances is not rejected (Bartlett's test: 1,16748 P-Value = 0,706246).

Since it was demonstrated statistically significant differences between rates of unemployment in these regions, it is appropriate to examine the methods of multiple comparisons among pairs of regions can be observed statistically significant differences (for the determination of "significant" values of difference in unemployment rates is considered 5 % level of significance). A pair of regions, the unemployment rate can be considered different at the 5% significance level are recorded in Table 2 (for 2008) and Table 3 (for year 2011).

Table 2: A pair of regions, the unemployment rate in 2008 are significantly different

	PRG	SB	SM	KV	KRAL	LIB	MOR	OL	PAR	PLS	CB	ÚST	HIGH	ZL
PRG			X	X		X	X	X	X			X	X	X
SB			X	X			X	X				X		
SM	X	X			X						X	X		
KV	X	X			X						X	X		
KRAL			X	X			X	X						
LIB	X										X	X		
MOR	X	X			X					X	X		X	
OL	X	X			X					X	X	X		
PAR	X											X		
PLS							X	X				X		
CB			X	X		X	X	X				X		
ÚST	X	X	X	X		X		X	X	X	X		X	X
HIGH	X						X					X		
ZL	X											X		

Table 3: A pair of regions, the unemployment rates in 2011 are significantly different

	PHA	JČ	JM	KV	KRÁL	LIB	MOR	OL	PAR	PLZ	STČ	ÚST	VYS	ZL
PHA			X	X		X	X	X	X			X	X	X
JČ			X				X	X				X		
JM	X	X			X					X	X	X		
KV	X													
KRÁL			X				X	X				X		
LIB	X											X		
MOR	X	X			X					X	X			
OL	X	X			X				X	X	X		X	
PAR	X							X				X		
PLZ			X				X	X				X		
STČ			X				X	X				X		
ÚST	X	X	X		X	X			X	X	X		X	X
VYS	X							X				X		
ZL	X											X		

From Tables 2 and 3 shows that Ústí region, as the Capital city of Prague in the two periods were significantly different from most other regions. The Capital city of Prague is different compared to other regions significantly lower unemployment rate, Ústí Region is different compared to other regions significantly higher unemployment rate.

Cluster analysis of regions

In terms of a more detailed analysis of individual regions of the Czech Republic is interesting to examine clusters of districts that form the region described above. Using the two-step cluster analysis were created in SPSS, version 12.0.1. clusters of individual districts. To determine the optimal number of clusters have been used Schwarz Bayesian Information Criterion (BIC) and its modification in SPSS. The monitored variables were included in the unemployment rate, the share of unemployed persons under 19 years of age, over 60 years, the proportions of unemployed people without basic education, with secondary and tertiary education. Another variable included is the unemployment rate. For clustering of districts were used data from the 4th quarter of 2011.

Values of the criteria for determining the number of clusters are shown in Figure 3. According to the BIC information criterion in the second column (searches for the minimum value) and its modification in the last column (searches for the maximum value) were determined as the optimum three clusters.

Figure 3: The values of the criteria for determining the optimal number of clusters

Auto-Clustering				
Number of Clusters	Schwarz's Bayesian Criterion (BIC)	BIC Change ^a	Ratio of BIC Changes ^b	Ratio of Distance Measures ^c
1	1001,185			
2	881,727	-119,458	1,000	1,590
3	856,578	-25,149	,211	2,588
4	929,489	72,912	-,610	1,234
5	1014,118	84,628	-,708	1,254
6	1108,884	94,767	-,793	1,252
7	1211,689	102,805	-,861	1,059
8	1316,267	104,577	-,875	1,252
9	1426,895	110,628	-,926	1,011
10	1537,789	110,894	-,928	1,204
11	1652,705	114,916	-,962	1,255
12	1771,634	118,929	-,996	1,016
13	1890,806	119,173	-,998	1,190
14	2012,450	121,643	-1,018	1,202
15	2136,285	123,835	-1,037	1,018

a. The changes are from the previous number of clusters in the table.

b. The ratios of changes are relative to the change for the two cluster solution

c. The ratios of distance measures are based on the current number of clusters against the previous number of clusters.

Source: own calculation, SPSS

The numbers of districts in the individual clusters are shown in the following table of frequency, which represents the output from SPSS.

Figure 4: Table of frequency of individual clusters

Cluster Distribution				
		N	% of Combined	% of Total
Cluster	1	4	5,2%	5,2%
	2	36	46,8%	46,8%
	3	37	48,1%	48,1%
	Combined	77	100,0%	100,0%
Total		77		100,0%

Source: own calculation, SPSS

In the first cluster are a total of 4 districts, which include as Prague, Frydek-Mistek and Pribram. In the second cluster are 36 districts, including all districts that belong to the Liberec region, some districts of the Central Bohemian region (Kladno, Beroun, Kolin, Benešov), Hradec Králové region (Hradec Kralove, Jicin, Nachod, Rychnov nad Kneznou above), etc. In the last cluster are 37 districts, which include districts such as Highland region (Havlickuv Brod, Jihlava, Trebic), Zlin Region (Uherske Hradiste, Vsetin, Zlin), Pilsen Region (Klatovy, Domazlice, Rokycany) and Usti Region (Most, Teplice, Usti nad Labem), etc.

The average characteristics for the individual clusters are shown in Table 5. The table shows, for example, the unemployment rate is an average of the smallest districts in the first cluster. The share of unemployed up to 19 years is also the lowest average again in the first cluster. The highest proportion of unemployed with basic education is, on average, districts in the second cluster.

Table 5: Average characteristics for individual clusters (in %)

	Share to 19 years	Share over 60 years	Share without education	Share with primary education	Share with secondary education	Share with tertiary education	Unemployment rate
Cluster 1	3,83	2,88	0,08	18,80	3,20	7,90	7,03
Cluster 2	4,99	1,77	0,84	27,68	2,51	4,42	9,48
Cluster 3	4,60	1,83	0,33	26,44	2,56	5,16	9,39

Source: own calculation

Conclusion

The unemployment rate is one of the main economic indicators, and therefore its analysis of attention. The aim of this article was to analyse regional unemployment in the Czech Republic and especially in classification by CZ-NUTS3, respectively broken down into individual districts that form the region by CZ-NUTS3. Based on the analysis it was found that the lowest unemployment rate is standard in the Capital city of Prague. In all regions there from 2008 to 2011 there was an increase, the largest increase occurred in the Olomouc region (4.5%) and the lowest increase was recorded in the City of Prague (about 1.8%). Using ANOVA identified two regions, the unemployment rate can be considered statistically significantly different. Usti region has a consistently high level of unemployment and the lowest region Praha. For further analysis of the regions in terms of unemployment was used division of the territory into separate districts. Using the two-step cluster analysis were (using the BIC information criterion and its modifications) were determined as the optimum three clusters of districts.

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POVERTY IN LITHUANIA AND EUROPE AT CLOSE RANGE

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Abstract. Despite a long-term story of poverty and social exclusion research or political actions, the poverty continues to grow all the time in the big part of the world. The poverty does persist in the big part of EU including the Lithuania too. The paper presents the empirical information about the risk of poverty in EU and Lithuania. The influence of social groups and macro factors on poverty is analyzed. The marked risks at poverty levels of the groups of children and working people have been noticed. The risk at poverty level of retired people is conversely much lesser and clearly declining during the past decade.

A new macro-econometric multilevel model for determining the determinants of poverty is developed in the paper. The model enables to check the different premises and structural determinants of poverty dynamics and the efficiency of public policy measures as well.

A part of present paper material has been presented in the Conference EIIC-2012 at 3-7 Sept. 2012. A great importance of detailed comparative analysis and numerical modeling were noticed in the conference. The text of present paper is substantially updated and supplemented.

Keywords: poverty and social exclusion, causes and determinants of poverty, modelling of poverty processes, testing of public policy.

JEL classification: I32

Introduction

The tradition in social policy is to focus on a set of events that happen to people and propel them into poverty. This includes unemployment, divorce, and the arrival of children, sickness, and old age. The poverty imposes the costs on the nation in terms of both programmatic outlays and productivity losses that can affect the national economy as a whole. The classic exposition of this view was developed (Bradbury, 1999; Smeeding, O’Higgins, Rainwater, 1990; Bradshaw, 1999). More recently the causes of poverty compared and analyzed in this way for 1998 and 2001, and the size of the poverty gap resulting from such events is also compared (Fertig, Tamm, 2007; Atkinson, Piketty, Saez, 20031). This focus on the underlying events is useful since these are the true drivers of poverty dynamics.

Tackling poverty by 2010 was one of the European objectives defined by the Lisbon European Council in 2000. Ten years later, 2010 is the European year for combating poverty and social exclusion. Poverty continues therefore to be at the heart of social policy in most European Member States. Ideally, social policies aimed at reducing poverty need to be based on an in-depth understanding of the underlying processes at work. A first step towards such an understanding consists in shedding some light on the main causes and structural determinants of poverty.

These remarks unquestionably denote the theoretical and practical importance of the present research: despite the long-term story of poverty research there are a number of unresolved problems from a theoretical viewpoint, and the grievous political challenge to the government of every country, including the EU countries, defines the practical importance of present research.

Despite the constant political attention of EU institutions and the huge sums of money of EU structural support funds the poverty does persist and continues to grow in big part of EU countries. The theoretical analysis of poverty and social exclusion processes is still more descriptive but less predictive, so the rational to investigate the causes, determinants and dynamics of poverty processes at different extents and levels is clear and present.

The National department of statistics of Republic of Lithuania (NDS) provides information at both individual and household levels and covers at most 20 years. The data of the NDS and Eurostat were used in the present analysis. The unit of present theoretical analysis is the individual and usual choice for poverty analysis with longitudinal data because individuals can be followed

over time whereas households cannot. The sample contains 500 working age adults (25-55) for the first modelling wave, and 600 for the second wave.

The innovation of this research effort consists of the multilevel modelling of micro- and macro factors of poverty and social exclusion processes, and of examination from a perspective of new integrated system of indicators whereby individual and community indicators and the sustainability of the land and environment in which farmers operate are included.

The objective of this paper aims at disentangling the role of micro and macro factors in explaining the poverty status, by using detailed information about different social groups in Lithuania. The definition of risk at poverty is to be found in Section 2. The detailed situations of poverty in Europe and Lithuania are outlined in Section 3 and 4. A macro-econometric regressive multilevel model for determining the different determinants of poverty for structural analysis of poverty and social exclusion is adapted in Section 5, and the results of probationary numerical research are presented in Section 6. The final conclusions are to be found in Section 7.

Risk at poverty rate

The poverty is officially defined in relative terms in Europe, as the percentage of individuals living in a household whose equivalent income is below the poverty threshold. This threshold is defined in each country (equal to 60% of the national median equivalent income), aiming at taking into account the national income inequalities. As a consequence, two countries with very different standards of living (and thus very different median equivalent income and different poverty thresholds) can have the same poverty rate.

Seemingly contradictory results due to this definition do not matter as long as one is aware of the conventions they are based on, and when the at-risk-of-poverty rates (RPR) are interpreted together with the threshold values. But, in present case, the main objective is to figure out to what extent the poverty status is explained by some macro factors such as the unemployment rate. It is thus necessary, in order to allow that kind of relationship to appear, that the poverty indicator ranks the countries as the macro variables do. As a consequence, the defining poverty can be defined in a relative way (60% of a certain threshold) but to define a new threshold, allowing this kind of ranking. With this objective in mind, a unique European poverty threshold can be presented by considering all individuals to belong to a same big country, which is the Europe.

RPR observations in EU

Despite the ambitious goals set by the Lisbon European Council of March 2000 and the subsequent efforts in this direction by the European Community and Member States, the poverty is still significant in Europe. Compared with other regional reviews prepared for OECD, the “absolute” levels of poverty are low in Europe with 37 countries out of 42 having less than 2% of the population living on less than 2 dollars a day. The countries with significant and persistent income poverty are in Eastern Europe - Romania, Moldova, Turkey, Albania and Kosovo. However, these national figures disguise the polarisation of poverty in the rural areas – particularly among smallholder farmers – (Bertolini, Montanari, Peregrine, 2008; Cappellari, L. 2004). The relevance of absolute poverty has significantly increased with the recent enlargement of the EU that involved countries with a lower level of income. Rural poverty, and its relationship to the farming community, represents an important aspect of European poverty, considering that the rural areas account for a large part of territory and of the 800 million population of the Europe. Nevertheless, the rural areas and their agricultural, environmental and touristic contributions to development have been neglected in their specific features in the analysis of poverty. Indeed, the awareness of European public opinion as well as the commitment of the public institutions to the problems of rural poverty is extremely weak (Macours, Swinnen, 2006; Lampietti, Lugg, Van der Celen, Branczik 2009; Mollers, Buchenreider, 2007). The future predictions for the poor are not good in Europe if they are linked to overall economic growth which is forecast to continue to decrease (by

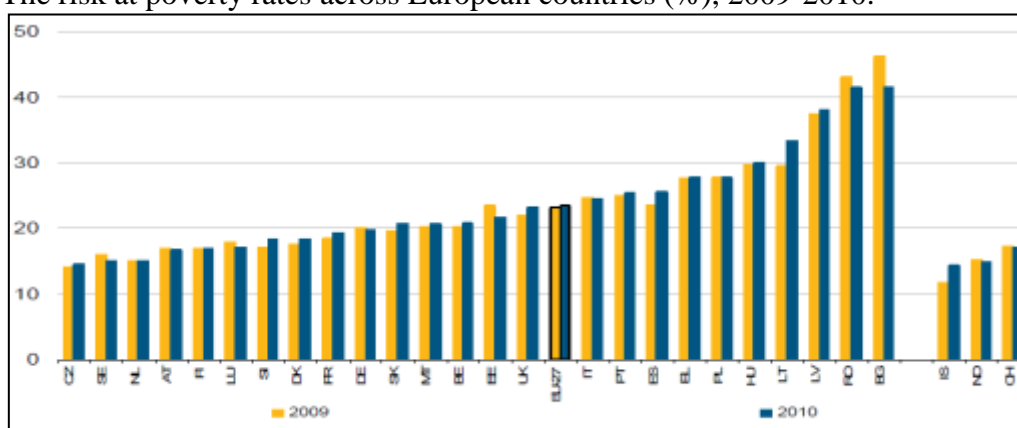
50% over the next 20 years – from 5.5% in 2008 to 2.7% in 2030), - the largest regional decrease in the world.

An absolute poverty is traditionally perceived to have three principal components: insufficient income, employment, and food. However, the poverty is a complex topic which enhances the seven other criteria captured by the Millennium Development Goals: education, gender equality, child mortality, and maternal health, the ability to combat disease, the environment and global partnerships (GEP 2007).

Other indicators of poverty are used in global discourses and these more sophisticated descriptors are occasionally reported in this document when recent data is available from the European area. Such indicators include: basic human needs such as access to food, water, shelter and clothing; the UN's Human Development Index which looks at quality of life factors including access to education, health systems and credit (MDG Rep., 2009). The others are the human security indicators – whether people have the assets or skills to survive shocks such as poor rainfall; while the others stress the importance of empowerment and participation in decision making, including the right to information and knowledge (WD Rep., 2008; WB, 2007). In the agricultural context of Europe, there is also a growing body which see poverty reduction not as an one uniquely driven by economic parameters but equally or more importantly by an integrated system index whereby social and community indicators and the sustainability of the land and environment in which farmers operate are included (WB, 2011; IAASTD, 2007; Eur. Comm., 2012).

Approximately 115.5 million people in the EU-27 (23%) were at risk of poverty or social exclusion in 2010 (Stubbs 2009). This figure, calculated as a weighted average of national results, masks considerable variation between EU countries. The highest RPR rates were to be found in Bulgaria (42%), Romania (41%), Latvia (38%), Lithuania (33%) and Hungary (30%) were at one extreme.

Figure 1. The risk at poverty rates across European countries (%), 2009-2010.



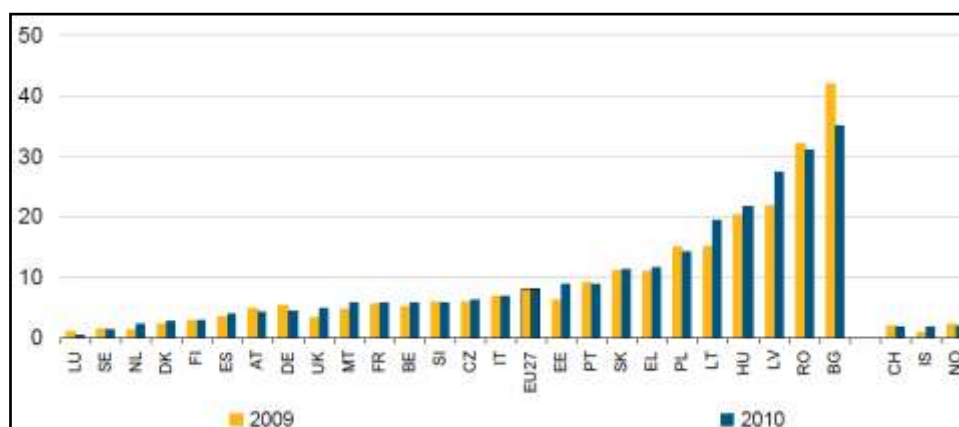
Source: Antuofermo, DiMeglio, 2012.

Poverty is measured by Eurostat as a relative concept, with no reference to an EU benchmark (Eurostat, 2009). This is because minimal acceptable standards usually differ between societies according to their general level of prosperity - someone regarded as poor in a wealthy, developed country might be regarded as rich in a poor, developing country. Using this data from Eurostat, a first allocation of resources was carried out on the basis of the distribution of food aid to "poor people" in Europe, among the EU countries that wanted to participate in the programme.

The material deprivation rates (MDR) complement the social exclusion picture by providing an estimate of the proportion of people whose living conditions are severely affected by a lack of resources. Thus the MDR in our case excludes the luxury commodities as auto or weeks holiday fees (Antuofermo, DiMeglio, 2012). The severe MDR represents the proportion of people who cannot afford at least a half of the six following items: 1) the arrears on mortgage or rent payments, utility bills, hire purchase instalments or other loan payments; 2) a meal with meat, chicken, fish or

vegetarian equivalent every second day; 3) unexpected financial expenses; 4) a phone (including mobile phone); 5) a washing machine; and 6) heating to keep the home adequately warm.

Figure 2. The severe material deprivation rate (%), 2009-2010.

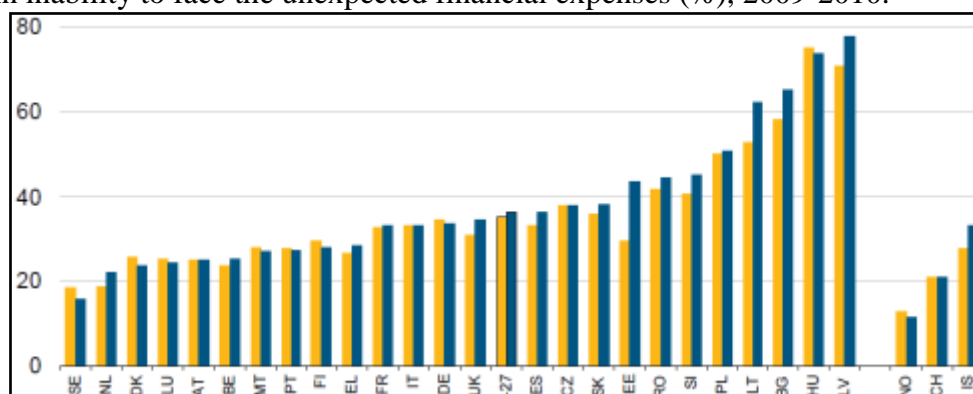


Source: Antuofermo, DiMeglio, 2012.

The deprivation rate exceeded 30% in Bulgaria and Romania, and exceeded 20% in Hungary and Latvia. While overall at EU level, severe material deprivation remained stable between 2009 and 2010, it increased in the Baltic countries (by 5.5% in Latvia, 4.4% in Lithuania, 2.8% in Estonia), or in the UK (1.5%), Hungary (1.3%) and Malta (1.0%) and it decreased significantly in Bulgaria (-6.9%) and Romania (-1.2%). It is no wonder that the Lithuania takes a fifth place endways on.

Among the material deprivation items, facing unexpected expenses showed the greatest variation in 2010 at EU-27 level compared with 2009. This item measures the ability of a household to cover from their own resources an unexpected expense amounting to a fraction (1/12) of the poverty threshold. The amount varies between countries from about €100 in Romania to about €1600 in Luxembourg. In 2010 around 36 % of the EU population reported difficulties in facing such unexpected expenses. This represents an increase of 1% compared with 2009.

Figure 3. An inability to face the unexpected financial expenses (%), 2009-2010.

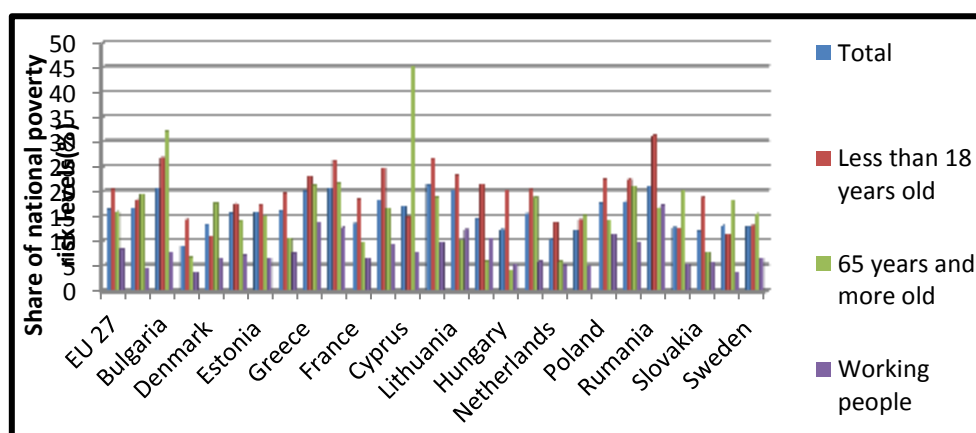


Source: Antuofermo, DiMeglio, 2012.

There is a considerable variation among EU countries. The percentage of people reporting such difficulties ranges from 25% or less in Austria, Luxembourg, Denmark, the Netherlands and Sweden to more than 60% in Lithuania, Bulgaria and Hungary, reaching a maximum of 77.6% in Latvia. Lithuania has taken a fourth place endways on in this instance.

Compared with 2009, the percentage of people reporting difficulties in facing unexpected expenses increased by more than 5% in Estonia (14.0%), Lithuania (9.5%), Latvia (6.8%) and Bulgaria (6.7%). At the same time it decreased by more than 2% only in Sweden (-2.7%).

Figure 4. The conventional risk-at-poverty rate in EU countries by social groups, 2010.



Source: Eurostat, 2012.

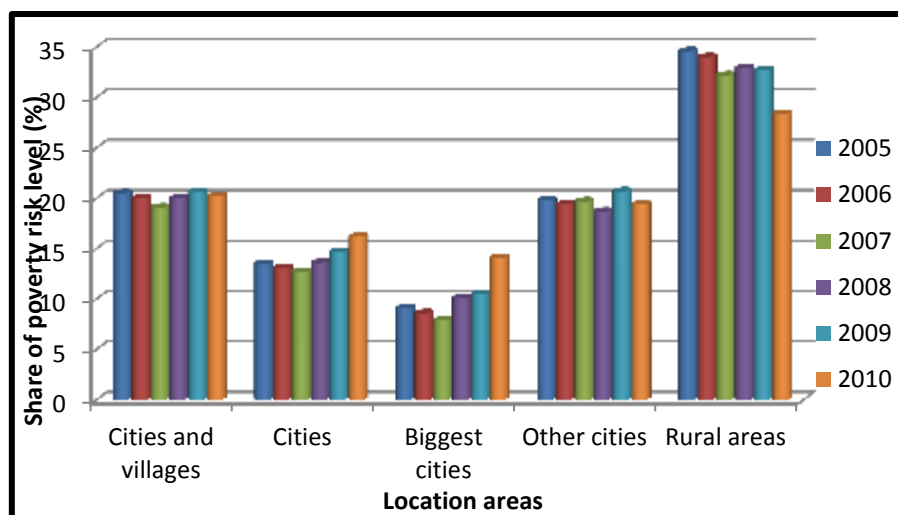
The familiar figure 4 clearly shows that despite enormous number of declarations on the poverty reduction the situation varies slowly. The poverty faces the 17.3% of EU inhabitants in 2010. The poverty risk level (PRL) of younger than 18 years people clearly exceeds the average poverty levels of other groups in biggest part of EU countries. We can observe the same high trend for old and retired people too. The PRL of working people slowly varies since 2005. The largest levels are observed in Rumania (17.2%), Greece (13.8%), Spain (12.7%) and Lithuania (12.3%), the minimal are in Finland and Czech Republic (3.7%) and Belgium (4.5%). The given level even has increased in Lithuania at 4.1% since 2007.

