



Proceedings of the  
12<sup>th</sup> International Scientific Conference:

# European Forum of Entrepreneurship 2019

“Sustainable Socio-economic Development  
or Crisis on the Horizon?”

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NEWTON College  
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“Sustainable Socio-economic Development or Crisis on the Horizon?”**

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## *General info about Proceedings of the 12<sup>th</sup> International Scientific Conference*

### **European Forum of Entrepreneurship 2019**

#### **“Sustainable socio-economic development or crisis on the horizon?”**

Current almost unprecedented socio-economic development of the Czech Republic determinates potential for standards of living convergence between the Czech Republic and Western Europe. Moreover, this process is strengthened by extremely low rate of unemployment. Present conditions open space for academic discussion, considering future socio-economic development in the Czech Republic, as well as in whole Central Europe.

To create platform for open-minded discussion of Czech and foreign experts on topic of socio-economic development of Euro Zone and all European Union members, questions related to sustainability of such development and potential crisis scenarios – that is the aim of the Forum.

Socio-economic development of European countries, possible threats and their topicality will be discussed in following contexts:

- Management and leadership
- Development of human resources and society
- Economy and sustainable development
- Public economy and administration

The European Forum of Entrepreneurship is organized under kind auspices of emeritus vice-governor of the Czech National Bank prof. Ing. PhDr. Vladimír Tomšík, Ph.D. et Ph.D.

Conference orators and partners are from: the Czech Republic, the Slovak Republic, Poland, Austria, Croatia, Slovenia, and others.

For more info please follow the website of the Conference: <https://www.efp.cz/en/>

## *Prologue*

Dear colleagues,

It is a great honour to welcome you to 12<sup>th</sup> International Scientific Conference, European Forum of Entrepreneurship that is annually held at NEWTON College, a. s.

This year's conference is special due to the highly relevant topic which is reflected in the name and head idea of the conference – “Sustainable socio-economic development or crisis on the horizon?”. National economy of the Czech Republic and other European Union countries pass through the top of economic cycle and it will be highly required to accent the sustainable economic development issue, regarding possible crisis scenarios. This, and many other topics, are going to be discussed by the participants of our 12th International Scientific Conference.

The main topic of the Conference is going to be analysed from various viewpoints in particular contributions. The contributions will be embedded into management, economics, human resource development, sustainable development, public economics and other fields.

It is a great honour for NEWTON College, a. s., to introduce prof. Ing. PhDr. Ing. Vladimír Tomšík, Ph.D. et Ph.D., emeritus vice-governor of the Czech National Bank, who kindly took the auspices under the whole Conference. Prof. Ing. PhDr. Ing. Vladimír Tomšík, Ph.D. et Ph.D. is going to be the first orator of the plenary section of the Conference as well.

I am very pleased to introduce also other orator of the plenary section of the Conference – PhDr. Marian Jelínek, Ph.D., renowned mental coach and hockey and condition trainer.

I am looking forward to meet on 15th March 2019!

MUDr. Jan Mojžíš  
Rector NEWTON College, a. s.

# Professional Leadership as a Potential and Quality

- ▶ doc. PhDr. PaedDr. Eva Ambrozová, Ph.D. » Head of the Department of Humanities, NEWTON College, a.s.  
email: eva.ambrozova@newtoncollege.cz
- ▶ PhDr. Ing. Vratislav Pokorný, MBA » Department of Humanities, NEWTON College, a.s.  
email: pokorny.v@seznam.cz
- ▶ Agnieszka Knap–Stefaniuk, Ph.D., MBA » Jesuit University Ignatianum,  
Institute of Political and Administrative Sciences, Cracow; email: aknapstefaniuk@gmail.com

## \* 1. Introduction

The current environment, whether it has the attribute of business, corporate, security, or Industry 4.0, still puts new demands on the quality of people involved both in the role of managers and leaders. This environment is constantly evolving, changing and transforming. Dynamics, volatility, and instability entail demands on managers' and leaders' capabilities, not only to navigate in this environment, i.e. learn, make decisions, and take action, but above all to lead people and human systems.

