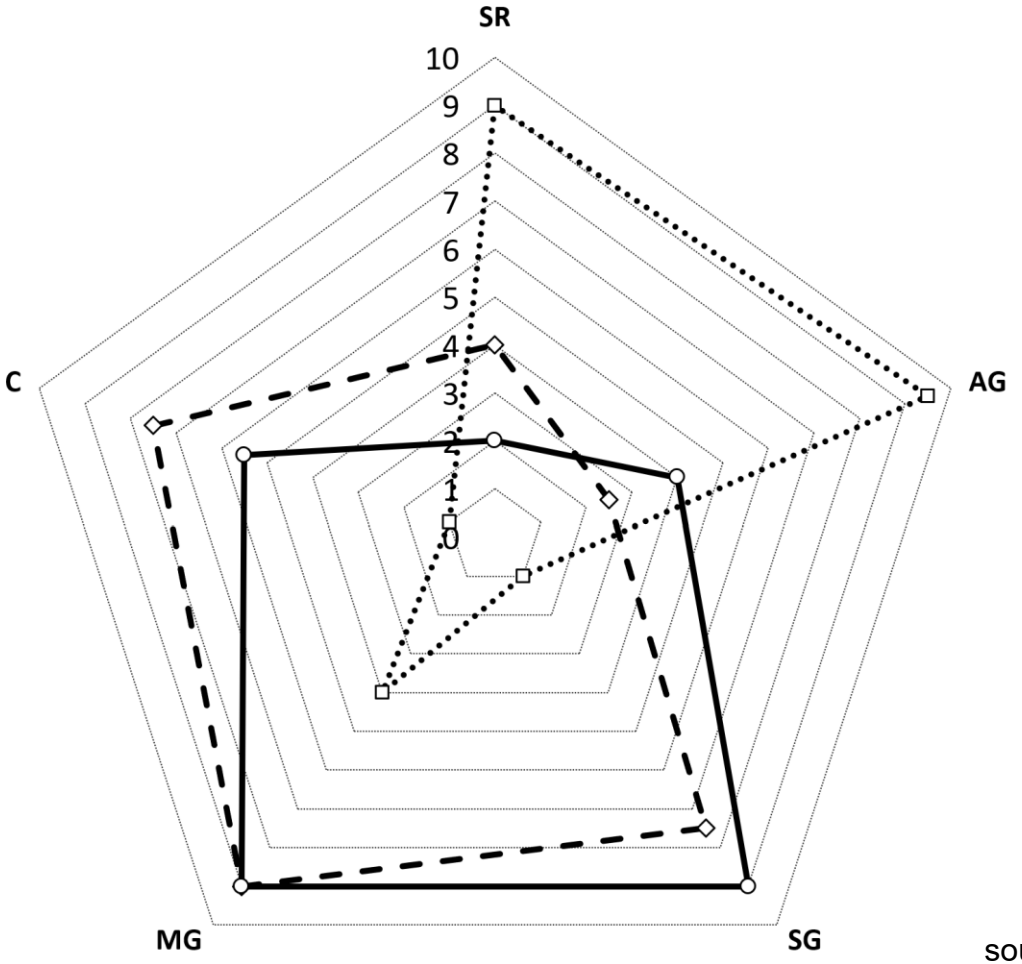
FACULTY OF MANAGEMENT AND ECONOMICS

Stakeholders satisfaction measurement for improvement of quality management system of Polish technical universities

Jan Paweł Szefler MSc Eng.