Approximately 59% of the EU27 population live in rural regions (Bertolini, Montanari, Peregrine, 2008). GDP per head, is generally lower in rural than in urban areas. Even taking all the limitations of the GDP indicator into account, this evidence suggests the existence of a higher risk of poverty of rural areas as compared to urban ones. Data thus seem to show the presence of a phenomenon of poverty in rural areas, i.e. the people living in rural areas are at a disadvantage in comparison with those living in urban areas. A survey of eight different EU countries noticed the following pattern: rural areas are characterized by a higher degree of income poverty with respect to urban areas in all countries for which such distinction is possible (Stubbs, 2009). The gap in poverty rates between rural and urban areas is larger in Eastern European countries than in Western countries. Moreover, in Eastern countries poverty is generally associated with difficulties in the agricultural sector. In Western countries, within rural areas, poverty is concentrated in remote regions and, in general, regions with hard accessibility problems. The second note on different levels of social groups can be drawn from the European statistics. The clearly high positions of poverty levels of young and old people can be noticed. It is evident that the Lithuania takes a modest place of high poverty rate among the European countries. So, what are the state of poverty and social exclusion in Lithuania and the roles of appropriate factors in dynamics of poverty?

State of poverty in Lithuania

The numerous observations of the poverty were carried out in Lithuania by paying attention to the components of risk poverty rate (Lith. NDS, 2012).

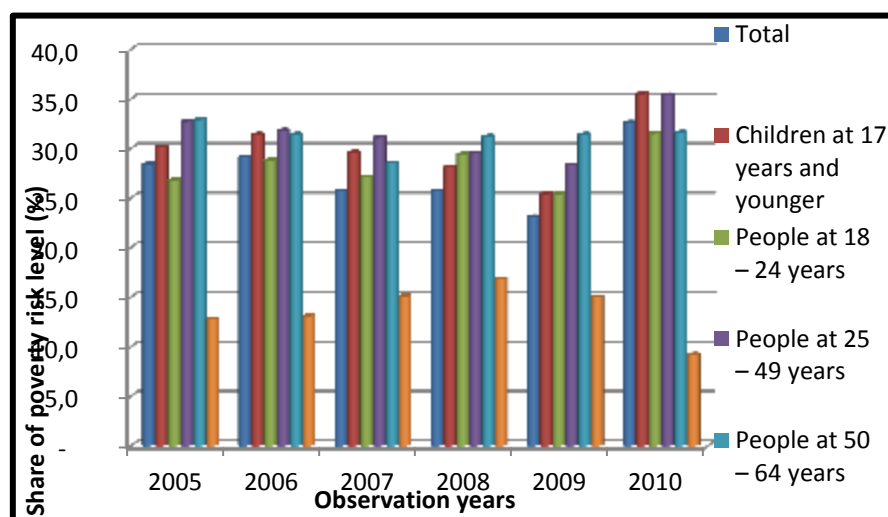
Figure 5. The dynamics of poverty risk levels by the location areas.



Source: LNDS, 2012.

The national at-risk-of-poverty-rate (RPR) varies quite little from 2005 to 2010 (Seckute, 2012). Unfortunately, the biggest RPR is to be found in the rural areas of country (28.4% at 2010). It is clearly bigger two times than in different cities (14.1%). The least PRL was observed during the period of economic growth at 2006-2007. The constraints are familiar from the poverty analysis in Europe, especially of Eastern European countries: the shortage of working people, lesser wages and lower background are the clear premises for high RPR in the villages. The weak social infrastructure does not meet the expectations of young people in rural areas too. These trends of the development of working people market remain the same, tough it has been passed 13 years and the crisis on 2009-2010 (Macys, 1999e).

Figure 6. The dynamics of RPR by the age groups



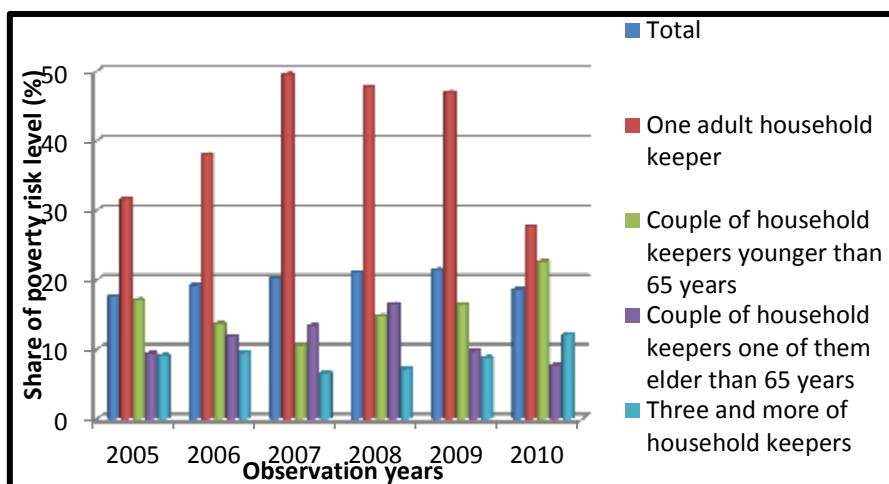
Source: LNDS, 2012.

The highest RPR of the groups of children and working people of 25-49 years old are coming to notice, and that high-risk trend continues to grow. The PRL of retired people are conversely much lesser and clearly declining during the past 4 years. It is a quite good result of successful governmental policy of growing pensions in Lithuania and feeding social relationship especially in

rural communities of Lithuania (Macys, 2011b; Macys, Vijeikis, 2010c). It can also be noticed in Fig. 6 that the integral situation does not change during past 5-7 years.

The level of household keepers RPR shows conversely an extremely high RPR for a single household keeper though the strong decline of a given index is also remarkable (Lith. NSD, 2012). It is a result of successful governmental agriculture policy giving the subsidies to incomplete young families especially in rural areas of Lithuania.

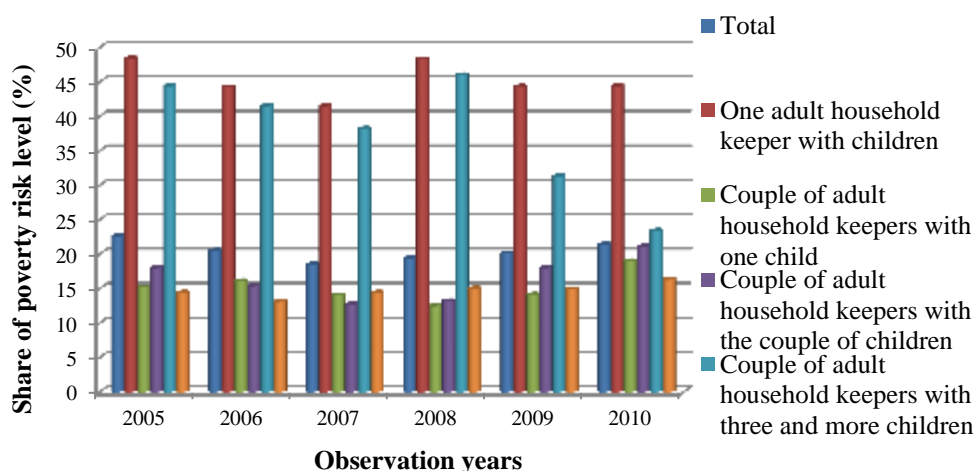
Figure 7. The dynamics of poverty risk levels by the childless household size



Source: LNDS, 2012.

The same trend of high PRL can be observed in case of the households of single mother or father with children. It is quite clear that the given index is appreciably diminishing since 2007. This decline is partially due to grow of pensions in Lithuania and the fact that the single owners of households are predominantly the retired people. The RPR of other household groups do not vary appreciably during past 7 years.

Figure 8. The dynamics of RPR by the size of household with children.



Source: LNDS, 2012

The RPR for big families was actually high, though the clear decline of 7.9% can be also noticed since 2008. It is a result of successful governmental policy discussed before. So, if the territorial disparities of incomes are not taken in account, obviously the social disparities on

community level are emerging. The educational and professional disparities are playing to certain extent in poverty spreading as the derivative factors too. An analytic model of poverty process can be undertaken now by keeping in mind the mentioned constraints.

Model of individual poverty in Lithuania

In order to cope with that statistical problem of poverty, the one of the many available techniques has been chosen: a multilevel model, which treats the upper levels (the individuals and the regions) not as unique entities but as units primarily characterised by factors calculated at their level (e.g. characteristics of the individual, or the unemployment rate of the region). These models explicitly take into account the hierarchical structure of the data, thereby allowing us to analyse - first to measure, then to explain - the fraction of the variability of the poverty rate which is attached to each (nested) level (Reinstadler, Ray, 2010). Contrary to the fixed effects models (Stubbs, 2009), a multilevel model make use of the between variance, and are therefore especially useful when this variance is quite high. Some authors have already stressed that the use of this kind of models would be relevant in this framework but they have underlined also the complexity of these models, whose convergence status is often out of reach (Cappellary, 2004; Brady, Mullerton, Moren-Cross 2009).

The analysis of the at-risk-of-poverty determinants can be improved by taking into account factors at macro (regional) level. This hypothesis has already been made in previous research, at country-level, on cross-sectional data (Reinstadler, Ray, 2010). The territorial data are used in this analysis in order to get more precise estimated parameters, and we test if the regional unemployment rate and the regional GDP affect the individual at-risk-of-poverty status. The model is a binary logistic regression, where the probability of being at-risk-of-poverty is explained. This multilevel model takes into account three levels: a time measured in years, the individuals and regions. It can be written in its reduced structural form:

$$\text{logit } P_{ijk} = \gamma_0 + \gamma_1 z_{0k} + \delta_0 x_{1ijk} + \delta_1 z_{1k} x_{1ijk} + \beta_2 x_{2ijk} + U_{0k} + U_{1k} x_{1ijk}, \quad (1)$$

The explanatory variables have been chosen in order to take under control the different structural determinants of the poverty status. Some of them are related to the demographic characteristics of the household (number of children and number of adults), others to the labour market (presence of at least one adult with an upper level of education, number of employed people), others still to the health status (presence of at least one adult with chronic disease, or hampered by illness in his/her daily activities). Two additional variables are measured at the regional level: the GDP and the unemployment rate.

Beyond the usual hypotheses concerning all the control variables, two further ones concerning the variables of interest are made: a first hypothesis assumes that the negative effect of the level of education on the probability of being at-risk-of-poverty could be weaker in richer areas (where the probability of being poor is quite low, whatever the level of education). A second hypothesis assumes that the negative effect of the number of employed people in the household on the probability of being at risk of poverty could be attenuated when the unemployment rate is high due to the downward pressure on wages. The method of numerical research enables to check the different premises and structural determinants of poverty dynamics as the results of possible political actions as well.

Results of modelling in Lithuania

The present model supplemented by the published already macro econometric model of regional economic development in Lithuania constitute a strong analytic instrument of the poverty analysis in country (Macys, Stunguriene, 2005d). The mentioned macro econometric model was based upon the single territorial area analysis. It means that the present analysis can be successfully

applied on international level too. The main concern in is to obtain the constants of regressive analysis.

The probationary modelling and testing are underway at Mykolas Romeris University. The first series of modelling have revealed good results. As expected, the regional GDP per capita has a strong and highly significant direct negative effect on the probability of being at-risk-of poverty: for individuals living in households where nobody has an upper education level, the odds of being poor decreases by 7.3% for an increase of annual GDP per capita by a 100 Euros (Macys, 2012a). It coincides well with earlier observations of territorial disparities of human resources market (Macys, 1999e). These direct effects are supplemented by an indirect effect: the regional GDP per capita moderates the negative impact of upper education on the poverty risk.

Conclusions

The observations of the poverty were carried out in Lithuania and European Union by paying attention to the important components of risk poverty rate. The results clearly show the higher poverty levels in rural areas of Lithuania. The social groups of single adult household keepers, big families and retired people of country are also undergoing the high probability of being at-risk-poverty.

A multilevel regressive econometric model of poverty processes was developed too. The method of research is analytic and enables to check the different premises and structural determinants of poverty dynamics and the possible scenarios for political actions. The present model in conjunction with macro econometric model of territorial disparities can present the good results as on national, as on international (European) level as well. These simulations are underway now.

The probationary modelling has noticed the strong influence of regional GDP per capita on the probability of being at-risk-of poverty: for individuals living in households where nobody has the upper education level. This direct effect is supplemented by an indirect effect of the negative impact of upper education on the poverty risk.

The two clear and distinctive strands of a future research agenda can be drawn: 1) to test if there is a genuine effect of macro factors such as the territorial disparities on the poverty probability, and 2) to determine the impact of individual characteristics such as the education or professional experience level on this probability.

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UEFA EURO 2024 in the Baltic States and Finland or Keynesianism Help to the Free Market

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Abstract. In this paper two main ideas are considered. The first proves the failure of economic doubt in the organization and holding of EURO 2024 in the Baltic States & Finland and shows their ability to host the mega-event. The second idea is that the economically relatively weak countries, only then can become equal partners of developed countries in specific areas, if they have in these areas of competitive infrastructure. Promoter of this new competitive infrastructure is the state. Then the state intervention in the economy in Keynes’s understanding will contribute to its prosperity in a globally integrated economic space.

Keywords: EURO 2024, Baltic countries, Finland, football, the free market, state regulation.

INDUSTRIAL POLICY OF THE EUROPEAN UNION AND THE DEINDUSTRIALIZATION

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Abstract. Industrialized production for several centuries has determined the scale and pace of social and economic transformations. Computerization has become not only the determining factor in the development of modern society, but also created the preconditions for economic de-industrialization. Machinery exclusion from the sphere of human activity is an objective process. Public adaptation mechanisms, through decreasing the role of material production in the economy, develop as a result of political decisions. EU supranational industrial policy is influenced, first of all, by the national action principle on the development of industry of its leading countries – Germany, France, Italy, Sweden. This means that the EU industrial policy has a marked emphasis on socially-oriented market. For small open economies the social orientation to the market economy contains a risk of deepening the negative aspects of de-industrialization.

Keywords: de-industrialization, enterprises, industrial policy, manufacturing industry

JEL classification:

025 Industrial Policy

Introduction

The substantiation of the national economic policy, its nature, functions and tasks has a long history. From the time when machine production became dominant in the world economy the state intervention in regulating the economy has qualitatively changed. The key role here has been taken by the progress of scientific research, technical, technological and social spheres. One of the economic policies is industrial policy. Development of the modern industrial policy is characterized by the absence of a strong sectoral priorities related to the underlying business structure diversification. That is why in most cases corporate structures in one or another country have become the destination of the industrial policy.

In industrialized countries productivity growth is ensured by increasing the use of information technology, active technological innovation and reduction of the production costs. Competition has brought to the fore non-price factors, the most important of these is the quality of the goods, the novelty and scientific capacity. Innovation has become the key factor to achieve high competitiveness. These are innovations that enable the rapid increase in return of investment. Furthermore, when assessing the effectiveness of innovation one should take into account not only the expenses for science, but also the acquired number of patents in the country and abroad, the expenses for design and marketing, intellectual property protection and the degree of development of the field of education. An important role in innovative activity is taken by the business culture, the level of private initiative and desire to risk.

The emphasis on innovation raises the machine and machine production future challenges. Obviously, machines crowding on the periphery of the material production contributes to the reduction of the amount of industrial manufacturing. The downside of this process is the increase in the share of services in gross domestic product (GDP). Educational and financial, consulting and communications constitute a small part of the list of services that make up the demand for labor in the knowledge-based economy.

Becoming a knowledge-based economy is much faster than the formation of machine production. So, while the industrial revolution, as noted M.Castells, from their native western Europe coast of the world spread widely over the next two centuries, new information technologies spread on the planet at lightning speed, in less than two decades from the mid-1970s to the middle

of 1990. This is due to the fact that the state, not the entrepreneur-innovator, initiated the information technology revolution (Castells, 2009).

Manuel Castells rightly belongs to the scientists, who for many years define the direction of the contemporary socio-economic research. Therefore, his conclusion about the decisive contribution of the state in creating the conditions for the spread of knowledge-based economy is very important also for the understanding of industrial policy issues in the context of de-industrialization in the Europe Union (EU). Is the rate of "Brussels bureaucracy" for financial support of the accelerated spread of information technology at the expense of investment in the infrastructure of industrial production justified? What is the degree of freedom of EU member countries in developing national industrial policy directions? In particular, if the material benefits of modern technologies for the economy can be observed only in the long run, but the decrease in the GDP and rising unemployment – in the current reality.

The aim of this paper is to look at today's EU industrial policy, its links with the de-industrialization processes in the modern economy, with the emphasis on the Baltic States, especially on the Latvian case. The object of research is the industrial policy in the context of de-industrialization. During the research the following challenges are addressed: to get the theoretical background for state intervention in industrial development; to explore the process of de-industrialization in modern times, including the impact of technological progress; to find out the characteristics of industrial policy of different groups of EU Member States; to assess Latvian (Baltic countries in general) industrial policy; to develop recommendations for policy development. Section 1 of the article analyzes the theoretical and methodological basis of industrial policies, as well as the de-industrialization (industrialization) in determining the definition, object and types of the industrial policy. In Section 2, based on statistical data, trends analysis in technological development of EU manufacturing industry in the last years is given. Section 3 is devoted to critical analysis of the EU's industrial policy main principles. The main conclusions are given at the end of the paper.

1. Methodological Survey of Industrial Policy of the European Union

In countries with developed market economy the state played an important role in the establishment of industrial production, creating the necessary conditions for private business development and protecting the industry from foreign competition, but later, creating conditions for social infrastructure and its functioning. Currently, the most important tasks to be carried out for industrialized countries, along with defense, public order and the protection of private property rights include:

- creation and maintenance of an infrastructure of the economy;
- the social sector development (health, education, social security, etc.);
- national business support in the fight against foreign competitors in the domestic market and in the development of markets outside the country. This task can be implemented in the form of protectionism that is incompatible with the principles of market economy.

But just protectionism, especially with regard to the support of entrepreneurs industrialists, often is associated with industrial policy. As a result, many researchers for fear of accusations of promoting the ideas of protectionism, rather vaguely interpret the content, objectives and instruments of industrial policy.

So H.-J. Chang (1994) describes industrial policies as governmental actions supporting the generation of production and technological capacity in industries considered strategic for national development (Chang, 1994). This implies that the discrimination among activities, sectors and agents is based on their potential to boost the overall economy. E.Cohen argues that industrial policy in the strict sense is a sectoral policy; it seeks to promote sectors where intervention should take place for reasons of national independence, technological autonomy, failure of private initiative, decline in traditional activities, and geographical or political balance (Cohen, 2006).

The scope within which industrial policy operates depends on two dimensions (Peres and Primi, 2009):

1. Policy making capacity, which in turn relies on a set of factors including institutional capacity for design, implementation and assessment; and
2. The number and scope of the instruments used, which depends on the development strategy and its specific objectives.

These two dimensions define an industrial policy space, where we can identify a sequence of three types of policies:

1. Horizontal policies are typically the least demanding in terms of institutional infrastructure. They include measures to support human capital formation, and generic measures in support of production activities such as certifications, quality control, and guides for standards setting, among others. They also comprise incentives for infrastructure and business environment development.

2. Selective (sectoral) policies require greater institutional capacity, since they involve specific sectors or special interest areas. Their implementation calls for a broad set of instruments. Examples of selective policies are, targeted attraction of foreign direct investment, sector-specific international trade negotiations, incentives and subsidies for specific sectors or production activities, and programs in support of the competitiveness of given industrial activities.

3. Frontier, each characterized by different sets of instruments, targeting and institutional arrangements. Frontier policies respond to a broader national development vision, and aim at creating capabilities in key strategic technological and science areas.

All researchers mark rather indefinite content interpretation of industrial policy. Vishnevsky V.P and Dementjev V.V. have written about it more definitely. According to them, it is impossible to define industrial policy due to the lack of clearness:

- what is the object of industrial policy (what is meant by the industry as the object of policy, why and how it should be distinguished from other sources of employment);
- what actions are related to the content of industrial policy;
- what are the objectives of industrial policy (Vishnevsky & Dementjev, 2012).

Methodological uncertainty in the interpretation of industrial policy can be overcome provided that it is linked to the subject and object of research. For purposes of this study, a working definition of industrial policy is based on:

- a formal understanding of the phenomenon of de-industrialization (industrialization) and
- limitation of the subject of research to manufacturing industry.

In the Cambridge Dictionary the process by which a country or area stops having industry as its main source (= cause) of work or income it is interpreted as de-industrialization but the process of developing industries in a country – as industrialization (Cambridge Dictionary Online, 2012).

Statistically de-industrialization is expressed in reducing the share of industry in the GDP and decreased employment in material production sphere. Industrialization in the traditional sense, as the formation process of a large-scale machine production in the developed countries was completed long ago. But industrialization as the process of quality, innovative transformation in the industry is relevant now to the governments of many countries as well to the executive structures of European economic integration.

Taking into consideration what is said above, in the context of this study it can be asserted that industrial policy is the forms and methods of institutional regulation of de-industrialization (industrialization) affecting the functioning and development of the manufacturing industry of the country. The guiding principles of modern industrial policy are as follows:

- transition from the sectoral industrial policy to competitive industrial policy;
- transition to a knowledge intensive economy in which knowledge and information production, distribution and use are the key to sustained economic growth;
- industrial policy is no longer focused on specific industry sectors and subsidization of it. In today's industrialized countries politicians are aware that the state will not get the effect from support of the selected "sector-winning" and the selective public assistance has become an expensive pleasure;

- public authorities attention is more and more focused on the business environment that increases business opportunities to be innovative and competitive.

2. Trends in technological development of EU manufacturing industry

Industry during the reign of machine production was considered to be the leading sector of the economy of each country. Theory and the global economy have practically proved that the industry has a key role in the country's economic security mechanism. This is achieved by "natural selection" process of competition between the most successful entrepreneurs, as well as active public participation in the creation of competitive conditions in the survival and development of national production. The published 14.10.2011. European Commission (EC) report "Industrial Policy: Reinforcing competitiveness" stated that „European industry is of critical importance for the EU as a global economic leader. Industry is also the key source of the innovations required to meet the societal challenges facing the EU” (European Commission, 2011).

At the same time scientific technology, trade liberalization and economic integration reduced the strengthening of the importance of manufacturing industry, but its share in GDP in industrialized European countries accounts for only 18-23%. According to the EC (European Commission, 2011) the largest share of manufacturing industry in GDP – 24,2% – was in 2009 in Ireland (change in shares of GDP between 1997 and 2009 = –6,6%), see Table 1.

Table 1: Share of manufacturing industry* in GDP in 2009 and change in shares of manufacturing industry of GDP between 1997 and 2009 (%)

	EU– 27	Ireland	Germany	Finland	Lithuania	Estonia	Latvia
Share in GDP in 2009	14,9	24,2	22,7	18,2	16,4	14,3	9,9
Change in shares of GDP between 1997 and 2009	–4,9	–6,6	0,2	–6,6	–2,2	–5,7	–10,3

* In accordance with the NACE classification manufacturing industry included all activities within Section C. Both cottage industry and large scale activity are included. It should be noted that the use of heavy plant or machinery is not exclusive to Section C (NACE Rev. 2).

Source: European Commission (2011)

The information in Table 1 shows that:

- EU manufacturing industry for the period 1997 to 2009 showed an average annual decrease in the share in GDP –4,9%. This fact is the argument confirming the process of de-industrialization of the European economy;
- industrialists of Germany – the EU leaders – in 1997-2009 managed to keep the share of manufacturing industry in GDP at 22.7%. This gives reason to believe that Germany was able to carry out qualitative transformation of the national manufacturing industry and thereby slow down the process of de-industrialization;
- in Baltic countries (including Finland) entrepreneurship in manufacturing industry is losing ground in the economy. The most obvious de-industrialization of the Latvian economy – the average annual rate of decline in the share of industry in GDP exceeded 10%! The result is that the contribution of Latvian manufacturers in GDP in 2009 was almost the lowest in the EU. According to this indicator only Cyprus (6.8%) and Luxembourg (6.5%) have overtaken Latvia.

Looking back to the longer-term changes in the industrial structures of the Member States in 1999–2007 EC experts have classified all the countries in 4 groups (European Commission, 2011): In the first group of countries, the industrial structure is dominated by technologically advanced sectors. A key development in this period has been that the specialization of this group in technology-driven industries and sectors with high innovation or high education intensity increased further. The countries in this group are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Sweden and the United Kingdom.