The paper presents reflections on professionalism, which result in the need to define the term of a professional manager. The connatural management approach creates the background for defining the term of the professional leadership as the quality of an individual that relates to mental mobility on the relationship and managerial continuum. This mobility, in terms of the current environment and its characteristics, reduces, for example, the effect of cognitive dissonance, fragility and reduces the risk of digital dementia occurrence resulting from the increased usage of modern communication and information technologies and networks. The mobility relates to the decision-making, individuals' and human systems leadership processes in various situational contexts.

## 2. Professional Manager

The current environment requires managers and leaders who, in addition to professional, expert knowledge and skills, are professionals in terms of quality, such as personal mastery and system thinking (Senge, 2007), conceptual and comprehensive thinking (Robbins and Coulter, 2004; Hroník, 2008), mental maturity and personal fitness (Ullrich and Pokorný, 2012; Kiyosaki, 2016), or the specific qualities of professionals in the security environment (Mikulka, 2017; Nekvapilová et al., 2018; Sládek and Ullrich, 2018) and qualities of ethic leadership (Mikulka et al., 2018).

We understand professionalism as a mature, complex competence that relates, among other things, to the level of mental, psychophysical and social condition of an individual, for example in terms of the ability to accept a change and adapt proactively to its consequences. It also relates to the potential for critical, creative, and systemic thinking and the ability to change cognition models for decision-making, taking action, and leadership. This forms the basis of a professional management and leadership mastery.

The core of professionalism is based on a constant self-recognition and care for an individual's self and his or her life. From this core, the following competencies develop, which form the basis



→ for specific occupational (professional or systemic) competencies:

- the ability to maintain and constantly develop individual qualities and competencies in the context of intention (personal, professional, systemic) and aspire to balance between internal and external environments;
- the ability to consciously develop and improve in a specific profession;
- the ability to usefully apply the individuals' knowledge, experience, and competence within the environment and level of the system in which they operate.

The analysis of the current environment development trends shows the partially selected outputs in the personal quality requirements of professional managers and leaders are as follows:

- Network literacy and IT management, competencies to use the potential of modern communication and information technologies for networking, information, knowledge and their sharing, creation, and organization of relationships and processes (proactivity, speed, critical, creative, systemic and contextual thinking).
- Ability to cognitively manage the changing conditions and development of relationships, in terms of mental mobility in decision-making and taking action in various environments, or situational conditions (decision-making under uncertain risks, solving analytical problems, heuristics, etc.).
- Requirements on the personality of an individual, resulting from the constantly changing conditions of the professional and personal environment, in terms of the ability to maintain, cultivate, and develop psychophysical and mental fitness.

Based on the above, a professional manager is as an individual who is equipped with:

- Appropriate quality of capabilities (competencies) for effective decision-making and the right action, creation, organization, cultivation, and development of relationships and processes in the human system and its environment, in

terms of respect and responsibility towards the environment, individuality, and activity of each individual;

- Meta-skills, in terms of reflected experience. Meta-skills can be perceived as the qualities of managers' personality that relate to emotions, attitudes of attentiveness, care, and reflection;
- Mental maturity, which refers to the levels of quality and the way of recognition, decision-making, taking action and leadership.

These and other aspects form the basis of what can be considered as a professional manager's mastery (Knap-Stefaniuk and Karna, 2018). Its natural part is besides critical thinking, also the ability to reflect, pay attention and be open to change and transformation, the ability of constant self-recognition based on the self-esteem as a primary relationship quality that generates respect for others and the environment that he helps creating by organizing and cultivating the relationships and processes.

Experience shows that it is not possible to equate the level of quality of the mastery of an occupation to the quality of the managerial position held by an individual in this occupational system. This is, apart from other reasons, why we deal with professional leadership, with a special focus on the Connatural-management approach.

### 3. *Connatural-Management Approach*

Connatural management is the concept of Cognitive Management, which primarily focuses on the quality of cognition, thinking, relationships, and the development of competencies and subtle skills of people and human systems. The output of the cognition process and practice of the principles and methods of Cognitive Management are the qualities of the natural potentials, abilities, and skills of people and human systems, useful for their operation and development, especially in the current environment. (Ambrozová et al., 2016).