Main concepts for universities - radar



Entrepreneurial University

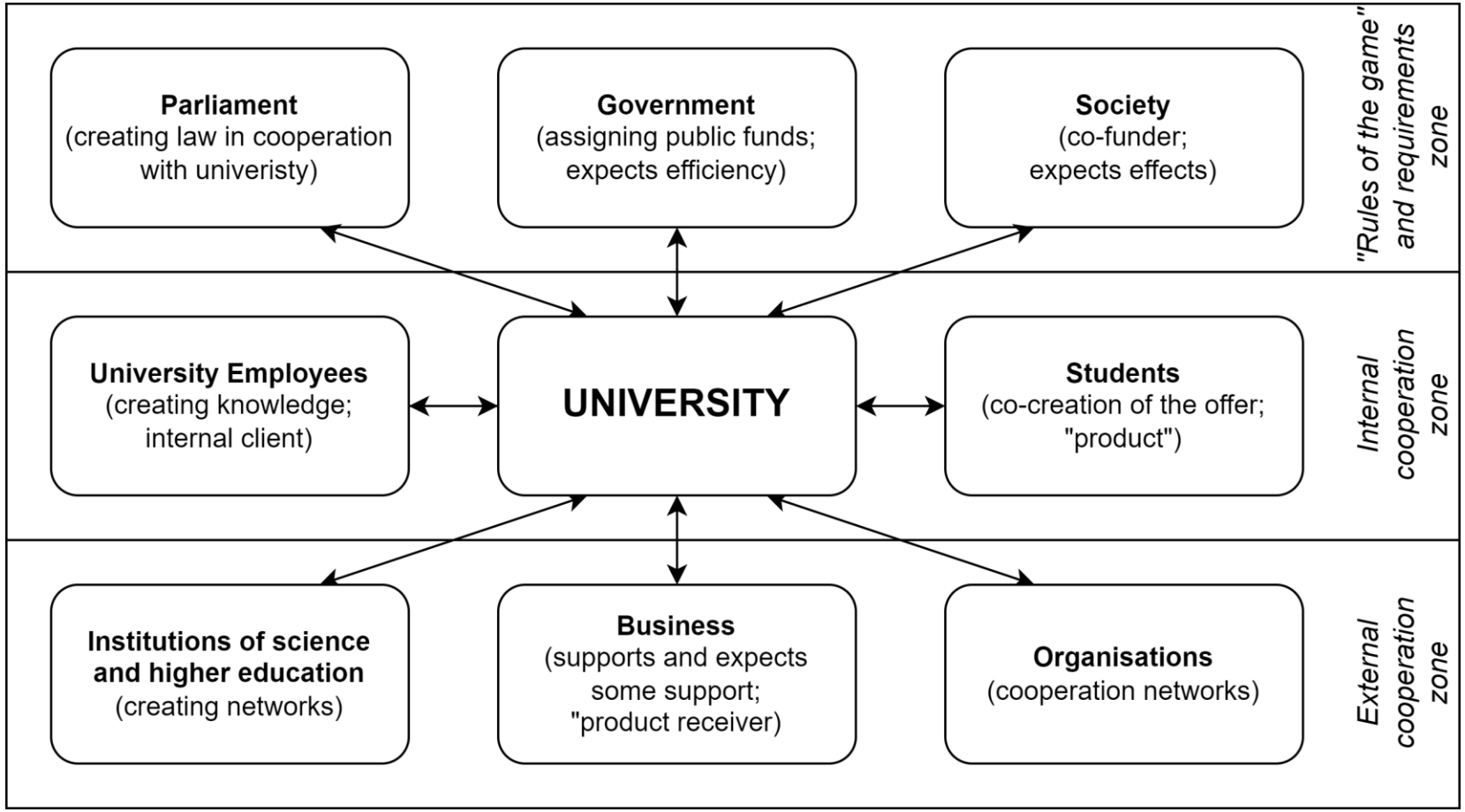
Socially Responsible University

Liberal University

SR – State Regulations
AG – Academic self-Governance
SG – Stakeholder guidance
MG – Managerial self-Governance
C – Competition

source: Leja 2011, p. 175

Conflicting interests environment



source: author's own work based on Leja, 2019, s. 13

What is Quality of Education

- Educational services:
  - Hyper intangible
  - Heavily „customer" dependent
  - Complex structure of relations

> *"Quality ... you know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others, that is, they have more quality. But when you try to say what the quality is, apart from the things that have it, it all goes poof!"*
>
> Robert M. Pirsig, Zen and the Art of Motorcycle Maintenance: An Inquiry Into Values

- Quality of Education:

> *„the **degree** to which the **requirements** regarding the educational process and its outcomes, formulated by stakeholders, are **met**, taking into account internal and external conditions"*
>
> Grudowski & Lewandowski, The notion of quality of education and conditions of its quantification at the universities, Zarządzanie i Finanse, nr 3, cz. 1, 2012

- CFM (*Customer Feedback Measures*) – NPS, **Satisfaction**, Loyalty, etc.
- Rankings – polish universities' far positions – inadequate to the polish economy's potential