The second group includes countries with industry specialization in less technologically advanced sectors, despite the presence of some highly competitive industries. The prevalence of labour intensive industries, low innovation and relatively low knowledge intensity lead to fewer high-growth firms, at least compared to the first group of countries. The countries in this group are Cyprus, Greece, Italy, Luxembourg, Portugal and Spain.

The third group comprises countries that are catching up in terms of GDP per capita, and whose trade specialization is in high-innovation intensity sectors and technology-driven industries. They have achieved a structural change from labour-intensive industries towards technology-driven industries on both production and trade. The group consists of the Czech Republic, Hungary, Malta, Poland, Slovakia and Slovenia.

The fourth group of countries are those that are catching up, but with trade specialization in technologically less advanced sectors. These countries resemble those of the second group with which it also shares the trend towards sectors with higher educational intensity. However, a major difference is the much stronger than average presence of high-growth firms in this group, and the large increase in industry and trade specialization in technology-driven industries. This group consists of Bulgaria, Estonia, Latvia, Lithuania and Romania.

Indirect confirmation of the conclusions of the EC experts contains statistics on high-tech industries. So, in the first group of countries, where the industrial structure is dominated by technologically advanced sectors, the number of medium-high and high technology manufacturing enterprises according to Eurostat significantly higher than the average for EU-27 (see Table 2).

Table 2: Statistics on high-tech industries at the national level (NACE Rev.2) – 2009 (%)

		EU-27	Germany	Finland	Lithuania	Estonia	Latvia
manu factur ing	Medium-high	10,2	15,0	13,1	3,3	7,4	4,9
	High	2,4	4,9	2,6	1,2	2,2	1,5
	Medium-low	34,4	36,6	39,4	24,8	32,7	25,6
	Low	53,0	43,5	44,9	70,7	57,7	68,0
In total enterprises		100,0	100,0	100,0	100,0	100,0	100,0

Source: Eurostat data

In Germany medium-high (Electrical and Non-electrical machinery, motor vehicles) and high (Aerospace, Pharmaceuticals, Computers, office machinery, Electronics, Communications, Scientific Instrument) technology manufacturing enterprises in 2009 amounted to 19.9% of the total number of enterprises. The proportion of medium-high and high technology manufacturing enterprises in the total number of companies in the EU-27 is a little over 10% (12.6% in 2009). In this context, it can be asserted that the economy of Germany rather successfully overcomes the way from the machine production to the knowledge-based production. German industrialists success is determined by:

- in the leading sectors of economy of Germany – Electrical Machinery, Motor Vehicles, Pharmaceuticals, Electronics, Communications, Scientific Instrument et al. – is dominated by transnational corporations (Siemens AG, Volkswagen, BASF, Deutsche Telekom AG, Leica Microsystems). Corporations significant investments in developing and implementation of innovations are an effective tool for creating a knowledge-based manufacturing. German small business also makes extensive use of the financial resources of corporations, in particular, to create venture enterprises.

- the economy of Germany has maintained a fairly high low-technology manufacturing enterprises share (43.5% of all businesses or 9 low-technology manufacturing enterprises per high-technology manufacturing enterprise). It should be also noted that low-technology manufacturing food, beverages, tobacco, textile and clothing enterprises are usually concentrated in small towns. This not only slows down the de-industrialization, but also addresses the problems of employment in the country.

- government officials, forming the country's industrial policy at the federal and state level, are actively lobbying the interests of German industrialists in the EU government structures. In Germany, as Lehmann notes, there has traditionally been a high degree of business confidence in the government and in the national channels used to Influence the EU policy process (Lehmann, 2003).

The fact that the high saturation of the German industry with high-technology manufacturing enterprises is even more evident compared to the statistics of the Baltic States. Thus, if in the industry of Finland 1 high-technology manufacturing enterprise in 2009 accounted for 17,3 low-technology manufacturing enterprises, then in Estonia, Latvia and Lithuania – 25,9, 46,5 and 60,6 food, beverages, tobacco, textile and clothing enterprises respectively. Such a strong position in the Baltic countries of traditional machine production sectors is also reflected in the numbers of manufacturing employment (see Table 3.)

Table 3: Dynamics ($\frac{2010}{2008}$ %) of employment in EU manufacturing at the national level*

	EU-27	Germany	Finland	Lithuania	Estonia	Latvia
Manufacturing total	91,2	99,2	90,2	80,0	80,3	77,9
Medium-high & high technology	91,5	99,0	91,0	77,4	75,8	65,3
Medium-low & low technology	91,0	99,4	89,7	80,4	81,4	79,6

* calculated on the Eurostat basis of the annual data on employment

Source: Eurostat data

So, in 2010 the reduction of the number of employees in medium-low and low technology Baltic enterprises, compared to the 2008 crisis level was less than in medium-high and high technology manufacturing enterprises. This trend manifested itself most obviously in the industry in Latvia. The employment in medium-high and high technology Latvian enterprises in 2010 decreased to 65.3% from 2008 level. Such a trend is unlikely to allow Latvia to keep in the near future the status of "the country's catch-up" attributed by the EC experts to the fourth group of countries. If you do not take into account the increased competition in the market of medium-high and high technology manufacturing enterprises products, the reasons for the pessimistic forecasts about the prospects for expansion of knowledge-based manufacturing in the economy of Latvia can be formulated as follows:

1. Industrial policy of Latvia does not have clear guidelines, and it is poorly coordinated with other economic policies. This conclusion is supported by task analysis of industrial policy, formulated in the regulations of the Ministry of Economics of Latvia (LR Ekonomikas ministrija, 2012):
 - the aim of national industrial policy is the transition to the production of higher value-added goods and services;
 - the main directions of the national industrial policy will be focused on the development of industrial zones, support for existing and emerging industries, labour tax reform, creation of excellent business environment, reform of innovation systems, as well as a new approach to employment policies.
2. In the manufacturing sectors of the economy of Latvia there are no corporations, which, by analogy with Germany, can invest in high technology Small and Medium Enterprises (SMEs). To

confirm this argument, one can refer to the Central Statistical Bureau of Latvia, according to which the share of large manufacturing enterprises (250 or more employees) in 2010 was only 0.7% of the total number of manufacturing enterprises, and the average number of employees in one large enterprise – 550 people.

3. The possibility of using forest resources existing in relative abundance and the low cost of the Latvian wood make an attractive manufacture of wood – the industry, which statistics include in the low technology enterprises. Thus, in 2010 the share of manufacture enterprises of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials amounted to 21% of the total number of enterprises of Latvian industry. For comparison: manufacture enterprises of computer, electronic and optical products – only 1.3%. Overall, almost half (46.6%) of Latvian manufacturing enterprises is low technology enterprises.

The situation in the industry in Latvia has features typical of the economies of Eastern Europe. Many of the national governments were unable to develop the forms and methods of industrial policy, which are not based on the traditional tools of protectionism. Entrepreneurs, who are predominantly SMEs, failed to form a "social order" for their politicians. Difficulties to consolidate the large number of diverse positions of enterprises are reflected in the low efficiency of lobbying the interests of entrepreneurs in national government structures. In this context, it appears that better results at the EU as a whole and for each individual country can be achieved on the condition that industrial policy built on knowledge-based manufacturing is developed in Brussels and strictly implemented in every separate country.

3. The basic principles of EU industrial policy

The history of European industrial policy EC experts have classified (European Commission, 2010) into several phases. In recognizing the treaty establishing the European Coal and Steel Community and the foundation of EURATOM as the first phase attempts to implement some sort of an industrial policy on the European level.

The treaty establishing the European Economic Community (EEC) marks the second phase; the treaty itself does not mention industrial policy. The main purpose of European integration – aside from political goals – was the creation of an internal market. The attempt to increase competition and the free flow of goods necessitated the reduction of tariffs and trade barriers. Subsidization and national assistance to specific sectors had to be abandoned or at least made subject to common rules. The treaty nevertheless allowed various versions of industrial policy to be maintained in different member countries, some of which focussed on sectoral policies, others on framework conditions.

The third phase began with the discussions surrounding the Maastricht Treaty, which established industrial policy explicitly as an area of the Community's responsibility. Industrial policy was defined as the promotion of competitiveness, with a focus on the horizontal approach. The importance of new technologies in general and of information technologies was acknowledged.

The renewed interest in industrial policy since about the year 2000, has been stimulated by globalization, enlargement, deindustrialization and slow European growth. It constitutes a fourth phase emphasizing the sectoral dimension of the horizontal approach.

Industrial policy of EU in the boom of large-scale machine production, i.e, in the second half of the XX century, through the operation of EEC had a selective (sectoral) nature. Incentives and subsidies for specific sectors or production activities, and programs in support of the competitiveness of given industrial activities were in the political arsenal from 1957 to 1993, during the existence of the EEC. The British scientist J.Foreman-Peck, carrying out the analysis of the European industrial policy in the XX century, argues that structural policies are the core of classical industrial policy. These policies have targeted single firms or industries according to two different principles. One is „picking winners” – supporting those industries or businesses that the authorities deem to have great potential. The other principle is „helping losers”, firms and industries in trouble (Foreman-Peck, 2006).

The transition from machine production to a knowledge-based manufacturing work has not been finished even in Germany, as indicated by the information in Tables 1 and 2. Therefore it should be possible to use the principle of "picking winners" in the German economy in such high technology manufacturing sector as aerospace. But "helping losers" principle EU officials could well use in the implementation of industrial policy in sectors that are important for the new EU Member States' economies. In Latvia, for example, manufacture of wood could become "helping losers" industry. This would allow:

- identify responsibility of the EU executive structures for effective implementation of EU member governments sectoral (selective) industrial policy;
- define the segment of single European market for the competitiveness of which one or the other EU Member States would be responsible. German enterprises, for example, would focus on strengthening the competitiveness of aerospace manufacturing, but Latvian – on manufacture of wood.

It must be recognized, however, that the current notions of progressive economic sectoral structure are changing very fast. Therefore, a return to the old EU Member States experiences with proved sectoral (selective) industrial policy forms and methods can only supplement industry policy, which is defined as the promotion of competitiveness, with a focus on the horizontal approach. Horizontal Objectives include (Riess & Vāilā, 2006) research and development (R & D) environment, support for SMEs, and training aid. EU Member States outside the industrialized countries, should focus on strengthening the position of national business and expanding the capacity of the information infrastructure of the economy. Development of information and communication technologies is a necessary requirement of de-industrialization (industrial) process management. Support of SMEs – is a sufficient condition for the qualitative transformation of modern industrial production.

This approach is fully in line with Europe 2020 objectives set out in a European strategy for smart, sustainable and inclusive growth (EUROPE 2020, 2010): access for SMEs to the single market must be improved. Entrepreneurship must be developed by concrete policy initiatives, including a simplification of company law (bankruptcy procedures, private company statute, etc.), and initiatives allowing entrepreneurs to restart after failed businesses. Citizens must be empowered to play a full part in the single market. This requires strengthening their ability and confidence to buy goods and services cross-border, in particular on-line.

Strengthening the institutional information and communications infrastructure enables to raise the quality of economic policy, including the industrial policy of the state. The World Wide Web (WWW) or Internet technologies provides great opportunities for entrepreneurs to take action in the virtual market. Virtual entrepreneur is not only the man who is able to receive and transmit information constantly, but at the same time he is a professional who is able to maintain the competitiveness of enterprise at an appropriate level. Entrepreneur's professionalism manifests mainly as an efficient use of intellectual resources owned(or: managed) by him.

WWW-technologies raised the democratic level of market infrastructure, contributed to the increase of competition intensity. The fact is that the Internet creates equal opportunities for access to information about products and services for all potential real players. Virtual market, by definition, is the space, where the goods and services are bought and sold on-line. Supply scale of goods and services for virtual buyer is unlimited. As a result, an entrepreneur, an active internet user can successfully compete in the market, regardless of the size of the involved resources. Intellectual resources come to the fore for the large companies as well as for individual entrepreneurs when there is a business emphasis transposition from the market supply of the particular goods or services to meeting a particular buyer's needs with the WWW-technologies help.

The emphasis on the use of EU institutions forms and methods of selective (sectoral) industrial policy, approbated in EEC practices, in relation to the industrialists in countries with a predominance of low-technology manufacturing enterprises will strengthen the competitiveness of the European economic area. This conclusion is supported by the arguments:

1) technical, technological, qualifications and educational potential accumulated by the manufacturers in the Baltic countries is able to quickly adapt to the post-industrial production requirements;

2) the slowdown of the qualitative transformation of the industry in the Baltic countries is a prerequisite for the exporters from the third countries to expand their presence in the domestic markets. For the exporters from developed EU countries, the Baltic States consumers are not interesting due to their rather low purchasing power. However, taking into account that the markets of the Baltic States at the same time are part of the EU single market, there is a risk of low-cost competitive product expansion from the third countries;

3) the acceleration of the pace of de-industrialization with the slow pace of industrialization in the background contains threats of social degradation of the population of the Baltic States. In this case, the future financial injection from the EU budget into social programs may significantly exceed the current funding of selective (sectoral) industrial policy.

The evolution of the industrial policy in the foreseeable future will be determined by the scale and rate of state and entrepreneurs cooperation, where both parties participate on a parity basis. The state and the business community should have equal rights and responsibilities for strategic decision making and implementation. EU Member States are on the way to close cooperation between the state and the market, implement a competitive industrial policy, seek to liberalize the industrial, financial and infrastructure (energy, transport, telecommunications) markets. Supranational EU industrial policy is formed, first of all, using the principles of government influence on the development of the industry in its leading countries - Germany, France, Italy, Sweden. But Baltic politicians have a lot of work ahead in lobbying national business, including lobbying entrepreneurs - industrialists.

Conclusions

1. Transition to machine production during the formation of knowledge-based economy in the EU Member States takes place on the background of de-industrialization. Development of forms and methods for reducing the negative effects of de-industrialization is the result of industrial policy.

2. Goals and objectives of industrial policy in the scientific literature are not clearly formulated due to the fear of scientists being accused in support of protectionism.

3. Industrial policy – that is the forms and methods of institutional regulation of de-industrialization (industrialization) influencing the functioning and development of the manufacturing industry of the country.

4. In the Baltic countries entrepreneurship in manufacturing industry is losing ground in the economy. A significant reduction in the share of manufacturing industry in GDP has occurred in recent years in Latvia. Industrial policy of Latvia does not have clear guidelines and it is poorly coordinated with other economic policies.

5. It is possible to reduce the negative effects of de-industrialization in the Baltic countries by strengthening the responsibility of EU executive bodies being in charge of the implementation of the sectoral (selective) industrial policy of their governments.

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THE MINIMUM WAGE IN THE EUROPEAN UNION AND UNEMPLOYMENT

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Abstract. The minimum wage is an instrument of economic policy, which often causes conflicting responses. The opponents of the minimum wage argue that the minimum wage has a negative impact on employment. Proponents argue that the minimum wage has a social function. All EU countries have introduced a system of determining of the minimum wage. In most states there is a statutory minimum wage. In other countries, the minimum wage is negotiated in collective agreements of higher order. The article deals with how the recent economic recession has affected the minimum wage in the European Union. The second aim of this article is to find out whether the minimum wage has an impact on the unemployment rate.

Keywords: European Union, labour market, minimum wage, unemployment

JEL classification:

J31 - Wage Level and Structure; Wage Differentials

J64 - Unemployment: Models, Duration, Incidence, and Job Search

Introduction

At present, each Member State of the European Union has introduced some system of wage threshold. Twenty out of twenty-seven Member States of the European Union has established the statutory minimum wage, which covers all sectors of the economy. In the remaining seven states of the European Union is not the minimum wage in the form of the statutory national minimum wage, but is negotiated through collective bargaining (in collective agreements of a higher order).

The European Union has recently undergone an economic recession. This article aims to analyze whether the economic recession has had an impact on the amount of the minimum wage in each Member State of the European Union. Opinions about minimum wage vary. Most frequently there are disputes about how the minimum wage affects unemployment. Opponents of the minimum wage argue that the minimum wage reduces the flexibility of the labor market and an increase in the minimum wage leads to a rise in unemployment. Supporters of the minimum wage, on the contrary, affirm that reasonable wage increase may not have a negative impact on unemployment. The rise of the minimum wage may even lead to employment growth. According to supporters, the right level of the minimum wage motivate of the unemployed to seek employment. A considerable attention in world scientific literature is dedicated to the impact of minimum wages on unemployment. A summary of the different opinions may be found, for example, in two books. The first book is titled “Myth and Measurement – The New Economics of the Minimum Wage” and its authors are: David Card and Allan B Krueger (Card, Krueger 1995). A second book has been written by David Neumark and William L. Wascher and its title is “Minimum wage” (Neumark, Wascher 2008). From the perspective of microeconomic theory, setting a high minimum wage has a negative impact on employment in the conditions of the neoclassical theory. However, if we consider the existence of monopsony in the labor market, the minimum wage may lead to higher employment. Detailed explanations can be found in advanced microeconomics textbooks or labour economics textbook (for example: Borjas 2010). The second aim of this article is to find out whether the minimum wage has an impact on the unemployment rate in the European Union in the period 2000 – 2010.

The first part of the paper contains analyses of the changes of the minimum wage in the Member States of the European Union since 2005. It is examined whether the policies of the governments were different in the period before the economic recession and during economic recession. The second part of the paper contains a comparison of the amounts of the minimum wages in purchasing power standards in the European Union. The last part of the paper contains

graphical and statistical analyses of the impact of the minimum wages on unemployment in the European Union.

The data on the amount of the minimum wage in the European Union are drawn from Eurostat. The data on the share of minimum wage to the median wage, which is used in the last part of the article, are drawn from the OECD because Eurostat does not publish time series of this indicator.

The minimum wage in national currencies

All Member States have introduced some system of wage threshold. The statutory minimum wage has been currently introduced by the next twenty out of twenty seven EU Member States: Greece (1953)⁶⁶, Netherlands (1969), France (1970), Luxembourg (1973), Portugal (1974), Malta (1974), Belgium (1975), Spain (1980), Hungary (1989), Bulgaria (1990), Poland (1990), Romania (1990), Czech Republic (1991), Estonia (1991), Lithuania (1991), Latvia (1991), Slovakia (1991), Slovenia (1995), United Kingdom (1999), Ireland (2000). The countries that do not have established the national statutory minimum wage in the European Union are: Denmark, Finland, Italy, Cyprus, Germany, Austria and Sweden. Often these are countries where there is a high degree of trade union participation and the percentage of workers who are covered by collectively agreed minimum wages is high. For example in the Nordic countries Denmark, Finland Sweden is trade union organization around 70%. In the remaining four countries trade union participation is not as high as in the Nordic countries, but there are collectively agreed sectorial or professional minimum wages, which are in some cases mandatory for all employees in a given industry or for a given profession. This paper deals only with EU countries that have established the statutory minimum wage.

The development of the nominal minimum wage in the Member States of the European Union in the years 2005 - 2012 is shown in Table 1. Table 1 shows the nominal value of the minimum wage in the national currency in January of the year. The data in Table 1 are more informative, as the absolute value of nominal minimum wages in national currencies in individual years can not be used for international comparisons. The percentage annual changes of the minimum wages, which are in table 2, have got the greater explanatory importance.

From Tables 1 and 2 it is evident that the nominal minimum wage, with one exception, did not fall during this time period. The only exception is France, where the nominal minimum wage in 2006 declined, by 5.3%. In fact, even in this case there was no real decline in nominal wages, it was only a change in the calculation. There is an hour minimum wage in France. Since 2006 Eurostat has used 35 working hours per week for calculation monthly minimum instead 39 working hours. In Ireland from 1 July 2007, the nominal minimum wage was € 8.65 per hour. As a part of austerity measures the Irish government has reduced the nominal minimum wage by one euro to 7.65 euros per hour from 1 February 2011. The new government after the elections has decided to return nominal hourly rate of the minimum wage back to € 8.65 from 1 July 2011. From 1 March 2012 the minimum wage was reduced in Greece. There are data from January in the Table 1.

⁶⁶ Year in parentheses is the year of the introduction of the statutory minimum wages in the country.

Table 1: The minimum wage in the EU in national currency (2005 – 2012)

	currency	2005	2006	2007	2008	2009	2010	2011	2012
Belgium	EUR	1 210,00	1 234,00	1 259,00	1 309,60	1 387,50	1 387,50	1 415,24	1 443,54
Bulgaria	BGN	150,00	160,00	180,00	220,00	240,00	240,00	240,00	270,00
Czech Republic	CZK	7 185,00	7 570,00	8 000,00	8 000,00	8 000,00	8 000,00	8 000,00	8 000,00
Estonia	EUR	171,92	191,73	230,08	278,02	278,02	278,02	278,02	290,00
Ireland	EUR	1 183,00	1 292,85	1 402,70	1 461,85	1 461,85	1 461,85	1 461,85	1 461,85
Greece	EUR	667,68	709,71	730,30	794,02	817,83	862,82	862,82	876,62
Spain	EUR	598,50	631,05	665,70	700,00	728,00	738,85	748,30	748,30
France	EUR	1 286,09	1 217,88	1 254,28	1 280,07	1 321,02	1 343,77	1 365,00	1 398,37
Latvia	LVL	80,00	90,00	120,00	160,00	180,00	180,00	200,00	200,00
Lithuania	LTL	500,00	550,00	600,00	800,00	800,00	800,00	800,00	800,00
Luxembourg	EUR	1 466,77	1 503,42	1 570,28	1 570,28	1 641,74	1 682,76	1 757,56	1 801,49
Hungary	HUF	57 000,00	62 500,00	65 500,00	69 000,00	71 500,00	73 500,00	78 000,00	93 000,00
Malta	EUR	561,53	584,24	601,90	617,21	634,88	659,92	664,95	679,87
Netherlands	EUR	1 264,80	1 272,60	1 300,80	1 335,00	1 381,20	1 407,60	1 424,40	1 446,60
Poland	PLN	849,00	899,00	936,00	1 126,00	1 276,00	1 317,00	1 386,00	1 500,00
Portugal	EUR	437,15	449,98	470,17	497,00	525,00	554,17	565,83	565,83
Romania	RON	310,00	330,00	390,00	500,00	600,00	600,00	670,00	700,00
Slovenia	EUR	490,32	511,60	521,80	538,53	589,19	597,43	748,10	763,06
Slovakia	EUR	215,76	229,04	252,27	268,87	295,50	307,70	317,00	327,00
United Kingdom	GBP	800,00	831,00	883,00	911,00	948,00	956,00	978,00	1 004,00

Source: Eurostat (2012)

http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/earnings/database (10.9.2012)

In the period before the crisis, i.e. in the period 2005 – 2008, monthly nominal minimum wages grew by an average of 7.7%. Higher growth rate reached countries of Central and Eastern Europe. The Baltic States, Latvia, Lithuania, Estonia and also Bulgaria and Romania reached double-digit rates of growth. Conversely fifteen original EU states showed more moderate growth in the period 2005 - 2008. Yet even in these countries the differences can be observed. The higher rate had southern states Greece (5.9%), Spain (6.8%), Portugal (3.9%) and then Ireland (8.0%) and the UK (5.2%). The lower growth rate of minimum wages showed Western European countries France (1.3%), Netherlands (1.4%) and Belgium (2.5%). The economic recession and the associated deterioration in the labour market had effect at the minimum wages. Only five countries had higher the average growth rate of the minimum wage in the period 2009 - 2012 than in the period 2005 – 2008. France by 0.9 percentage points, Slovenia by 5.4 percentage points, Luxembourg by 0.9 percentage points, Hungary by 0.9 percentage points and Netherlands by 0.6 percentage points. The remaining fourteen countries of the European Union had lower average change of the minimum wage in the crisis and after the crisis period in comparison to the pre-crisis period.

