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DETERMINANTS OF INTRA-INDUSTRY TRADE IN AGRICULTURAL AND FOOD PRODUCTS BETWEEN POLAND AND EU COUNTRIES

Justyna Łapińska¹

Abstract

The present study investigates the country-specific determinants of intra-industry trade between Poland and its European Union trading partners in agricultural and food products during the time period 2002–2011. An econometric model for panel data is applied for the analysis of the factors determining Polish bilateral intra-industry trade with European Union countries. The research leads to the formulation of a statement that the intensity of intra-industry trade in agricultural and food products is positively influenced by the intensity of trade with EU countries and the level of economic development of the member countries (as measured by the size of their GDP *per capita*). Increase in intra-trade turnover is also facilitated by EU membership and by the fact that Poland's trade partners use similar Slavic-based languages. Relative differences in the size of the economies and relative differences in Poland's and its trading partners' levels of economic development have a negative impact. The degree of the imbalance of trade turnover between trading partners also negatively influences the intensity of intra-trade exchange. The research confirms that the impact of all of the identified factors determining intra-industry trade is consistent with the predictions of the theory.

Keywords

Intra-industry trade, Agricultural and food products, Poland, European Union

I. Introduction

As a result of technological progress and structural transformation in the world's production and consumption, intra-industry trade has become the dominant form of trade exchange, particularly between industrialized countries. According to the most frequently accepted definition, intra-industry trade occurs when countries simultaneously export and

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import finished products, semi-finished products, parts and components of products belonging to the same industry, which are close substitutes in production or consumption, or in both of these spheres together (Grubel and Lloyd, 1975).

Intra-industry trade is the subject of numerous theoretical and empirical analyses, leading to the creation of the theory of intra-industry trade, now considered to be an important completion of traditional theories of international trade.

Within the still being developed theory of intra-industry trade, the identification of factors determining intra-industry trade is continued. They are generally divided into two categories. The first includes country-specific determinants. These are the characteristics of the economies of trading partners involved in the exchange. The second group are the industry-specific determinants, i.e., the characteristics of the branch within which products are exchanged.

The purpose of this work is to identify the country-specific determinants impacting the intensity of intra-industry trade within Poland's trade turnover with EU countries in agricultural and food products.

II. Country-specific determinants of intra-industry trade

Literature on the subject points to a number of factors influencing the intensity of intra-industry trade. As follows from empirical studies, development of this type of exchange depends on the size of the economies of the trading countries, as measured by the size of their GDP. This factor is considered to be particularly important in gravity models of trade (not only intra-industry trade), in which it is a variable determining the mass of countries, which in turn determines the attracting strength of economies (see, for instance, van Bergeijk and Brakman, 2010; Pietrzak and Łapińska, 2014). Large markets foster the development of intra-industry trade, mainly due to the greater possibilities for extending production there, as characterized by increasing economies of scale. Moreover, as noted by Czarny (2002), a larger GDP frequently means that the country is better equipped in terms of capital, a condition which favours the development of the processing industry. Those goods subject to intra-industry trade are the diversified products produced by the processing industry. The existence of a positive relationship between the size of the economies of trading countries and the intensity of intra-industry trade is confirmed by numerous empirical studies (see, for instance, Clark and Stanley, 1999; Zhang and Li, 2006; Onogwu, 2013).

Differences between trade partners' GDPs are also important. The smaller these are, the more intense the intra-industry trade. This factor underlies Helpman's statement (Helpman, 1987), which showed that bilateral trade between countries is directly proportional to the product of their GDPs. Helpman proved the validity of his statement in relation to developed countries. He studied trade conducted by countries belonging to the Organization for Economic Cooperation and Development. Empirical tests of Helpman's statement were also carried out by a number of researchers in relation to non-OECD countries (see, for instance, Okubo, 2007; Czarny and Śledziewska, 2009). The results obtained by them indicate the existence of a negative correlation between intra-industry

trade and large differences in the size of the countries involved in the exchange. There are, however, such empirical studies that do not confirm this relationship. According to Markusen and Venables (1996), comparable sizes of economies do not necessarily favour the development of intra-industry trade. Such trade can, in fact, be replaced by mutual direct investments. In empirical studies, differences in the size of trading partners are usually calculated according to the following formula (see, for instance, Zhang and Li, 2006):

$$DGDP_{kt} = 1 + \frac{[w \ln w + (1 - w) \ln(1 - w)]}{\ln 2}, \quad (1)$$

$$w = \frac{GDP_j}{(GDP_j + GDP_k)}, \quad (2)$$

where:

GDP_j , GDP_k – Gross Domestic Product of the country j and its trading partner k .

The above index takes on values from the interval $[0;1]$. If the differences in GDP between countries are large, then the index approaches the value of 1. When GDP is identical for both countries, then it equalizes 0.

An important factor supporting the development of this type of exchange is a high level of GDP *per capita*. In affluent countries with a high GDP *per capita*, consumers are more likely to acquire diversified, i.e. more processed, products. Higher incomes mean that consumers can buy more variants of diverse goods or pay more and get the preferred variant of a diversified good. Such consumer behaviours (demand for various products) favours the development of intra-industry trade. This is confirmed by the results of empirical studies conducted by Loertscher and Wolter (1980) and Balassa and Bauwens (1987). Another way of interpreting the impact of this factor relates to the supply side of the market, or the resources of the production factors of a given country. Theoretical models (see, for instance, Helpman and Krugman, 1985) assume that a higher GDP *per capita* in the economy corresponds to a higher ratio of capital to labour. Countries where capital-intensive sectors outweigh relatively, produce relatively more diversified products, which in turn fosters the development of intra-industry trade (Bergstrand, 1990).

An important factor fostering the development of intra-industry trade is also slight differences between the GDP *per capita* of trading countries. These may demonstrate similar consumer preferences in the countries engaged in trade exchange. This interpretation refers to the concept of similarity of preferences created by Linder (1961), according to which the intensity and structure of trade largely depends on the degree of similarity between countries. GDP *per capita* can also be interpreted from the supply side, as an approximation of the proportion of productive factors in the economy (see, for instance, Clark and Stanley, 1999; Niem and Kim, 2010). Countries similarly equipped in capital and labour have similar opportunities to develop the processing industry that manufactures the differentiated products subject to intra-industry trade. These capabilities increase together with increases in the share of capital in the economy. Differences in GDP *per capita* between countries are estimated using the formula constructed as in the case of differences

in the size of GDP of trading countries. Numerous empirical studies confirm the negative impact of large differences in GDP *per capita* of trading countries on the development of mutual intra-trade exchange (see, for instance, Turmo et al. 2005; Zhang and Clark, 2009; Sotomayor, 2012).

Other factors supporting the development of intra-trade are trade liberalization and economic integration. As a result of the integration processes, and more specifically, of trade policies conducted within integration grouping, two classic effects are revealed. These are the effect of trade creation and the effect of trade shift. The first effect denotes an increase in the volume of mutual trade exchange between the group partners as a result of the elimination of barriers to trade. It applies to goods that previously, i.e., under the conditions of the autonomous customs policies run by individual countries, were not imported because their prices after adding import tariffs were higher than domestic prices. The abolition of customs duties makes imported goods cheaper than those produced in the country. Consequently, a new trade stream is created which gets stronger when the level of tariffs increases and the difference in production costs is larger. The other effect is associated with a shift in existing trade flows and means the replacement of supplies from third country producers by supplies from producers from member states of the group, whose competitiveness has increased significantly as a result of the abolition of internal trade barriers.

Empirical studies (see, for instance, Globerman and Dean, 1990; Wakasugi, 2007; Sudsawasd, 2012; Ramakrishnan and Varma, 2014) confirm that, under conditions of imperfect competition and product differentiation, integration processes and the related process of removing barriers to trade are more conducive to the intensification of intra-industry trade than inter-industry trade. This is the case because those goods subject to intra-industry trade are close substitutes, and therefore they have a fairly high price elasticity of demand. The importance of integration processes for the development of intra-industry trade is associated not only with the reduction of trade restrictions, but also reflects the fact that the integration grouping includes countries with similar levels of economic development. The development of intra-industry trade is significantly affected by the geographical distance between trading partners. The significance of this factor is mainly related to costs of transport and the insurance of goods. In empirical studies, geographical distance is most frequently measured by the number of kilometres between the capital cities of trading partners. Sometimes the cost of sending a parcel by mail (a good) of a certain weight to a specific country is taken as the measure of distance. Crespo and Fountoura (2004) argue that such an approach in expressing distance is justified, because transport costs do not increase linearly together with increases in distance. The existence of a negative relationship between the geographical distance and the intensity of intra-industry trade is confirmed by empirical studies (see, for instance, Cieřlik, 2000; Botrić, 2013).

As shown by empirical research, the cultural community of trading countries, in particular, a common or similar language, national identity, tradition and history, facilitate the development of intra-industry trade (Ekanayake, 2001; Mulenga, 2012). This is mainly due to easier communication, lower transaction costs and similarity in the structure of demand.

Other factors affecting the development of intra-industry trade include a large share of processed goods in the trade volume and a considerable intensity of trade relations between the countries (Byun and Lee, 2005; Ekanayake, 2001).

Empirical studies confirm that the degree of trade imbalance exerts a negative impact on the intensity of intra-industry trade (see, for instance, Lee and Sohn, 2004; Thorpe and Zhang, 2005; Leitão, 2011). If trade between two countries is not balanced, then the intensity of the intra-industry trade index cannot reach its maximum value. The degree of trade imbalance is determined mostly by means of the following formula (Lee, Lee, 1993):

$$TIMB_{jk} = \frac{|X_{jk} - M_{jk}|}{(X_{jk} + M_{jk})}, \quad (3)$$

where:

X_{jk} – the value of exports from country j to country k ,

M_{jk} – the value of imports to country j from country k .

The above index takes on the value of 0, when the trade exchange between two countries is balanced, and the value of 1 if in the case of one of the countries its exports or imports (but not both exports and imports at the same time) equal zero.

III. Intensity of intra-industry trade between Poland and European Union member states in agricultural and food products

There are many methods for measuring intra-industry trade. An overview is presented by such authors as, for instance, Vona (1991), or Łapińska (2003). However, most empirical studies measuring the intensity of intra-industry trade employ the Grubel-Lloyd index, calculated according to the following formula (Grubel and Lloyd, 1975):

$$GL_i = \frac{(X_i + M_i) - |X_i - M_i|}{(X_i + M_i)} = 1 - \frac{|X_i - M_i|}{(X_i + M_i)}, \quad (4)$$

where:

X_i – the value of exports of the industry i ,

M_i – the value of imports of the industry i .

The above index takes on values from the interval $[0;1]$. The higher the value of the GL_i index, the more intense the intra-industry trade. The GL_i index is the so-called simple Grubel-Lloyd index, which allows the intensity of intra-industry trade in individual industries to be evaluated. An aggregated measure is obtained by calculating the weighted average of the indexes for individual industries (GL_i). Weights shall be shares of each of the industries in total trade, i.e., $(X_i + M_i) / \sum_{i=1}^n (X_i + M_i)$. The aggregate measure is expressed by the following formula:

$$GL_i^A = \frac{\sum_{i=1}^n (X_i + M_i) - \sum_{i=1}^n |X_i - M_i|}{\sum_{i=1}^n (X_i + M_i)}. \quad (5)$$

The indices of the intensity of intra-industry trade in agricultural and food products between Poland and European Union member states are contained in Table 1. The presented data show that in 2002–2011 there was a significant increase in the intensity of intra-industry trade turnover between Poland and almost all EU countries. A particularly favourable situation was noted during the examined period in intra-industry trade with the so-called old EU members (EU-15).

In the case of the new members, there were far smaller increases in the intensity of intra-industry trade. In the case of the trade exchange with three new members of the Community, namely, with the Czech Republic, Slovakia and Romania, intra-industry trade indices even saw a decrease.

Table 1: Intensity of intra-industry trade between Poland and European Union member states in agricultural and food products in the years 2002–2011

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	0.125	0.135	0.220	0.250	0.262	0.251	0.381	0.418	0.414	0.391
Belgium	0.105	0.141	0.199	0.408	0.437	0.415	0.373	0.317	0.322	0.322
Bulgaria	0.191	0.180	0.207	0.205	0.216	0.200	0.210	0.215	0.303	0.270
Cyprus	0.000	0.000	0.263	0.187	0.308	0.380	0.515	0.430	0.240	0.238
Czech Republic	0.491	0.490	0.481	0.500	0.437	0.489	0.452	0.404	0.425	0.425
Denmark	0.331	0.350	0.370	0.383	0.398	0.399	0.340	0.342	0.379	0.393
Estonia	0.011	0.024	0.072	0.081	0.045	0.121	0.169	0.107	0.129	0.144
Finland	0.192	0.273	0.272	0.236	0.266	0.261	0.231	0.174	0.264	0.220
France	0.309	0.311	0.381	0.471	0.424	0.407	0.474	0.445	0.472	0.474
Germany	0.307	0.299	0.401	0.449	0.475	0.516	0.598	0.592	0.593	0.631
Greece	0.055	0.068	0.105	0.147	0.211	0.278	0.183	0.142	0.245	0.253
Hungary	0.347	0.379	0.388	0.317	0.334	0.373	0.334	0.305	0.332	0.421
Ireland	0.029	0.027	0.066	0.178	0.317	0.372	0.400	0.437	0.423	0.398
Italy	0.195	0.172	0.243	0.249	0.249	0.267	0.297	0.226	0.262	0.294
Latvia	0.037	0.023	0.054	0.081	0.087	0.145	0.119	0.136	0.179	0.124
Lithuania	0.090	0.159	0.213	0.328	0.308	0.353	0.309	0.332	0.404	0.382
Luxembourg	0.000	0.000	0.123	0.034	0.053	0.129	0.052	0.042	0.024	0.079
Malta	0.000	0.000	0.001	0.003	0.001	0.000	0.003	0.001	0.004	0.006
Netherlands	0.283	0.300	0.304	0.363	0.392	0.445	0.442	0.475	0.469	0.461
Portugal	0.043	0.085	0.142	0.048	0.089	0.171	0.164	0.207	0.212	0.203
Romania	0.158	0.061	0.064	0.115	0.149	0.107	0.217	0.214	0.260	0.148
Slovakia	0.349	0.367	0.407	0.349	0.357	0.411	0.334	0.343	0.358	0.337
Slovenia	0.082	0.168	0.176	0.138	0.115	0.109	0.083	0.074	0.105	0.102
Spain	0.060	0.077	0.118	0.132	0.139	0.147	0.158	0.144	0.164	0.213
Sweden	0.238	0.274	0.279	0.260	0.269	0.282	0.260	0.298	0.316	0.312
United Kingdom	0.293	0.296	0.328	0.323	0.293	0.325	0.375	0.346	0.329	0.342

* Twenty-six of Poland's trade partners were considered and these states were members of the European Union in 2011.

Source: the author's own calculations based on the UN Comtrade Database (2013).

IV. Model estimation

In order to identify the factors determining Poland's intra-industry trade with European Union member states in the field of agricultural and food products, a model for panel data was constructed. The Grubel-Lloyd index set for Polish trade turnover with EU countries in the period 2002–2011 was taken as the dependent variable. The bilateral intra-industry trade indices calculated for the three-digit commodity groups were separated according to the Standard International Trade Classification. The study covered the following product sections: SITC 0 – Food and live animals, SITC 1 – Beverages and tobacco, SITC 2 – Crude materials, inedible, except fuels (excluding divisions SITC 27 and SITC 28) and SITC 4 – Animal and vegetable oils, fats and waxes.

The study included 26 of Poland's trade partners that were members of the European Union in 2011. The following were taken as potential explanatory variables: GDP, GDP *per capita*, the index of the relative difference in trading partners' GDP, and the index of the relative difference in trading partners' GDP *per capita*. Also, the impact of geographical distance between countries was taken into account and was expressed in the number of kilometres between their capitals. In addition, the impact of European Union membership on the increase in the intensity of intra-industry trade was examined. For this purpose, an additional dummy variable for EU was introduced. The model also takes into account use by Poland's trade partners of a similar language, i.e., one belonging to the group of Slavic languages. Therefore, yet another dummy variable (*LANG*), was added to the model.

Due to the fact that the dependent variable GL_{kt} is an index taking on values from the interval $[0;1]$, a logit transformation of the dependent variable was performed. In this manner, we obtained a dependent variable in the form of the logit $\ln(GL_{kt}/1 - GL_{kt})$ and this dependent variable's values are contained in the interval $(-\infty; \infty)$. This eliminated the possibility of obtaining theoretical values of the Grubel-Lloyd index beyond the acceptable interval $[0;1]$.² All independent variables, except for dummy ones, were logarithmised.

The following research hypotheses concerning the intensity of intra-industry trade in agricultural and food products between Poland and European Union member states were subject to verification:

- H1: There is a positive correlation between the size of the economies of trading partners, as measured by the size of their GDP, and the intensity of intra-industry trade with these countries.
- H2: There is a negative correlation between relative differences in the size of the economies of trading partners (measured by the size of their GDP) and the intensity of intra-industry trade between these countries.
- H3: There is a positive relationship between the level of economic development of European Union member states, as measured by the size of their GDP *per capita*, and the intensity of intra-industry trade between these countries.