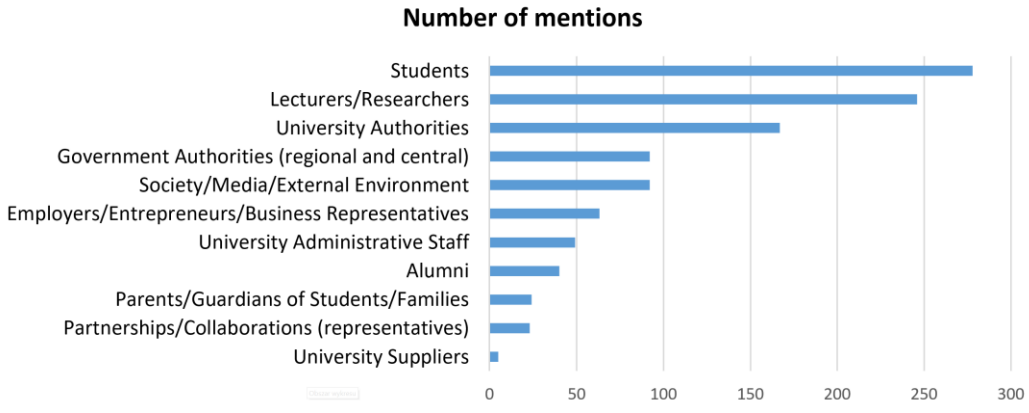
What is Quality Management for Education

1900's → QI – Quality Inspection
1920's → QC – Quality Control
1960's → QA – Quality Assurance
1980's → QM / TQM – Total Quality Management

- Quality Management Systems are **client-centric** (customer focus)
- Who is a client of University?
- Unsuccessful implementations at universities of TQM, Lean or SixSigma
- CAF (*Common Assessment Framework)* for public institutions – close to QM
- PKA (*Polish Accreditation Comission*) – 10 quality criterions – far from QM
- Key role of organisation's leaders
- ISO 21001:2018 – *Management systems for educational organizations*

If not Client then Stakeholder?

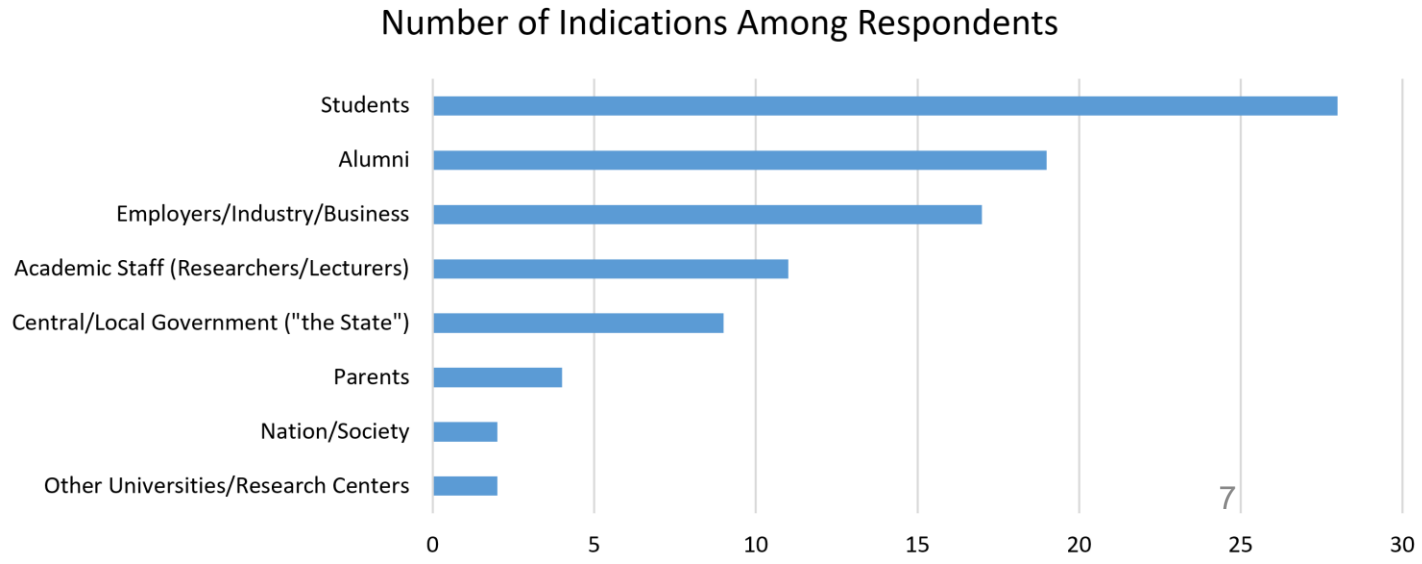
- Stakeholders' theories since 1960's
- Stakeholder – „can affect and can be affected by" **Freeman (1984)**
- Based on analysis of 474 articles' abstracts:
- Stakeholders' analysis methods:
  - Interest – power chart
  - Relations diagrams
  - Policy attractiveness vs stakeholder capability grid
  - Stakeholder maps
- Management recommendations based on outcomes of analysis
- Measuring quality as stakeholders' satisfaction?
- ISO 21001:2018 – lots of references to „interested groups"



Research - questions

- **Q1**: *how different stakeholders perceive the aim of universities' existence*
- **Q2:** *how different stakeholders perceive the importance of different stakeholders' groups*
- Qualitative research: 33 respondents of interviews from 8 chosen (↑) groups of stakeholders
- Who is the most important stakeholder?