Table 2: The annual growth of the minimum wage in EU

	2005	2006	2007	2008	2009	2010	2011	2012	2005 -2008	2009-2012
Belgium	2,00	1,98	2,03	4,02	5,95	0,00	2,00	2,00	2,50	2,46
Bulgaria	25,00	6,67	12,50	22,22	9,09	0,00	0,00	12,50	16,36	5,25
Czech Republic	7,24	5,36	5,68	0,00	0,00	0,00	0,00	0,00	4,53	0,00
Estonia	8,47	11,52	20,00	20,84	0,00	0,00	0,00	4,31	15,08	1,06
Ireland	10,24	9,29	8,50	4,22	0,00	0,00	0,00	0,00	8,03	0,00
Greece	5,85	6,29	2,90	8,73	3,00	5,50	0,00	1,60	5,92	2,50
Spain	11,40	5,44	5,49	5,15	4,00	1,49	1,28	0,00	6,84	1,68
France	5,84	-5,30	2,99	2,06	3,20	1,72	1,58	2,44	1,31	2,23
Latvia	0,00	12,50	33,33	33,33	12,50	0,00	11,11	0,00	18,92	5,74
Lithuania	11,11	10,00	9,09	33,33	0,00	0,00	0,00	0,00	15,47	0,00
Luxembourg	4,55	2,50	4,45	0,00	4,55	2,50	4,45	2,50	2,86	3,49
Hungary	7,55	9,65	4,80	5,34	3,62	2,80	6,12	19,23	6,82	7,75
Malta	3,25	4,04	3,02	2,54	2,86	3,94	0,76	2,24	3,21	2,45
Netherlands	0,00	0,62	2,22	2,63	3,46	1,91	1,19	1,56	1,36	2,03
Poland	3,03	5,89	4,12	20,30	13,32	3,21	5,24	8,23	8,12	7,43
Portugal	2,63	2,93	4,49	5,71	5,63	5,56	2,10	0,00	3,93	3,30
Romania	10,71	6,45	18,18	28,21	20,00	0,00	11,67	4,48	15,60	8,78
Slovenia	5,40	4,34	1,99	3,21	9,41	1,40	25,22	2,00	3,73	9,10
Slovakia	6,91	6,15	10,14	6,58	9,90	4,13	3,02	3,15	7,43	5,02
United Kingdom	7,67	3,88	6,26	3,17	4,06	0,84	2,30	2,66	5,23	2,46

Source: own calculation from Table 1

Over the last four years, the monthly nominal wages have unchanged in three states - the Czech Republic, Ireland and Lithuania. Even in the period 2009 – 2012, higher growths of the minimum wage were in Central and Eastern Europe. The highest average growth rate over the last four years showed Hungary, Poland, Romania and Slovenia. A partial explanation may be the relatively higher inflation rate in these countries.

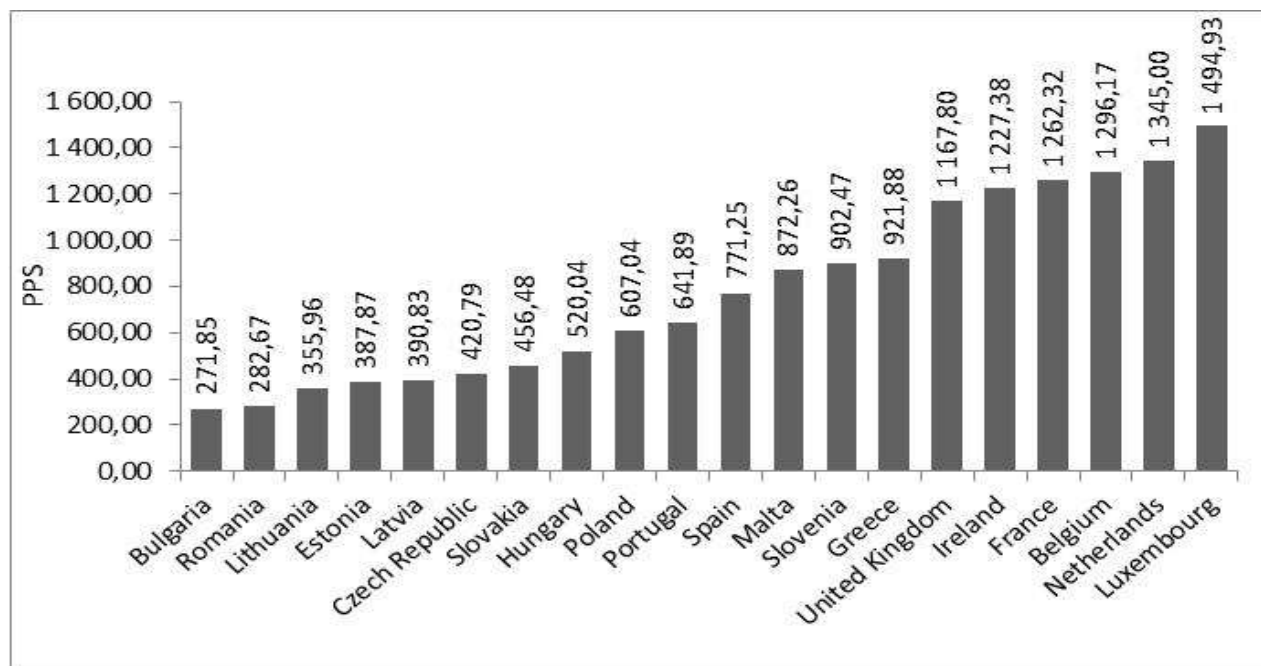
The minimum wage in purchasing power standards

For international comparison, the minimum wage could be expressed in purchasing power standards or in euro. In this paper purchasing power standards are used. The analysis of minimum wages in the European Union in euro can be found in the article “The minimum wage in the European Union and the impact of recent economic recession on its development”(Pavelka, 2012). Figure 1 contains data about the minimum wages in purchasing power standards in the European Union in 2012.

According to the minimum wage in purchasing power standards in 2012, the EU Member States can be divided into 3 groups.

The first group with the highest nominal minimum wage includes countries whose minimum monthly nominal wages exceeded 1 000 PPS. They are the countries of Western Europe: United Kingdom, Ireland, France, Belgium, Netherlands and Luxembourg.

The second group consists of countries whose minimum wage in 2012 ranged between 400 - 1 000 PPS. This group can be divided into two subgroups. The first subgroup consists of countries of Southern Europe: Portugal, Spain, Malta, Greece and Slovenia too. The second subgroup is formed by countries of Central Europe: Czech Republic, Slovakia, Hungary and Poland. The Czech Republic slightly worsened off in the ranking of countries in the given period. The main reason was no increase of the minimum monthly nominal wages in the last five years.

Figure 1: The minimum wage in the European Union in PPS in 2012

Source: Eurostat (2012), own construction,

http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/earnings/database (10.9.2012)

The last third group is formed by countries with low monthly nominal minimum wages, which were below 400 PPS. Into this group of countries belongs besides all the Baltic States - Estonia, Latvia and Lithuania - Romania and Bulgaria too.

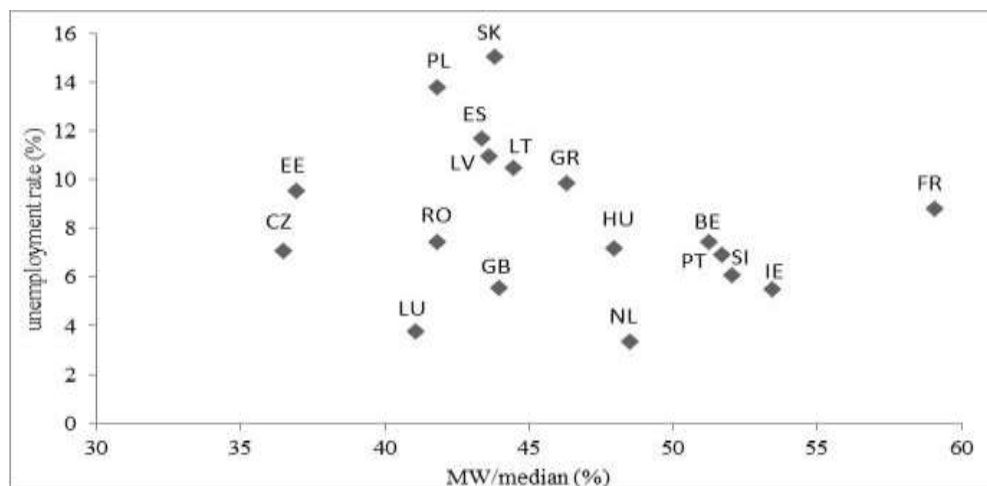
The minimum wage and unemployment

In this part of the paper graphical and statistical analysis of the relationship of the minimum wage and the unemployment rate are made. The analysis covers the period 2000 - 2010, for which data about the share of minimum wage to the median wage are available. Generally, it is assumed that the higher the ratios of the minimum wage to the wage median, the higher the unemployment rate.

On the vertical axis of Figure 2 is the average unemployment rate for the period 2000 - 2010. On the horizontal axis is the average share of minimum wage to the wage median for the same period. Already from Figure 2 it is clear that there will be no strong relationship between the proportion of minimum wage to the wage median and the unemployment rate. A simple regression analysis confirms this conclusion. The relationship between the proportion of minimum wage to the wage median and the unemployment rate is very weak and statistically insignificant.

Besides the simple regression analysis of the relationship which used averages of both variables in 10 years, can be carried out investigations on panel data. The results of this analysis are presented in Table 3.

Figure 2: The unemployment rate and ratio of the minimum wage to the wage median in the EU



Source: own construction and own calculation from OECD (2010), "Earnings: Minimum wages relative to median wages", *OECD Employment and Labour Market Statistics*, <http://www.oecd.org/> (10.9.2012).

Table 3: The influence of share of the minimum wage to the wage median on unemployment.

Dependent Variable: UN?
Method: Pooled Least Squares
Date: 09/04/12 Time: 10:55
Sample (adjusted): 2001 2010
Included observations: 10 after adjustments
Cross-sections included: 17
Total pool (balanced) observations: 170
Convergence achieved after 5 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MM?	0.206842	0.024915	8.302024	0.0000
AR(1)	0.895830	0.030947	28.94682	0.0000
R-squared	0.811247	Mean dependent var		8.774706
Adjusted R-squared	0.810123	S.D. dependent var		4.223897
S.E. of regression	1.840557	Akaike info criterion		4.069708
Sum squared resid	569.1251	Schwarz criterion		4.106600
Log likelihood	-343.9252	F-statistic		722.0512
Durbin-Watson stat	1.222954	Prob(F-statistic)		0.000000

Source: own calculation

The analysis was based on data for the 17 Member States of the European Union for the period 2000 - 2010. For all countries the unemployment rates and the ratios of the minimum wages to the wages medians are used. The data are stationary. The low number of data can affect the quality of the outcome of the model. An autoregressive lag (AR 1) is used.

A simple static model can be written by the equation:

$$u_{it} = c_{it} + \alpha mm_{it} + \beta u_{it-1}$$

where:

u – is unemployment rate

c – is fixed constant that is statistically insignificant and therefore is excluded from the model

mm – is share of minimum wage to wage median

The data in Table 3 show that when the proportion of minimum wage to the median increases by unit, the unemployment rate will rise by 0.2 percentage points. This confirms that the increase in the minimum wage (in this case, faster than the growth of the average wages) may have some impact on the unemployment rate. However, this effect nevertheless seems small.

Conclusion

The minimum wage is an economic policy tool whose use often evokes different opinions. Among economists there is dominant opinion that a high minimum wage leads to a rise in unemployment. But it is obvious that not every increase of the minimum wage must necessarily leads to a rise in unemployment. The proper level of the minimum wage can motivate people to seek employment. This can reduce unemployment.

The analysis shows that the minimum wages in the European Union were increased more in the pre-crisis period. In a time of economic crisis, minimum wages grew more slowly, and some governments even froze the minimum wages for several years. The states of Central and Eastern Europe in the period had a higher growth of the minimum wage than fifteen original EU states. A cause may be a higher rate of inflation in the countries of Central and Eastern Europe.

States of Western continental Europe have the highest minimum wages in terms of purchasing power standards. The lowest minimum wages in purchasing power parity can be found in Eastern Europe.

From performed statistical analysis is evident that the increase in the minimum wage to the wage median lead to an increase in the unemployment rate. This increase was only moderate. From the above analysis does not follow that any increase in the minimum wage must necessarily lead to a rise in unemployment. Negative effects of the minimum wage will be significant from a certain level of the share of the minimum wage to the wage median. It should also be noted that the unemployment rate in the period was influenced by many other factors (among others economic crisis). Applied time series is very short, so it could not be made strong conclusions on the impact of minimum wages on unemployment.

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THE IMPACT OF FDI INFLOW IN THE “AGRICULTURE AND FISHING” SECTOR OF OECD COUNTRIES ON CO₂: SOME EMPIRICAL EVIDENCE

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Abstract. We analyse the FDI dynamic in the “agriculture and fishing” sector to observe whether and how its inflow generates a statistically relevant level of environmental impact. By referring to available data on pollutant agents such as Carbon dioxide (CO₂) from fuel combustion, which is considered to be specifically linked to those activities typically run in the considered sector, and FDI inflow per country and per activity sector, we use the econometric technique of panel data analysis while considering thirty OECD countries and a time-span of 25 years from 1981 and 2005. Among the main results of the analysis, we find that the use of CO₂ from fuel combustion in the agricultural sector does not generate statistically significant results with regard to the main relationship under investigation (that between FDI inflow in the “agriculture and fishing” sector and the considered pollutant), although some other meaningful and interesting evidences are achieved and discussed.

Keywords: FDI and Environment; Environmental Impact of FDI; CO₂ emissions and FDI.

JEL classification:

F18 - Trade and Environment

F21 - International Investment; Long-Term Capital Movements

Q56 - Environment and Development; Environment and Trade; Sustainability; Environmental Accounts and Accounting; Environmental Equity; Population Growth.

Introduction

A quick look at the literature review shows how studies on the FDI-environment relationship can be clustered in three main veins of discussion: 1) the environmental effects of FDI flows; 2) the competition for FDI and its effects on environmental standards; 3) the cross-border environmental performance. It has also been highlighted how the theme related to the environmental effect of FDI is still largely unexplored and calls for further research (OECD, 2002). This is even truer when this type of argument is treated at the level of specific economic activity sectors. In fact, there is little research in this sense and it is still far from a definitively clear understanding of the phenomenon.

For this reason, we analyse the relationship between FDI and the environment, while focusing on the environmental effect of FDI in the context of the “agriculture and fishing” sector of thirty out of thirty-four OECD countries⁶⁷. More specifically, we want to observe whether and how the sectoral FDI inflow in the considered countries has an impact on environmental features such as Carbon dioxide (CO₂) emissions. While postponing the explanation for the reason of the choice of this pollutant to the end of this section, we now would like to recall the essential literature, which our work refers to. In fact, our study basis its idea on some relevant works on this issue and focuses its analysis structure on the decomposition of the impact of FDI on the environment into scale,

⁶⁷ The thirty considered OECD countries are: 1) Australia; 2) Austria; 3) Belgium; 4) Canada; 5) Czech Republic; 6) Denmark; 7) Finland; 8) France; 9) Germany; 10) Greece; 11) Hungary; 12) Iceland; 13) Ireland; 14) Italy; 15) Japan; 16) Korea Republic; 17) Luxembourg; 18) Mexico; 19) Netherlands; 20) New Zealand; 21) Norway; 22) Poland; 23) Portugal; 24) Slovak Republic; 25) Spain; 26) Sweden; 27) Switzerland; 28) Turkey; 29) United Kingdom; 30) United States of America. The remaining four OECD countries (Chile, Estonia, Israel and Slovenia) are not taken into consideration, because their accession only took place in 2010. At the last visit made in November 2011, the OECD database within the ESDS International statistical support tool (which is the only database available reporting data on the sectoral breakdown of FDI), does not yet report information on these countries, since it is based on the “OECD international direct investment statistics (vol. 2010, release 01) with updates at 2007.

composition and technique effects (Grossman & Krueger, 1991 and 1993[a]; Cole & Elliott, 2003; He, 2006)⁶⁸. For the purpose of our study, the three types of effect are all the result of the FDI inflow entry in the “agriculture and fishing” sector of the considered OECD economies. However, while the scale effect refers to the increase in the size of the economy, the composition (or structural) effect is associated to the change in its industrial structure occurring as a shift in the pattern of economic activity. Lastly, the technique effect refers to the change in the production method – this involving development, transfer and diffusion of technology – deriving from the FDI inflow. The environmental implication of the scale effect hypothesizes the generation of a detrimental result deriving from the fact that an increase in the size of an economy implies more production and, in turn, more pollution. However, it must be highlighted that the scientific discussion on the scale effect contains the EKC argument in itself and, grasping the different positions from the literature, we are aware of the different viewpoints the empirical investigation on this topic has generated with respect to the above stated hypothesis. With respect to the composition effect, it is generally expected to be beneficial to the environment on the assumption that the free movement of investment encourages allocative efficiency among countries (OECD, 2001). However, this view is not subject to general agreement. Other works highlight how the expected sign of the impact resulting from the composition effect – in a free trade and investment context – is the result of the productive specialization of a country. This, of course, depends on the country’s competitive advantages, which can be characterized by opposite sources (Cole & Elliott, 2003). Finally, the environmental implication of the technique effect can be represented by the fact that, as FDI inflow, growth and income increase, the demand for environmental quality also increases. This leads to the generation in the considered economy of a new demand for products based on more “environmentally friendly” technologies or to the enforcement of environmental regulation policies. In other terms, the technique effect is generally referred to the development, introduction and diffusion of new and more efficient technologies, which are expected to exert a beneficial role on the environment (Grossman & Krueger, 1993[b] and 1995; Cole & Elliott, 2003; He, 2006; Liang, 2006).

The explanation of the reason why we choose CO₂ as the pollutant subject of our analysis is based on the following aspects. First of all, CO₂ is the mainly investigated pollutant and represents the main aspect whose reduction policies worldwide are trying to pursue⁶⁹. Furthermore, CO₂ is among those few pollutants for which availability in larger and more complete dataset is ensured. Of course, CO₂ is here considered, in connection with the purpose of our analysis, in relation to the activity of fuel combustion occurring in both agriculture and fishing, whose data are available thanks to estimates provided by the International Environmental Agency (IEA). With regard to the relationship between CO₂ and agriculture, we must observe how this is fundamentally based on deforestation (quite often caused by the expansion of agriculture to the expense of forested areas) and biomass burning (Fernandes & Thapa, 2009: 2; World Bank, 2009: 8). For other aspects, in relation to the identification of possible links between CO₂ and fishing, we can observe that some studies state how the removal of marine biota – basically occurring through uncontrolled fishing activities, which always results into heavy marine resources exploitation – would increase the almost unknown atmospheric Carbon dioxide (pCO₂), which implies an increase of CO₂ (Fashman, 1993; Shaffer, 1993). Nevertheless, as we have already mentioned above, the link between CO₂ and the “agriculture and fishing” sector is here in this study particularly taken into consideration with regard to fuel combustion emission happening in their related activities.

⁶⁸ These terms, which now belong to the standard economic terminology, were entered in the economic literature after they were used by Grossman and Krueger in their seminal work of 1991, where they analysed the environmental impact of trade liberalization within the context of the NAFTA agreement (Grossman & Krueger, 1991). Although these terms were coined in relation to trade, they are also used for the case of FDI studies. This makes sense if we think – as will be highlighted again in the work – that trade and FDI are the two faces of the same coin due to the strong correlation existing between them and proved by various studies (e.g. Ghosh, 2007; OECD, 2002).

⁶⁹ Relevant studies state that, CO₂ together with CH₄, N₂O (Nitrous Oxide) and halocarbons (which is a group of carbons containing fluorine, chlorine or bromine), it is among the four long-living Greenhouse Gases (GHGs) and the main largest contributor to global warming and climate change as a result (IPCC, 2007: 36-37).

Having so far circumscribed our argument by briefly reviewing the relevant literature for the purpose of our analysis and justifying the choice of the two considered pollutants, we now move onto describing the dataset and the methodology used for our empirical investigation. This will be the aim of the next section. In the further section we will present the results of the analysis and the relative comments. Some final conclusions together with a discussion of the resulting policy implications will be drawn in the final section.

Data, method and modelling strategy description.

In this section we first describe the main features of our dataset. Afterwards, we will give a specific look at the evolutionary trends – over the considered period of our main investigated variables: the FDI inflows and stocks and the considered pollutants. As has already been referred, our investigation on the impact that FDI arriving into the “agriculture and fishing” sector of receiving countries generates in their environmental contexts focuses on the OECD area. Hence, data cover thirty national countries and, where has been possible on the basis of their availability, are related to the period between 1981 and 2005. As a result, the full dataset we have composed for the purpose of our analysis contains twenty-three different variables and is characterized by remarkable country disparities, which should guarantee a good efficiency level for our empirical analysis. The gathered data – all sourced from the databases of different international organizations – have been handled to build indicators, which have all been tried in numerous analysis attempts aimed at looking for the best fit of the estimated models. For easier reading, the table below (tab. 1) reports very schematically the specification of only those variables (out of the twenty-three total), which have been found to be statistically relevant in our analysis together with the indication of their data source⁷⁰.

Tab. 1 – Variable specification

No.	Variable	Description	Source
1	Ln_CO2sct	Dependent variable. Natural log. of the ratio between the amount of Carbon dioxide (in million tons) from fuel combustion in the sector and the amount of population	Our computation on IEA estimation and UN data
1 bis	Ln_CO2tot_pc	Dependent variable. Natural log. of the ratio between the total amount of Carbon dioxide (in mln. tons) and the amount of population	Our computation on IEA estimation and UN data
2	Ln_GDPsct_pw	Natural log. of the ratio between the sectoral GDP (in real US\$) and the amount of workers in the sector	Our computation on UN and OECD data
3	Ln_GDPsct_pw2	Natural log. of the squared ratio between the sectoral GDP (in real US\$) and the amount workers in the sector	Our computation on UN and OECD data
4	Ln_FLWset_pGDP71	Natural log. of the sectoral FDI inflow (in real mln. of US\$) per unit of GDP (in real US\$)	Our computation on UN and OECD data
5	Ln_SCTrel_2	Natural log. of a sectoral relevance indicator given by the ratio between the sectoral GDP (in real US\$) and the total GDP (in real US\$)	Our computation on UN data
6	Ln_GCF_pw	Natural log. of the ratio between the amount of Gross Capital Formation ⁷² (in real US\$) and the total no. of work force (in thousands)	Our computation on WB, ILO

⁷⁰ Table 1 reports the two variables *Ln_CO2sct* and *Ln_CO2tot_pc*, because we have used both as dependent variables in our analysis attempts to check their degree of responsiveness in the model we have build. The result will be presented later in the next section.

⁷¹ According to other empirical works, we focus our attention on the FDI inward flow, and not on the inward stock, because the stock measure is unsatisfactory. In fact, FDI stock represents the direct investment position on a historical-cost basis, namely the investment amount already in the host country as opposed to the flow of capital into the host country at a considered year. As already highlighted by Cantwell and Bellack (1998), the use of the book value (which is the historical cost) does not take into account the distribution of the stock age. As a result, international comparison of FDI stocks are almost impossible.

⁷² The Gross Capital Formation (GCF) consists of: 1. Gross Fixed Capital Formation (GFCF), that is the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non-produced assets (e.g. subsoil assets or major improvements in the quantity, quality or productivity of land) realised

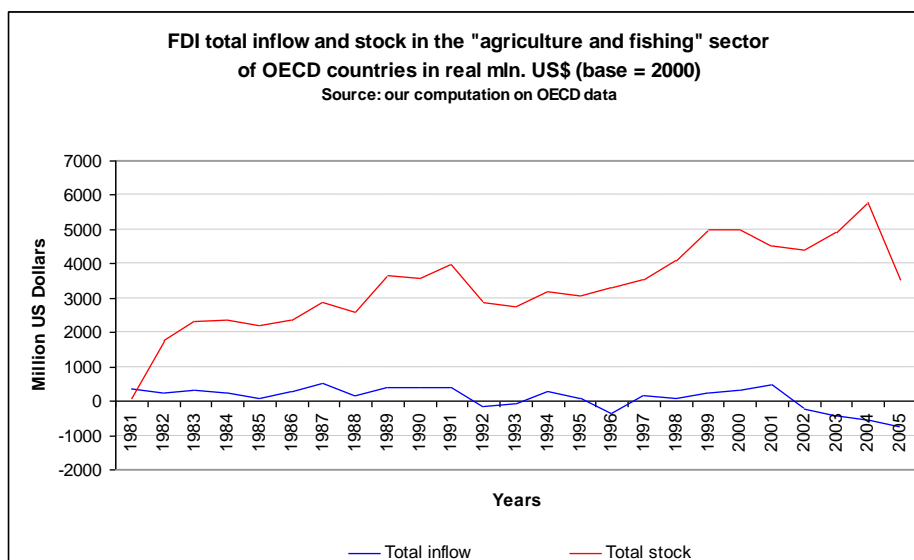
7	Ln_edu	Natural log. of the average year of school indicator	Our computation on CID Harvard data
8	Ln_MKTopn_2	Natural log. of a market openness indicator given by the ratio between the amount of export f.o.b. (in real US\$) and the total GDP (in real US\$)	Our computation on IMF and UN data
9	Ln_1_CRpr_GDP_1	Natural log. of a cross-product derived from the sectoral GDP (in real US\$) times the total FDI inflow (in real mln. US\$)	Our computation on UN and OECD data
10	Ln_3_CRpr_MKop_2	Natural log. of a cross-product derived from the above market openness indicator times the total FDI inflow (in real millions US\$)	Our computation on UN and OECD data
11	Ln_5_CRpr_SCTrel_2	Natural log. of a cross-product derived from the above sectoral relevance indicator times the total FDI inflow (in real mln. US\$)	Our computation on UN and OECD data
12	Ln_6_CRpr_GCF	Natural log. of the cross-product derived from the amount of GCF (in real US\$) times the total FDI inflow (in real mln. US\$)	Our computation on WB and OECD data

Before proceeding to develop any comment, it is important to highlight that all the financial data were gathered in US\$ and they were transformed from current to real terms by using the USA Gross National expenditure Deflator (base year = 2000) gathered from World Bank⁷³. Moving now onto analysing the dynamic of the trends of the main investigated variables and firstly that of sectoral FDI, the graph below (Graph 1) shows a synthetic view of the trends of the FDI inflow and stock (or inward position) derived from the year by year data aggregation in the thirty OECD countries (see table A1 and table A2 in the appendix section). Although the difficulty arising in dealing with these data, which derives from various gaps and from the way their computation is handled at source, we can see how over all the considered period the trend of the inflows has remained fluctuating in a range varying between minimum of about -736 million (when evidently the amount of disinvestment overtook the investment) and a maximum of +527 million US\$ (recorded at 1987). The observation of the aggregated data by country shows how the country which has received the major investment quota is Spain (with a total of about 1,472 million US\$) for all the considered period. It is followed by USA (with about 783 million US\$) and Italy (with about 595 million US\$). The countries which, between 1981 and 2005, have experienced major levels of disinvestment, instead, are: Belgium (with about -2,139 million US\$) and Germany (with about -1,528 million US\$).