² In cases where the index of intra-industry trade (GL_{kt}) took the value of 0, a procedure proposed by Lee and Lee (1993) was applied. It assumes that the dependent variable (GL_{kt}) takes on a very small value equal to 0.0000001 and this value is substituted for the purpose of logarithmisation.

- H4: There is a negative correlation between relative differences in income *per capita* of trading partners and the intensity of intra-industry trade.
- H5: The degree of trade imbalance between trading partners negatively impacts the intensity of mutual intra-industry trade.
- H6: There is a positive relationship between the intensity of trade exchange between countries, as measured by the share of a specific trading partner in the total of Poland's trade in agricultural and food products, and the intensity of mutual intra-industry trade.
- H7: There is a negative correlation between the geographical distance which divides trading partners and the intensity of their mutual intra-industry trade.
- H8: EU membership significantly increases the intensity of intra-industry trade.
- H9: A similar language, i.e. one belonging to the group of Slavic languages, which is an official language in the countries that trade with Poland, significantly increases the intensity of mutual intra-industry trade.

The assumed research hypotheses allowed the model specification for panel data:

$$GL_{kt} = \alpha_0 + \alpha_1 GDP_{kt} + \alpha_2 DGDP_{kt} + \alpha_3 PCI_{kt} + \alpha_4 DPCI_{kt} + \alpha_5 TIMB_{kt} + \alpha_6 TI_{kt} + \alpha_7 DIST_k + \alpha_8 UE_{kt} + \alpha_9 LANG_k + v_{kt} \quad (6)$$

$$v_{kt} = e_t + u_k + \varepsilon_{kt}, \quad (7)$$

The description of the variables and sources of data used are shown in Table 2.

Table 2: Variables used in empirical investigation

Variables	Variables description
GL_{kt}	The intensity of intra-industry trade in agricultural and food products between Poland and the country k , in the time period t , measured by the Grubel-Lloyd index. Data source: United Nations (2014). <i>UN Comtrade Database</i> .
GDP_{kt}	Gross Domestic Product of the partner country k , in the time period t . Data source: The World Bank (2014). <i>World Development Indicators</i> .
PCI_{kt}	Gross Domestic Product <i>per capita</i> of the partner country k , in the time period t . Data source: The World Bank (2014). <i>World Development Indicators</i> .
$DGDP_{kt}$	The index of the relative difference in the size of Poland's GDP and GDP of the partner country k , in the time period t . The index values are measured by means of the following formula: $DGDP_{kt} = 1 + \frac{[w \ln w + (1-w) \ln(1-w)]}{\ln 2}, \quad (8)$ $w = \frac{GDP_{PLt}}{GDP_{PLt} + GDP_{kt}}, \quad (9)$

Continued on next page

Variables	Variables description
	where: GDP_{PLt} , GDP_{kt} – the size of Poland's GDP and GDP of the partner country k , in the time period t . The above index takes on values from the interval [0;1]. If the differences in GDP between countries are large, then the index approaches the value of 1. When GDP is identical for both countries, then it equalizes 0.
$DPCI_{kt}$	The index of the relative difference in Poland's GDP income <i>per capita</i> and in GDP of its partner country k , in the time period t . The index values are calculated with the use of the formula constructed as in the case of DGDpkt.
EU_{kt}	The dummy variable takes on the value 1, if in the year t , Poland and its trading partner k were EU member states, and takes on the value 0, if the two countries, or one of them, did not belong to the European Union.
$TIMB_{kt}$	The degree of trade imbalance of trade exchange in agricultural and food products between Poland and the country k , in the year t . The variable was designated as the share of the trade balance with the partner k in total turnover of agricultural and food products. Data source: United Nations (2014). <i>UN Comtrade Database</i> .
TI_{kt}	The share of the country k in Poland's total trade turnover in products of the agricultural and food industry, in the year t . Data source: United Nations (2014). <i>UN Comtrade Database</i> .
$LANG_k$	The dummy variable takes on the value 1, when the language of Poland's trading partner is a Slavic language, and equals 0, when it is not a Slavic language.
$DIST_k$	The geographical distance between the capitals of Poland and its trading partner k . Data source: Centre D'Etudes Prospectives et D'Informations Internationales (2014). GeoDist.
v_{kt}	The random error in the object k , in the time period t , which consists of the following components: e_t – impulses affecting all observations in the time period t , u_k – impulses affecting all the observations in the object k , ε_{kt} – impulses affecting only observations in the object k , in the time period t .

Source: elaborated by the author.

The estimation of the panel data model, designated with formula (6) was made with the use of the *Gretl* software³, version 9.1.14. There were no *a priori* assumptions made for the occurrence and significance of individual effects, as well as for the character of the individual effects (fixed or random). The choice of estimation methods (*pooled OLS*, *fixed effects*, *random effects*) was made with the use of a decision procedure from the field of econometrics advocated in the literature (see, for instance: Baltagi, 2001; Muszyńska 2006). The model is estimated with the use of a least squares method and diagnostic tests were performed. The results of the diagnostic tests are shown in Table 3.

³ GNU Regression Econometrics Time-Series Library.

Table 3: Test statistics and significance levels in the diagnostic tests of the model of intra-industry trade in agricultural and food products between Poland and EU countries

Diagnostic test	Test statistic	p-value
Wald test	F=13,157	< 0, 00001
Breusch-Pagan test	LM=103,707	< 0, 00001
Hausman test	H=63,384	< 0, 00001

Source: the author's own calculations.

Based on the diagnostic tests conducted, it was found that a suitable model for studying the impact of the macroeconomic determinants of the intensity of intra-industry trade is a model with fixed effects (*FE*). Therefore, model parameters with fixed effects were estimated. However, the phenomenon of heteroscedasticity occurred, that is the non-homogeneity of the random components variance within the sample.

Heteroscedasticity affects inappropriate estimations of standard errors for individual parameters and the revaluation of the determination coefficient, which may distort the conclusions regarding the significance of variables. Therefore, to ultimately estimate the parameters, the weighted least-squares method was applied (*WLS*).

V. Results

The values of the statistically significant parameters of the model described with formula (6) are contained in Table 4.

Table 4: Results of the estimation of the model describing Poland's intra-industry trade in agricultural and food products with the use of country-specific determinants

		Dependent variable $\ln(GL_{kt}/1 - GL_{kt})$			
Independent variables	Coefficient	Standard error	t-statistics	p-value	Significance ^{a)}
Constant	-0.9384	0.9521	-0.986	0.3253	
$TIMB_{kt}$	-0.1323	0.0343	-3.859	0.0001	***
TI_{kt}	0.6660	0.0432	15.430	< 0.00001	***
$DGDP_{kt}$	-0.0335	0.0178	-1.885	0.0606	*
PCI_{kt}	0.1512	0.0903	1.674	0.0954	*
$DPPI_{kt}$	-0.0548	0.0204	-2.688	0.0077	***
$LANG_k$	0.7232	0.1340	5.398	< 0.00001	***
UE_{kt}	0.5809	0.1119	5.190	< 0.00001	***
Observations		260			
Standard error of residuals		0.794366			
R^2		0.664572			
Adjusted R^2		0.655255			
$F(7, 252) = 71, 32568$		p-value for test $F < 0, 00001$			

^{a)}* Statistically significant variable at the level of 10%, *** Statistically significant variable at the level of 1%.

Source: the author's own calculations.

The above model is statistically correct. Seven out of the nine potential explanatory variables proved to be significant. In the model all of the obtained signs for parameter estimates for a particular explanatory variable are consistent with the predictions of the theory. The general performance of the model is satisfactory (Adjusted $R^2 = 0.6552$).

When interpreting the results obtained in relation to the variables that were previously logarithmised, the following interpretation method can be used: an increase in the explanatory variable by 1% causes *ceteris paribus* an increase or decrease (depending on the sign of the parameter) in the dependent variable of $\alpha\%$ (the parameter for a specific explanatory variable). In this case, the dependent variable is the logit, which means that the relation $GL_{kt}/1 - GL_{kt}$ changes by $\alpha\%$, which is the relation of intra-industry trade (GL_{kt}) and inter-industry trade ($1 - GL_{kt}$).

The results of the research confirm that the factor that significantly and at the same time positively affects the growth of the intra-industry trade indices is the degree of the intensity of trade exchange between Poland and its trading partners (the variable TI_{kt}). The intensity of trade was expressed by the share of individual partners in Poland's total trade turnover in agricultural and food products. The resulting value of the parameter α for the variable TI_{kt} indicates that the average increase in the intensity of trade between the countries by 1%, causes a slightly smaller than the proportional (almost by 0.6%) increase in intra-industry trade relative to inter-industry trade. The research hypothesis H6 was verified positively. The variable that significantly and also positively affects the intensity of intra-industry trade is the size of GDP *per capita* achieved by Poland's trade partners. This variable represents the level of economic development of individual countries. The impact strength of this factor, however, is smaller, as indicated by the parameter α , for the variable PCI_{kt} , which is 0.1512. The research hypothesis H3 was verified positively.

A factor that significantly but the same time negatively affects the intensity of intra-industry trade is also the degree of trade imbalance in agricultural and food products between Poland and EU countries. The value of the parameter α of the variable $TIMB_{kt}$ was -0.1323 . Hypothesis H5 was verified positively.

Statistically significant, though of a smaller impact strength, were the determinants describing the relative differences in the size of the economies and relative differences in the level of the economic development of Poland and its EU trading partners. The study confirms that an increase in the differences of the size of trading countries' GDP (the variable $DGDP_{kt}$) has a negative impact on the intensity of intra-industry trade ($\alpha = -0.0335$). It is similar in the case of the differences in GDP *per capita* between Poland and its trading partners. Variable $DPCI_{kt}$ has a negative impact on the intensity of this exchange ($\alpha = -0.0548$). With respect to these variables ($DGDP_{kt}$ and $DPCI_{kt}$), the signs obtained were consistent with the predictions of the theory, which led to a positive verification of the research hypotheses H2 and H4.

Within the estimated model, two dummy variables proved to be statistically significant. One of them (EU_{kt}) is related to Poland's and its trading partners' EU membership. This variable had the value of 1 in the years when Poland and its trading partner were members of the European Union, and had the value of 0 when one of the countries (Poland, or its trading partner) or both countries (Poland and its trading partner) did not belong to the

EU. The other variable ($LANG_k$) describes the cultural ties of trading partners, expressed by the affiliation of a trading partner's language to the Slavic language group. In the case of the dummy variables UE_{kt} and $LANG_k$ based on the evaluation of the sign of the parameter estimate for a particular explanatory variable, one can specify only the direction of the impact of this variable on the dependent variable. A positive relationship between partners' EU membership and the intensity of their mutual intra-industry trade can be inferred from the obtained results. A positive impact on the intensity of bilateral trade also occurs when the population of a country being Poland's trading partner uses as their primary language a language which is a member of the Slavic group of languages. The results obtained are consistent with the predictions of theory and allow the positive verification of the research hypotheses H8 and H9.

The variables GDP_{kt} and $DIST_k$ proved to be statistically insignificant. Therefore, the remaining research hypotheses failed to be verified positively.

VI. Conclusion

The simultaneous import and export of similar products in the same industry plays an increasingly important role in Poland's trade with European Union member states. This also applies to agricultural and food products. The present work identified the factors that determine Poland's intra-industry trade with EU countries in agricultural and food products. The focus was on the features of the economies of the countries participating in that exchange, i.e. on country-specific determinants.

The research conducted shows that the development of this type of trade exchange in Poland is positively influenced by the intensity of trade with European Union countries and by the level of economic development of the member states (as measured by the size of their GDP *per capita*). The development of intra-trade turnover is also encouraged by such factors as EU membership and the fact that Poland's trade partners use similar Slavic languages. The relative differences in the size of the economies and the relative differences in Poland's and its trading partners' levels of economic development have a negative impact. The degree of the trade imbalance between trading partners also negatively influences the intensity of mutual intra-trade exchange. The study confirmed that the impact of all of the identified determinants of intra-industry trade is consistent with the predictions of the theory.

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GERMAN LANGUAGE PROFICIENCY AMONG STUDENTS OF BUSINESS AND MANAGEMENT IN THE CZECH REPUBLIC AND ITS PERCEPTION: THE IMPORTANCE OF GERMAN LANGUAGE SKILLS ON THE LABOUR MARKET AND THE ROLE OF UNIVERSITIES IN FOREIGN LANGUAGE TRAINING

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Abstract

This paper presents the results of an empirical study designed to map German language proficiency among students at Czech universities of business and management. The results of this empirical survey can be summarised as follows. First, the ability of students at Czech universities of business and management to communicate in German is poor, and exceeds the general German language proficiency of the Czech population only to an insignificant extent. Second, the school environment (the opportunity to learn the language, compulsory subject, language study motivation) has a decisive influence on the respondents' ability to communicate in German. Third, nearly three-quarters of the respondents perceive German as a language that is very or rather important for their profession and career growth. Fourth, almost two-thirds of the respondents consider the role played by a university of business and management in the improvement of German language proficiency rather or very important. In conclusion, the study proposes directions for the potential development of the national educational system in the area of German language proficiency of university graduates in business and management in the Czech Republic, with an emphasis on the concept of content and language integrated learning (CLIL). We believe that the survey results are also very important from the point of view of enterprises operating in the Czech Republic because of the very close economic relations between the Czech Republic and German-speaking countries.

Keywords

Content and Language Integrated Learning (CLIL), German Language Proficiency, Students of Business and Management, Foreign Language Training at Universities

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I. Introduction

For over a thousand years, the Lands of the Bohemian Crown and the German-speaking environment have been linked “not only by deep cultural and historical roots but also by economic collaboration” (isea, 2010; Müller, 2003; Riemeck, 1997).³ The political and economic transformation of the country after 1989 presumably strengthened the importance of the German language, and German language proficiency became a prerequisite for success on the labour market in the Czech Republic.⁴ On the other hand, due to the globalization of the world economy, English is gaining in importance and is becoming the *lingua franca* in science, on the labour market and in international politics (Greiner, 2010).⁵ The following questions arise in this context:

- Given the importance of mutual economic relations with German-speaking countries, what is the level of German language proficiency of Czech university students, specifically, students of business and management, and thus their language skills when they seek positions on the national and international labour market? Business and management university graduates in particular can be expected to find management positions in companies, and to maintain intensive contacts with business partners on international markets as a result.
- What factors influence the level of German language proficiency of Czech university students of business and management?
- How do Czech university students of business and management perceive the importance of German language proficiency in their careers and professional growth on the current Czech labour market, as compared to English?
- How do Czech university students of business and management perceive the role of universities in improving German language proficiency?

³ The Lands of the Bohemian Crown were one of the parts of the Holy Roman Empire from the High Middle Ages until its collapse in 1806. Due to German colonization, in particular in border regions, the territory became bilingual by the 13th century or earlier. Between 1806 and the foundation of the Czechoslovak Republic (1918), the Kingdom of Bohemia was one of the Crown lands of the Austrian, or rather Austro-Hungarian, Empire (from 1867). The tragic events of WWII ended the coexistence, peaceful until the 1930s, of the two ethnic groups in the territory of present day Czech Republic (Müller, 2003; Riemeck, 1997).

⁴ Since the inception of the Czech Republic (1993), Germany as a business partner is unequivocally number one in both import and export, as well as the largest direct foreign investor in the Czech Republic. The share of the Federal Republic of Germany in total foreign trade turnover of the Czech Republic oscillates around one-third in the long run (Czech Trade, 2012).

⁵ English is undoubtedly used as the language of science in an overwhelming majority of key disciplines, i.e., in natural science, medicine and social sciences. A survey performed by Amon (1991) shows that the use of other languages in scientific publications is rather marginal. German accounts for approximately one per cent of publications in the field of natural sciences, and approximately seven per cent in social sciences worldwide. German has traditionally played a more important role only in selected humanities, such as Germanics, theology and philosophy. The significance of English on the labour market is a logical outcome of the processes of internationalization and globalization of the world economy. It is worth mentioning that many international corporations domiciled in Germany also prefer English as their corporate language. As regards international politics, it seems to be appropriate to stress that while German is one of the EU's working languages, its use is not particularly supported by German politics (Greiner, 2010).

- How should business and management universities in the Czech Republic respond to student demand for greater German language proficiency in the form of courses, or at the level of individual subjects?

The above questions made it possible to formulate the main goal of the survey: to assess the German language proficiency of students at Czech business and management universities. Individual objectives can be derived from the main goal, specifically, to identify a) factors that had the greatest influence on the respondents' German language proficiency, b) the perception of the importance of the German language for professional development, and c) the perception of the role played by universities in language training.