Stakeholders - respondents
Students
Alumni
Parents (Guardians)
Administrative Staff
Academic Staff (Researchers/Lecturers)
Entrepreneurs (Employers)
University Authorities
Local & Government Authorities



Research – hypothesis verification 1/2

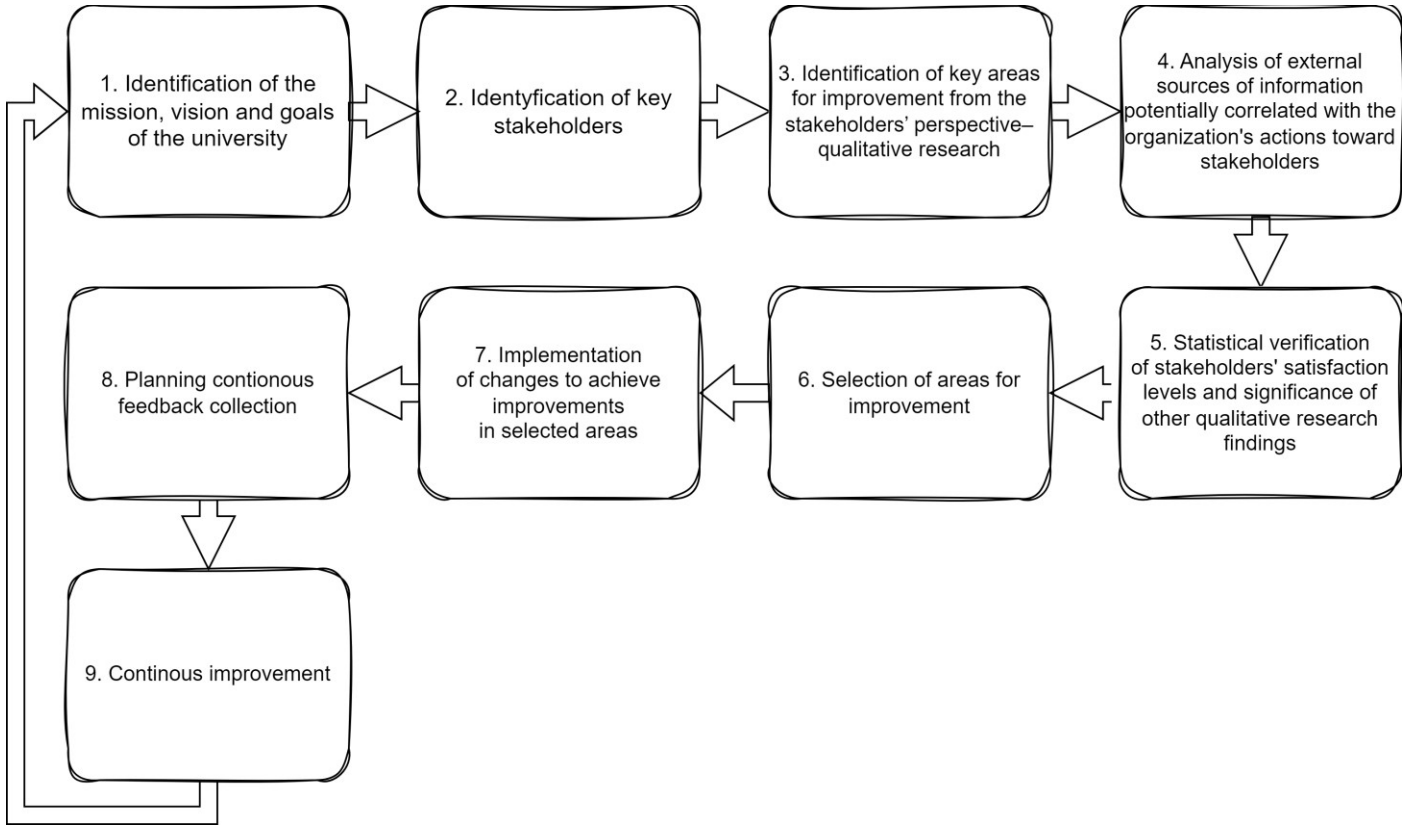
- **H1**: *there is positive correlation between stakeholders' satisfaction and other measures of quality of universities' services* → Not confirmed
- **H2:** *there is a positive correlation between stakeholders' satisfaction and graduates' market performance index (earnings, employment – named **IWRA**)* → Not confirmed
  - **H2a***: Employment rate among university graduates one year after graduation is positively correlated with satisfaction of universities' services* → Not confirmed
  - **H2b***: Employment rate among university graduates three years after graduation is positively correlated with satisfaction of universities' services* → Not confirmed
  - **H2c***: Graduate salary levels one year after graduation are positively correlated with satisfaction of university services* → Not confirmed
  - **H2d***: Graduate salary levels three years after graduation are positively correlated with satisfaction of university services* → **Confirmed**