With regard to the FDI stocks trend, the analysis of the OECD aggregated data shows a substantial – although swinging – increase from about 74.5 million US\$ in 1981 to about 3,492 million US\$ in 2005. As can be observed in the table A2, reported in appendix, the years in correspondence of which the major levels of stock capitalization were recorded are: 2004 (with about 5,798 million US\$); 1999 (with about 5,005 US\$) and 2000 (with about 4,983 US\$). The analysis of the stock dynamic by country makes us observe how, during the all period between 1981 and 2005, USA and Australia are the two countries which have received the highest amount of FDI. In fact, the earlier shows a total stock of about 44,068 million US\$, the latter about 18,184 million US\$. They are followed by the United Kingdom (with about 4,280 million US\$), Mexico (with about 4,086 US\$) and Italy (with about 3,834 million US\$).

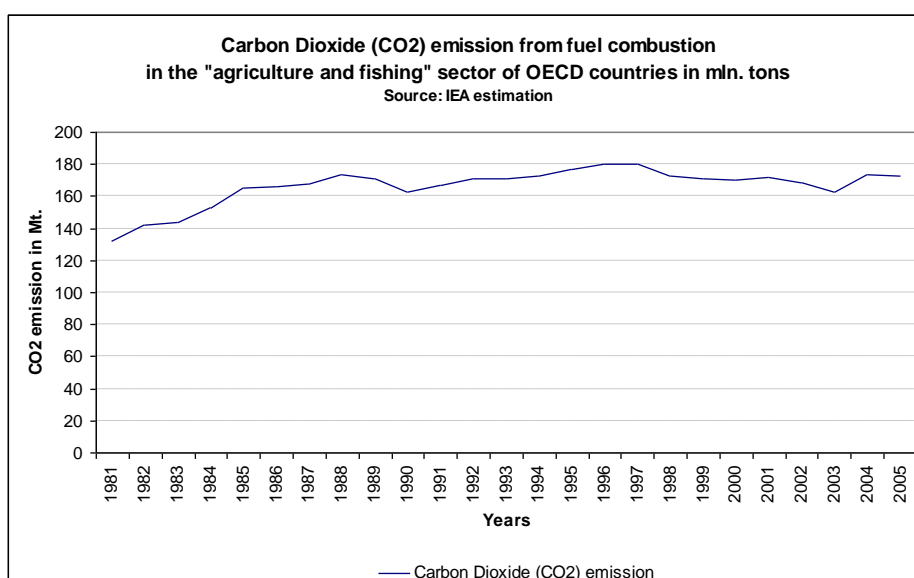
by the productive activity of institutional units; 2. changes in inventories in produced assets like building roads, machinery, stocks of commodities etc. The gross fixed capital formation may also include additions to the produced assets such as improvement of land, cost of transferring land and other non-produced assets between owners. The value of capital formation is added to the value of non-produced assets, but separately 'depreciated' as other changes in volume (<http://stats.oecd.org/glossary>).

⁷³ World Bank database at <http://databank.worldbank.org>

Graph 1

After having observed the evolution of the trend of the sectoral FDI inflows and stocks, we can now move onto commenting the evolution of the trends related to the pollutant we are taking into consideration (CO₂ from fuel combustion).

As shown in the graph below (Graph 2), which is built on data estimated by the International Energy Agency (IEA) and reported in the table A3 in the appendix section, we can observe an increase of the sectoral CO₂ emission from 132.8 million tons in 1981 to 173.04 in 2005, although during the all period increasing and decreasing fluctuations can be seen. Here again, moving onto analysing the breakdown by country we can see how, during the whole period of the 25 years we are considering, the USA were the major polluters of CO₂ from fuel combustion activities in the “agriculture and fishing” sector with about 1,108 million tons. They are followed by Japan (with about 491 million tons), Poland (with about 256 million tons), France (with about 231 million tons), Canada and Italy (with about 192 million tons each) and Netherlands (with about 178). Minor polluting countries are Luxembourg (with 0.56 million tons), Switzerland (with 6.87), Ireland (with 14.92), Iceland (with 16.87) and New Zealand (with its 22.40 million tons).

Graph 2

With regard to the methodology used for the data analysis, we recur to the econometric method and more specifically to the use of the panel data technique, since we deal with both spatial

and temporal dimensions. The spatial dimension regards the set of cross-sectional units of observation, which in our case corresponds to the thirty OECD countries. The temporal dimension is characterised by the temporal sources associated in our case study to the time span from between 1981 and 2005. This technique shows the advantage of giving the opportunity of controlling for unobserved heterogeneity so as to eliminate the omitted variable bias together the possibility of investigating in dynamics. Furthermore, it helps to decrease the problem related to the existence of collinearity among variables, which allows the achievement of more precise estimates generated by the efficiency gain resulting from the higher quantity of data which can be considered with respect to other techniques such as cross-section and historical time series analysis (Gujarati, 1995; Woolridge, 2000; Greene, 2003: 291-293)⁷⁴.

With regard to the definition of the relationships subject of the present analysis, it can be expressed in log-log terms by the following equations:

$$[1] \quad \text{Ln_CO2sct}_{it} = \alpha + \beta_1 \text{Ln_GDPsct_pw}_{it} + \beta_2 \text{Ln_GDPsct_pw}^2_{it} + \beta_3 \text{Ln_FLWsct_pGDP}_{it} + \beta_4 \text{Ln_SCTrel_2}_{it} + \beta_5 \text{Ln_GCF_pw}_{it} + \beta_6 \text{Ln_edu} + \beta_7 \text{Ln_MKTopn_2}_{it} + \beta_8 \text{Ln_PRTarea}_{it} + \beta_9 \text{Ln_1_CRpr_GDP_1}_{it} + \beta_{10} \text{Ln_3_CRpr_MKop_2}_{it} + \beta_{11} \text{Ln_5_CRpr_SCTrel_2}_{it} + \beta_{12} \text{Ln_6_CRpr_GCF} + \varepsilon_{it}$$

where: i represents the cross-sectional units related to our 30 OECD countries; t is the time dimension referred to the years considered in our time span, that is from 1981 to 2005; ε is the error term. The meaning and construction of all the other variables considered in the above relationships have already been explained in the table reported above (tab. 1), where it is possible to find their detailed specification. Here, it is just the case to specify how the majority of the variables in the above equations are associated to the identification of the scale, composition and technique effect. Similarly to what has been done in other studies (e.g. Antweiler et Al., 2001; Cole & Elliott, 2003; Liang, 2006), we associate the scale effect to the two variables identifying the per-capita GDP and its squared computation, these representing the size of the countries' economy and its enlargement. The composition effect is caught by considering two different aspects, which refer to the relevance of the sector in the considered economies and their capitalization levels. More specifically, these two aspects are considered by the ratio between the sectoral and total GDP and by the capital-labour ratio (namely, variables no. 5 and no. 6 as reported in the above tab. 1). Finally and according to Cole and Elliot (2003), the technique effect is identified through the GDP measure taken in isolation, since it happens as a result of a change in the income level⁷⁵. For this reason, in our model we consider the natural logarithm of the per-capita GDP.

A final specification to justify the choice of introducing cross products in our estimation is that sometimes we need a test with power to detect ignored nonlinearities in models estimations and, especially, in those estimated by OLS or 2SLS. To do this, a suggested useful approach

⁷⁴ A possible problem arising, when employing the panel data technique, can be related to the existence of “attrition”. This occurs when units belonging to a dataset are missed to be considered in subsequent steps of the analysis (e.g. the impossibility of interviewing people being part of a dataset – after statistically sampling – because of their absence in the place and at the moment the interviews are run). However, it is clear this is not our case considered the nature of the data we are considering.

⁷⁵ In some other relevant work (i.e. Antweiler et al., 2001), scale and technique effects are separately measured through employing of two different identities. While the earlier is measured in terms of GDP per squared km., the per-capita GDP is used for the latter. In agreement with Cole and Elliott (2003: 367), we here decide to use the per-capita GDP to catch the scale effect. Since our analysis focuses on national pollution emissions, the GDP per squared km. would not be significant as a measuring scale. As a result, we observe how the per-capita GDP, which is the obvious measure of the scale effect, is also the measure of the technique effect. Now, the consideration that in the real world the scale effect is likely to be contemporaneous whilst the technique effect is likely to be the result of some past income dynamic, which would suggest diversifying the variable in question by using lagged forms, can be overtaken. Similarly to what has been done by Cole and Elliott (2003), we have tried to run our regressions analysis while using some lagged version of the per-capita GDP, as an alternative to its measure considered at time, and we have reached more or less similar results.

consists in adding nonlinear functions, such as squares and cross product (that is a vector obtained by the product of two other vectors) to the original function (Wooldridge, 2002)⁷⁶.

3. Results of the empirical analysis.

To comment on our analysis results, which have been achieved by using the tool Stata/SE 10.0 for Windows, we begin from reporting the table below (tab. 2), where a classical summary statistics of the variables considered in our models appears.

Tab. 2 – Summary statistics of the variables considered in the models

Variable	Obs	Mean	Std. Dev.	Min	Max
Id	750	15.5	8.661218	1	30
Year	750	1993	7.215915	1981	2005
Ln_CO2sct (dep. var. in [2])	744	-15.55893	.8372048	-18.57597	-12.6687
Ln_GDPsct_pw	600	17.83365	2.826254	14.23709	31.6578
Ln_GDPsct_pw2	600	326.0136	122.0182	202.6947	1002.216
Ln_FLWsct_pGDP	331	-12.79029	21.74173	-39.42923	33.39568
Ln_SCTrel_2	650	-3.354633	.7404608	-5.598056	.3206728
Ln_GCF_pw	657	22.67215	.6319137	20.43895	23.74382
Ln_edu	750	2.12257	.2730594	1.029619	2.505526
Ln_MKTopn_2	662	-2.459594	3.221396	-15.70503	3.740827
Ln_1_CRpr_GDP_1	547	30.36875	10.78978	-33.8916	46.42584

The estimation results of the model subject of our analysis are displayed in the table here below (tab. 3), where OLS, FE and RE estimation are reported. As expected, a first look at all the estimates achieved, makes us realize that this model does not produce relevantly significant outcomes⁷⁷. Moreover, the estimates of the considered model do not allow us to achieve significant evidence of a direct effect of the sectoral FDI inflow on CO2, which is actually the main purpose of our investigations. The Brush-Pagan (LM) test (tab. 4) shows a chi2 equal to 669.19 with a p-value equal to 0.0000. This makes us choose the FE or RE over OLS. Hence, for the choice between FE and RE the Hausman test is run, which generates a chi2 equal to -25.37 and fails to meet its asymptotic assumption. For this reason, we rerun the Hausman test by employing a specific option of the STATA software, which enables forcing the test⁷⁸. The result of this rearranged Hausman test is shown further down in this section and, considering its significance level (p-value = 0.0022), it would induce us to choose the FE model. However, on the consideration that that our model can contain both fixed and random effects, we rerun our analysis while taking into account both time and individual effects and by employing a mixed modeling strategy⁷⁹. The results produced,

⁷⁶ The implementation of such an approach is easy when all explanatory variables are exogenous. F and LM statistics for exclusion restrictions are easily achieved. Complications arise, instead, for models with endogenous explanatory variables, because we need to choose instruments for the additional non-linear functions of the endogenous variable. However, we must consider that transforming into squares and cross product all exogenous variables can considerably consume degrees of freedom (Wooldridge, 2002: 124).

⁷⁷ The reason why we did not expect to achieve significant results from the estimation of the considered model is due to the fact that, although we are here working on IEA estimates of CO2 from fuel combustion in the “agriculture and fishing” sector, it must be highlighted that this pollutant is not really associated to the exercise of agricultural activities. In fact, according to the World Resources Institute (WRI) estimates – as will be better reported in the concluding section of this work – the quota of “other fuel combustion” associated to “agricultural energy use” is just 1.4% of the total CO2 generated by anthropogenic activities (Herzog, 2009; Baumert et al., 2005).

⁷⁸ Sometimes, in finite samples, the Hausman test stat can result < 0 and fails to meet its asymptotic assumption because different estimates of the error variance are being used in V_b and V_B . STATA software provides us with the possibility of forcing the same variance to be used in both by employing the “sigmamore” option, which bases both (co)variance matrices on disturbance variance estimate from efficient estimator (STATA help).

⁷⁹ Stata allows us to fit mixed models (that is models containing both fixed and random effects) through the use of *xtmixed* command. “The fixed effects are merely the coefficients from a standard linear regression. The random effects are not directly estimated but summarized by their variance components, which are estimated from the data. As such, *xtmixed* is typically used to incorporate complex and multilevel random-effect structures into standard linear regression”. Its syntax “is complex but versatile, allowing it to be used widely, even for situations that do not fit the classical “mixed” framework” (Gutierrez, 2008: 1).

reported in tab. 5 further down, show signs and coefficients very similar to those achieved with the RE estimations, but appear to be slightly better in their level of statistical significance. For this further reason, we focus our reporting on them.

Tab. 3 – Panel data estimation results for model [2]; *Ln_CO2sct_pc dep. var.*

	OLS	FE	RE
Ln_GDPsct_pw	.2844477†† (.1986525)	-.0793763 (.2500167)	.0256665 (.2140511)
Ln_GDPsct_pw2	-.0040813 (.004959)	-.000889 (.006338)	-.0030242 (.0054049)
Ln_FLWsct_pGDP	.0027183† (.0018141)	-.0002738 (.000715)	-.0001679 (.0007295)
Ln_SCTrel_2	.8850387* (.0750126)	.1359481*** (.0921773)	.166646** (.0856273)
Ln_GCF_pw	.4196495* (.1174747)	.1085437 (.1257066)	.1586885†† (.1202299)
Ln_edu	.7128855* (.1605166)	1.906183* (.398073)	1.578326 (.3394628)
Ln_MKTopn_2	.1274578* (.0482939)	-.164718* (.0612228)	-.1369007** (.0556679)
Ln_1_CRpr_GDP_1	-.0150997* (.0045776)	-.0030535** (.0017816)	-.0033269*** (.0018274)
Constant	-26.41582* (2.112724)	-20.15614* (3.040656)	-21.67185* (2.720045)
N. obs.	278	278	278
N. groups	-	25	25
R-squared	0.4820	Rho = .93850564	Rho = .89525986
Adj. R-squared	0.4666		

Standard errors in parenthesis; P-value: * = 0.000; ** ≤ 0.05; *** ≤ 0.10; † ≤ 0.15; †† ≤ 0.20

Tab. 4 – The Brush-Pagan (LM) test results.

	Var	sd = sqrt(Var)
Ln_CO2sct_pw	.6949337	.8336269
E	.0475666	.2180977
U	.4065725	.6376304
Test: Var(u) = 0	Chi2(1) = 669.19	Prob > chi2 = 0.0000

Tab. 5 – Mixed model estimation results.

CO2sctr_pc dep. var.	Mixed-effect ML regression
Ln_GDPsct_pw	-.0062505 (.2178569)
Ln_GDPsct_pw2	-.0023703 (.0055081)
Ln_FLWsct_pGDP	-.0002113 (.0007006)
Ln_SCTrel_2	.1526086*** (.0848969)
Ln_GCF_pw	.1399028 (.1182142)
Ln_edu	1.678889* (.3466082)
Ln_MKTopn_2	-.1452394** (.055575)
Ln_1_CRpr_GDP_1	-.0032135*** (.001752)
Constant	-21.17935* (2.728448)
N. obs.	278

N. groups	1
Group variable	All
Log likelihood	-26.821856
Wald chi2(10) [p-value]	33.42 [0.0001]

Standard errors in parenthesis; p-value: * = 0.000; ** ≤ 0.05; *** ≤ 0.10

We begin by observing how in our model the variables considered to represent the sectoral features, through which we want to assess the magnitude of the impact of the sectoral dynamics on CO₂ emission levels, do not generate any useful evidence. Hence, we argue by saying that the achieved estimates do not allow us to release any comment on the impact the “agriculture and fishing” sector produces on the CO₂ sectoral emissions levels from fuel combustion. In fact, we do not observe any statistical significance with regard to the relationship between CO₂ and the GDP and GDP squared variables, which makes us fail to report on both technique and scale effects of this model. As already anticipated, overall we do not even observe a direct effect of the sectoral FDI inflow on the considered measure of CO₂. The findings showing a statistically significant relationship to CO₂, apart from that associated to the relevance of the investigated sector, are all external to the “agriculture and fishing” sector and, more specifically, associated to the education levels existing in the considered economies, the market openness and the cross-product built between GDP and the total inflow of FDI.

With regard to the magnitude of the sectoral relevance, a significant (p-value = 0.072) and positive relationship (+0.1526) is found between its indicator and CO₂, this highlighting – further than one of the two aspects of the composition (or structural) effect considered in our model – that at an increase of 1% in the relevance of the sector would produce an increase of about 0.15% of the CO₂ emission level. It must be noted how the economy capitalization variable (GCF), representing the further face of the composition effect of our model, is not found statistically significant since its p-value is a little bit above the maximum threshold of statistical acceptance.

A very high level of statistical significance (p-value = 0.000) and a positive coefficient (+1.678) can be observed in relation to the linear impact between the education level and CO₂ emissions. This outcome would make us think that that a 1% increase of the education level in the considered country areas generates an increase of about 1.67% in the level of CO₂ emission.

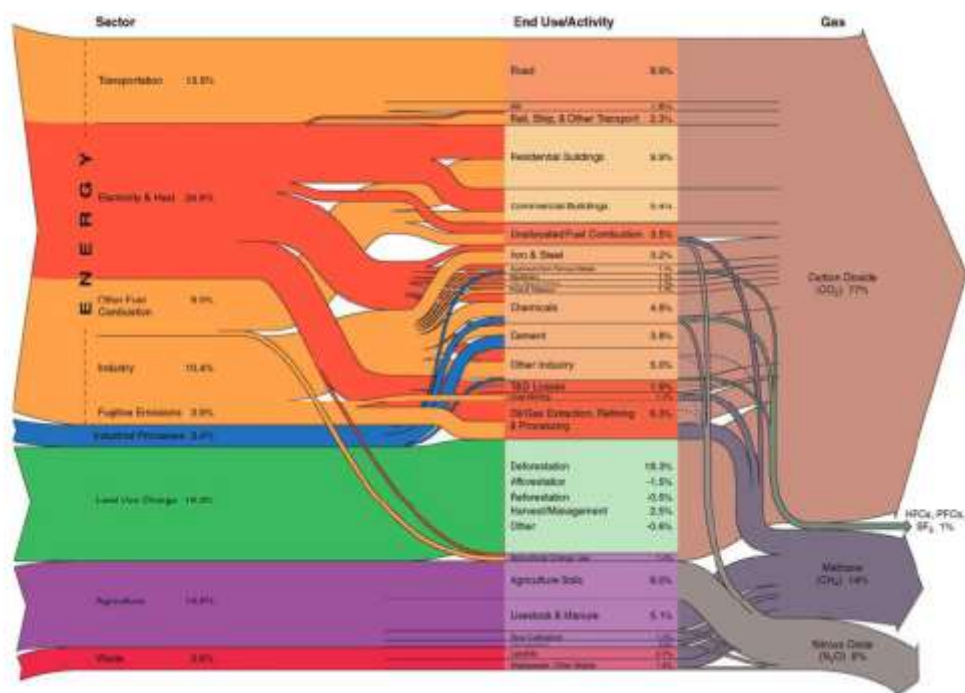
Very significant (p-value = 0.009) and negative (-0.142) is the finding associated to the relationship between the variable indicating the market openness and CO₂. The practical implication of the achieved relationship would mean that a 1% increase in trade openness produces a decrease of the CO₂ level of about 0.14%. The last statistically significant finding (p-value = 0.067) can be observed in relation to the linear effect shown by the cross-product accounting for the interactive effect of GDP the total flow of FDI on CO₂. Its negative coefficient (-0.032) would suggest that an increase of 1% of the sectoral GDP generates a decreased impact of about -0.03% of the total inflow of FDI on CO₂.

4. Concluding remarks

In this work we have analyzed the context of thirty OECD countries between 1981 and 2005 to primarily assess whether the FDI inflow in the “agriculture and fishing” sector can be considered beneficial or detrimental for the environment, namely if it plays a role in the dynamic of CO₂ arising from fuel combustion activities in the “agriculture and fishing” sector. To this aim we carried out our analysis by using an equation model which, according to the mainstream literature, took into account scale, composition and technique effects. This model was estimated through the use of the panel-data technique. Moving now onto specifically discussing the achieved result, we move onto highlighting again that the considered model did not show results characterized by particular statistical significance and, for this reason, does not help us to achieve any useful evidence to comment on the relationship between the FDI inflow in the agricultural sector and the environment (this considered in terms of CO₂ sectoral emissions from fuel combustion). As already

anticipated in a footnote in the previous pages, the reason of this could be identified in the fact that the contribution of the agricultural sector to the generation of sectoral CO₂ from fuel combustion is very little and this could represent the misleading aspect of our analysis. As can be observed in the following two charts, which are produced by the World Resources Institute (WRI) for years 2000 and 2005, the world contribution of agriculture to the generation of CO₂ is about 1.4% of the total emission⁸⁰.

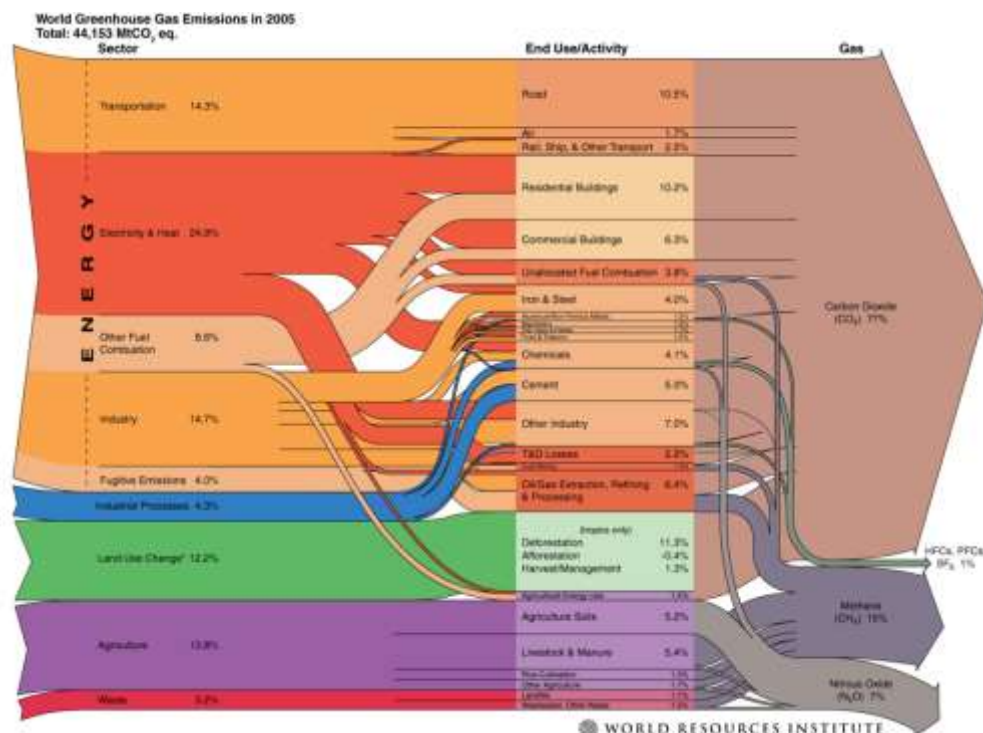
Graph 3



Source: Baumert et al., 2005, p. 14.