The following hypotheses were defined in light of the goals of the survey:

1. There are statistically significant differences between the German language proficiency of the respondents and socio-demographic characteristics (i.e., age, course, form of study, work experience, intent to start one's own company, intent to work for an international company).
2. There are statistically significant differences between the perception of the importance of German for professional development in the current labour market in the Czech Republic and socio-demographic characteristics.
3. There are statistically significant differences between the perception of the role played by universities in the improvement of German language proficiency and socio-demographic characteristics.
4. There are statistically significant differences between the perception of the role played by universities in the improvement of German language proficiency and the respondents' interest in improving their language proficiency through the respective subjects (i.e., language training in general, specialized courses, specialized subjects taught in German).

We assume that it is a highly intriguing issue to map the state of German language proficiency in the Czech Republic almost one hundred years after the decline of the Austro-Hungarian Empire. Although ethnic, religious and language diversity dominated the monarchy, the German language created a tie between its former countries. We also believe that our article represents a contribution to the scope of European Association Comenius (EACO) i.e. "the re-establishment of the academic and scientific ties among the countries of the former Danubian Monarchy".

II. Literature Review

One of the objectives of the employment policy of the European Union is to improve the language skills of citizens of its member states. In the European Commission's White Paper on Education and Training "Teaching and Learning" (1996), multilingualism is referred to as a typical feature of the identity of a European citizen, and knowledge of multiple foreign languages is viewed as an important prerequisite for success on the labour market in a knowledge-based economy. Baur (2009) deems this decision of the European Commission extraordinarily significant in that it is a decision as to whether knowledge

of European languages is to be restricted only to the territories of the individual states or whether it is to expand beyond their borders as well. "This development directly relates to the creation of a diverse and dynamic sense of belonging and awareness of European citizenship" (*cittadinanza europea*).

Gudauner (2009) stresses the extraordinary importance of knowledge of foreign languages in the context of the Lisbon Strategy which heads of states and governments resolved at a European Council meeting in Lisbon on 23–24 March, 2000. The Lisbon Strategy was a response to the internationalization and globalization processes that lead *inter alia* to an ever closer integration of labour markets. At the Barcelona European Council meeting on 15–16 March, 2002, heads of states and governments agreed that language education in Europe was a necessity from an early age. In the 2010 "Work programme on the follow-up of the objectives of education and training systems in Europe", compiled in order to give effect to the conclusions of the Lisbon summit, the effort to improve foreign language proficiency within the EU was also emphasized.

In 2001, the Common European Framework of Reference for Language was applied; it classifies language knowledge in terms of six competence levels (from A1 to C2), and reflects the fact that "the learning of a language starts from a complete lack of knowledge and progresses steadily towards autonomy".

In 2003, the European Commission approved "Promoting Language Learning and Linguistic Diversity: An Action Plan 2004–2006" in order to show all citizens the advantages of knowledge of foreign languages, to improve the approach to foreign language teaching in the educational system, and to create an environment recognizing linguistic diversity as a typical feature of a united Europe while seeing it as a path to integration. The European Commission unequivocally states in the above-referenced document: "Learning one *lingua franca* alone is not enough. Every European citizen should have meaningful communicative competence in at least two other languages in addition to his or her mother tongue." In the 2006 "Recommendation of the European Parliament and of the Council on key competences for lifelong learning", the ability to communicate in foreign languages is listed as one of the eight key competences in lifelong learning.

The European Commission's 2007 Report on the implementation of the Action Plan "Promoting language learning and linguistic diversity", which summarizes the outcome of the implementation of the Action Plan 2004–2006, analyzes the progress made by European countries in relation to those measures. It stresses in particular that the learning of foreign languages and multilingualism increased in importance on the political agendas of individual states. The slogan of the Barcelona summit, "Mother tongue plus two other languages": making an early start, was applied in the respective support programmes of individual states, and "a basic consensus was reached that the mastery of several languages was a key competence of lifelong learning and that the quality of language training was extraordinarily important". Important and partly innovative approaches of individual member states consist for instance in introducing foreign language training to pre-school children, in the implementation of the CLIL model (Content and Language Integrated Learning), i.e., the teaching of specialized subjects in a foreign language, in the expansion of foreign language training at secondary level and investment in teacher education.

The report notes the following in the paragraph devoted to the situation in Belgium (the Flemish Community), the Czech Republic and Romania: “In Belgium (Dutch-speaking Community), the Czech Republic and Romania some universities offer a graduate programme in natural sciences, history or geography with a minor in foreign languages, in some cases leading to a double degree. This combination of different disciplines enhances language competences and should also prepare future CLIL teachers.”

Baur (2009) is of the opinion that, from a social and economic point of view, multilingualism is not only a guarantee of flexibility in one’s professional life but of higher social status as well. The European Commission recommends learning at least one language of a neighbouring country because using it, respecting it and supporting it does not mean mere knowledge of another language, but also the building and strengthening of inter-cultural competence and peaceful coexistence. Broad ranks of the EU population further ought to possess basic English communication skills and sufficiently receptive language skills in at least one, if possible two, European languages. Bilingualism or multilingualism is not a merely linguistic issue or a matter of language didactics. It is further an issue of language policy, an issue of closeness to and distance from others, and an economic matter. Höffe (1999) emphasizes that political integration requires the existence of a European public. “Its formation presupposes multilingualism because if Anglophiles only receive English and Francophiles French, the voices of other languages in Europe will remain unheard.” Baur (2009) warns of the risks inherent in the exclusive use of English as a *lingua franca*. He warns against the temptation of following solely the path of bilingualism, i.e., the mother tongue + English, in educational policy. English as a *lingua franca* is increasingly becoming a medium of a linguistic “McDonaldization” (Ritzer, 2011) which is “instrumentalized for the purposes of quick satisfaction of communication needs, and ultimately reduced from a living organism to a de-culturalized tool of information exchange”. Due to the growing involvement of foreign companies in various regions of Europe, as well as the growing importance of selected tourist destinations, the demand for other European languages in connection with inter-cultural competences, capability of teamwork and communication has been increasing on the European labour market. The processes of internationalization and globalization thus unequivocally require multilingualism, and this criterion is ever more important in decisions on HR issues. This trend clearly puts employees who speak several European languages at an advantage.

Pörnbacher (2009) and Baur (2009) demonstrate with empirical data that foreign language knowledge is the third most importance competence following informatics and manufacturing and marketing and sales: “Businesses wish to put their stakes on those employees who are able to communicate in languages important in terms of corporate strategy.” Many markets in Europe open up through a good knowledge of German, Italian and English. Although the position of English as a *lingua franca* in international business is indisputable, it is appropriate to stress the fact that the other European languages mentioned above also occupy an indispensable position as languages of communication. German was indicated as the “mainly” used language of communication by 52% of respondents in Benelux countries, 24% of respondents in Poland, 30% of respondents in Croatia and Slovenia, and 14% of respondents in the Czech Republic, Slovakia and Hungary. Italian was indicated

as the “mainly” used language of communication by 14% of respondents in France and 23% of respondents in Spain and Portugal. It may be assumed from the survey results that a communication level knowledge of German and Italian also opens up markets to companies in Europe that are above and beyond Italy and German-speaking countries. This finding represents an assignment for politics and national educational systems that ought to place an even greater emphasis on language education and strengthening of inter-cultural competences.

In its study “Effect on the European Economy of Shortages of Foreign Language Skills in Enterprise”/ELAN (2006), the British National Centre for Languages found that “lack of language skills in companies causes loss of prospective business, and may be a barrier to entry onto various European markets.” The study involved 2,000 SMEs from all over Europe, whose data was confronted, using correlation analysis, with data obtained from 30 multinational holdings and information from experts from the countries involved. The study shows that, from the employees’ perspective, adequate language skills are an increasingly important factor in their search for satisfactory posts on the labour market. The ELAN study further shows that nearly half of the SMEs taking part in the survey plans to expand to new foreign markets, and expects increased requirements on the language skills of their employees. Despite this fact, the companies do not invest in language training on an individual basis: instead, they tend to expect that the national systems of education would provide them with adequately qualified employees. The study points out that this strategy is unfortunate. The study proposes that direct investment in the improvement of language skills be increased, as they can be expected to have a positive effect on the corporate economy, in particular at the level of productivity and export development.

It is evident that all European educational systems, as well as further education models of enterprises, are facing the increasing importance of learning foreign languages, since “there is a dire need to educate multilingual and multicultural citizens in a context where the linguistic consequences of globalization are more and more evident” (Lasagabaster, 2008).

The extent of knowledge of selected foreign languages in individual European countries and the perception of their importance is suggested by the outcome of the Eurobarometer 386 (2012) and Eurobarometer 243 (2006) surveys commissioned by the European Commission. The overall objective of these surveys was to understand European citizens’ experiences and perceptions of multilingualism. Fieldwork was completed in 2005 and 2012. These macro-surveys involved 28,694 and 26,751 respondents, respectively.

The survey results (2012) showed that, while just over half of Europeans (54%) are able to hold a conversation in at least one additional language, a quarter (25%) is able to speak at least two additional languages and one in ten (10%) is conversant in at least three. There were significant differences between countries. Almost all respondents in Luxembourg (98%), Latvia (95%), the Netherlands (94%), Malta (93%), Slovenia and Lithuania (92% each), and Sweden (91%) say that they are able to speak at least one language in addition to their mother tongue. On the other hand, countries where respondents are least likely to be able to speak any foreign language are Hungary (65%), Italy (62%), the UK and Portugal (61% in each), and Ireland (60%).

The five most widely spoken foreign languages remain English (38%), French (12%), German (11%), Spanish (7%) and Russian (5%). At a national level English is the most widely spoken foreign language in 19 of the 25 Member States where it is not an official language (i.e. excluding the UK and Ireland). Two-thirds of Europeans (67%) consider English one of the two most useful languages. Those languages perceived as the next most useful are the following: German (17%), French (16%), Spanish (14%) and Chinese (6%). In comparison to 2005 (Special Eurobarometer 243, 2006), the proportion of respondents able to speak at least one foreign language has decreased notably in the Czech Republic (–12 points to 49%). Also, in other countries there has been a similar downward shift since 2005: in Slovakia (–17 percentage points to 80%), Bulgaria (–11 points to 48%), Poland (–7 points to 50%), and Hungary (–7 points to 35%). Within these countries the proportions of respondents able to speak foreign languages such as Russian and German have declined as well. For example, the proportions speaking German are down in the Czech Republic (–13 points to 15%), Slovakia (–10 points to 22%) and Hungary (–7 points to 18%).

Furthermore, respondents were asked to name the two languages, apart from their mother tongue, that they believed to be most useful for their personal development. Two-thirds of Europeans (67%) think that English is one of the two most useful languages. Less than one in five Europeans mention German (17%), French (16%) and Spanish (14%). Compared with the results from the 2005 survey, there has been a notable decrease in the proportion thinking that French is important (–9 points), and a somewhat smaller decrease in those thinking German is an important language for personal development (–5 points). The most significant worsening of opinion on the usefulness of German is in the Czech Republic (–23 points to 32%), Slovakia (–17 points to 44%), Lithuania (–15 points to 13%), Poland (–15 points to 30%), in the UK (–15 points to 12%), Bulgaria (–14 points to 20%) and Luxembourg (–13 points to 47%). On the other hand, the view that German is one of the most useful languages for personal development is most widespread in Slovenia (50%), Denmark and Hungary (48% in each), Luxembourg (47%), and the Netherlands and Slovakia (44% in each).

In 2010, the Institute for Social and Economic Analyses, in collaboration with the Deutsch-Tschechische Zukunftsfonds and Goethe-Institute Prag, carried out a survey focusing on the foreign language proficiency of the Czech population, in particular its ability to communicate in German. The survey focused on five languages: English, German, Russian, French and Spanish. The data set is representative of the Czech population over 15 years of age. The total number of respondents in the set is 1,061 (isea, 2010).

The outcome of the survey suggests that the “ability and willingness to learn foreign languages is not great in the Czech Republic” (isea, 2010), as 54% of the respondents are unable to communicate “well” in any of the languages concerned, 27% are conversant in one of them, 14% in two languages, and 5% of the respondents are conversant in three or more of the languages. The fact that 23% of university-educated Czechs are unable to communicate well in any of the languages concerned is a matter of concern. The survey results further indicate that, while 27% of the respondents state they are able to communicate “quite well” in English, less than 10% of the respondents claim they speak

English “very well” or “have no problem with both oral and written communication”. German ranks second: 22% of the respondents state they can communicate in German “quite well”, but less than 5% of the respondents claim to be able to communicate in German “very well” or “have no problem with both oral and written communication”. The authors of the survey stress that while German is not the number one world language for Czechs, it “unequivocally” enjoys the status of the number two language.

The survey further examined the perception of the importance of German in career success. 77% of the respondents agreed with the claim that “German is useful for career success”. The study concludes in this context that “while German ranks second after English in terms of importance for life, which is not a surprising conclusion, it is nonetheless a much more important language than the other world languages, probably also thanks to its perceived importance for one’s career. This potential is much higher in the university-educated population.”

The outcome of the survey stresses the key importance of schools in the process of foreign language proficiency acquisition: “More than one-half of the Czech population (54%) states that their current language skills were strongly influenced by language learning opportunities at school.” The authors of the study thus recommend in conclusion that “more favourable conditions for a greater expansion of foreign language proficiency in at least two world languages be created at schools, in particular with a view to the Czech Republic’s geographic location, and the importance of mastery of world languages for nations of the size of the Czech nation”.

III. Methodology

An approach based on statistical testing of hypotheses was used to attain the goal of the survey. Collection of data using a standardized questionnaire took place in October to November 2011. The respondents were students of two Czech business and management universities – one public and one private – in the South Moravian Region. Given the scope of both universities, however, the surveyed sample can be expected to include respondents from all regions of the Czech Republic.

The first part of the questionnaire examines the German language proficiency of the respondents (based on self-evaluation), the reasons for low or non-existent German language proficiency, as well as factors that influenced the fact that the respondent is conversant in German. The second part of the questionnaire focused on the perception of the importance of German for professional development on the current labour market in the Czech Republic (as compared to English). In the third part of the questionnaire, the respondents comment on their perception of the university’s role in the improvement of their German language proficiency and what subjects they would be interested in in order to improve their German language proficiency. The fifth part of the questionnaire examines the socio-demographic characteristics of a selected sample of respondents.

A total of 257 questionnaires ($N = 257$) in hard copy form was collected. According to data from the Ministry of Education, Youth and Physical Education/MEYS (2011), there was a total of 96,500 students enrolled in business and management programmes at public

and private universities in the Czech Republic in 2011. The share of the set of respondents in the basic set thus amounts to 0.27%.

Composition of the sample surveyed

The composition of the sample surveyed is shown in Table 1. Women (57%) outnumber men (39%). The age group of 18–25 (68%) is dominant, respondents aged 26–55 accounted for 27.24% in aggregate. As regards the type of study, full-time students (56%) outnumber students enrolled in a combined form of study (38%), and as regards the study programme, students enrolled in Bachelor's programmes (56%) outnumbered students enrolled in Master's programmes (40%).

The composition of the sample surveyed can be compared to certain statistical data concerning the basic set of students of all public and private universities in the Czech Republic in business and management programmes in 2011.⁶ MEYS (2011) states that students enrolled in Bachelor's programmes account for 69% of the total number of students, and students enrolled in Master's programmes for 29% of all students. Full-time students account for 66%, while 34% are students enrolled in extramural (combined) study. Women represent nearly 56% of all students enrolled in all the study programmes in the Czech Republic. In terms of age make-up, the age group of 18–25 is dominant (nearly 72% of the total population), while the other age groups account for a significantly smaller percentage (28%). It can be noted that the survey sample of respondents is comparable to the basic set because of a similar distribution of features (age, sex, study programme and type).

The work experience of the respondents was also surveyed. More than three-quarters indicate they have work experience, as opposed to some 19% of students who have no experience as of yet. Given the distribution of the survey sample, a large percentage of students enrolled in full-time study thus already has some work experience. The fields in which the respondents would like to work after graduation are dominated by “accounting, taxes and corporate finance”, “business management”, “trade” and “human resources”. 46% of the respondents declare they wish to start their own business, i.e., slightly fewer than those who see their future as employees (48%). As regards the respondents' attitude to foreign language skills, information concerning their intent of working for an international company is presumably also significant: over 75% of the respondents declare that that is what they plan to do.

⁶ I.e., natural sciences, technical sciences, agricultural-forestry sciences and veterinary sciences, medical and pharmaceutical sciences, art sciences, social sciences, services.