Research – hypothesis verification 2/2

- **H3**: *Graduates of public technical universities are more valued in the labour market than graduates of other universities (higher IWRA index values)* → Not confirmed
  - **H3a'**: *Employment rate among graduates of public technical universities one year after graduation is **lower** than the employment rate of graduates from other universities* → **Confirmed**
  - **H3b**: *Employment rate among graduates of public technical universities three years after graduation is higher than for graduates from other universities* → Not confirmed
  - **H3c**: *Average salaries of graduates of public technical universities one year after graduation are higher than for other universities* → Not confirmed
  - **H3d**: *Average salaries of graduates of public technical universities three years after graduation are higher than for other universities* → **Confirmed**
  - **H3e**: *IWRA indicator values, based on employment and salary data one year after graduation, for technical universities are higher than for other universities* → Not confirmed
  - **H3f**: *IWRA indicator values, based on employment and salary data three years after graduation, for technical universities are higher than for other universities* → **Confirmed**
- **H4:** *IWRA results for Polish public technical universities are positively correlated with the quality of university services measured by the Perspektywy ranking* → **Confirmed**

Proposed practical solution - SSDQM

- **Stakeholders Satisfaction Driven Quality Management Model**
  (main stages only)
- based on facts → qualitative and quantitative research → stages 3, 4, 5
- choice of agile and waterfall (project) methods → stage 7
- supporting compliance with:
  - ISO 21001:2018
  - PKA requirements



Set of Indicators supporting implementation of the SSDQM at a Technical University

No.	Name	Description / Comment
1.	**SSI (aggregated)**	Aggregated Stakeholder Satisfaction Index
2.	**Partial SSI indexes**	Satisfaction measures calculated separately for each stakeholder group
3.	**Number of Habilitation Rights**	• the strongest correlated with Perspektywy ranking • improvements largely dependent on university actions
4.	**Parametric Assessment**	The number and level of parametric grades obtained in various scientific disciplines during the evaluation of scientific activity quality.
5.	**Position in Webometrics ranking**	• extremely easy to monitor; twice a year • correlation with the employment level of graduates (3Y)
6.	International Recognition	• from Perspektywy ranking • strong correlation with the overall score in the ranking
7.	WOP index	• based on Perspektywy ranking; weighted score – not position
8.	Graduate Earnings (3Y)	Based on the nationwide ELA survey, or on other proprietary research.
9.	Graduate Employment (3Y)	Based on the nationwide ELA survey, or on other proprietary research.
10.	Prestige Index	Based on a survey conducted among academic staff in Poland by the Educational Foundation "Perspektywy" and the "International Recognition" parameter

Summary

- Synthesis of quality management theory and stakeholder theory
- Cognitive and utilitarian goals of the study - achieved
- SSDQM as a tool for improvements
- Basic set of indicators supporting the implementation of SSDQM
- Application of SSDQM as preparation for implementing ISO 21001:2018 and other standards promoting focus on stakeholders

Literature

- Grudowski P., Lewandowski K. (2012), Pojęcie jakości kształcenia i uwarunkowania jej kwantyfikacji w uczelniach wyższych, Zarządzanie i Finanse, nr 3, cz. 1
- Freeman R.E. (1984), Strategic Management: A Stakeholder Approach, Pitman, London and Boston, MA
- Leja K. (2011), Koncepcje zarządzania współczesnym uniwersytetem, 10.13140/RG.2.1.3539.1529.
- Leja K. (2019), Misja społecznie odpowiedzialnego uniwersytetu, w: Jastrzębska, E., Przybysz, M. (red.), Społeczna odpowiedzialność uczelni znaczenie dla uczelni i sposoby jej wdrażania (s. 11-13), Ministerstwo Nauki i Szkolnictwa Wyższego i Ministerstwo Inwestycji i Rozwoju, Warszawa
- Puente C., Fabra M., Mason C. et al. (2021), Role of the Universities as Drivers of Social Innovation, Sustainability, 13, 13727, 10.3390/su132413727


FACULTY OF
MANAGEMENT
AND ECONOMICS