⁸⁰ We do not have a similar detailed evidence for the OECD area. Similar computations do not exist in relation to the area subject of our investigation. However, the U.S.A is the only OECD country which benefits from this computations thanks to the activity run by the WRI with data at 2005. These again show the irrelevance of agriculture in contributing to the generation of CO₂ emission (www.wri.org/chart/us-greenhouse-gas-emissions-flow-chart). Approximating to these evidences, we consider all the other OECD countries in the same way.

Graph 4



Source: Herzog, 2009, p. 2.

As reported in detail in the previous section presenting the estimation findings, our model result did not show any statistical significant evidence proving the existence of some linear effect between CO2 and GDP and, still, between CO2 and GDP squared. This implies that the considered model does not allow us to comment either on the technique effect (which recurs when the GDP is considered in isolation) or on the scale effect (which recurs when the GDP is considered in its squared form). As well, no comment can be released on the relationship between the FDI inflow in the agricultural sector and CO2 since no statistical significance was observed in the result of the empirical analysis.

About the composition (or structural) effect, which was considered in our model in terms of relevance of the “agriculture and fishing” sector in the whole economy, the achieved finding shows a positive linear effect between the sectoral relevance and the sectoral CO2 generated from fuel combustion. This would mean that the “agriculture and fishing sector” does not play a beneficial role for the environment. In fact, the considered measure of CO2 emissions increase as the sector becomes more and more relevant. In other words, this result would suggest that a greater level of economic specialization in the “agriculture and fishing” sector generates a negative environmental impact (in terms of CO2 from fuel combustion). This finding agrees with those results proving that the composition effect does not always generate beneficial effects on the environment, but it can also produce a negative and detrimental impact. In fact, contrarily to what is generally said in a part of the literature referring the existence of a beneficial result of the composition effects (or structural effect) on the environment⁸¹, our result makes us recall Cole and Elliott (2003), who clarify how the actual role (positive or negative) of the composition effect on the environment depends upon the comparative advantages of a given country which – we would add – should be considered not only between sectors but also within a given sector. The policy implication which implicitly could be recalled is a typical approach of environmental economics, which refers to the importance of

⁸¹ This is referred to happen on the consideration that free trade and investment promote comparative advantages among nations inducing them to an efficient specialization of their economies. Hence, those countries showing a higher specialization level would result less polluting thanks to sectoral efficiencies in resource allocation, which implies that production is ensured by the employment of lower inputs per unit of output (OECD, 2001).

pricing environmental goods and externalities to ensure trade and investment towards an efficient path so avoiding their shift towards environmentally damaging sectors and/or – we would add – activities within the same sector.

With regard to the role of capitalization and education, the findings of the empirical analysis showed a statistically insignificant result in the relationship between the economy capitalization level and CO₂. In relation to the education variable, namely the relationship between education and CO₂ emission, a statistically significant relationship was found. Here again, this evidence refers the existence of a detrimental impact of education on the environment. This result goes against the mainstream approach in understanding such a kind of relationship where higher education levels (most of the time associated to higher capitalization levels) are found to exert a reducing effect on polluting emissions (Lan J. et al., 2011; OECD, 2002). An explanation of this counterintuitive result could be seen in the fact that higher education does not mean that people automatically switch on more modern and cleaner technologies. In this sense, some work (e.g. Hill and Magnani, 2002) we have already recalled in the previous pages refers that higher education induce people of low-income countries to an easier access to polluting technologies (cars in their example) and we have reasons to believe that the same happens in wealthier countries. With regard to this, we would like to highlight how education should not be considered a meaningful variable to explain such a kind of phenomenon and that a better approach would be that of entering in the qualitative information of education through distinguishing the different types of education (scientific, humanistic, etc.) on the consideration that the attitude towards innovation of people very likely depend on their education background.

With regard to the market openness variable and its relationship with the environment our analysis found a negative relationship with CO₂, this showing that the more a country is open the less it is polluting. According to the mainstream literature, particularly recalled by various international organizations, this result would confirm that free trade and investment – as a result – always generate minor levels of pollution thanks to their capacity of ensuring major efficiency in resources allocation (OECD, 2002; Lucas et al. 1992). However, it is the case to highlight that the opposite view is also referred in the specific literature, where the existence of a positive relationship is referred between market openness and pollution levels on various developing and developed countries (e.g. Feridun et al., 2006; Hill & Magnani, 2002). The policy implication deriving from our observation could focus on the opportunity that trade and investment agreements should hold stricter provisions, especially with regard to those sectors of activity generating CH₄ emission, to avoid environmental degradation while guaranteeing at the same time that free trade and investment can take place.

The last result we achieved in the empirical task showed a significant negative relationship between the cross-product considering the interactive effect of GDP and the total inflow of FDI on CO₂, so showing the existence of a sort of technique effect which happens through the entry of total inflow of FDI in the considered countries. This evidence would suggest that FDI might vehicle technological advances which generate a lesser impacts on the environment in terms of CO₂. On the consideration of this beneficial role of the inward flow of FDI, the policy implication would be that of encouraging the entrance of FDI in the considered countries.

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LATVIAN COMPANIES' ENTRY MODEL IN THE MARKET OF FRANCE

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Abstract. The purpose of the research is to come forward with a model for Latvian companies so that they might successfully enter into the market of France. The research is urgent because at the current economic situation Latvian companies should seriously consider entering new markets.

The research is divided into three parts where the first one analyses theoretical aspects of international sales, the second part is an overview and evaluation of Latvian companies activities in the market of France as well as its socioeconomic data analysis, but the third part of the research outlines Latvian companies' entry model in the market of France and there is a comment of four reviewers- industry experts. The main conclusions apply to Latvian companies which should use a personalised entry model composed of 12 steps described in the research. Taking into account specific information about economic, political and social situation in France and its own characteristics described within this research may be important.

Key words: Entry model; international trade; Latvian producers; the market of France.

JEL classification:

F23 - Multinational Firms; International Business

Introduction

Starting from classical country-based theories like Adam Smith's mercantilism theory in 16th century we do know what export is. In 2010 the Gross Domestic Product (GDP) in Latvia was 18,07 billion euro where goods for a value of 6,69 billion euro were exported. Export in 2010 constituted 36,9% of GDP in Latvia. Trade balance in France in 2010 was negative- 68,9 billion euro. Import in France in 2010 was 456.9 billion euro or 13,0% of their GDP (3497,5 billion euro in 2010). Population of Latvia is 2,07 million people (2011) while in France there are 65,35 million inhabitants (2012) and 77,1 million tourists in 2010 (ranking 1st place worldwide) or more than 140 million potential customers in other words. These are significant circumstances to speak about France as a potentially important external market for Latvian producers.

It is possible to find various theoretical materials about modes and models to enter external markets but just few of them concentrate on specific countries. It is required for Latvian companies to take into account the political, economic and social situation in external market as well as mentality to work out a personalised model. It is significant to concentrate on a specific market, to study it and work out a precise, business-oriented, objective and trendy entry model. These preconditions lead to a necessity to research the particular topic “Latvian Companies' Entry Model in the Market of France” because no papers about this issue were presented so far.

The research is urgent because at the current economic situation every Latvian company should seriously consider entering new external markets. The goal of the research is to study the possible entry modes and to come forward with a model so that Latvian companies can successfully enter into the market of France. To achieve the goal the author has set three tasks: (1) To describe theoretical aspects of international trade and possible entry modes in external markets; (2) To analyse socioeconomic situation in France and Latvian companies potentialities in the market of France and (3) To come forward with a personalised entry model for Latvian companies so that they might successfully enter into the market of France. The hypothesis of the research states that for more efficient operations in the market of France Latvian companies should use a personalized entry model.

This research concentrates on Latvian companies and the market of France. The author has had some comments that this paper may be used for companies from different industries to enter in several countries. It is true but at the same time it was not the goal. The author wanted to present a progressive and trendy model in a specific and very precise field of the research.

Materials and Methods

The research was held starting from February 2010 until December 2011. In order to prepare a successful research project the author has used qualitative and quantitative research methods. The qualitative research methods used in this paper are in-depth interviews in Latvia as well as in France, focus group discussions and participant observation. The research is divided into three parts where the first one analyses theoretical aspects of international trade and other activities in external markets, the second part is an overview and evaluation of Latvian companies activities in the market of France as well as its socioeconomic data analysis, but the third part of the research outlines Latvian companies' entry model in the market of France and there are comments of four reviewers- industry experts.

The presented entry model is based on three elements. The first one is overview of theoretical entry modes described in several books like T.Volkova “Bizness pāri robežām: Praktisks ceļvedis jaunu tirgu apgūšanā” (2010), R.W.Griffin, M.W.Pustay “International Business (5th edition)” (2007) and D.J.Daniels, L.H.Radebaugh, D.P.Sullivan “International Business: Environments and Business Operations” (2007). These books are useful to theoretically display several entry modes but do not encourage Latvian companies to operate abroad. The outcome of these materials is a clear division of possible entry modes without any tips how to use this information in business environment. Dr., prof. Tatjana Volkova shows some cases with Latvian companies but her objective is to prove the strategy written in a book not to analyse companies' experience which may be used in other cases. The book “Bizness pāri robežām: Praktisks ceļvedis jaunu tirgu apgūšanā” states out theoretical ways to enter in external markets but do not consult on steps which should be made to do business abroad. On the other hand, in books “International Business” and “International Business: Environments and Business Operations” the authors concentrate on multinational organisations with a turnover in millions which is not Latvian case. In Latvia for 97% enterprises (they are considered as SME's) these are hundreds and thousands of euro in everyday deals. So the literature is useful to read it as a background for optional entry modes but is not sufficient to understand things to do for Latvian producers to enter in external markets.

The second element is the research of the political and socioeconomic situation in France by statistical data analysis, observations while being in France and following the latest news in the period of the research. It is crucial to understand the market where you do want to place the product. So it is not possible to underestimate the usefulness of these data which should be updated on time basis to get precise information.

At the very end the author tested Latvian companies' results while discussions and interviews with the industry experts. The research has no sense if it does not help Latvian companies to enter in the market of France. So the third element of the research was to present the Latvian companies' entry model to four industry experts with a significant experience in external markets as well as in France to test it.

Results

In the research there are examined seven international trade theories. They may be divided into two groups. Classical country-based theories (starting from Adam Smith's Mercantilism Theory in 16th century, Adam Smith's Absolute Advantage Theory in 18th century, David Ricardo's Comparative Advantage Theory in 19th century as well as Heckscher-Olin Theory in 1930's) and firm-based theories (Linder Theory in 1961, Product Cycle Theory in 1970's and Porter Theory in 1990's). Actually, we can say that International trade in 2010's is a correlation of these theories. They can't be called useless or old fashioned because these theories are the basics of modern trade. Companies from various countries take part into international trade because economic resources (raw materials, capital, labour force etc.) are decomposed all over the world and for an efficient production we do need several compositions. The company's advantages in external market may be based on natural (local resources) and inherited (local know-how) aspects. In case of Latvia, natural advantage is local resources like wood (50% of the country is covered by forests) as well as labour-force which is not that expensive as in developed countries. Inherited advantage or local know-how

Latvia has in several fields which have been known in Eastern Europe for years- wooden, textile, machinery industries. These are businesses where Latvian companies are competitive and could be potentially interesting partners for French enterprises.

There are four basic strategies (International, Multinational, Transnational and Global) which may be used to enter external markets. The choice is made before starting the entry in external market but after the market research is held. The decision is based on correlation of particular company's brand (image) and marketing activities as well as product price and quality.

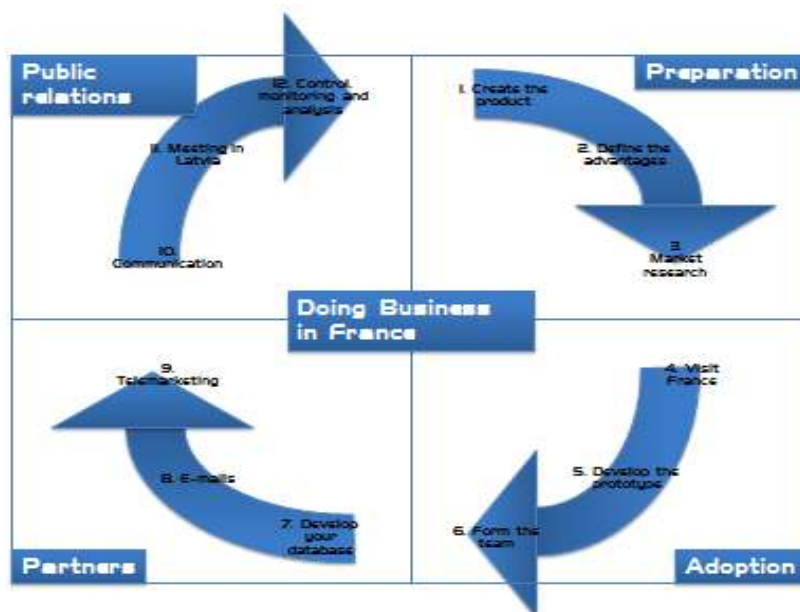
International trade theory displays five entry modes in external markets- export, licensing, franchising, foreign branch and joint venture. Every entry mode has its own advantages and disadvantages. The decision which mode may be the right one is based on company's own goals, vision and the situation in the market. Anyway, before entering in external markets it is important to carry out a market research. There is not a clear mathematic formula that answers to the questions which mode should be used. Although by working out a plan how to enter in external market, it will be possible to see which model should be used. Business is a process which means that the company may use one model to enter in the market but another one in some period of time for further development of their activities. At the same time Latvian company should choose that mode which does not bother its comparative advantages- local resources and labour-force as well as know-how.

There are three other possibilities which may be examined to enter in external market- turnkey project, management contract and cluster. Turnkey project is a deal where the company signs a contract that someone else will do all actions (agreed within a document) and will sell them this project at the very end. It does not eliminate the entry in external market because the other party (which is executor in this case) will do all the operations to get there anyway. Management contract is an outsourcing service which may be useful to use consultation from industry experts. Cluster is a way of cooperation which recently gets more and more popular in Latvia.

There are a lot of potential problems when doing business in France- French is the only language in communication, company should schedule delays in money transactions and other co-activities, French people are used to ask a lot of information and documents for even a small project, the product must be adopted to the customer's taste and should be prepared for an immediate use. Legislation process takes a lot of time in France; bureaucracy is a common term when dealing with French institutions. Haggling is a regular action for French people so it is important to foresee a margin for a discount. The vast majority do not know Latvia and they do not trust people as well as companies from the Eastern Europe. Because of the transportation costs only high added value products or products with small premium but in gross quantity may be competitive in the market of France. These are important circumstances that should be taken into account but on other hand the market of France is a way too big to postpone the entrance.

Latvian companies should use their own know-how to create a product with high added-value based on Latvia's natural and competitive advantage. There are several industries where Latvian companies have been known as proficient for a long period of time- wood, machinery, textile etc. Latvian companies may be successful in the market of France when selling product with a Scandinavian quality at Eastern Europe's price. Latvian companies should use export as an entry mode at the beginning and a personalised entry model composed to successfully enter the market of France. The model to enter in the market of France is composed of 12 steps which are divided into four categories (Fig. 1. Latvian Companies Entry Model).

Figure 1. Latvian Companies Entry Model



Source: Ritovs

A. PREPARATION

1) *Creating the product*- company should start with the product. They may work out a new commodity or adjust the existing one. Anyway, it won't be possible to enter the market with the existing one. Every market has its own particularity which requires adjustments. Price, quality, delivery terms and flexibility is essential. French customer requires a product which is ready for an immediate use so Latvian producer has to adjust it to the local traditions and taste.

2) *Defining advantages*- SWOT analysis is necessary to define company's as well as product's advantages and things to improve. It is vital to compare and look on two categories- companies and products from developed countries as well as from emerging markets. It is not enough to be cheaper than French companies because in the market of France there are rivals from Eastern Europe and China too.

3) *Market research*- this is a correlation between first two steps of the model. Before moving on, the company should research several issues in the market- political and socioeconomic situation, legislation, potential customers and their values, habits, transportation costs, mentality, quality, price standards etc. It is not a theoretical aspect but a thing in "to do" list. Just a clear understanding of the country and its market is acceptable to think about business operations there.

Examination question- are we ready to enter the market now? As Mister Donald Trump has said that the best investments in his life were projects when he didn't invest the money. Maybe it is better to refuse now to successfully enter later on.

B. ADOPTION

4) *Visiting France*- the company will have some uncertainties and questions. It is recommended to visit France, meet industry experts as well as Latvian representatives in the Embassy of Latvia and Latvian Investment and Development Agency in France to get answers. Lack of information may cause important loses in the future. This is the best time not to hesitate to hire export consultant agency and use their knowledge as an outsourcing service.

5) *Developing the prototype*- company should adjust the product regarding the information they have got in the previous four steps. Just a prototype which is prepared for an immediate use means that the company is ready to enter in the market. Partners will require a prototype to see what the company wants to sell there.

6) *Forming the team*- the company has to form a team with experts in several fields (exporting, marketing, production, financing etc.). It is possible to use outsourcing services but the responsible person (manager) should be chosen. It is very important for the manager to set the goal and tasks as well as divide roles and responsibilities within the team. Do not forget about French language.

C. PARTNERS

7) *Developing own database*- it is not possible to enter the market of France on your own. Company is obliged to have a native representative, agent or distributor. Latvian enterprise should start with working out a database. Contacts may be found on the Internet, mass media and previous communication sessions. Company name, Name and Surname of a contact person, email address, phone number, website address or other information about experience is crucial. This is some kind of wish list with potential partners in the market of France.

8) *Sending emails*- a formal letter where presenting the company, product and express willing to cooperate should be sent to all recipients from the database. Average turnover (answers to the email) is around 1%. Be formal, punctual and precise.

9) *Telemarketing*- the goal of the step 8 (sending emails) was to carry out the telemarketing session. It is much easier to start conversation if there is a clue (email which was sent before in this case). Average turnover is around 5%. Company should sort the contacts after the phone call in three groups- potentially interested partners (to continue the communication), not for cooperation now (to call back in 6 months), and not interested at all (to contact in a year).

D. PUBLIC RELATIONS

10) *Communication session*- there will be question and answer session with potential partners. Both parties will be interested to clear up values, cooperation conditions and details about the company and product. It is suggested to stop the interconnection as fast as possible in case of bad presentiment or problems in this early phase of cooperation.

11) *Meeting in Latvia*- it is critical to have a meeting in Latvia. Trust is essential when being partners. The image of the company as well as country is vital. So try to be a nice host and do not forget that Latvia is not just its capital Riga and the person is really interested to get familiar with you. Both parties are looking for confidence in this early stage of co-business.

12) *Controlling, monitoring and analysing results afterwards*- if the potential partner is satisfied about the results of the meeting in Latvia there is a serious reason to start cooperation which means an entry in the market of France. It is not the end of the acquisition, it is the beginning of the business activities in France so monitoring, controlling and result analysis must be carried out.

The model is prepared based on theoretical materials as well as existing companies experience however further research and observations are important to evaluate the usefulness of it which is some kind of never-ending story.

Conclusions

Taking into account specific information about economic, political and social situation in France and its own characteristics described within this research may be important. When considering the entry in the market of France Latvian companies should pay attention on long-term business relationships and subordinate their strategy in this way but for efficient operations in the market of France Latvian companies are obliged to have a native representative (agent, salesmen or company).

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LITHUANIAN RETAIL INTERNATIONALIZATION STAGES, THEIR DESCRIPTION AND PERSPECTIVES

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Abstract. It is difficult to justify the country's retail internationalization prospects ignoring the previous steps and the current situation, and not evaluating the process and trends in the world and region. This is especially in the case of Lithuania, which began to create a private trade only after 1990. All the significant quantitative and qualitative changes of national retail in internationalization process was made during that 22 year period. The specification and evaluation of the process will allow a more realistic look at the perspectives of the retail internationalization in the country.

Keywords: Retail internationalization , stages, the perspectives in Lithuania

JEL classification:

M21 - Business Economics

Introduction

Analysis of the Lithuanian retail internationalization process is considered a special case, because it's a small Eastern European country that regained its independence 22 - year ago and is developing market economy. Although it is a relatively short period of time for the country, but it was very rich with a rather contradictory events. Progressive small, medium and larger formation of supermarket chains and market penetration in difficult environmental were relatively quickly , as well as state stores privatization phase, unused indoor space applications for trade purpose, construction of new stores. Those processes were also open to the foreign investor. So, retail internationalization assumptions in Lithuania were different from that of strong economic countries: level of risk businesses face was very high, and the profit is only a perspective; the Lithuanian market was small, and complicated operating conditions were unacceptable to large foreign retail companies. Certain retail internationalization processes already took place during privatization of state trading and in the beginning of private trade development. Individual cases which are not discuss in the retail internationalization theory, but can be found in the individual analysis of Holander (1970), Treadgold (1988), Salmon and Tordjman (1989), Dawson (1994), Alexander (1997), Alexander and Myers (2000) and in books or articles of other authors.

Lithuanian retail internationalization process was non-traditional, well-known manner. This was influenced by many factors: the external environment, the specifics of emerging economies, a small market, low purchasing power of residents, local business initiative, the development of private trade and so on. After year 2000, the Lithuanian capital trading companies began development of the neighboring country markets. Looking at the Lithuanian retail internationalization process perspective, there is a need to identify and summarize the steps, compared with the global trends. It is assumed that the Lithuanian retail internationalization process in the future will have to specificity, acquired in the previous phases. Aim of the article - to distinguish and describe the Lithuanian retail internationalization stages and based on the changes in the future. In order to achieve the following tasks:

- Retail internationalization phase extraction methods;
- Retail internationalization stages of characterization;
- Retail internationalization changes in the future.

The present Lithuania, creating a market economy unusual case. Theoretical article is based on a market economy laws, articles, books, dealing with retail internationalization, its processes and individual European and U.S. companies with practical experience.

Literature review

Practical retail internationalization taking place since ancient times, but the theory started only eight of the last century - in the decade, when the process of gradually gained regional and even global level. The first retail internationalization researches Holander (1970), Kacker (1985) was focused on the most retail companies. Holander (1970) study originality was that it offered five retail companies forms to go to a foreign market. This luxury goods seller (General Merchandise Dealer) Trading Company, specialized in the market chain (Specialized Chains), direct sales (Direct Selling) and vending machines (Automatic Vending). Holander suggested retail companies in the classification provided a useful basis for further research, it helped refine the business entity - the retail company and what forms it can expand into foreign markets. Since 1980 - in the middle of the external environmental factors (political - legal, economical, cultural) analysis has been focused on how they impact on foreign investment in retail companies. Kacker (1985) is examined in great detail. Treadgold (1988) further examined the retail internationalization issues not only trading company but also the market perspective. He made international retail companies typology, which is based on the company's operations in foreign markets, costs and supply of control dependence. According to Treadgold based trading companies passing into foreign markets in four categories (conservative development, encourage expansion, an aggressive strategy of global influences). This consists of retail companies in the classification helped to answer the questions of where and how the company is expanding.

Salmon and Tordjman (1989) classified the trading companies based on their strategies. They proposed three major retail campaign main strategies (global, multinational, investment), depending on what works in the field of retail company. Whitehead (1992) notes that the retail internationalization is more than a change in the strategy process.

Methodology

Each country's retail internationalization phases based on the content, the length of time is different, because it was influenced by many external and internal factors. Since 1990, only Lithuania restored its independence and gradually began to develop a market economy, it is the retail internationalization process influenced the choice of economic model, the process of theoretical terms. Lithuania chose the market economy model with the so-called "shock therapy", it's mean quickly break down and reform the socialist economy into a market. Market economy - private property and its consolidation. Entrepreneur's goal - profit. Competition in a market economy "engine". The market is supply and demand, value added tax and other laws.

Retail internationalization theory does not deal with the point of view of these processes, and it consistently starts from the retail company's ability to expand into foreign markets, ie individual authors (Holander 1970, Treagold 1988, Salmon and Tordjman 1989 and others) classified them, and tipizavo based entry strategies. Widely considered and based retail company's entry into the markets of other countries strategies and discusses their peculiarities, problems. After 1990, the individual trading companies internationalization problems gradually preferred trading markets, the internationalization process, as the same become established in different countries trading companies.

As retail companies turn to overseas markets mainly aimed at producing a profit of more than its domestic market. As a result, the theory considered trading company in terms of issues like when and where you like to go to one or the other country's trade market. Large retail companies, the most important criteria are: the size of the market, the country's level of economic development, government policy, business regulation (laws, taxes, etc.), Competition in the internal market, industry development speed, transport and other communication rate, etc.. We see that the government and other institutions involved in the retail internationalization process and may speed up or slow down. The state, by reducing or increasing its market entry into a variety of barriers to addressing their economic, social and other problems, and retail companies were constituent parts of the domestic market to its goals. As a result of national trade markets vary in their degree of

internationalization, and could also be achieved in different ways. Methodologically distinct phases to be seen in the country's retail internationalization methods used in different stages. Taking advantage of the laws of the market economy, the retail internationalization provisions of the theoretical and practical examples, the Lithuanian government programs to Lithuania for retail internationalization stages and summarize them.