Table 1: Socio-demographic characteristics of the sample of respondents

	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
Sex:				
male	99	99	38.52	38.52
female	146	245	56.81	95.33
n/a	12	257	4.67	100.00
Age:				
18–25	175	175	68.09	68.09
26–35	39	214	15.18	83.27
36–45	25	239	9.73	93.00
46–55	6	245	2.33	95.33
n/a	12	257	4.67	100.00
Programme:				
Bachelor's	143	143	55.64	55.64
Master's	102	245	39.69	95.33
n/a	12	257	4.67	100.00
Type of study:				
full-time	144	144	56.03	56.03
Combined	98	242	38.13	94.16
n/a	15	257	5.84	100.00
Intended field of work after graduation				
finance, accounting and taxes	63	63	24.51	24.51
business management	6	69	2.33	26.84
HR	5	74	1.95	28.79
logistics	1	75	0.39	29.18
banking	4	79	1.56	30.74
trade	6	85	2.33	33.07
industry	4	89	1.56	34.63
services	2	91	0.78	35.41
health care	2	93	0.78	36.19
education	2	95	0.78	36.97
marketing	4	99	1.56	38.53
business	3	102	1.17	39.70
telecommunications	1	103	0.39	40.09
sports	1	104	0.39	40.48
other (unspecified)	21	125	8.17	48.65
n/a	132	257	51.35	100.00
Work experience				
yes	197	197	76.65	76.65
no	48	245	18.68	95.33
n/a	12	257	4.67	100.00
Wish to start one's one business				
Yes	119	119	46.30	46.30
No	123	242	47.86	94.16
n/a	15	257	5.84	100.00
Wish to work in an international company				
yes	193	194	75.10	75.10
no	50	243	19.46	94.56
n/a	14	257	5.44	100.00

Statistical processing of data

The data gained from the survey was processed in the following consecutive steps: 1) Questionnaire data were entered into a database for statistical processing; 2) Descriptive analysis of all the parameters studied was performed; 3) An analysis of contingency tables and their statistical evaluation using the M-V chi-square test were performed.

Descriptive statistics and its commentary are based on real numbers. Statistical processing of source data is provided in Tables 1 through 13. In the part dedicated to results, only data to which answers had been provided is commented on (i.e., the sum of relative frequencies is not 100%).

The data was evaluated at the significance level of $\alpha = 5\%$. The entire statistical evaluation was performed by Statistica.CZ, Version 9.

IV. Survey Results

Respondents' German language proficiency

The first part of the survey focused on assessing the respondents' ability to communicate in German. The respondent was asked to assess, using the self-evaluation scale under the Common European Framework of Reference for Language, his/her level of comprehension of the German language in terms of listening comprehension, reading, the ability to converse and the quality of written output. The survey results (see Table 2) indicate that over 76% of the respondents claim to be able to communicate in German (categories A1–C2). However, considering the fact that respondents at levels B2–C2 are able to communicate in German very well, it is apparent that a mere 7.41% of the respondents is able to communicate orally and in writing without any problem.

Table 2: Respondent's ability to communicate in German

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
I cannot speak German at all	59	59	22.96	22.96
A1 – beginner	70	129	27.24	50.20
A2 – elementary	60	189	23.35	73.55
B1 – intermediate	47	236	18.29	91.84
B2 – upper intermediate	13	249	5.06	96.90
C1 – advanced	5	254	1.95	98.85
C2 – proficient	1	255	0.39	99.24
n/a	2	257	0.76	100.00

The results of the questionnaire survey can be compared to MEYS's statistical data (2011). According to the latter, a foreign language is studied at university by less than one-half of university students in the Czech Republic, regardless of their study programme (see Table 3). This is a rather low figure which does not suggest that Czech students are particularly willing to learn foreign languages. Of those who do study foreign languages, most of them study English. The position of English has been stable over the last five years

(a 73% share). The study of German ranks second although its position has weakened slightly. As compared to the original 25% in 2007, less than 20% of students studied German in 2011. Nonetheless, the position of German as the second most frequently studied language in the Czech Republic remains incontestable. The shares of other languages are significantly lower. It also needs to be pointed out that the number of students studying two or more foreign languages is declining. In 2007, it accounted for 25%, in 2011, for 17%.

Table 3: Teaching of foreign languages at universities in all study programmes in the Czech Republic (2011)

Year	2007	2008	2009	2010	2011
University students in total	343,990	368,073	389,066	396,073	392,429
No. of students studying foreign languages in total	159,445	166 490	172,330	172,243	177,941
<i>of that:</i>					
1 language	119,918	128,015	133,002	136,315	147,027
2 languages	36,008	34,485	36,092	33,071	28,956
3 and more languages	3,519	3,990	3,236	2,857	1,958
<i>of that, the number of students studying:</i>					
English	116,574	122,408	127,175	127,249	129,480
French	9,601	9,494	9,895	9,289	8,880
German	39,401	38,819	38,390	35,775	35,107
Russian	10,874	10,640	11,677	10,907	10,103
Spanish	8,903	10,154	11,074	10,341	9,418
Italian	1,952	3,133	2,421	2,219	2,095
Latin	8,878	9,603	9,335	9,611	9,297
other European language	2,434	2,737	2,048	1,943	1,408
other language	1,167	1,322	1,182	1,104	1,262
<i>Share of students:</i>					
studying a foreign language in the total number of university students	46.35%	45.23%	44.29%	43.49%	45.34%
of German in the total number of language students	24.71%	23.32%	22.28%	20.77%	19.73%
of English in the total number of language students	73.11%	73.52%	73.80%	73.88%	72.77%
studying only one foreign language	75.21%	76.89%	77.18%	79.14%	82.63%
studying two or more foreign languages	24.79%	23.11%	22.82%	20.86%	17.37%

Source: MEYS (2011)

Note: The number provided is that of students learning a language regardless of how many languages they are studying.

As in the *isea* survey (2010), the questionnaire included a question designed to identify the main factors that influenced the fact that the respondent is able to communicate in German. Respondents were able to check multiple answers and could choose from the following:

- a) It was my parents' wish;
- b) I had the opportunity to study the language at school;
- c) There was no other choice at the school I attended;

- d) Motivating environment for study of the language at school (teachers, schoolmates);
- e) The necessity to speak a language for the purposes of employment or career success;
- f) My relationship to the country and culture associated with the language;
- g) School exchange or study stay abroad;
- h) Work stay abroad;
- i) Friends or relatives in German-speaking countries.

65% of the respondents answered the question. The survey results (see Table 4) stress the role of school in the teaching of the German language. More than 13% of the respondents state that their ability to communicate in German was influenced by the school environment which gave them an opportunity to learn the language. 14% of the respondents stated that they learned German because the school did not offer any language other than German (i.e., German was taught as a compulsory subject in this case). Where respondents checked multiple answers (29%), a combination of two factors prevails in an overwhelming majority of cases: the school environment (opportunity to study, compulsory subject, motivation to study the language) and the necessity of knowing the language for work purposes. Factors such as future career contemplations, parents' wishes, relationship to the country and culture or a study or work stay play a marginal role in the acquisition of German language proficiency.

Table 4: Factor that influenced the fact that the respondent can communicate in German

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
parents' wish	3	3	1.17	1.17
opportunity to learn the language at school	34	37	13.23	14.40
no other option	36	73	14.01	28.41
motivating school environment	4	77	1.56	29.97
profession	8	85	3.11	33.08
relationship to the country and culture	3	88	1.17	34.25
school exchange, study stay	1	89	0.39	34.64
work stay	2	91	0.78	35.42
friends, relatives	2	93	0.78	36.20
multiple answers	75	168	29.18	65.38
n/a	89	257	34.62	100.00

If we examine the reasons for low or non-existent German language skills (in the case of respondents who either do not speak German at all or are at A1 level), the survey results once again indicate that schools play a key role in the teaching of German. The respondent was asked to indicate the main reason and was able to check only one of the following answers:

- a) German was not taught at the schools I attended;
- b) I learned German a little but have forgotten it;
- c) I did not want to learn German because it is a very difficult language;
- d) I did not want to learn German because I do not think I will need it for my life or career;
- e) I did not want to learn German because I do not like it as a language;
- f) I did not want to learn German because of another reason. Please indicate why;
- g) I have no gift for languages and so I do not study them;
- h) I am only able to learn one foreign language properly.

Table 5 indicates that there are two dominant reasons for low or non-existent German language skills which relate to the school environment: the first being the fact that the respondent did study German but has forgotten it (23%), the second the inability to learn the language at school (8%). Those who did not want to learn German indicate they do not like it as a language as the main reason (13%). Other reasons why the respondents did not want to learn German include lack of use for it, difficult grammar, preference for English as the sole foreign language, or preference of French, Spanish or Russian as the second foreign language.

Table 5: Main reasons for low or non-existent German language skills

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
German was not taught at schools	21	21	8.17	8.17
German was taught but I have forgotten it	54	75	21.01	29.18
I did not want to learn German – it is a very difficult language	1	76	0.39	29.57
I did not want to learn German – no need for my career	3	79	1.17	30.74
I did not want to learn German – I don't like it	30	109	11.67	42.41
I did not want to learn German – other reason	17	126	6.61	49.02
I have no gift for languages	0	0	0.00	0.00
I am only able to learn one foreign language	2	128	0.78	49.80
n/a	129	257	50.20	100.00

Further, the following statistically significant differences between the German language proficiency of the respondents and the individual components of socio-demographic characteristics were examined. The authors tested the existence of the following relations:

- a) Is there a relationship between the respondent's age and his/her ability to communicate in German?
- b) Is there a relationship between the respondent's study programme and his/her ability to communicate in German?

- c) Is there a relationship between the respondent's type of study and his/her ability to communicate in German?
- d) Respondents with work experience are able to communicate in German to a greater extent.
- e) Respondents who wish to start their own business are able to communicate in German to a greater extent.
- f) Respondents who wish to work for an international company are able to communicate in German to a greater extent.

No statistically significant difference was found at the level of the individual components of socio-demographic characteristics (data not provided).

Perception of the importance of German for career success and professional growth

In a further part of the survey, we asked about the respondents' perception of the importance of German for their career success and professional growth on the current labour market in the Czech Republic. Nearly 70% of the respondents indicated that German was important for success on the labour market; of that, 57% indicated it was quite important and 12% that it was very important. Only 2.33% of the respondents believe that German is completely unimportant for work success and professional growth (see Table 6).

The respondents were further asked to what extent they agree with the opinion that knowledge of one foreign language – English – is sufficient for success and professional growth on the current labour market in the Czech Republic (see Table 7). Nearly 48% definitely or slightly agree with this opinion, while 50% definitely disagree.

The assessment of the responses to both questions outlined above shows that the perception of the importance of German for career and profession is high, despite the fact that most respondents believe that knowledge of English is currently sufficient for success on the labour market in the Czech Republic. This finding once again confirms the significant potential of German as the second foreign language.

Table 6: Perception of the importance of German for work success and professional growth on the current labour market in the Czech Republic

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
knowledge of German completely unimportant	6	6	2.33	2.33
knowledge of German rather unimportant	69	75	26.85	29.18
knowledge of German rather important	146	221	56.81	85.99
knowledge of German very important	31	252	12.06	98.05
n/a	5	257	1.95	100.00

Table 7: Identification with the view that knowledge of one language – English – is sufficient for success and professional growth on the labour market in the Czech Republic

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
definitely disagree	29	29	11.28	11.28
slightly disagree	99	128	38.52	49.80
slightly agree	93	221	36.19	85.99
definitely agree	30	251	11.67	97.66
n/a	6	257	2.34	100.0000

Statistically significant differences between the perception of the importance of German for professional growth on the current labour market in the Czech Republic and the individual components of socio-demographic characteristics were also examined. The following statistically significant differences were found to exist:

- a) A statistically significant difference was found to exist between the following components: **respondent's age** and **the perception of the importance of German** for success and professional growth on the current labour market in the Czech Republic ($\chi^2 = 16.79$; $df = 9$; $p = 0.049$).

German is considered important (rather or very important) for professional life by 128 respondents in the age group of 18–25 (i.e., 74% within that age group), 19 respondents in the age group of 26–35 (i.e., 50% within that age group), 20 respondents in the age group of 36–45 (i.e., 83% within that age group), and 4 respondents in the age group of 46–55 (i.e., 67% within that age group). The results confirm that there is a statistically significant difference between the respondent's age and his/her perception of the importance of German. While in the agreement groups of 18–25 and 36–45, German is perceived as an unimportant language by a minority of the respondents, in the agreement group of 26–35, German is perceived as an unimportant language by one-half of the respondents; on the other hand, not a single respondent in this agreement group expressed the opinion that German was a completely unimportant language in terms of success on the domestic labour market. The opinion that German is completely unimportant for professional purposes is held by an insignificant number of respondents across all the age groups (see Table 8).

Table 8: Contingency table – relationship between the respondent's age and his/her perception of the importance of German for success and professional growth on the labour market in the Czech Republic

Age	Frequency	Perception of the importance of German				
		German completely unimportant	German rather unimportant	German rather important	German very important	sum
18–25	absolute (relative)	4 (2%)	41 (17%)	105 (44%)	23 (10%)	173 (72%)
26–35	absolute (relative)	0 (0%)	19 (8%)	15 (6%)	4 (2%)	38 (16%)
36–45	absolute (relative)	0 (0%)	4 (2%)	17 (7%)	3 (1%)	24 (10%)
46–55	absolute (relative)	1 (0%)	1 (0%)	3 (1%)	1 (0%)	6 (2%)
total	absolute (relative)	5 (2%)	65 (27%)	140 (58%)	31 (13%)	241 (100%)

Note: The information on relative number is based on the total number of answers ($N = 241$).

b) A statistically significant difference was found to exist between the following components: **respondent's work experience** and **the perception of the importance of German** for success and professional growth on the labour market in the Czech Republic ($\chi^2 = 13.55$; $df = 3$; $p < 0.05$).

In both categories of respondents (with and without work experience), the opinion that German is rather or very important for success on the Czech labour market is dominant. In the category of respondents with work experience, this opinion is prevailing in 137 respondents (i.e., 71% in this category), in the category of respondents without work experience, 34 respondents hold this view (i.e., 72% in this category). However, if we compare the frequency of positive answers in the answer variant “German is very important”, we find that while 30 respondents with work experience (i.e., 15% in this category) consider German to be a very important language, only one person deems German to be a very important language in the group of respondents without work experience (i.e., 2% in this category). If we disregard those respondents who consider German completely unimportant in terms of work success, we arrive at the conclusion that 98% of all the respondents (both with or without work experience) perceive German as a language important for professional purposes, although there are differences in the perception of the degree of its importance between the two categories (see Table 9).

Table 9: Contingency table – relationship between the respondent's work experience and his/her perception of the importance of German for success and professional growth on the labour market in the Czech Republic

Work Experience	Frequency	Perception of the importance of German				
		German completely unimportant	German rather unimportant	German rather important	German very important	sum
no	absolute (relative)	3 (1%)	10 (4%)	33 (14%)	1 (0%)	47 (20%)
yes	absolute (relative)	2 (1%)	55 (23%)	107 (44%)	30 (12%)	194 (80%)
total	absolute (relative)	5 (2%)	65 (27%)	140 (58%)	31 (13%)	241 (100%)

Note: The information on relative number is based on the total number of answers ($N = 241$).

c) A statistically significant difference was found to exist between the following components: **knowledge of English is sufficient for success and professional growth on the current labour market in the Czech Republic** and **the perception of the importance of German** ($\chi^2 = 7.43$; $df = 3$; $p = 0.048$).

Table 10 shows that in the category of respondents who perceive German as a very important language for career success and professional growth (31 persons), 29% (i.e., 9 persons) definitely disagree with the view that the knowledge of English is sufficient. On the other hand, in the category of respondents who perceive German as a rather important language (146 persons), 11% (i.e., 16 persons) definitely disagree with this opinion. In both categories under examination, a comparable relative frequency of respondents who checked the “slightly disagree” option can be observed (49% of the respondents perceiving German as rather important and 48% of the respondents perceiving German as very important).

Table 10: Contingency table – relationship between agreement with the opinion that knowledge of English is sufficient, and the perception of the importance of German for success and professional growth on the labour market in the Czech Republic

Perception of the importance of German	Frequency	Agreement with the opinion that the knowledge of English is sufficient				
		definitely disagree	slightly disagree	slightly agree	definitely agree	sum
German rather important	absolute (relative)	16 (9%)	72 (41%)	45 (25%)	13 (7%)	146 (82%)
German very important	absolute (relative)	9 (5%)	15 (8%)	6 (3%)	1 (1%)	31 (18%)
total	absolute (relative)	25 (14%)	87 (49%)	51 (29%)	14 (8%)	177 (100%)

Note: The information on relative number is based on the total number of answers ($N = 177$).

d) A statistically significant difference was found to exist between the following components: **knowledge of English is sufficient for success and professional growth on the current labour market in the Czech Republic** and **the type of study** ($\chi^2 = 7.53$; $df = 3$; $p = 0.047$).

Table 11 suggests that while full-time students mostly do not agree with the opinion that knowledge of English is sufficient for professional success (83 persons, or 59%, opted for “definitely disagree” or “slightly disagree”), 58% of the students enrolled in a combined type of study (56 persons) hold this view. This is a significant finding with a view to the fact that students enrolled in a combined type of study can be expected to have closer links to corporate practice, and as such possess a more thorough knowledge of employers’ requirements. The importance of German for professional success is completely denied by 17% of students enrolled in a combined type of study (16 persons) and 9% of full-time students (13 persons). As for the opinion that knowledge of English is sufficient for professional success, 13% of full-time students (18 persons) and 10% of students enrolled in a combined type of study (10 persons) definitely disagree with this opinion, respectively.