Retail internationalization assumptions

Theory states that after 1990 years of retail internationalization has moved into developing countries and emerging with high potencies. Countries (China, Russia, India, Brazil, etc.). Lithuanian retail internationalization of the assumptions necessary to touch because they appeared only in 1991 after the privatization of state property law, and after privatization of state trading items. Private equity is an important validation of a market economy basis. Since, according to state property privatization law to participate in auctions and acquire assets could and foreign natural and legal persons, it is the first important retail internationalization has been assumed since the market economy development.

Another important assumption is the size of the market, the country's level of economic development, public policy. Market size acts as a magnet, i.e., significant market traction so great that the world's largest retail trade which campaign main entrance into these markets, plans and other under favorable conditions, it is implemented. The market size of the bait, and small market has to wait their turn. Country's level of economic activity is an important part of retail internationalization assumption because there is less business risk. However, the market size is important. State policies to encourage foreign retail companies coming and contrary to worsen their conditions of entry. Lithuania, as a small country, chose the open economic policies and retail internationalization any specific conditions do not.

Competition in a market economy "engine" is one of the determining assumptions coming into the country of foreign retail companies. Country's trade market niches may be excluded because they are engaged in local trading companies, whose presence on it for survival alone compete. The potential and the second option when the country's in the market now has a similar profile of another country's retail company. It is equally important for the Government, its institutions, competition policy, ie whether it is adequate for all companies operating in the country, or more favorable to local companies. As the retail internationalization is not only entering the domestic market of another country retail companies, but also indirectly, for example., Through wholesale trade marks distribution, rental, etc. These methods are particularly important for small countries the market, which does not rush to large foreign retail companies.

The country's neighbors. This assumption is an important new market economy in developing countries. The most economically powerful neighbors, regardless of their territory and population, can significantly affect the country's economy and retail internationalization. All the above listed assumptions more or less single-Lithuanian retail internationalization stages.

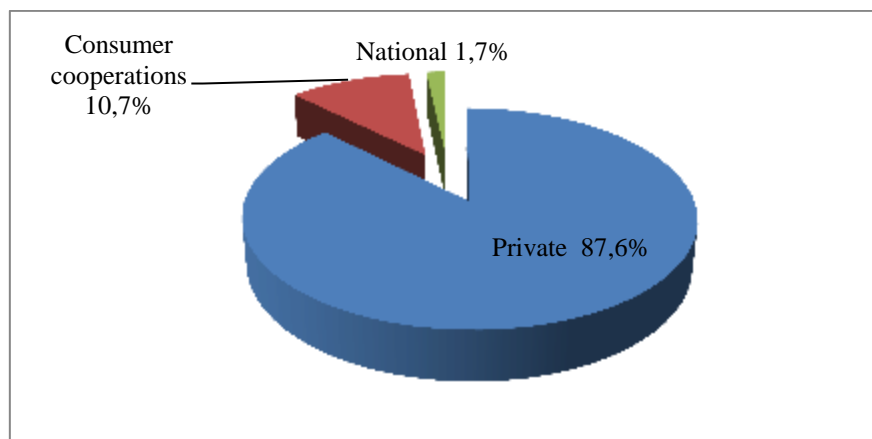
Internationalization stages

The country's retail internationalization of course influenced by the advent of foreign trade companies in the domestic market, imports of goods, joint marketing ventures, etc. If foreign retail companies do not come to market in the country, it does not mean that they are not internationalized trade. Since Lithuania's retail There were no such significant changes that have changed the situation of some other commodity in the market, then the internationalization stages emissions can be attributed to the country's economic developments. The growing economy of the country is attractive to foreign investors, and the crisis period of stagnation can buy bankrupt companies. Based on the above methodology, a small start-up a market economy, the Lithuanian market, it is appropriate to distinguish the three stages of internationalization: the first (1990 - 1999 years), or

creative market economy, and the second (2000 - 2009 years) or a market economy has strengthened and the third (from 2010) or change.

The first phase. The first Lithuanian retail internationalization stage may be divided into two periods. 1991 - 1995 was held in a state trading privatization. In fact during this period were developed private trade (Figure 1).

Figure 1. Shops distribution by type of ownership



Source: Lithuanian statistic department data

Although the 1991 - 1995 year, before the introduction of the litas was a huge inflation, trade deficit, significant unemployment, a weak economy, but buying privatized state-owned trading facilities, or other facilities used to build new stores and have both natural and legal persons in foreign countries. The risk of investment was high, but this option has been exercised little aliens. Brothers belgians Ortiz (George, Oliver ir Nicolas) in 1992, opened his first grocery store in Antakalnis street. This year's "Iki" celebrates the 20 - anniversary and is the second largest retail chain in Lithuania, also has stores in Latvia and Estonia. I think there is a fundamental difference between network marketing and development of the country starting from the first store, or purchase of an already existing sales network. In the first case, chain of stores expanded gradually, growing the economy and the retail chain customers become their own, as the Lithuanian capital network marketing. Purchase of operating shopping network essentially changes only its owners and is relatively easy to stay in the market. Like the brothers Ortiz, founded and formed the Lithuanian capital supermarket chains. Also created various general trading companies, which often had a Lithuanian businessman premises, while the foreign partner's share of capital required to launch the company. 1993 metais Kaunas opened the first JV Baltman commerce store, which was founded by Lithuanian and Estonian legal persons. JV Baltman trade "similar to the" Iki "number of stores grows. Regarding Vilnius University Faculty of Economics, Economics Department of Commerce made foreign-owned trading companies in trials with the Department of Statistics to the Government of Lithuania, at the end of 1995, they accounted for only 1.71% of total Lithuanian the number of trading companies, of which 93.4% were joint ventures. More than 60% of all foreign-owned shops trading in non-food goods. In 1995, foreign-owned firms accounted for 5.5% of the country's retail trade turnover. If foreign-owned trading companies are selling only goods of other countries, the Lithuanian retail internationalization level is still very low. 1997 showed that 89.4% of foreign-owned trading companies goods are imports. A large percentage of imports of goods shows that foreign-owned trading company did not bother with the Lithuanian producers since even easier and cheaper to bring the low-cost imported goods. In addition, the country's first customers in the market economy in the period were valued beautifully packaged, goods from abroad. During this period, trade flourished in the food and non-food commodities markets. The goods were shipped from Turkey and China. In addition, many foreign goods sold for individual brands

distributors, that's to say received from the manufacturer to distribute in the country or in the goods. In 1992 Lithuanian businessmen founded the joint venture "Sanitex" which distributed by Procter & Gamble laundry detergents and other products. JSC "Senukai" began selling building materials and various household goods. While statistics do not what the retail trade turnover amounted to imports of goods and manufactured in Lithuania, the experiences carried out in foreign-owned trading companies of origin study, it can be said that in this period, imports could reach 70% or even more throughout the country's retail trade turnover. Such a high level of retail internationalization can be seen in two ways. First, the more difficult the strengthening of local industry, because it has outlets a problem, although the same products are imported from abroad. Second, the privatization of state property in the first year, a trade deficit, import was inevitable. During this period (1991 - 1995 years) the greatest impact on retail internationalization was not foreign-owned trading company and import of goods, including different brands of distributors and trade in imported goods markets.

Second - (1996 - 1999 years), the first phase of the retail internationalization period can be characterized as a private trading consolidation and competition over market shares and foreign capital attraction in the trading sector.

The market was trading companies become large-scale phase-out, which is not unique to the construction of new stores or the old reconstruction, but also connecting smaller firms, it's mean their purchases. In the retail trade network in quantitative and qualitative changes in formation of such large grocery retail chains as "Maxima", "Iki", JSC "Ekovalda, non-food goods trade - Senukai", Apranga, and so on. However, not all trading companies had enough capital to development and looked abroad. UAB Ekovalda "In 1999, 50% of the shares sold to Swedish company ICA Baltic, which later bought the rest of the shares in 2002 has Rimi marketing network. By 2000, the retail Lithuania was the Lithuanian capital trading companies. Another thing that the trade turnover accounted for a large part of the imported goods (see Table 1).

Table 1. Retail trade turnover breakdown by origin in 1999 and 2000

EVRK	Activity	Sales of good in total		Of them			
				Produced in Lithuania		Produced in foreign countries	
		1999 years	2000 years	1999 years	2000 years	1999 years	2000 years
50	Motor vehicle and automotive fuel retailing	100,0	100,0	47,4	44,7	52,6	55,3
50.10	Sale of motor vehicles	100,0	100,0	9,3	2,7	90,7	97,3
50.50	Sale of automotive fuel retail	100,0	100,0	85,1	83,4	14,9	16,6
52	Retail trade except motor vehicles	100,0	100,0	54,3	53,7	45,7	46,3
52.11	Retail sale in non-specialized stores with food, beverages and tobacco	100,0	100,0	73,9	74,2	26,1	25,8
52.12	Other retail non-specialized shops	100,0	100,0	35,9	33,1	64,1	66,9
52.4	Other retail of new products in specialised shops	100,0	100,0	33,1	27,9	66,9	72,1
52.44	Other, miscellaneous furniture, lighting equipment and household goods retailing	100,0	100,0	43,1	40,0	56,9	60,0

Source: Lithuanian statistic department data

The table presents the total retail sales of some product groups, internationalization levels are significantly different. A comparison of year 2000 vs year 1999, we see a pattern that is a retail internationalization level of marginal growth. Lithuania until 1990, was a well-developed garments,

knitwear, footwear industry, but in 2000 72.1% of the turnover of these goods were goods produced abroad (52.4). The first table shows not only the retail level of internationalization, but the Lithuanian individual industries situation.

Summing up the first phase of the retail internationalization process, it should be noted that they were complex, with its own specificity, which is typical of a small country through the launch of market economy.

Second Stage. 2000 - 2009 years. This period relates to the change of ownership. 2004 KESKO than 30 million litas bought the remaining 50% of shares trendsetters. True, trendsetters are no longer in real estate. In 2002, ICA AB acquired the remaining 50% of shares EKOVALDA. In 2008, the brothers Ortiz graduated from the transfer of independent trading companies in the alliance "Coopernic" Palink Lithuania and Latvia managed stores control. As for non-food retailing, it should be noted that the level of internationalization increased, as most of the foreign retail companies in Lithuanian market includes indirectly, through intermediaries, through franchises and other indirect retail market entry methods.

Summing up the second phase, it can be said that the retail trade in Lithuania increased internationalization as part of the Lithuanian capital firms purchased by foreign companies.

The third stage. The third phase began only recently, since 2010, and this is just the beginning. The essence of this stage - to enter the retail market in Lithuania is only possible acquisition of another retail chain. Retail market is filled with enough new players to practice does not occur. . This can only be done especially in large international companies, such as IKEA, which is building a shopping center having not only in Lithuania but also Latvia, Estonia, Poland, Belarus and other countries consumers' needs and expectations. In other cases, the retail company's market penetration into less risky ways.

Summing up the third stage, one can say that this is just the beginning, so more observations and analysis will be a few years

Conclusions

Retail internationalization processes are not new in world markets, but such a small country like Lithuania retail internationalization process was similar to other countries. First, because the country has moved towards a market economy suddenly, without any additional preparation. Therefore, the first national retail internationalization phase associated with the privatization of state property. It was at that time were created first the equity retail business, then the increase in the trading networks. The next stage is more related to the fact that some companies have been sold to foreign investors or foreign retail chains. This is due to several reasons - first, the lack of investment. Another thing - an international company, seeing and assessing the future prospects of paid significant money for local capital firms. Third, but no less exciting phase of Lithuania is just beginning, when the retail market players in practice does not, and the next are already using proven, low-risk ways. Further Lithuanian retail internationalization sequence of stages will be considered in the other.

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STRUCTURAL PROBLEMS OF THE DEVELOPMENT OF ECONOMY OF LATVIA

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Abstract. The economy of Latvia has experienced both a period of rapid growth and a deep recession. Particularly, the last crisis caused severe consequences, which was one of the deepest in Europe. The internal and external imbalances were considered as one of the main causes of vulnerability of the economy of Latvia. The global financial crisis has contributed to significant adjustments in accumulated imbalances. At the same time the reduced disparities did not mean that the economy had become less vulnerable, capable of providing stable long-term balanced growth of GDP. The article provides the analysis of the main structural problems of the economy of Latvia and main structural policy directions.

Key words: macroeconomic imbalances, structural policy, industrial policy, competitiveness

Introduction

Since Latvia joined the European Union (EU) it has experienced rapid economic growth and considerable recession, stimulated by structural, cyclical and external environmental factors. The economic crisis in Latvia was the deepest crisis within the EU. During three years (2008–2010) the overall GDP decreased per 21.3%⁸², and historically it was the largest drop, experienced by some national economy after the Great Depression in the USA where within four years GDP decreased per 29%⁸³. Although in 2011 the growth of GDP in Latvia was positive and reached 5.5%⁸⁴, however, the economy in Latvia is still in the recovery phase after the economic crisis, as the pre-crisis level of GDP has not been reached yet. One of the main problems in the economy of Latvia now is its structure which is unable to compete on a global level. The export of goods with high added value in Latvia accounts for only 4.6% of total export (in the EU countries – on average 12%), every year only 0.6% of GDP is spent for research and development in the private and public sectors in Latvia (in the EU countries – on average 2%, including Estonia – 1.2%).⁸⁵ In the competitiveness ratings, regularly published by the World Economic Forum (WEF), Latvia lags far behind other new EU countries (Czech Republic, Poland, Slovenia and Slovakia) and other Baltic states. Particularly bad is sub-index score of innovations in Latvia, according to which Latvia was ranked 68th in the world in 2012/2013 (of the 144 countries considered)⁸⁶.

Taking into account the situation in Latvia and EU, as well as global economic trends, the article's scientific problem is to assess the development of Latvian economy macro-structural bottlenecks, and the measures necessary for faster economic recovery after the crisis, while ensuring sustainable growth over the medium term. Research aim is analysis of the main structural problems of the economy of Latvia and demonstrates the potential of economic policies to improve the structure of the Latvian economy. To reach this target there has been evaluated the influencing factors of the economy of Latvia from the 2004th until 2011, analyzed the structural changes of the economy of Latvia and identified the main problems limiting the Latvian economic development and competitiveness. Results of the analysis highlighted the potential economic policies of the Latvian economy to improve the structure and competitiveness of the Latvian economy to promote balanced and sustainable development.

The research object is Latvian economic structure. By the assessment of data there have been used methods of analysis and synthesis, reference and dynamical line.

⁸² The author's calculations using CSB data basis.

⁸³ Weisbrot, M. and Ray, R. (2010). Latvia's Recession: The Cost of Adjustment With An "Internal Devaluation", Center for Economic and Policy Research, February 2010, 5 p.

⁸⁴ Economics Development of Latvia. Report (2012). Ministry of Economics Republics of Latvia, Riga, June 2012, 9 p.

⁸⁵ Bitāns, M. (2010). My view on 1920s in Latvia economics: what will the next cycle be? Riga. Bank of Latvia.

⁸⁶ Global competitiveness report 2012–2013. Klaus Schwab. World Economic Forum, 2012, 226 p.

In section 1 the Latvian economy after accession to the European Union is described, dividing the three different stages, and pointing out the main problems that limit its development in the future. The section 2 focuses on the Latvian economy and structural problems in the analysis of the factors that led to it. In the end it is concluded that one of the major obstacles to structural economic growth is the low share of industry in GDP, which needs an active industrial policy to enhance productivity and increase in exports and the Latvian improvement.

The economical growth of Latvia after joining the European Union

Joining the European Union promoted Latvian economic integration, radically changing the situation in financial and labor market. The borders were opened for free flows of finances and capital, that set lower prices for financial resources, and also increased the lending amounts and domestic demands, the freedom of labor movement offered new opportunities for inhabitants of Latvia to get incomes and experience in other EU countries, at the same time causing rapid labor force emigration and rise of salary and inflation in Latvia. The development of Latvian economy from the year 2004 can be divided in three stages:

1) year 2004–2007 when growth of economics was fast and dynamic, that reflected on a rapid rise of GDP, inflation and current account deficit, low unemployment level, small budget deficit and little Government debt;

2) year 2008-2010 when Latvia was hit by economic crisis, that was promoted by structural, cyclical and environmental factors, that reflected on a drop of GDP, inflation and current account deficit, high unemployment level, rapidly growing budget deficit and Government debt;

3) from the year 2011 when there is stability of economics, gradual growth of GDP, unemployment level and budget deficit decreases.

In the first stage (from 2004 to 2007) Latvian economy was largely based on domestic demand. Essentials of private consumption and investment growth, which exceeded the GDP growth was due to a significant inflow of foreign capital through the commercial banks. It also said the rapid rise in inflation and the current account deficit of excessive and thus - Latvian economic vulnerability increases. At the same time increased imbalance in both the domestic and external economic, as evidenced by the low share of manufacturing in GDP, a small high-tech sectors in manufacturing, domestic savings decline in public debt and the loss of competitiveness of Latvian exporters. Economic imbalances intensified government pro-cyclical fiscal policy. According to the authors the stage from 2004 to 2007 was a significant need for tighter and more restrictive fiscal policy - both capital gains taxes and stricter regulations in real estate foreclosure, which would reduce inflationary pressures and risks of overheating. Until the year 2007 the Government did not take action to reduce economic imbalances, despite the fact that the unbalanced economic development and "overheating" was actively discussed throughout society and economic experts. Also, monetary policy, although focused on the rapid growth in domestic demand and inflation reduction (Latvian bank since the year 2003 implemented by the end of a tight monetary policy several times raising the minimum reserve ratio and the refinancing rate), did not give tangible results, because it is limited by the fixed currency exchange rate and other factors.

In the year 2008 there were a sharp directional turn in Latvian economy. After several years of rapid economic growth the Latvian GDP began to decrease rapidly, and there was a recession. Three years (2008-2010) Latvian GDP as a whole fell by almost 22%, the unemployment rate at the end of a year 2009 was more than 20% of the economically active population, investment fell by half, deficit in the year 2009 was 1 258 million lats or 9.6% of GDP (in year 2010 it dropped to 974 million lats or 7.6% of GDP), Government debt increased from 1 329.8 million at the end of a year 2007 up to 5 693.6 million LVL at the end of a year 2010, reaching 44.7% of GDP.⁸⁷ Contributing causes of the crisis can be divided into three groups - the cyclical, structural and environmental factors. Cyclical factors were related to the stage from 2004 to 2007 of rapid economic growth, with

⁸⁷ CSB data basis

GDP growth projected ahead and there was a significant in both internal and external imbalances (high inflation and a large current account deficit). Structural factors are mainly related to the sectors of the economy structural disadvantages, which was spontaneously formed by private investment flows and did not result in Latvian competitiveness (share of manufacturing in total value added of Latvian in year 2009 was the third lowest in the EU). However, environmental factors were linked to the global economic crisis and the decline in external demand, which negatively affected the Latvian exports and other indicators of economic activity of 93.6 million LVL at the end of a year 2010, reaching 44.7% of GDP. The banking sector's total losses from the year 2009 to 2010 amounted to 1 134.1 million lats.⁸⁸ The economic crisis revealed the years built up over economic disparities, demonstrating the shortcomings of government economic management and control policies and resource allocation procedures. The crisis has forced people to rethink the current model of behavior and change limiting costs (during the crisis, private consumption declined significantly, while the national savings rate rose reaching 29.1% of GDP in the year 2009). The crisis also contributed to the reform of the public sector, reducing its capacity and improving its operational efficiency. There were also a number of measures to improve the business environment in order to promote the competitiveness of local producers, and increasing economic activity. For example, the Commercial Code amendments, which provided for the establishment of a company to reduce share capital, the largest possible number of economically active people start a business, Micro-enterprise Tax Law and Implementation measures of business start-up cost reduction and simplification.

Latvian experience in coping with the crisis triggered a broad discussion about currency devaluation and the associated risks, demonstrating that the devaluation (which the IMF was previously considered to be a universal instrument of financial crises) are not always necessary and inevitable.⁸⁹ This view was defended during the crisis by Prime Minister V. Dombrovskis, who took up these responsibilities after I. Godmanis in February 2009, and management of the Latvian bank, stressing that the cost of devaluation of the Latvian case would be greater than the gain.⁹⁰ Latvia, like the other Baltic countries, showed the international community that are able to make massive cuts in public spending (the biggest budget cuts - 15% of GDP - Latvia made in the first nine months of a year 2009⁹¹), while fiscal consolidation in the short term hinder economic growth and create "painful experiences" to its people.

Since 2011 the Latvia has reached some stability and slow recovery is happening after the crisis, but there are still a number of significant issues that may limit the development of the future:

- inflation persistence;
- slow productivity growth;
- high GDP volatility and low average growth rates;
- low growth in the Baltic States and the EU and the world in general, limiting external demand and Latvian exports;
- the need to reduce government debt;
- dependency increases (due to negative natural increase and emigration);
- a large external debt and its servicing-related expenses;
- volatility in global financial markets, which makes it difficult to obtain loans for refinancing of existing debt in both the public and private sectors;
- unsustainable demand uncertainty and major trading partners;
- poor Latvian competitiveness in the EU and world markets;
- political instability (from 2004 to 2010 changed the 7th Latvian government);

⁸⁸ Latvian Commercial Banks Association (2011).

⁸⁹ Aslung, A. and Dombrovskis, V. (2011). How Latvia Came through the Financial Crisis, Peterson Institute for International Economics, 2011, 118 p.

⁹⁰ Bank of Latvia. Publication (2009).

⁹¹ Aslung, A. and Dombrovskis, V. (2011). How Latvia Came through the Financial Crisis, Peterson Institute for International Economics, 2011, 118 p.

- cooperation between policy-makers.

Recent experience in the global crisis has highlighted the factors that affect any crisis proportions and is critical to its successful management. Crisis less rigid countries were those, whose growth in recent years was a balanced economic structure and evenly developed. For example, in Poland, where, thanks to the smooth development of the economy (from 2004 to 2007 Poland's GDP grew on average was 5.5% per year⁹²) and balanced field structure of GDP growth rate, however, remained positive in 2008 and 2009, when in all other EU countries the GDP growth was negative. But more severe the crisis hit the countries in which they are deployed aggressive lending, such as Ireland, as well as countries with an open economy, whose growth is heavily dependent on external demand, such as Estonia and Slovenia. To reduce the impact of the crisis it is also important to keep track of their own financial situation and create a balanced budget, as well as provisions for contingencies. This is evidenced by the Estonian example that, although it was the 2nd more injured country in EU after Latvia, however, quickly and without connecting international assistance regained pre-crisis levels.

Latvian economic structural problems

Population welfare depends not only on economic growth, which tend to be characterized by quantitative indicators of growth, but also the economic stability preservation in maintaining a stable macroeconomic environment is a necessary condition for the attraction of investment and business development, as well as competitive jobs. In turn, economic stability is possible only when there is compliance with the principles of balanced development. Balanced development of the principle of non-compliance increases the economic vulnerability to internal and external shocks. This means that rapid changes in the behavior of economic subjects may result in significant adjustments to goods, capital and labor markets, with serious negative socio-economic effects in the short term, as well as reducing the potential for economic growth over time.

The authors believe that the analysis of economic development must distinguish macroeconomic and structural imbalances. Both imbalances are closely interrelated and represent a country's competitiveness problems. However, it should be noted that so far the policy makers and researchers focus mainly on the found macroeconomic imbalances. Macroeconomic theory is discussed in more stable and balanced economic development, dividing both internal and external balance (stability) values, which are reflected in several documents, including European Stability and Growth Pact. By contrast, the structural imbalances in the question development increases the most when it is facing problems that are associated with economic growth, regeneration and growth potential in the long run. These issues are closely related to the structural formation and they are covering such aspects as the role of state intervention and the need for intervention and regulation of the depth of the market economy.

It should be noted that the global economic historical development showed that the macroeconomic disparities are an important factor on the one hand they increase cyclic variation, but on the other hand, in times of crisis, the market economic forces tend to reduce. So, the crisis is a unique way to achieve macroeconomic balance. As for the structural imbalances, the ability of market forces to solve it is much weaker and the crisis only exacerbates existing problems, highlighting the urgency of putting policy makers in a number of questions on the need for structural reforms and the implementation of the road. Moreover, if the structural imbalance problems are not addressed, there is a risk that the future economic development of the inevitable formation of macro-economic disparities.