Table 11: Contingency table – the relationship between agreement with the opinion that knowledge of English is sufficient, and type of study

Type of study	Frequency	Agreement with the opinion that the knowledge of English is sufficient				
		definitely disagree	slightly disagree	slightly agree	definitely agree	sum
full-time	absolute (relative)	18 (8%)	65 (27%)	45 (19%)	13 (5%)	141 (59%)
combined	absolute (relative)	10 (4%)	30 (13%)	40 (17%)	16 (7%)	96 (41%)
total	absolute (relative)	28 (12%)	95 (40%)	85 (36%)	29 (12%)	237 (100%)

Note: The information on relative number is based on the total number of answers ($N = 237$).

The role of university in the improvement of German language proficiency

The last part of the questionnaire focused on mapping the role played by the university in the improvement of German language proficiency. We further examined the question of how business and management universities in the Czech Republic ought to respond to potential demand by students for improvement of German language skills at the level of individual subjects.

The results of the survey indicate (see Table 12) that 65% of respondents believe that a business and management university should play a rather or very important role in the improvement of their language skills. Less than 5% of respondents believe that the university should not play any role in the German language training of its students.

Table 12: Perception of the university's role in the improvement of German language proficiency

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
completely unimportant	12	12	4.67	4.67
rather unimportant	66	78	25.68	30.35
rather important	125	203	48.64	78.99
very important	42	245	16.34	95.33
n/a	12	257	4.67	100.00

Table 13 shows what types of subjects students are interested in in connection with the improvement of their German language skills. 163 of the respondents (i.e., 64%) confirm they would like to improve their knowledge of general German (“definitely yes” and “rather yes”). 152 of the respondents (nearly 50%) are interested in an offer of specialized courses, such as “Business German”, and 104 of the respondents (40%) would welcome it if specialized subjects (e.g., management, marketing, finance) were taught in German.

Table 13: Interest in the teaching of subjects in the process of improvement of German language proficiency

Category	Frequency table			
	Frequency	Cumulative frequency	Relative frequency (%)	Cumulative relative frequency (%)
General language training				
definitely not	11	11	4.28	4.28
rather not	29	40	11.28	15.56
rather yes	64	104	24.90	40.46
definitely yes	99	203	38.52	78.98
n/a	54	257	21.02	100.00
language training – specialized courses (e.g., business German, legal German)				
definitely not	14	14	5.45	5.45
rather not	29	43	11.28	16.73
rather yes	103	146	40.08	56.81
definitely yes	49	195	19.067	75.88
n/a	62	257	24.12	100.00
specialized subjects taught in German (e.g., management, marketing, finance)				
definitely not	25	25	9.73	9.73
rather not	49	74	19.07	28.80
rather yes	77	151	29.96	58.76
definitely yes	27	178	10.51	69.27
n/a	79	257	30.73	100.00

Statistically significant differences between the perception of the role played by universities in the improvement of German language proficiency and socio-demographic characteristics were also examined. The following statistically significant differences were found to exist:

- a) A statistically significant difference was found to exist between **“the perception of the importance of the role played by the university in the improvement of German language proficiency”** and **“the respondent’s interest in the improvement of German language proficiency through general language courses”** ($\chi^2 = 18.43$; $df = 9$; $p = 0.030$).

Of the 132 respondents who perceive the role played by the university in the improvement of their German language skills as rather or very important, 124 (i.e., 94%) also state they would like to improve their German language skills through general language courses (see Table 14). Of the options available, the highest number of respondents checked definitely yes (99 persons, i.e., 59% of the total number of responses).

Table 14: Contingency table – relationship between the perception of the importance of the role played by the university in the improvement of German language proficiency and the respondent’s interest in the improvement of German language proficiency through general language courses

Perception of the role played by university	Frequency	Interest in improvement of German language proficiency (general language courses)				
		definitely not	rather not	rather yes	definitely yes	sum
unimportant	absolute (relative)	0 (0%)	0 (0%)	3 (2%)	1 (1%)	4 (3%)
rather unimportant	absolute (relative)	0 (0%)	0 (0%)	20 (12%)	13 (8%)	33 (20%)
rather important	absolute (relative)	1 (1%)	5 (3%)	32 (19%)	59 (35%)	97 (58%)
very important	absolute (relative)	0 (0%)	2 (1%)	7 (4%)	26 (15%)	35 (21%)
total	absolute (relative)	1 (1%)	7 (4%)	62 (37%)	99 (59%)	169 (100%)

Note: The information on relative number is based on the total number of answers ($N = 169$).

- b) A statistically significant difference was found to exist between **“the perception of the importance of the role played by the university in the improvement of German language proficiency”** and **“the respondent’s interest in the improvement of German language proficiency through specialized language courses”** ($\chi^2 = 27.44$; $df = 6$; $p < 0.05$).

Of the 136 respondents who perceive the role played by the university in the improvement of their German language skills as rather or very important, 125 (i.e., 92%) state they would like to improve their German language skills through specialized language courses (see Table 15). Of the options available, the highest number of respondents checked rather yes (103 persons, i.e., 64% of the total number of answers). The definitely yes option followed (48 persons, i.e., 30% of the total number of answers).

Table 15: Contingency table – relationship between the perception of the importance of the role played by the university in the improvement of German language proficiency and the respondent’s interest in the improvement of German language proficiency through specialized language courses

Perception of the role played by university	Frequency	Interest in improvement of German language proficiency (specialized language courses)				
		definitely not	rather not	rather yes	definitely yes	sum
unimportant	absolute (relative)	0 (0%)	0 (0%)	1 (1%)	0 (0%)	1 (1%)
rather unimportant	absolute (relative)	0 (0%)	0 (0%)	22 (14%)	3 (2%)	25 (15%)
rather important	absolute (relative)	0 (0%)	8 (5%)	68 (42%)	23 (14%)	99 (61%)
very important	absolute (relative)	0 (0%)	3 (2%)	12 (7%)	22 (14%)	37 (23%)
total	absolute (relative)	0 (0%)	11 (7%)	103 (64%)	48 (30%)	162 (100%)

Note: The information on relative number is based on the total number of answers ($N = 162$).

c) A statistically significant difference was found to exist between “**the perception of the importance of the role played by the university in the improvement of German language proficiency**” and “**the respondent’s interest in the improvement of German language proficiency through subjects taught in German**” ($\chi^2 = 38.22$; $df = 6$; $p < 0.05$).

Of the 126 respondents who perceive the role played by the university in the improvement of their German language skills as rather or very important, 87 (i.e., 69%) state they would like to improve their German language skills through specialized subjects taught in German (see Table 16). Of the options available, the highest number of respondents checked rather yes (76 persons, i.e., 54% of the total number of answers). The rather not (36 persons, i.e., 35% of the total number of answers) and definitely yes (26 persons, i.e., 18% of the total number of answers) options followed.

Table 16: Contingency table – relationship between the perception of the importance of the role played by the university in the improvement of German language proficiency and the respondent’s interest in the improvement of German language proficiency through subjects taught in German

Perception of the role played by university	Frequency	Interest in improvement of German language proficiency (specialized subjects)				
		definitely not	rather not	rather yes	definitely yes	sum
unimportant	absolute (relative)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
rather unimportant	absolute (relative)	0 (0%)	0 (0%)	13 (9%)	2 (1%)	15 (11%)
rather important	absolute (relative)	3 (2%)	34 (24%)	45 (32%)	9 (6%)	91 (65%)
very important	absolute (relative)	0 (0%)	2 (1%)	18 (13%)	15 (11%)	35 (25%)
total	absolute (relative)	3 (2%)	36 (25%)	76 (54%)	26 (18%)	162 (100%)

Note: The information on relative number is based on the total number of answers ($N = 162$).

d) A statistically significant difference was found to exist between the ability to communicate in German and the perception of the role played by a business and management university in the improvement of German language proficiency ($\chi^2 = 44.76$; $df = 18$; $p < 0.05$).

Respondents who attained levels A2 or higher in German in their self-evaluation under the Common European Framework of Reference for Language perceive the role played by the university in the improvement of German language proficiency as rather important (63%) or very important (17%). The role played by the university in this regard is considered rather or completely unimportant by 18% of the respondents (see Table 17).

Table 17: Contingency table – relationship between the ability to communicate in German and the perception of the role played by a business and management university in the improvement of German language proficiency

Perception of the role played by university	Frequency	Ability to communicate in German (attained language skill levels A2–C2)
unimportant	absolute (relative)	2 (2%)
rather unimportant	absolute (relative)	19 (16%)
rather important	absolute (relative)	76 (63%)
very important	absolute (relative)	21 (17%)
total	absolute (relative)	121 (100%)

Note: The information on relative number is based on the total number of answers ($N = 121$).

e) A statistically significant difference was found to exist between the perception of the importance of German for success and professional growth on the current labour market in the Czech Republic, and interest in the improvement of German language proficiency through general language courses ($\chi^2 = 20.449$; $df = 9$; $p = 0.0153$).

As can be seen in Table 18, of the 136 respondents who consider German rather or very important, 122 (i.e., nearly 90%) stated they would like to improve their German language skills through general language courses (definitely yes or rather yes options). Respondents who refer to German as rather unimportant for professional life (52 persons) are also clearly interested in improving their general language skills (38 respondents, i.e., 73%, opted for rather yes or definitely yes).

Table 18: Contingency table – relationship between the perception of the importance of German for success and professional growth on the current labour market in the Czech Republic, and respondent's interest in the improvement of German language proficiency through general language courses

Perception of the importance of German	Frequency	Interest in improvement of German language proficiency (general language courses)				
		definitely not	rather not	rather yes	definitely yes	sum
completely unimportant	absolute (relative)	0 (0%)	2 (1%)	1 (1%)	0 (0%)	3 (2%)
rather unimportant	absolute (relative)	0 (0%)	14 (7%)	20 (10%)	18 (9%)	52 (27%)
rather important	absolute (relative)	1 (1%)	12 (6%)	35 (18%)	65 (34%)	113 (59%)
very important	absolute (relative)	0 (0%)	1 (1%)	7 (4%)	15 (8%)	23 (12%)
total	absolute (relative)	1 (1%)	29 (15%)	63 (33%)	98 (51%)	191 (100%)

Note: The information on relative number is based on the total number of answers ($N = 191$).

f) A statistically significant difference was found to exist between the perception of the importance of German for success and professional growth on the current labour market in the Czech Republic, and interest in the improvement of German language proficiency through specialized language courses ($\chi^2 = 19.561$; $df = 9$; $p = 0.021$).

As can be seen in Table 19, of the 133 respondents who consider German rather or very important, 114 (i.e., 86%) stated they would like to improve their German language skills through general language courses (rather or definitely yes options). Respondents who refer to German as rather unimportant for professional life (45 persons) mostly also express an interest in improving their general language skills through specialized courses (35 respondents opted for rather yes or definitely yes).

Table 19: Contingency table – relationship between the perception of the importance of German for success and professional growth on the current labour market in the Czech Republic, and respondent's interest in the improvement of German language proficiency through specialized language courses

Perception of the importance of German	Frequency	Interest in improvement of German language proficiency (specialized language courses)				
		definitely not	rather not	rather yes	definitely yes	sum
completely unimportant	absolute (relative)	0 (0%)	2 (1%)	1 (1%)	0 (0%)	3 (2%)
rather unimportant	absolute (relative)	0 (0%)	10 (6%)	28 (15%)	7 (4%)	45 (25%)
rather important	absolute (relative)	2 (1%)	13 (7%)	66 (36%)	29 (16%)	110 (61%)
very important	absolute (relative)	0 (0%)	4 (2%)	7 (4%)	12 (7%)	23 (13%)
total	absolute (relative)	2 (1%)	29 (16%)	102 (56%)	48 (27%)	181 (100%)

Note: The information on relative number is based on the total number of answers (N = 181).

g) A statistically significant difference was found to exist between the perception of the importance of German for success and professional growth on the current labour market in the Czech Republic, and interest in the improvement of German language proficiency through specialized subjects taught in German ($\chi^2 = 25.622$; $df = 9$; $p = 0.016$).

As can be seen in Table 20, of the 122 respondents who consider German rather or very important, 81 (i.e., 66%) expressed an interest in improving their German language proficiency through subjects taught in German (rather or definitely yes options). Respondents who refer to German as rather unimportant for professional life (35 persons) mostly also express an interest in improving their general language skills through specialized subjects taught in German (22 respondents, or 63%, opted for rather yes or definitely yes).

Table 20: Contingency table – relationship between the perception of the importance of German for success and professional growth on the current labour market in the Czech Republic, and respondent's interest in the improvement of German language proficiency through subjects taught in German

Perception of the importance of German	Frequency	Interest in improvement of German language proficiency (offer of specialized subjects)				
		definitely not	rather not	rather yes	definitely yes	sum
completely unimportant	absolute (relative)	0 (0%)	3 (2%)	0 (0%)	0 (0%)	3 (2%)
rather unimportant	absolute (relative)	0 (0%)	13 (8%)	20 (13%)	2 (1%)	35 (22%)
rather important	absolute (relative)	7 (4%)	30 (19%)	48 (30%)	15 (9%)	100 (63%)
very important	absolute (relative)	1 (1%)	3 (2%)	8 (5%)	10 (6%)	22 (14%)
total	absolute (relative)	8 (5%)	49 (31%)	76 (48%)	27 (17%)	160 (100%)

Note: The information on relative number is based on the total number of answers (N = 160).

V. Conclusion

The results of the survey show that the ability of students of Czech business and management universities to communicate in German is not very high. A mere 7.41 of the respondents is able to communicate orally and in writing at B2–C2 levels under the Common European Framework of Reference for Language. These values are comparable to the results of the isea survey (2010) according to which less than 5% of the Czech population can communicate in German “very well”. In this context, it is appropriate to draw attention to the development indicated by statistical data of MEYS (2012): the share of students studying two and more foreign languages has been declining continually in 2007–2011, from 25% (2007) to 17% (2011), and the status of German as the second foreign language most frequently studied in the Czech Republic weakened slightly. Instead of the original 25% in 2007, less than 20% of all students studied this language in 2011. Special Eurobarometer 386 (2012) actually points out the declining portion of Czech population conversant in at least one foreign language as compared to 2005. The document further stresses, *inter alia*, the significant decline in the number of respondents in the Czech Republic able to communicate in German.

It can be noted that the declining portion of Czech population, especially students at business and management universities, conversant in two or more foreign languages, definitely represents an unfavourable trend which is moreover in direct conflict with the policy of the European Commission which in its document, *An Action Plan 2004–2006*, calls on EU citizens to learn foreign languages, and recommends they master two further foreign languages, specifically, English and the language of their neighbouring country (European Commission 2003).

If we focus on factors affecting the level of German language proficiency in the case of Czech university students of business and management, it is apparent that the school environment has a decisive influence on the respondents’ ability to communicate in German (the opportunity to learn the language, compulsory subject, motivation to study the language). Factors such as contemplations of future career, parents’ wishes, relationship to the country and culture, or study or work stay, play a rather marginal role in the acquisition of German language proficiency. The consistency of survey results of isea (2010) can be confirmed in this regard as well: it demonstrates the “fundamental” importance of school in the learning of foreign languages. The extraordinary importance of language education is also stressed by the Report on the implementation of the Action Plan “Promoting language learning and linguistic diversity” addressing the implementation of *An Action Plan 2004–2006* (2009), which commends selected EU member states for their efforts to innovate their national educational systems, for instance, by introducing foreign language training of preschool children, implementation of the Content and Language Integrated Learning/CLIL model, expansion of foreign language training at the secondary level of schooling, or investments into teacher training. Lasagabaster (2008) also stresses challenges faced by European educational systems in light of the growing importance of foreign language training, since “there is a dire need to educate multilingual and multicultural citizens in a context where the linguistic consequences of globalization are more and more evident” (Lasagabaster, 2008). Given the Czech Republic’s historical, cultural and

economic ties to German-speaking countries, we are of the opinion that German should logically be the second language after English, the teaching of which would be pro-actively supported by the Czech system of education at all its levels.

The survey results further indicate that nearly three-quarters of the respondents view German as a language rather important or very important for their success on the current Czech labour market, even though nearly one-half of the respondents voiced the opinion that knowledge of English was sufficient. This result confirms that the perception of German as a language useful for professional purposes and professional growth is incontestable in Czech conditions. While the perception of the importance of German declines with age, the view that German is rather or very important for professional purposes prevails across age groups. Another important finding is that, regardless of the respondents' work experience or lack thereof, and the type of study they are enrolled in, the prevailing opinion is that German is rather or very important for success on the labour market in the Czech Republic. Another survey result according to which full-time students mostly do not subscribe to the opinion that knowledge of English is sufficient for career success is rather contradictory; however, more than one-half of students enrolled in a combined type of study holds this view. Students enrolled in a combined type of study in particular can presumably be expected to have greater work experience and thus better knowledge of the requirements encountered in corporate practice. However, despite this contradiction, it can be noted that the survey results emphasize the conviction of a large segment of the respondents that language skills in both of those world languages need to be improved. German thus is, in addition to English, a language the knowledge of which, according to a large segment of the respondents, increases the likelihood of success on the Czech labour market. The ISEA survey (2010) yielded similar results. It addressed, *inter alia*, the motivation for foreign language learning, and arrived at the conclusion that the Czech population is mainly motivated to learn German by practical concerns ("it is in particular a language important for one's profession").

The respondents are thus fully aware of the importance of knowledge of two or more foreign languages, especially English and German, as a prerequisite to success on the labour market, and a number of other studies conducted at European level considers foreign language skills to be one of the key factors of the success of individuals on the labour market and companies in global competition (e.g., Baur, 2009; Gudauner, 2009; Lasagabaster, 2008; Loi, 2009; Pörnbacher, 2009). These studies point out risks inherent in the belief that the mastery of English for communication on the European labour market is sufficient, and stress that employers often require foreign language skills from their employees. Foreign language competence is deemed to be the third most important competence after informatics and manufacturing, and marketing and sales. The processes of internationalization and globalization clearly give preference to the employment of persons conversant in several European languages, and empirical data testifies to the extraordinarily important position of German as the second foreign language in corporate practice, especially in regions that are geographically close to German speaking countries (Benelux, Poland, Croatia, Slovenia, Czech Republic, Slovakia and Hungary). Companies are well aware that German communication skills also open markets above and beyond

German-speaking countries. In this context, the National Centre for Languages (2006) points out damage in the form of loss of prospective business and unsuccessful entry on foreign markets, caused by a lack of adequate language skills on the part of the employees of European SMEs.

The above findings may thus be interpreted as terms of reference for politics and national systems of education at the level of foreign language teaching. In the Czech context, it specifically means investing in the teaching of at least two foreign languages, the preferred combination being English and German, at all levels of schooling, given the above-mentioned factors, such as geographic location, common historical and cultural roots, and last but not least, intense economic relations. University students, i.e., future employees, should consider the fact that, apart from other things, the labour market in German-speaking countries offers substantial opportunities for career building and professional growth, when thinking of what languages to study.

Other survey results convincingly testify to the fact that German is definitely not on the margin of interest for Czech university students of business and management. Nearly two-thirds of the respondents believe that business and management universities play a rather important or very important role in the improvement of German language proficiency. As regards the improvement of their German language skills, students are interested in general German courses (64%), specialized courses, such as “Business German” (nearly 50%), and 40% of the respondents would welcome specialized subjects (e.g., management, marketing, finance) taught in German. It is thus apparent that a great majority of the students is aware of the importance of knowledge of the German language for their professional growth. This result should certainly be taken into account when the curricula for the respective study programmes and courses are drawn up. German at universities should not gain the status of a subject of marginal interest to students. Universities ought to respond to this challenge, and it appears appropriate to point out the opportunities inherent in the implementation of the Content and Language Integrated Learning (CLIL) concept. For instance, Lasagabaster (2008), who examined the implementation of this concept in the Basque Country, concluded that the “CLIL approach is successful and helps to improve students’ foreign language competence even in bilingual contexts where English has little social presence”. Similarly, a review of studies conducted by Dalton Puffer (2007) in German conditions stresses “CLIL advantages concerning receptive skills, vocabulary and fluency”. The teaching of specialized subjects in German may thus be one of the ways of strengthening the German language proficiency of university students of business and management in the Czech Republic, and increase their chances of success on the Czech and European labour markets.

In conclusion, the authors would like to voice their conviction that the results of this study may be viewed as an important contribution to increasing the current level of knowledge of those factors that influence German language skills of Czech university students of business and management, and by extension their potential success on the labour markets at home and abroad. The study further proposes potential directions which language training could follow in order to improve the German language proficiency of business and management university graduates.

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THE INTERNATIONAL COURT OF JUSTICE AND THE LEGALITY OF UN SECURITY COUNCIL RESOLUTIONS

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Abstract

Through the United Nation's Charter, the UN Security Council represents the most powerful executive institutional body in the field of collective security. Moreover, its ultra vires acts may have distinct legal consequences. Accordingly, questions arising from these facts are whether such a large scope of competences could be abused, what are the limits of the executed power and above all, affirmation of the legality of the actions of Council. Predominantly by means of the analytical method as well as a case study of the Lockerbie case, the present study provides the related argumentative discourse. Notwithstanding the fact that the decisions of the Council appear to be without any limitations, it is obliged to act within the purposes and principles of the UN Charter. The opinion of the International Court of Justice on the legality of the SC's actions in the field of collective security are still, however, indirectly expressed through its general function.

Keywords

United Nation's Security Council, International Court of Justice, UN Security Council Resolutions, Collective Security, UN Charter

I. Introduction

The relationship between the Security Council ("SC" or "Council") and the International Court of Justice ("ICJ" or "Court") is established by the Charter of the United Nations as well as by the Court's Statute. The International Court of Justice is seen as the principal judicial organ of the United Nations³ and is a body to which States may refer their legal disputes, under Article 36 of the UN Charter; the Security Council can make a recommendation for action to be taken. Another role of the International Court of Justice is

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³ Article 92, UN Charter.

to provide the General Assembly and the Security Council with an advisory opinion on any legal question⁴. Currently, there are no express provisions in the Charter, nor in the Statute of the Court determining its power of review over political actions, even though this concept among the principal governing organs is often seen in different systems (Nigel, 2005, p. 216).

This study will examine whether the International Court of Justice of the United Nations is the proper body for reviewing the legality of the Security Council's actions; first, through the constitutional framework by the analogy of judicial review of the political decision with legal consequences and its restrictions in different legal systems. The second part will assess the function of the ICJ with regard to the Security Council's primary responsibility in maintaining international peace and security, supported by the case study of the *Lockerbie* case⁵ that, since the establishment of the United Nations, brought the given question back to wide discussion. The third part will recognise the realistic implications of the ICJ being in a position to review the legality of the SC's actions in the field of collective security.

II. The basis for the constitutional parallels

In the common law system judicial review has officially obtained the explicit legal frame in the famous *Marbury v. Madison* case⁶. The principle of review of the constitutionality of acts of the U.S. Congress was not expressed in the Constitution; similarly, judicial review of the Council's acts has no legal support in the UN Charter. Where there are two colliding norms that are impossible to apply consistently alongside each other, the authority is obliged to choose the one with the higher status. Thus the judicial organ is bound to use legislation rather than an executive decree and the constitution rather than legislation (Akande, 1997, p. 326). The constitutional framework assumes the separation of power and its consequent system of control among the principal governmental organs. This concept has evolved over centuries from, primarily, philosophical ideas based on the doctrine that every democratic governing system should build its rules on equally assessed branches of executive, legislative and judicial power. In the 17th century, John Locke and later Charles Baron de Montesquieu developed the theory of the horizontal position of governmental organs ensuring mutual balance and control (Loveland, 2012, p. 54). Their works had a profound influence on theoretical analyses and became the background for the different national legal systems in which the judicial bodies, in specific domestic traditions, particularly the constitutional court, was provided with the capacity to review the legality and compatibility of the decision of the executive organs *vis-à-vis* the rule of law (Akande, 1997, p. 309; Kubinec, Potočná, 2008).

This constitutional point of view often provides a clear analogy to simply use the same concept with regard to international judicial bodies and consequently would presume their

⁴ Article 96, UN Charter.

⁵ Questions of interpretation and Application of the 1971 Montreal Convention Arising from the Aerial Incident at 1992 (*Libyan Arab Jamahiriya v. United States of America*) ICJ Reports (1992) PM 1992/9.

Questions of interpretation and Application of the 1971 Montreal Convention Arising from the Aerial Incident at 1992 (*Libyan Arab Jamahiriya v. United States of America*) ICJ Reports (1992) PM 1992/8.

⁶ *Marbury v Madison* (1803) 5 US (1 Cranch) 137.

capacity of reviewing the legality of actions or decisions of the SC by the ICJ. However, the practice of judicial review in domestic legal systems includes exceptions, particularly those regarding the actions of heads of state representatives related to state security or defence, e.g. proclamations of a state of war (Drgonec, 2012). Considering this paradigm, judicial systems on the international level appear to follow national patterns in relation to the executive. Even though the national judiciary usually include the function of judicial review, in order to ensure prompt and effective action related to maintenance of peace and security within the state, these enactments are not subject to judicial review.

However, consideration of the vertical strength or hierarchy of acts and their subsequent application is indeed limited. In the United Kingdom, control of the armed forces cannot be challenged in court.⁷ Decisions that involve national security in the sense of declaring war or deploying armed forces are exclusively within the authority of the executive power and it is accepted that decisions to take military action are beyond the court's purview.⁸ A subsequent decision of the Crown court confirmed the principle: the courts will not review the legality of foreign policy in terms of declarations of war or the deployment of armed forces and have identified the matter as not justiciable.⁹ Similarly, in other countries, the constitutional court is in its function often seen, with explicit exceptions, as being excluded from reviewing executive acts. These are usually directly implemented in the constitutional acts of a state. The constitutional court consequently finds the scope of its review, with regard to legislative/executive acts, limited. The restrictions are generally related to decisions of executive organs that in cases of state emergency deal with national security (Hor, 2005, p. 273).

In national legal cultures and most democratised countries, the courts in general, or the constitutional courts, possess the capacity to also function as a legal surveillance tool for the legality, validity and compatibility of acts passed by the government. Explorations that compare the United Nations and its rules of function to various domestic systems might appear to have logical, probably ideological grounds. This at first seems to make any analogy of the International Court of Justice to national courts impossible; the United Nations should not be compared to any national bodies or legal societies. The UN is a political organization and the United Nation Charter is the act constituting this organisation according to the conditions that member states have agreed to and complied with (Schweigman, 2001, p. 15). The Security Council and the International Court of Justice are the organs of the United Nations and the scope of its function are explicitly constituted. Their unique purposes differ from any other, though the applications of any kind of framework, concept or structure in comparative sense appear to be irrelevant.

The second parallel, a concrete comparison of the system of judicial review of the legality of the Security Council's action to domestic reviewing procedures, finds obvious gaps. Actions in the scope of collective security under Chapter VII of the UN Charter would analogically fall into matters that are in most democratic countries excluded from the competence of the organs providing judicial review. The state's decisions and subsequent

⁷ *Chandler v DPP* (1964) AC 763.

⁸ *R v prime Minister of the UK* (2002) EWHC 2759 QB.

⁹ *R v (1) Philip Pritchard and Others* (2004) EWCA Crim, 1981.

actions taken related to national security, the use of the armed forces, and military action are often protected by the prerogative clause and are particularly considered to be non-justiciable (Matheson, 2004, p. 615).

Through this analysis, it can be determined whether the ICJ is the proper body to review the legality of the actions of the Security Council, although the temptation to apply philosophical ideas and conventional proposals, or any potential constitutional parallel, would not be just. Review of the legality of actions in the field of collective security would be most probably, analogically to national practice, excluded from the extent of the powers of the International Court of Justice, while even in the most democratised cultures, the consequences of executive action are preferably judged politically rather than legally by courts (Loveland, 2012, p. 114).

III. The role of the International Court of Justice in relation to the Security Council's function

The role of the International Court of Justice attained its legal ground in 1945 by means of the Charter of United Nations, whereby Chapter XIV assesses its function as the principal judicial organ of the United Nations. The ICJ acts in accordance with the UN Charter and an annexed Statute of the International Court of Justice in two different fields: non-binding advisory opinions and continuous cases with mandatory consequences for the states involved. Procedures for determining the legality of the actions of United Nations organs by the International Court of Justice had not yet obtained a practical and explicit legal framework.¹⁰

Advisory opinions

Firstly, the ICJ is entitled to provide the General Assembly and the Security Council with an advisory opinion on any legal question. Moreover, a request for an advisory opinion might also be made by the other organ of the United Nations and specialised agencies with authorisation of the General Assembly on legal questions arising from the scope of their activities.¹¹ In the case of the General Assembly and the Security Council, such restrictions do not exist. The broad meaning of 'any legal question' could, however, suggest the mutual questioning of the legality of the acts of both principal bodies. The legal ground for the possibility to review the legality of actions of the Security Council consequently seems apparent, according to this article (Akande, 1997, p. 328). Realistically, the availability of this option would necessarily require the full force of political will.

However, a request to enquire as to the legality of political decisions within the United Nation's corpus was made in the *Expenses case*, where the Court noted: In the legal system of States, there is often some procedure for determining the validity of even a legislative or governmental act, but no analogous procedure is to be found in the structure of the United Nations.¹² A very similar conclusion with a more precise point was stressed in

¹⁰ *Certain Expenses of the United Nations etc.* ICJ Rep (1962) 62/20 AO 168.

¹¹ Article 96, UN Charter.

¹² Article 96, UN Charter.

the *Namibia case*¹³, whereby the Court stated that it ‘does not possess powers of judicial review or appeal in respect of the decisions taken by the United Nations organs concerned and also that the subject matter of the request for advisory opinion cannot be formed by the question of validity or conformity with the Charter of General Assembly Resolution 2145 and related Security Council decisions’.

Even though the ICJ’s opinion on the capacity to review the legality of actions was not positively expressed, the Court thereafter examined the Security Council’s power to issue the particular resolution and the entitlement of the General Assembly to terminate the mandate by means of the abovementioned resolution 2145.¹⁴ The way for the ICJ to determine whether the political decision is valid – notwithstanding its lack of an exact right to review – was thus potentially demarked.

Contentious cases

The jurisdiction of the International Court of Justice subsumes cases which the parties refer to it and matters especially provided for in the Charter of the United Nations or in other treaties and conventions in force.¹⁵ The Security Council can thus make a recommendation that a legal dispute should be, as a general law, referred by the parties under the Court’s jurisdiction.¹⁶ The decisions of the ICJ are, in contentious cases, binding solely on an inter-party basis.¹⁷

When examining the aptitude of the ICJ as the proper body to review the legality of the SC’s actions, it is worth noting the case that brought this issue into wider discussion.

The Lockerbie case¹⁸

In December 1988, a Pan American aircraft exploded over the village of Lockerbie, Scotland, and caused the death of 259 people on board and 11 on the ground. While the plane and most passengers were American, the people killed on the ground were British and the incident happened in the territory of the United Kingdom; the parties of the dispute and the jurisdiction over the case were presumed. In November 1991, US and UK bodies issued an indictment accusing two Libyans nationals, along with a warrant for their arrest and request for their extradition. (Graefrath, 1993) Libya refused to comply with reference to the 1971 Montreal Convention as the general rule of jurisdiction in cases of claims to extradite nationals, asking for arbitration according to Article 14/1 of the Montreal Convention. In January 1992, the Security Council adopted resolution 731, ordering Libya ‘to provide a full and effective response’ to the requests of the UK and US. Two months later, Libya applied to the ICJ asking for a judgement that would declare a breach of the obligations

¹³ The ICJ delivers its Advisory Opinion on the Legal Consequences for States of the Continued. *Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276* (1970). ICJ Rep (1971) 71/10, AO 19.

¹⁴ ICJ Rep (1971) 71/10, AO 51.

¹⁵ Article 36, ICJ Statute.

¹⁶ Article 36(3), UN Charter.

¹⁷ Article 94, UN Charter.

¹⁸ Questions of interpretation and Application of the 1971 Montreal Convention Arising from the Aerial Incident at 1992 (*Libyan Arab Jamahiriya v. United States of America*) ICJ Reports (1992) PM 1992/9.

of the US and UK under the Montreal convention and also for provisional measures to prevent the extradition. Before the delivery of the ICJ's judgement, the Security Council adopted resolution 748, under Chapter VII of the UN Charter imposing the mandatory sanctions in the event that Libya failed to comply. Requests for provisional measures were dismissed according to the binding and predominant effect of the Security Council's decisions (Martenczuk, 1999, p. 517–521).

The UN Security Council is, in accordance with the UN Charter, obliged to act in accordance with the principles and purposes of the United Nations and should, according to Article 36.2, take into consideration any procedures which have already been adopted by the parties for the settlement of a dispute. In the meaning of the legal disputes of the *Lockerbie case*, all concerned parties agreed to Article 14.1 of the 1971 Montreal Convention, according to which the proper action for the Security Council would have been to call for arbitration. But yet again, it is the UN Security Council itself that considers and decides the methods and necessary measures to be undertaken when threats to international peace and security occur.

Regarding the jurisprudence of the UN Security Council in relation to the fight against terrorism, resolution 731 seems to be outside regular customs. In terms of the allegation of the individuals to have any involvement in the terrorist act, the previous resolutions dealing with the terrorism were strictly constrained to support the convention regime or the bilateral treaties. According to the content of the resolution; contrary to the previous practice, whereby the legal background for adopting the act is essential, the explicit legal basis for the resolution 731 is missing. The resolution does not, however, indicate any breach or threat of international peace and security, nor an act of aggression. Furthermore, Libya was faced with complying with actions introduced by means of references, not directly, as seen in past Security Council practice (Krishnamurthy, 2014; Öberg, 2005). Insight into the factual and legal content makes resolution 731 disputable and provides room for different argumentation.