Latvian economic development analysis shows that by 2007 it was both macroeconomic and structural unbalanced. In order to characterize the macroeconomic disproportions in the Latvian economy authors used the list of indicators that were developing macroeconomic imbalances procedure (Macroeconomic Imbalance Procedure) program, in order to identify the time (the early

⁹² Author's estimates, using Eurostat data basis

warning mechanism (alert mechanism) developed a list of indicators (scoreboard) assistance) and correct macroeconomic imbalances.

Each indicator has also established a threshold above which shows the macroeconomic imbalance problem (see Table 1).

Table 1: Latvian macroeconomic imbalance indicators

	Thresholds	2004	2005	2006	2007	2008	2009	2010
External imbalances and competitiveness								
3 year average of Current Account Balance as a percent of GDP	-4/+6%	-9.3	-11.2	-16.0	-19.2	-19.4	-9.0	-0.5
Net International Investment Position as % of GDP	-35%	-52.3	-59.6	-69.9	-74.7	-79.0	-82.7	-80.2
% Change (3 years) of Real Effective Exchange Rate (REER) with HIPC deflators	±5% & ±11%	-6.9	-4.5	4.7	11.0	24.1	23.7	8.5
% Change (3 years) in Nominal ULC	+9% & +12%	10.5	29.2	42.9	71.4	79.4	42.0	-0.1
% Change (5 years) in Export Market Shares	-6%	29.8	43.3	32.0	45.9	41.1	31.8	14.0
Internal imbalances								
3 year average of Unemployment	10%	11.0	9.9	8.7	7.2	6.8	10.2	14.3
Private Sector Debt as % of GDP	160%	75	95	122	128	132	147	141
Public Sector Debt as % of GDP	60%	15	13	11	9	20	37	45
% y-o-y change deflated House Prices	+6%	-3.2	23.1	65.5	26.8	-23.1	-42.4	-3.9
Private Sector Credit Flow as % of GDP	15%	18.1	26.4	43.0	36.6	14.3	-6.1	-8.8

Source: Eurostat data basis

The table below shows that by 2009 the Latvian economy had imbalanced macroeconomic issues, while internal imbalance scores were generally within the threshold. The authors note that this data sheet is not included in the inflation rate, which until 2008 was the entire plant (reaching 15%), indicating the internal imbalance problems. Since 2008, macroeconomic imbalances gradually declined, mostly due to the crisis in the yearly adjustments.

The crisis and its consequences allows to clearly notice that an economic model, in which, thanks to an influx of foreign capital, was a rapid increase for domestic demand, which was a base for economic growth by 2007, has ceased to exist. Currently, the transition to a sustainable economic model, which will be the main driver of exports, is in progress. However, the authors note that for transition to a new economic development model Latvia has to overcome a number of macro-structural bottlenecks⁹³:

- reduction in the deficit;
- a well-functioning and stable financial sector in the light of the high indebtedness of the private sector;
- balanced economic development, contributing to the tradable sectors and raising productivity;
- reducing structural unemployment, better matching in the labor market;

⁹³ Latvian National Reform Programme "EU 2020" strategy

- improving the business environment, efficient use of EU funds, access to finance for businesses to support productive investments.

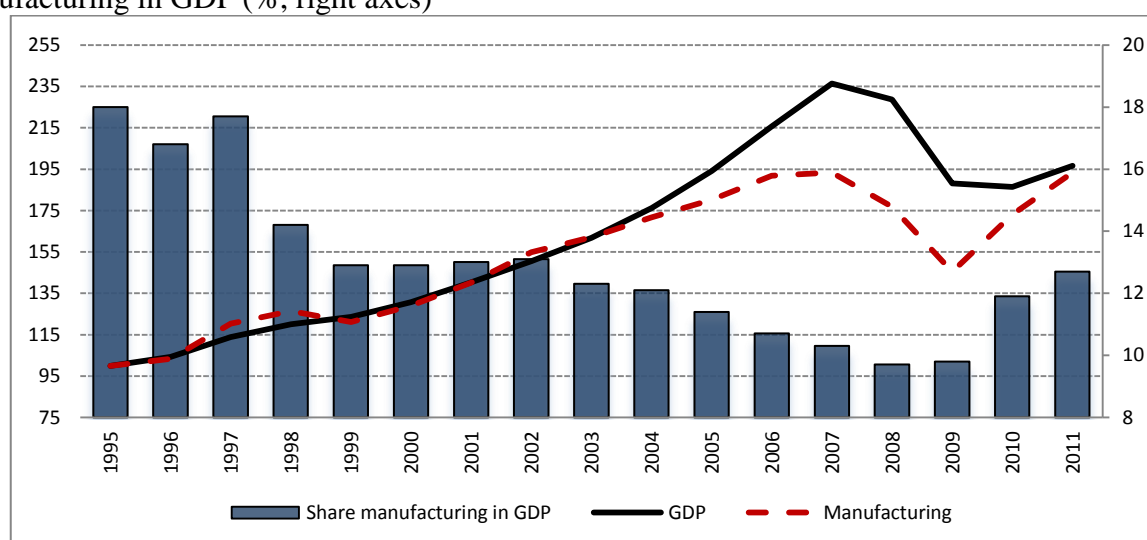
One of the most important structural obstacles to economic growth is the low share of industry in the structure of the Latvian economy. In the EU level, the manufacturing industry is seen as particularly important. European industry is of critical importance for the EU as a global economic leader. A competitive industry can lower costs and prices, create new products and improve quality, contributing thus decisively to wealth creation and productivity growth throughout the economy. Industry is also the key source of the innovations required to meet the societal challenges facing the EU⁹⁴.

Although the theory has not specified what should be the industry's share in the total structure of the national economy, however, is often noted that weak industry may limit a country's competitiveness and sustainable growth. One of the arguments as to why development is an important factor contributing to the competitiveness of that industry serves as a technology development and innovation base. In addition to maintaining human resources in science, industry or industrial sector contributes the access to technologies - technologies that create a potential new products and services, as well as contributing to the process of industrial restructuring necessary for the modernization of the industrial structure.

The current structure of the Latvian economy by sectors, compared to year 1990, has changed substantially in favor of the service industries. The share of value added has increased to 70.2% in 2011 comparing to 38.6% in year 1990.

The most rapid changes occurred during the first 3 years (1991-1993), the total production volumes per year fell by almost 1/5 and, at the various sectors of the economy that happened with a different intensity. In particular, a large decrease was observed in industry, where three years of production volumes decreased by 65%. In 1994th the situation stabilized - the total production volumes did not decrease anymore, but the structural changes continued to increase in service-sector output, while still declining industrial production. In 1997 significant growth was observed that was suspended for two years by Russia's financial crisis on industrial sales market due to the reduction (see Figure 1.).

Figure 1: Latvian GDP and manufacturing dynamics (1995=100, left axes) and share manufacturing in GDP (% , right axes)



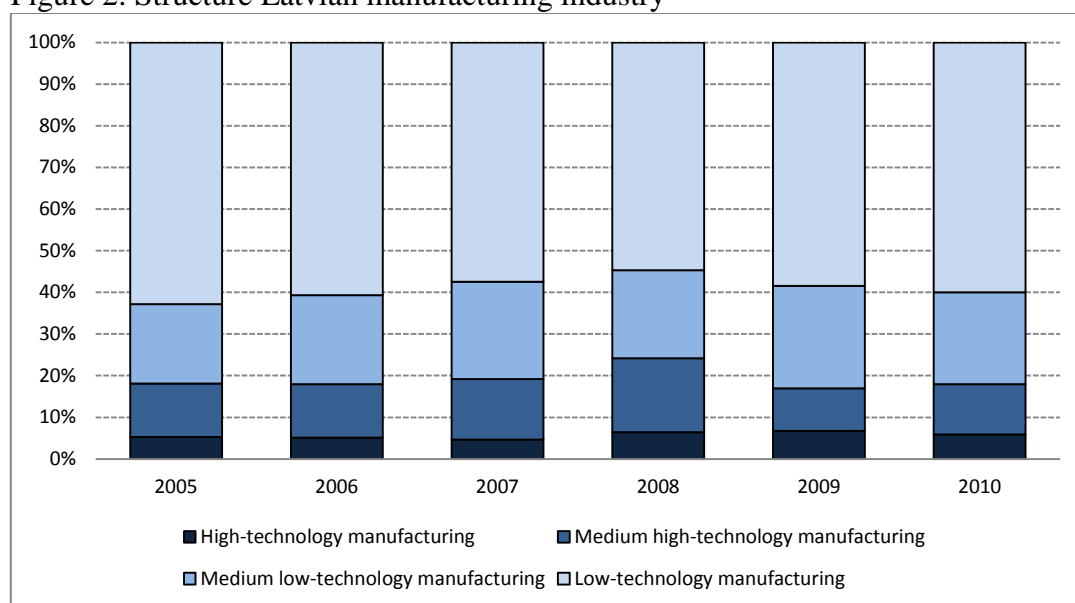
Source: CSB data basis

⁹⁴ Commission staff working document Member States competitiveness performance and policies 2011 SEC(2011) 1187

Since 2000 the Latvian economy experienced rapid growth and continued to increase share of service sectors. From 2000 to 2007 more rapidly than other sectors of the economy the construction, trade services and transport and communications have evolved. Significantly increased volume branches of production and number of their employees. Economic growth is ensured by increased domestic demand and, to a lesser extent, export opportunities. Domestic demand directly influenced by a number of service sectors in the rapid growth of the industrial production increase was mainly based on export growth. Therefore, the rapid growth of industrial share of the economy has continued to decline and in 2008 it reached 9.7%. It should be noted that the share of manufacturing in the Latvian economy is one of the lowest in the EU Member States. Also, the Latvian productivity rate of industries is considerably below the EU average.

Low Latvian manufacturing productivity level is largely due to the qualitative sub-structure. As according to the Latvian Central Statistical Bureau data processing industrial structure dominate the low-tech industries, which account for 60% of manufacturing value added (the EU average share of these sectors is almost one and a half times higher than Latvian). It should be noted that compared to 2005, the manufacturing sector in the technological structure is slightly improved. There have been persistent trends in the medium-high technology sectors share and a low-tech industries share decline (see Figure 2). As for high-tech industries, the dynamics of development is rather unstable, and the changes in evidence of the competitive position do not show any signs of strengthening.

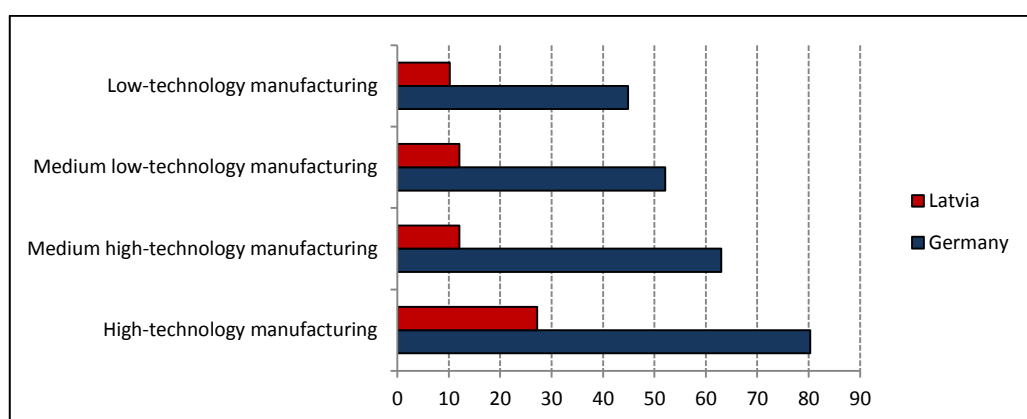
Figure 2: Structure Latvian manufacturing industry



Source: CSB data basis

In analysis of Latvian manufacturing productivity levels, the authors conclude that the high-tech industry company employees productivity almost double that of the average manufacturing productivity. At the same time, comparing Latvian and German productivity levels, it is clear that regardless of the technological level of intensity, it is considerably below the level of productivity in Germany (see Figure 3).

Figure 3: Apparent labour productivity (gross value added per person employed) in Latvia and Germany in 2009



Source: Eurostat data basis

This means that even without any changes in the production structure, there is the further improvements of production technologies or cross-specializations. At the same time the authors note that without a change in the technological structure of manufacturing in favor of high-and medium high-tech industries, there is a high probability that the difference between productivity levels remain sustained and Latvian ability to generate faster economic growth and convergence will be limited.

In order to achieve faster growth in the economy, not only in Latvia, the production technology modernization in all sectors of manufacturing, but also to develop the structure of production, which would increase the share of public sector in the economy, which is marked by higher productivity. It means to implement a targeted industrial policy. Industrial policy has eliminated the barriers that have so far limited the industrial competitiveness of the economic restructuring period and the years of rapid growth.

It should be noted that the increase in productivity is determined by several factors, such as:

- structures that are related to scientific and technical progress in the role of intensification of production;
- social-economic, which is mainly related to investment in human capital (human capital of education, training, body of knowledge, influencing people to be productive);
- organizational, which are related to the production process organization and management, production specialization and concentration of production territorial, as well as horizontal and vertical cross-link establishing.

The main problem of all these above mentioned activities is how to allocate investments to increase productivity between employers, workers and the state. Technology development key contributions, of course, are done by operators. State aid is related to the promotion and scientific research base. However, it was the state that had a key role to play in development, but it also increases the individual contribution. Less developed is the collaboration between business and vocational education and lifelong learning programs and has its own reasons. Return from investment in business education is not clear and has a higher risk (the workers can change jobs, employee qualifications obtained by visiting these or other training programs may not meet a host of needs, it requires time). Organizational factors are mostly corporate responsibility. Latvia has currently poorly developed such macro-level measures, such as clusters and all related activities are not conscious of their role in increasing productivity.

Conclusions

1. Since independence Latvian economic structure has undergone significant changes, substantially increased share of service sectors. Distinct structural changes continued after accession to the EU, the trend remained- the services sector growth was faster than goods industries.
2. Latvia compared to the EU average has very low share of manufacturing in the economy (in 2011-12.7% of GDP), which points to the need for industrial policy in Latvia.
3. Industrial policy has eliminated the barriers that have so far limited the industrial competitiveness of the economic restructuring period and the years of rapid growth.
4. The rapid pace of development of service sectors, which was observed from 2004 till 2007, the industry was unable to replace the relatively slow export cap manufacturing growth, which resulted in a disproportion- exports grew at a slower pace than imports, leading to substantial external imbalances.
5. Latvia has one of the lowest productivity levels in the EU, largely on account of the very low productivity directly in the industry. The low level of productivity in export industries shows that the country is gradually decreasing international competitiveness.

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THE CULTURE OF ECONOMIES: SELECTING METHODOLOGICAL APPROACHES

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Abstract. In the age of dehumanization and technization of economic knowledge the turn to the fundamental problems of economic science seems to be more than evidential. Among these fundamental problems we can't but mention the concept of “economic culture”. This concept may be interpreted in two mutually exclusive ways. It is on the one hand the way of so called “economic imperialism” - broadening the economic, especially economic rationality vision on the culture problematic. And on the other hand – the opposite vision of primordial cultural interpretation of the socio-economic interaction and economic processes. This article reflects and highlights the methodology of new Center of Culture of Economy based in St.Petersburg University in 2011 year.

Key words: economic methodology, cultural values, late capitalism, economic rationality

Economic methodology and culture values evaluating

First of all, we should take a review of the methodological approaches to the study of economic theory and explanation of the process of formation (genesis) of cultural values and preferences. One important methodological assumption of economic theory, in the first place in the frames of Microeconomics is the anonymity of exchange participants. In other words, in classical economic models that describe various aspects of the exchange (trade), are essential factors such as price, quality, transaction costs, etc., but not a person involved in the interaction of economic agents. The assumption of anonymity (indifference to individual counterparties) at first sight to be of even more fundamental assumptions about the rationality of economic agents. However, this is only allowed if the rationality of economic agents in the background of a lack of transparency and uncertainty (or if the uncertainty is allowed, but it is assumed that agents are able to quantify the degree of uncertainty (risk) and, using various tools to manage the risk.)

In reality, of course, economic agents always face a certain degree of uncertainty, which can not always be fully neutralized with insurance, hedging, diversification and other risk management techniques. When market or institutional instruments is not sufficient to reduce uncertainty, the role of personality factors in the exchange it is impossible to ignore. In such situations, the choice of contractors and / or the significant parameters of the transaction is influenced by such factors as the degree of relationship, dating, history of prior interactions, membership of a particular religious group, subculture, clan, etc.

The question of how and why there are certain cultural, religious, ethnic groups and why some of them are more open or closed is extremely interesting. There are several options, using the conceptual apparatus of the direction of economic theory, the "theory of clubs" (14), as virtually any isolated group until it reaches a certain threshold size can be considered as a club.

In some cases, the entry to such a club connected just mainly with rational, often predominantly economic, considerations. An example of this could be various social networks, in which people are built on grounds such as education, professional affiliation, etc. Special rules for interaction between members of these clubs can be consciously developed and adopted by the members. In this case we can talk about the formation of a full-fledged formal socio-economic institution as a mechanism of interaction of economic agents. The role of cultural factors, values and beliefs in this case may be low or absent at the stage of the club or joining the club in terms of the individual member. But in such a club may appear some non-formalized system of values, ethical standards, which will not necessarily be entirely rational and which therefore may be of interest as an object not only economic, but also cultural analysis. In addition, for most economists, interest will be the identification of the causes that give rise to the formation and stability of the economically irrational rules. Genesis understood this (sub) cultural norms can be almost

completely or largely explained by using theoretical economic arguments, including the use of methodological tools of the New Institutional Economics. (10)

Joining the club can also be initially mainly due to the system of values, attitudes, cultural, moral, religious, etc. In this case, the motivation coming into the club can be either positive (the desire to maximize the benefits of membership in the club) and negative (the desire to minimize losses, for example as a result of discrimination on the part of those who see it as a foreign element.) In this case, the economic cooperation within the club (and beyond), the ratio of benefits and costs may make the stability or instability of the club as a space of social and economic interaction. But evolution (devolution) of the club can affect the stability and intensity of the initial values and attitudes. In this case, even if the original cultural or religious values formed outside any economic logic, their evolution can be seen with the use of the same theoretical economic reasoning.

In the above cases, it is about the methodological aspects of the study of the origin and evolution of cultural values in a more or less closed groups, which can be viewed from the standpoint of the theory of clubs. In addition, because very often such groups are small in size (which is understandable from the point of view of the "theory of clubs"). They are small groups, and have sovereignty (that is, one way or another have to put up with the change of norms and values outside the club, and respond to this, and the new information), they are a convenient object for analysis. This is due to the fact that the smaller the group, the easier it is to study and describe the processes occurring in it, the easier it is to separate the internal from the external factors.

Otherwise this is the case in large groups (macro-) - the major ethnic, religious and cultural groups, nations and civilizations.

Despite the current (and the common and popular) attempts to study the cultural characteristics of the countries and peoples, including in terms of their relationship to the economic dynamics and economic practice, such studies are unlikely to give a definite answer to the question of the genesis and evolution of cultural values in economic context.

Towards the cultural economic method

Today economics goes back to the original question of the interpretation of the essence of the economy: what it is at the most basic level - the fact of the nature or value of culture? (1), (6).

As for the possibility, the answer is obvious: in the twentieth century there was a series of innovative theories in the field of social and humanitarian thinking, whose experience is hardly any way found its important application in economics - such phenomenology, hermeneutics, existentialism, structuralism, deconstruction, social constructivism, psychoanalysis, pragmatism (the list goes on). Of course, we can not say that these features are not implemented completely in reality - the development of disciplines such as economic sociology and economic anthropology are the obvious proof. However, can we say that practiced way of handling the economy is considered the absolutely essential definition of the subject of economics? On the contrary, rather, they are the co-existence, and the "professional economists" are viewed as a nice, but to the matter which has no relation.

For some reason, that still require further study, economists have distanced themselves from the historical and cultural understanding of the economy. While the historical and cultural dimension is an important component of leading treatises of Adam Smith, Karl Marx, Max Weber. In economic theory, the closest to the study of the economy as a culture have come institutionalists (T. Veblen) and the German historical school (G. Schmoller). In the post-war years, the development of new institutional theory has gone the path of imperialist economics, develop new areas: politics, crime, family, euthanasia, suicide, but retains the reductionism of the main flow. Much work has been done to ensure that an economic theory of institutions also extends the scope of the standard economic instruments: cost savings, the balance of supply and demand, efficiency, rationality behavior. In this case, has already become apparent that this phase of the work has exhausted itself. Perceptions of contractual relations opportunistic maximiser not explain not only

the person's behavior, but also, as shown by the last crisis long-term dynamics and the nature of decision-making with respect to consumption and production. Most of the institutional problems requires going beyond the standard methodology and search for new frontiers. In our view, such a new frontier in the knowledge economy should be the study of the economy as a cultural or economic culture. Under our proposed approach, the economy is understood as the sphere of human activity to a particular culture, education, history and worldview. An integral part of the economy is recognized as the language, which is the carrier of meaning and comprehension strategies and perceptions. (5)

Recourse to the term "culture", of course, is risky: if you take it in too generalized sense, you may encounter something repeatedly discounted the contrary, the number of its specifications for specific contexts is extremely high. However, it is assessing the relationship of the economy and culture (as special "spheres") allows you to understand the specifics of modern capitalism. For example, some postmodernist authors suggest that commodity in today's society can be interpreted by imposing a code of "total culture medium." On the other hand, it is also clear that some manifestations of cultural life can not be reduced entirely to the field of economic axioms. However, the culture - not artificially isolated oasis of value, but also includes the production of goods and labor, and home life, which is also characteristic of creative energy, poetry and value base as consider such an author as Eagleton (15).

The problem can be stated as: the need for interpretation of the economy as a means of culture shift from the study of mechanisms of its "natural" on the understanding of the functioning of the positive nature of its internal failures, breakdowns, crises and conflicts - positive, at least in terms of the ability to understand what is fundamentally important aspects of human life were permanently excluded.

Of course, nature and culture should not simply opposed to abstract, but in practice to do so unconsciously - resulting in a "natural" and "artificial" are simply indistinguishable. In fact, that may be a "natural" first principles of economics? And what of "artificial"? We must show that it is in the extent to which modern economics claims entirely natural, it acts just something entirely cultural - another thing that we are talking about the universality of a very particular type of culture. In the words of F. Knight, "Economic rationality is universalization marginal case of thinking of commercial agents." (2;11) That is why the mainstream criticism about his private shortcomings will only strengthen it (the phenomenon of "enveloping"). The problem is not in the mainstream that he was "unrealistic" and that it is real. Real agents do not follow the tenets of business economics, in an interview, they can demonstrate his complete failure in relation to the alternative "discourse." But consumers do not follow the advertising, but it exists, and the advertised goods are bought.

Economic science may ask his favorite question, "So what?" All the information that brings sociology (for example, the exchange - is a form of communication), anthropology (the existence of man - is being-towards-death) and psychoanalysis (the desire not reduced to the needs). Moreover, it can assess a particular culture as "good" or "bad" (in terms of economic growth or inflation). Important is that it reduces the need to own these phenomena axioms. Thus, it is not just a theoretical model, but the actual practice - not a so called "methodological individualism" and "biopolitical production" (Foucault) of man as the original entrepreneur in all aspects of their experience.

Conclusion

In the era of late capitalism, the researchers more acute question of the interpretation and understanding of how the economy is embedded in a wider system of social relations - cultural, social, political, etc. (7), (8), (12), (13).

It is necessary to give a definite answer to the question of the genesis and evolution of cultural values in economic context of late capitalism era.

Important is that the old model of capitalism was based on homogeneous economic area, equivalent to a market share on the income capitalization, on the principles of competition and clearly distinguishes itself from the culture of the entire non-economic spheres of human existence. Modern capitalism mutations deontologize farm outside - by shape-shifting into a kind of economic structure of neopagan reality. In fact, the change of one letter in the credit rating of the country it can cause economic collapse and rising unemployment, it's more likely is ideocratic, and not the economic problem. Community economic experts operates scores, ratings, exchange rates, emissions and inflation - imputed phantom money, cost, price, value, and the man himself. The emphasis on the problem of economic culture orients researchers to non-economic conditions and the effects of capitalism, the relationship between political and economic structure, mutual value systems and the nature of economic development, the causes of underdevelopment and regional imbalances, the impact of culture and self-perception of the reforms, economic policy and governance.

Staging such a complex task requires a review of existing approaches to economic theory - general methodological principles of work, collection of empirical material, theories and interpretations. In this regard, clear deficits as more theories in the style of Smith, Marx and Weber, synthesizing advances in economic theory, anthropology, sociology, philosophy, and practical research strategies.

The purpose of the researcher today to write responsive economic culture in contemporary social and human knowledge, to identify strategies and programs of theoretical and empirical research. The discussion about the economic culture of late capitalism will become an open platform for supporters of different views and approaches: the economic and mathematical and historical social, scientific and philosophical, religious and secular, left and right, human and natural sciences, the academic and the practical.

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