Examination of the measures provided by the UN Security Council in cases where a certain event has been considered to jeopardize world peace and security appears to provide no legal pattern, nor consistency (Krishnamurthy, 2014). In different cases the UN Security Council calls for condemnation, arbitration, the use of economic sanctions or other tools, until it comes to international intervention and the use of direct force (Malone, 2004, p. 211). In the *Lockerbie case*, for instance, the Security Council, with resolution 748, called for the prohibition of air flights, prohibition of the sale or supply to Libya or its nationals of military weapons, ammunition, vehicles, equipment or parts; and above all, the prohibition of the supply to Libya or its nationals of military training or advice.¹⁹ The UN Charter requests the determination of a threat to the peace, a breach of peace or an act of aggression by the Security Council to apply the measures under article 41 and 42. Literally, neither resolution 731 nor 748 explicitly reference satisfying this rule. The application of such international sanctions by the Security Council under the Chapter VII related to this case remains unclear (Aoude, 2014).

¹⁹ S/RES/748 (1992).

The opposite attitude to the situation could be seen in the *Corfu Channel case*²⁰, whereby the Security Council, according to Article 36.3, in making recommendations to Albania and the United Kingdom under Chapter VI, referred the case to the International Court of Justice. Important determinations were made by the ICJ in the *Nicaragua case*²¹. The Court stated that a breach of the customary principles of international law, in the sense of infringement of the territorial integrity of Nicaragua, had taken place and considered the actions of the United States as military and paramilitary help to the rebel group, ergo the illegal use of force against the Government of Nicaragua; nevertheless, it disregarded US assistance as collective self-defence. According to Article 2.4 of the Charter of United Nations, Member States shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state. Firstly, the ICJ provided a legal response, which might contribute to illuminating its role in similar future situations (Hossain, 2010, p. 91). Secondly, through the judgement of the *Nicaragua case*, another issue had been raised: the demarcation of functions between the General Assembly and the Security Council according to Article 12 of the UN Charter cannot be seen as a paradigm, while no such provision in the Charter defines the function between the ICJ and the Security Council. ‘The Council has functions of a political nature assigned to it, whereas the Court exercises purely judicial functions. Both organs can perform their separate but complementary functions with respect to the same events.’²²

The International Court of Justice in these cases acted in accordance with the sphere of its authority. The basis providing the Security Council’s decisions and actions with the full support of the law are constituted within the United Nations Charter, though even the highly conspicuous actions in a name of collective security might be given “political legitimacy” (Talmon, 2005). The Security Council has exuberant powers to determine the existence of threats or a breach of international peace and security, and such determination currently appears to remain beyond doubt. Nevertheless, the International Court of Justice has clarified its competence to act in terms of threat or a breach of international peace and security.

IV. Implications of the reviewing function of the International Court of Justice

Examination of whether the International Court of Justice is or is not a proper body for reviewing the legality of the Security Council’s action in the field of collective security should be at the last stage restricted to the implications for the system of the United Nations as a whole. The point of departure for this analysis must be based on Article 24 of the UN Charter, under which the member states agree to confer the primary responsibility for maintaining international peace and security on the Security Council. It is acting on their behalf, whereby the limits of such actions are to be seen in accordance with the purposes and principles of the United Nations.²³ The concept of collective security in the

²⁰ *Corfu Channel case (Albania v. United Kingdom)* (1948) ICJ Rep 1948/1.

²¹ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, ICJ Rep (1986) 86/6.

²² S/RES/748 (1992).

²³ Article 24 UN Charter.

United Nations is based on the idea of the institutionalised cooperation of states in order to strengthen their mutual protection. The established governmental and representative body, with the exception of the executive power, also possess implied legislative power. Article 25 provides explicit legal grounds for the binding force of the Security Council's decisions, which consequently become the source of international law (Amerasinghe, 2005, p. 293; White, 2005). In relation to Article 103, which provides the obligations of Members of UN under the UN Charter with the predominant position among the other obligations and international agreements, the actions of the Security Council, in the name of international peace and security with respect to international law, may enjoy the full package of a legal basis. (Franck, 1995) Moreover, the Security Council shall determine and decide under Chapter VII whether a situation constitutes a threat or breach of the peace or act of aggression, and if so, what measures are to be taken to resolve such a situation.²⁴ Even though the Charter of the United Nations grants the Security Council a large scope of authority, it is nevertheless the organ of the international organisation that establishes its predominance, the political function and outstanding character from the agreement concluded by member states with an exactly specified aim (Constantinides, 2005; Bowett, 1997). The Council is not a sovereign entity with powers above the law. The affirmation of such a statement came recently from the ICTY Appeal Chamber in the *Tadić case*.²⁵ The control mechanisms and limits of the Security Council's power under Chapter VII are often the subject of numerous discussions. The cardinal limits are principles and purposes of the United Nations, particularly those described by the Preamble of the UN Charter and the following Chapter I. These can be further developed into the concept of respecting and abiding the general principles of international law, ius cogens and human rights obligations (Akande, 1997, p. 317). The other possible method of restriction is the veto power that, despite criticism, represents a tool to control the Security Council's actions (Bailey, Daws, 2003, p. 201). The main point here is that it is not the goal of the members of Security Council to circumvent the law, nor is there to be any hidden promotion of illegal intent. They must act in accordance with rules which have been internationally settled. In the *Lockerbie case*, Libya challenged the legality of the Security Council's decisions on the whole, where it is clear that the UN Charter gives authority only to the Security Council to make such decisions.²⁶ Nevertheless, the authority of the ICJ in this case recognises the predomination of the obligations under the Charter over any other amendment of the states, so that the ICJ could only consequently confirm the mentioned status quo.²⁷ The decisions under Chapter VII are essentially factual, political and selective in character; there are neither legal reasoning nor the legal standards to reach such a decision (Amerasinghe, 2005). With reference to the analysis presented in the first part of this study, they are indeed difficult to become subject to the standards of judicial review. In national legal systems, such decisions would typically be regarded as non-justiciable (Roberts, 1995).

²⁴ Articles 39 41 42 UN Charter.

²⁵ *Prosecutor v. Tadić* (1996) IT-94-1-AR72 para 28.

²⁶ Article 36(3), UN Charter.

²⁷ Article 36 ICJ Statute, 36, 37.

Also, by exercising the functions of the Security Council related to Chapter VII in crisis threshold situations, there is an undisputable need for fast and effective reaction, forasmuch as the decisions must hold enough authority to be accepted by all parties as conclusive and binding. Otherwise, the process of deliberating and reviewing might be likely to block responsiveness to actual breaches of international peace and security and the effectiveness of the Council in such crisis situations. The option to review the legality of actions that flow to guarantees of collective security would ultimately harm the credibility of the Security Council, while any kind of leeway allowing for reversibility would seriously depreciate its function (Sarooshi, 1999). Furthermore, according to the Security Council's determination, Article 48 of the Charter binds member states to implement the decisions of the Security Council for the maintenance of international peace and security into their legal orders. The stark subsistence of the possibility to review the legality of Council's action by the ICJ would have a dramatic impact on the whole system of the United Nations, because neither the Charter nor the ICJ Statute bestows on the ICJ any powers to rule out or cancel binding decisions adopted under Chapter VII (Krishnamurthy, 2014). Nevertheless, the explicitly expressed right of the ICJ to review the legality of the Security Council's actions, pursuant to Chapter VII of the UN Charter could lead to another negative effect for the UN system. The adverse judgement of the International Court of Justice discrediting the action or decision of the Council in accomplishment of its primary responsibility might well in turn devalue the UN Charter. The ideologies of constitutionalization or judicialization of the UN system and the factual application of these theories may, from a long-term perspective, increase the will of the members of the UN to obtain greater influence in the Security Council's functions and procedures. Moreover, these potential needs could possibly grow into serious demands and consequently affect other issues, such as membership, voting process, etc. (Alvarez, 1995, p. 85; Geoffrey, 1993).

V. Conclusion

The function of the International Court of Justice is set out in the UN Charter and the Statute of the Court. It is often the subject of argumentation as to whether its actual function is satisfactory and adequate with regard to its potential power as the principal judicial organ of the United Nations. The possibility of extending the scope of its authority will probably evolve according to the particular situations and needs of contemporary society. Any constitutional parallels to emphasise the missing role of judicial review of the ICJ as a principal judicial organ appear to be irrelevant, while even if there were a general right to review Security Council actions, it is highly unlikely that the ICJ would really contemplate the judicial review of actions that were already pursued under Chapter VII (Hossain, 2010, p. 95).

The advisory opinion and continuous cases give the ICJ room to provide for control over the Security Council's actions, even though reviewing capacity is not explicitly expressed in the substantive constituting documents. The merit of consideration and any following measures undertaken to react to a threat or breach of international peace and security, or an act of aggression under Chapter VII of the Charter, are left to the Security Council. These decisions are purely political and, as far as they appear to be without any limitations, the

Security Council is obliged to act within the purposes and principles of the UN Charter, including *ius cogens*, fundamental principles of international law and indeed human rights obligations. The ICJ is neither a substitute nor a body of political legitimisation, though its opinion on the legality of the Security Council's actions in the field of collective security may be indirectly expressed through its function, as it is in the present (Hossain, 2010, p. 122). However any amendment of the Charter of the United Nations or radical change in the UN system related to the International Court of Justice in the function of Chapter VII would currently be most probably impossible, as to provide the ICJ with a reviewing function could also, *inter alia*, trigger a number of undesirable consequences.

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METHODOLOGY FOR THE SELECTION OF COMPENSATION TRADE TOOLS IN SMEs

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Abstract

The main aim of this paper is to determine which factors of business tools are important in Czech companies. To find these factors, theoretical information from the area of trade tools and data from primary research (obtained via questionnaire) were used. These data are applied by a statistical evaluation of selected indicators which could help determine the significance of the indicators in the area being monitored. Activities concerning the management of company finances are also partially incorporated, as due to their close cohesion with business, they cannot be excluded from the field of turnaround management. The business tools described in the paper see excellent usage not only during times of crisis but also in periods of prosperity, when their application provides companies with unique competitive advantages as a way of increasing GDP. The results of the paper confirm the necessity for compensation tools in the business environment and provide the significance level of the compensation tools used. Accurate usage could create an advantage in a global market characterised by high competition.

Keywords

Compensation Trades, Trading Tools, Crisis Management, SMEs

I. Introduction

The topic of this paper is compensation trade tools that can help a company organize day-to-day activities in order to achieve strategic goals during an economic crisis. The tools that are used can be taken as kinds of performance indicators. The performance of these tools has become crucial in competitive struggles; they provide a competitive advantage and it should therefore be in the interest of enterprises to monitor these key indicators and factors.

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Each economic crisis which has affected the European region raises important questions about the necessity of innovation to deal with the situation. This in turn creates opportunities for a company to be more effective in the monitoring of its own production and processes (Klímková, Hornungová, 2012).

The current hyper-competitive business environment requires continuous effort on the part of managers responsible for corporate governance to seek out new competitive advantages. In the recent past, inspiration has been found in the economic crisis, which forced the examination of the viability of projects and entire companies, and created a need to test management procedures and methods in the context of new circumstances.

Periods of crisis have given companies an opportunity to adapt to the business environment. Common practices include (1) reducing debts to the minimum (minimizing the risk of default) and (2) cost minimization and the stabilization of operating cash flow, methods which are commonly used by corporate top management. Financial and business instruments were applied alongside these tools.

This paper also deals with sets of business tools that help companies to realise their business and strategic objectives by means of compensation tools. The use of these is possible at any time, not only during periods of crisis. The aim of this paper is to find trends indicating improvement through the use of business tools during periods of economic crisis.

With regard to the state's provisions to deal with the crisis, small and middle companies are often on the edge of interest, even though they represent more than 99% of all companies and they make up more than two-thirds of all workplaces in the EU. They are the engine of innovation in lower orders and a platform for the development of the entrepreneurial spirit. Their obvious flexibility is perhaps the reason for the expectation that they will help themselves. The most important task for management is thus to find and realise provisions for stabilization and, if possible, to use the situation to improve the situation for the company. The tools available to managers in these conditions could be generally classified as crisis-management tools, but ultimately as turnaround-management tools.

II. Theoretical background

During any crisis, creative and innovative thinking become more important. According to Čichovský et al. (2012) and Vlček (2011), innovative thinking is created out of individual experiences and the ambition to improve abilities, skills or knowledge. Three factors are important for this creative process:

- 1) acceptance (usage of new and innovative findings in human thinking),
- 2) application (adoption or imitation of new and innovative findings),
- 3) adaptation (activity to transform findings into new original areas to expand knowledge).

Therefore, there exists a requirement to change the approach and thinking of entrepreneurs in order for them to be effective and innovative.

The effective implementation of innovation helps to increase competitiveness. It involves using intervention programs compared to free development and innovation under pressure.

In each organisation, the implementation of innovation is accompanied by a lack of connectivity between individual areas and non-linearity. This is usually caused by a shortage of needful skills, scarce resources, low flexibility or poor education levels (McAdam, 2005).

Acceptable solutions could be used by so-called innovative thinking. In order for an implementation process to be successful with innovative thinking, an appropriate supportive organizational structure is required (Humphreys, McAdam, Leckey, 2005; Paul, Elder, 2002).

For many companies, hard times are a constant of the present period. The difficult situation on the market indisputably has a strong influence upon these companies. But it does not have to bring them to the brink of survival. There are many tools for the identification of approaching troubles and, if potential problems are discovered in time, appropriate tools can be used to master the situation.

There are many indicators which allow companies to recognise approaching difficulties. The relevance of the indicators differs between various fields and also between various companies. The basis should be tools for the strategic analysis of corporate surroundings: (1) PEST analysis of environmental influences, (2) five forces analysis, (3) the life cycle model (Johnson, Scholes, Whittington, 2008) and also of internal forces and environment value chain, value system, competitive advantages (Porter, 2008). Many suitable indicators could also be selected from models of company processes and from strategic and operative controlling (Steinstöcker, 1998).

In addition to the listing of single indicators, it is also necessary to consider their quantifying ability (some indicators are so-called soft indicators) and also with “decontamination” from relations to others, unrelated trends, cyclic and seasonal deviations, etc.

For the purposes of this paper, indicators of economic crisis status were mainly selected from the business field which monitor changes in demand volume and structure, availability of resources at the input (materials and raw material) and basic associated services. In the financial field, data were investigated about the availability of external financial resources, the payment discipline of customers and the ability to cover their obligations.

For the requirements of the research, tools were selected which help the exercise of control over cash flow (Castor and Newcomb, 2006), for example, provisions for the quicker recovery of debts, postponement of obligations maturity, the use of compensation businesses and also many exclusive business tools from the fields of marketing, promotion, relationships with customers or the development of business channels (MacPherson, Miller, 2010).

Many of the tools described can act in contrary ways and it depends only on the given situation and management attitude if the path out of the crisis will be, for example, the limitation of loyalty actions for constant customers or their development. From the point of view of crisis management, it is essential to take this situation into consideration and evaluate the pros and cons of both attitudes.

From the point of view of those activities realised during a crisis, strategic partnership enables companies, with minimal effort and fast diversification of their portfolio, to extend their services or distribution channels and thus should also be mentioned (Somnath,

Pradyot, Sanjit, 2003; Kolečák, 2008; Oliver, Mpinganjira, 2011a). But the basic role of so-called turnaround management is played by compensation trade forms, especially barter and multilateral barter. In fact, barter trade is a general tool, applied in various countries (Oliver, Mpinganjira, 2011b).

Pure barter is the direct exchange of goods for goods, where one contract is signed for both supply and counter-supply. There is no invoicing in either the supplier's or the customer's currency, and there is no movement of money. Multilateral barter is quite a modern form of barter trade involving many parties. The fundamental basis of multilateral barter is that a client buys from another client goods or services only according to customer needs and pays by supplying his products to other clients. Individual businesses are not bound by a time frame; it is possible to purchase and sell continuously according to their needs. Each transaction is made by means of, and with support from, some barter centre. These subjects – trade companies of varying legal form and size, count of clients, turnover, and field of activity – register and book single transactions and are supported by the mutual business of their clients, participants in the corresponding barter chain with various means (Guriev, Ickes, 1999; Oliver, Mpinganjira, 2011a; Kaikati, Kaikati, 2013).

The main reason to use counter trade tools is in cases where companies are in a position where they must offer goods in return for an unstable local currency. Counter trades thus become a kind of guarantee of the value of the goods (Hatten, 2012; Marin, Schnitzer, 2002).

In times of crisis, a strong correlation exists between barter trades and business cycles, caused by the amount of barter transactions. Marvasti and Smyth (2011) and Cresti (2003) carried out studies in the U.S. region focusing on behaviour in barter exchanges between commercial barter and corporate barter. Both of these barter types are positively correlated with business inventories. That means companies usually use barter trades in almost 30% of all world trade cases (Oliver, Mpinganjira, 2011a).

In the Czech Republic, more than ten barter companies are active. Participation in the barter system can, for many entrepreneurs, be an interesting way to finance the overheads connected with the operation or extension of a company – especially in the current difficult period, when nearly every company is struggling with unbalanced cash flow. In the Czech Republic, fewer than 2,000 companies are actively organized in multilateral barter systems. In spite of all the arguments supporting the use of barter, there are many opponents declaring that there are not that many business cases wherein barter could substitute for classical payment with money. In reality, there is a problem with this claim, in that most of the transactions made via barter trade would not be made otherwise, or would only be of incomparably small volume or include other limitations.

One of the biggest problems entrepreneurs have to solve today is redundant capacity in the form of unused production facilities or the gathering of goods in stores (Uijttenbroek, 2004). These surplus products mean dead money, which is thus lacking from cash flow and which could be used by barter trade for the further development of the company. Barter trade thus helps to bring the actual state of assets in line with the desired state. When used, compensation tools contribute to improving corporate effectiveness. Hornungová (2014) mentioned possible systems by which management could measure the effectiveness

of corporate activities in connection to national and international competitiveness and economic performance.

III. Methodology

The objective of this paper is find trends of improvement in the use of business tools in the course of, and after, periods of economic crisis. A questionnaire was used which focused on small and medium companies after the economic crisis (in 2013). Zbortková (2014) and Bishop (2013) supposed that the economic crisis finish before 2013, due to the increasing trend of the world economy.

The respondents to the questionnaire were mainly owners and managers. Companies for the survey which operate in the Czech Republic. The conditions for selection were as follows:

- Czech companies,
- corporate size of up to 250 employees.

Corporate size is based on the definitions in the user guide of the European community. This user guide includes limits on which companies can be divided into specific size groups (Evropské společenství, 2006). The main limits for individual groups are mentioned in Table 1.

Table 1: Limits for dividing companies

	Number of employee	Annual turnover		Annual balance
Micro company	< 10	≤ 2 mil. €	or	≤ 2 mil. €
Small company	< 50	≤ 10 mil. €	or	≤ 10 mil. €
Medium company	< 250	≤ 50 mil. €	or	≤ 43 mil. €

Source: Evropské společenství, 2006

Questions were included as to how managers of SMEs are prepared to adapt their companies according to the impact of a crisis. The base premise was that managers have a low level of knowledge about trading tools.

Additional research methods were used to answer the primary objective of the research. From the point of view of secondary research, current information sources published in specialised literature were used, with a focus on tools from the field of business. In the primary research, we asked questions of the managers of Czech small and middle companies in the questionnaire and in some cases through controlled interviews.

The questionnaire used for primary investigation was divided into four categories:

- 1) Identification of the company
- 2) Impacts of the crisis on the business field
- 3) Impacts of the crisis on the financial field
- 4) Knowledge and usage of the tools for company management in times of crisis, with a stress upon protecting business activities (for more details, see the theoretical outcomes section).

It was independently investigated as to whether the managers of small and middle companies have enough information and knowledge in this field and how they have acquired this knowledge. In accordance with the defined research, part of the primary research was focused on determining the development of knowledge in the field of compensation trade tools.

The questionnaire was carried out in the second half of 2013 and was focused on analysing the possible impacts of the economic crisis on companies. This exploration was executed on a sample of 242 respondents. The respondents were managers from various levels of corporate management.

The field of activity of each company can be placed into the fields of services, production, and the construction industry. It was important for our own research to determine whether the respondents use trading tools. Specific information about individual companies and their industry was not the essence of the research.

From the total count, the biggest group (more than 69% overall) included owners or chief executives. Almost 15% of the rest of the respondents were located in lower management levels, and only 16% of respondents were in medium management.

IV. Results

It is obvious from an analysis of the results that companies commonly use compensation trade tools as a potential business support. Based on the analysis of the statistical characteristics of the examined group, we will present our conclusions as an approximate result, limited by the resulting reliability. In the results of the paper there are characteristics of research barriers and future research possibilities.

Table 2 includes fundamental data which shows that it is clear that companies mainly use the following methods out of the group of compensation trade tools: Reducing the cost of procuring inputs; Minimization of warehouse stock. The conclusions are given by the characteristics of the limits of the research and its possible future direction.

Based on the analyses of descriptive statistical characteristics of the sample, our conclusions will be presented as an explorative result limited by the resultant reliability.

From an analysis of the basic descriptive statistics, it is clear that companies mainly use the following compensation trade tools:

- Reducing the cost of procuring inputs
- Minimization of warehouse stock
- Sale of surplus property
- Increasing awareness of production

Factor analysis reveals the reduction of surveyed corporate performance indicators which companies use in their own measurement processes. The main input into factor analysis was a correlation matrix which showed the individual correlation values of the chosen indicators (see Table 3).

Based on the values listed in Table 3, it is possible to say that correlations exist only in the three highlighted relations. These relations are:

- Minimization of warehouse stock and Equal utilization of production capacities (0,441),
- Increasing awareness of production and Equal utilization of production capacities (0,419),
- Increasing awareness of production and Reducing the cost of procuring inputs (0,430),

Thus only the following can be determined to be key tools: (1) Minimization of warehouse stock, (2) Equal utilization of production capacities, (3) Increasing awareness of production, and (4) Reducing the cost of procuring inputs.

Table 2: Basic descriptive statistics

	Mean	Standard deviation	Variance
Equal utilization of production capacities	0.47	0.676	0.457
Minimization of warehouse stock	0.58	0.711	0.505
Sale of surplus property	0.51	0.665	0.442
Reducing the cost of procuring inputs	0.85	0.731	0.534
Deleveraging of company	0.39	0.639	0.408
Increasing awareness of production	0.52	0.677	0.458

Source: Own work

Table 3: Correlation matrix

	<i>Equal utilization of production capacities</i>	Minimization of warehouse stock	Sale of surplus property	Reducing the cost of procuring inputs	Deleveraging of company	Increasing awareness of production
Equal utilization of production capacities	1	0.441**	0.188**	0.382**	0.130*	0.419**
<i>Minimization of warehouse stock</i>	0.441**	1	0.347**	0.354**	0.044	0.311**
Sale of surplus property	0.188**	0.347**	1	0.323**	0.193**	0.283**
Reducing the cost of procuring inputs	0.382**	0.354**	0.323**	1	0.173**	0.430**
Deleveraging of company	0.130*	0.044	0.193**	0.173**	1	0.221**
<i>Increasing awareness of production</i>	0.419**	0.311**	0.283**	0.430**	0.221**	1

Notes: * Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Source: Own work

Table 4: Rotated component matrix

	Factor of production	Factor of finance
Equal utilization of production capacities	0.763	0.020
Minimization of warehouse stock	0.781	−0.085
Sale of surplus property	0.455	0.462
Reducing the cost of procuring inputs	0.670	0.281
Deleveraging of company	−0.016	0.918
Increasing awareness of production	0.636	0.358
Cronbach's alpha	0.718	0.323
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.		

Source: Own work

The total variance of inputs in the factor analysis can be explained by means of a description of the process of extraction. The beginning of extraction (Initial Eigenvalues) includes whole components which were put into the extraction. In the second step (Extraction Sums of Squared Loadings), according to the key ($\text{Eigenvalue} \leq 1$), there is a reduction to the four strongest components which are used in the next step of processing. The last step (Rotation Sums of Squared Loadings) shows the differences in individual components.

From this point of view, Extraction Sums of Squared Loadings with cumulative percentage is important. Factor analysis extracted only two factors, which explains almost 60% of the variance (the exact amount was 58.12%). This result confirms the good factor result of the interpreted variance.

The total variance of the compensation trade tools are explained due to eigenvalues, which represents the total variance explained by each factor. In extraction, all components were divided into two new strongest component groups. These new component groups have diverse depth with the previous four components (see Table 4). The eigenvalues were determined by our own figures and only two components have figures over or very close to 1. That means only two components make up almost 60% of the total variance of all four components, and have variability as original factors.

V. Discussion

In order to assess whether it is possible to use factor analysis, the Kaiser-Meyer-Olkin method (KMO) and Bartlett's test of sphericity were used. The KMO method is based on selective correlation and partial correlation coefficients. The value range of KMO is between 0 and 1 (Hinton, Brownlow, McMurray, Cozens, 2004). Each variable correlates perfectly with itself (approximate to 1), but has no correlation with the other variables (approximate to 0). In our case KMO reached a value of 0.752, which means that the performed level of usefulness of factor analysis is at an average level.

Bartlett's test of sphericity is a statistic test that is used to examine the hypothesis that the variables are correlated or uncorrelated. No correlation was found with other variables ($\text{Sig} = 0.000$). Nevertheless, Bartlett's test of sphericity is significant because of the value, which is lower than 0.05.

For the correctness of the factor analysis and acceptance the results, it is important to get a Cronbach's alpha value of over 0.7. Otherwise, there are requirements to improve the sample, or the questionnaire. Cronbach's alpha is a measure of internal consistency that is closely related to a set of items as a group. A "high" value of alpha is often used (along with substantive arguments and possibly other statistical measures) as evidence that the items measure an underlying (or latent) construct.

However, a high Cronbach's alpha does not imply that the measure is unidimensional. If, in addition to measuring internal consistency, you wish to provide evidence that the scale in question is unidimensional, additional analyses can be performed. Exploratory factor analysis is one method of checking dimensionality. Cronbach's alpha is not a statistical test; it is a coefficient of reliability (or consistency).

It could be written as a function of the number of test items and the average inter-correlation among the items. Below, for conceptual purposes, we show the formula for the standardized Cronbach's alpha:

$$\alpha = \frac{N \times \bar{c}}{\bar{v} + (N - 1) \times \bar{c}} \quad (1)$$

where

N is equal to the number of items,

\bar{c} is the average inter-item covariance among the items,

\bar{v} equals the average variance.

If the values were to increase the number of items (N), it is possible to increase Cronbach's alpha. Moreover, if the average inter-item correlation is low, the alpha will be low. As the average inter-item correlation increases, Cronbach's alpha increases as well. The values of Cronbach's alpha could be from 0 to 1. If the values were close to 0.5, it signifies a bad level of internal consistency. Over 0.7 means that the value is acceptable and values close to 1 are excellent (Hinton, Brownlow, McMurray, Cozens, 2004).

According to our results, the values of Cronbach's alpha were:

- Factor of production is at a good level
- Factor of finance is unacceptable.

Calculating the final value of acceptable factors needs the transformation of individual coefficients. These coefficients have become the significance of used elements. Their sum total has to be 1. The index of the factor of production was defined by this procedure.

$$\begin{aligned} \text{index of production factor} = \\ 0,268 \times E + 0,274 \times M + 0,235 \times R + 0,2223 \times I \end{aligned} \quad (2)$$

where

E – Equals utilization of production capacities

M – Minimization of warehouse stock

R – Reducing cost of procuring inputs

I – Increasing awareness of production

On the basis of the calculation index of the factor, the mean value of the index was found. This value represents the average factor for each set of data recorded. We can say that these indices reflect low bonds within a factor. This is due to the range of possible answers listed in the questionnaire.

Table 5: Evaluation of observed factor

	Mean	Standard deviation	Variance
Index of production factor	0.5972	0.51511	0.265

Source: Own work

To modify the index, it is necessary to use a rating scale for companies which determines whether the tool is used. For the calculation of the total index, it is necessary to put the answers of individual respondents into the appropriate index formula.

VI. Conclusion

The stated results confirm the necessity for compensation tools in the business environment and detect the lack of using these tools, especially during times of crisis. These tools could create an advantage in a global market characterized by high levels of competition.

The application of compensation tools in an effective manner supports corporate economic health, market position, and ultimately an increase in the GDP of the Czech Republic.

Post-crisis, individual governments approached anti-crisis policies with the obvious goal of limiting the negative influence on their economies. Zich (2009) mentions that the political situation itself offers the theme of the influence of links formed by various stakeholders in the competitive space upon the possibility of the development of company competitiveness and the ability to succeed. A similar opinion is put forth by Tomek and Vávrová (2009). Applied accurate policy by government should create opportunities for domestic companies to expand abroad (Lin, Cheng, 2013).

The correct choice of accurate compensation trade tools has become an important part of the corporate strategic process.

A limitation of this paper is its focus on only domestic Czech companies. It is therefore necessary to carry out future research where it is possible to use knowledge not only in the domestic environment, but in the international environment, and to ascertain the influence of economic “hard” times (e.g. on the European Union and Visegrad group).

Despite this, great progress has been made in the understanding and utilization of the findings and experience with marketing management by companies in the Czech environment. Our research showed that there is great room for improvement and offers new ways for companies to be more competitive.

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DAVID COADY

What to Believe Now: Applying Epistemology to Contemporary Issues

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In *What to Believe Now*, David Coady applies epistemology to some topics of everyday relevance, to rumours, conspiracy theories, the blogosphere, democracy and experts. A common theme is an emphasis on the political implications of these different sources of, or contexts for, knowledge.

An introduction, which could be skipped without harm by more pragmatic readers, surveys some theory, taking Alvin Goldman's "veritism" as a starting point. Coady touches on the balance between avoiding error and "being well informed", proceduralism versus consequentialism, doxastic voluntarism (the idea that we have some responsibility for our beliefs), and the possibilities of virtue epistemology. He argues that applied epistemology is a branch of applied ethics, and one that is important for social policy.

Self-contained chapters then address the five main topics.

Looking at the role of experts, Coady uses climate change as an example. There are reasons for skepticism about experts, such as the value of intellectual autonomy and the risk of information cascades, but rejection (or "reduction") of expert testimony is unsustainable. What do we do when experts disagree? It can make sense to simply go by numbers (some Bayesian probability analysis here is not particularly interesting), with non-independence balanced by the strength of peer evaluation, and we need to beware of rhetoric and take into account evidence of dishonesty or unconscious conflicts of interest. Expertise is both widespread and specific: there is no such thing as "a scientific expert" per se, for example – geologists and climate scientists have different domains of expertise – and in this regard science resembles morality, with which Coady draws some comparisons.

An epistemic approach to democracy tackles some fairly traditional questions: Are votes statements, and if so what do they say? What epistemic authority do elections have – does it make sense to change one's own opinion if an election goes the other way? And so forth. Coady emphasizes the importance of knowledgeable voters and sets his conception of epistemic democracy in the context of similar ideas of deliberative democracy.

Coady defines rumours as unofficial communications that have spread through a large number of informants, distinguishing them from urban legends, propaganda and other

variants, and argues that they do not deserve their bad reputation. There are circumstances when official sources are unreliable or unavailable, and transmission can improve as well as degrade information quality, as people preferentially forward rumours from trusted communicators and modify or update their content using their own knowledge. Where most participants have some relevant knowledge, rumours can be highly accurate. In the Second World War, the US military ran counter-rumour operations, concerned not that rumours about troop movements were wrong, but that they were too accurate and could easily spread to the enemy.

The widespread modern objection to conspiracy theories qua conspiracy theories originated with Karl Popper. Coady works through the obvious – once considered – problems with this: conspiracies are not uncommon, can succeed, and have important consequences. There are indeed many stupid conspiracy theories, but their problem is that they are stupid, not that they are conspiracy theories. Coady concludes with the suggestion that proper consideration of conspiracy theories is, ironically, necessary for anything like Popper's Open Society to function.

Finally, Coady turns to the blogosphere and how it compares with the traditional media (comparing it to the legal process or scientific research is misguided). He looks at journalism as a profession, the notion of "balance", the different kinds of filtering employed, claims of "parasitism", and so forth. There are advantages in low barriers to entry and interactivity and, allowing benefits to "promoting true belief" and not just to avoiding error, the epistemic consequences of the Internet are really not so bleak.

A conclusion touches briefly on Wikipedia, torture and political skepticism, while a postscript presents a non-privacy argument against extensive use of CCTV camera monitoring. In so far as a political stance can be distinguished in *What to Believe Now*, it is broadly anarchist, in that Coady argues for the merits of decentralised and distributed sources of knowledge. He is also skeptical about the epistemic reliability of the state and institutions, certainly much more so than theorists such as Cass Sunstein. This comes out most clearly, perhaps, in the chapters on rumours and conspiracy theories and in the postscript.

What To Believe Now is aimed at more practical problems than most epistemology, but it is still rather abstract: Coady is an academic writing as a participant in ongoing academic debates. In particular, he often appears to be having a kind of conversation with Alvin Goldman, whose ideas have a high profile in almost all the chapters. It is certainly possible to imagine a considerably "more applied" applied epistemology, which might consider practical guidelines for evaluating rumours or distinguishing more reliable Wikipedia pages from less reliable ones, among other matters.

With the possible exception of some of the introductory material, however, everything in *What To Believe Now* is accessible without a background in epistemology. Since it addresses topics of considerable importance, it should command, if not a mass audience, then one that reaches well outside the narrow confines of academic philosophy. Those particularly likely to find it useful include political theorists, students of social networks, and perhaps some policy makers.

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