Goffee and Jones (2008, p. 16), point out there are virtually no universal characteristics of a lead-

er, and any descriptions of the leader’s properties are more of a psychological construct. They highlight the relationship in their approach. They assume that “ a leadership is something we do in cooperation with others. If an individual wants to become a leader, he has to find out what he is able to mobilize within himself in the context of leadership.” Connatural management seeks to go deeper, to the very nature of individuals, i. e. the potentials that can not be developed linearly, but can be discovered, cultivated and subsequently developed under specific conditions. These are the so-called “subtle skills” that create the background for cognition, decision-making, and taking action in various situations, contexts, and environments. Their quality enables the mental mobility of individuals on the cognitive, relationship, and managerial continuum, in a variety of contexts, situations, and tasks. (Ambrozova et al., 2016; Pokorny et al., 2017).

The Connatural Management approach focuses on the natural potentials of people manifested in their skills and abilities, and are useful and necessary for cognition, decision-making, taking action, and leadership processes. It focuses on qualities that are natural to all people in various extent, i.e. the organizations of human systems either, and they are also included in all the situational contexts in which they may find themselves. They are close to tacit or implicit skills, or meta-skills or un-

rational practice, and relate to aspects of flow effects. (Hrbáčková, 2005; Mindell, 2009; Koleňák et al., 2013; Csíkszentmihályi, 2015, 2017).

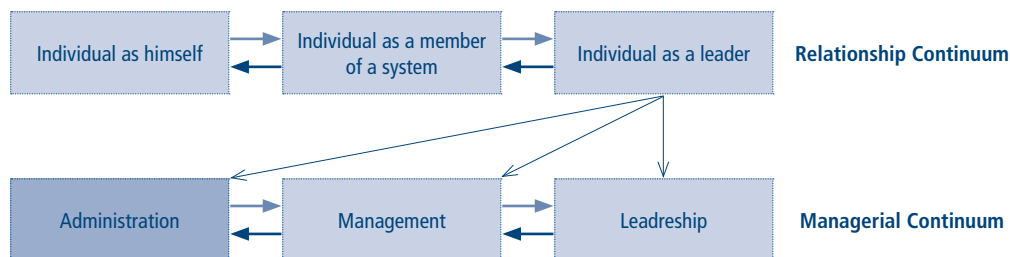
In the context of Cognitive Management, with the focus on Connatural-Management approach, we perceive professional leadership as the quality of an individual.

#### 4. Professional Leadership as a Potential and Quality Connatural-Management

Professional leadership is not considered as a position, but as the quality of an individual’s natural potential, relating to an inner style that has the potential of following and gravity, and is manifested in interpersonal contact. Professional leadership is an essential quality for people and human systems leadership in the current environment.

A professional leader may move (fluctuate), in terms of socially relevant aspects of the professional environment, in performing functions or activities, in three positions. In each occupational situation and role, an individual can represent, in terms of the organization of interpersonal relationships, either himself or a member of a system (team, group, organization) or a leader of the system. As shown in Figure 1, an individual who occupies the position of a leader may find himself, depending on the environment, situation, and task require-

**Figure 1 » Professional Leadership — Organizational-relationship Scheme**



Source: own data processing



ments, one of the three management modes: administration- management – leadership.

Further distinction concerns the status of a leader:

- **A leader of an individual as himself.** The essential assignment involves self-recognition and self-development. The required competence is the reflection. Critical and proactive thinking prevails. The output is a permanent and conscious self-development.
- **A leader of a team.** The assignment is represented by a specific situation task. The required competence is a tactic decision-making. Situational, tactic, critical, and process thinking prevails. The output is fulfilling the task.
- **A leader of a system.** The assignment is represented by a mission. The required competency is operational and strategic decision-making. Systemic, strategic, critical, and process thinking prevails. The output is fulfilling the mission objective.

This division is important because the first two versions require a higher proportion of direct recognition and communication. The third version is characterized by mediated recognition and communication. The variations of the individual versions also concern the specific requirements for leadership psychology, the organizational structure, and division of functions and activities. (Bedrnová, 2008; Koubek, 2013). In the third version, the importance of organization, symbols, shared myths, values and visions that have difficult quantifiable effects is also growing. This distinguishes the goal from intention, the plan from concept, and the tactics from strategy.

Professional leadership includes three areas:

- The first area includes proactivity in thinking, cognition, and decision-making, discovering weaknesses, hidden potentials of the inner and outer environment, resources of strengths, creating opportunities, searching for new ways in task solving, simplifying existing and organizing new processes, etc.
- The second area is sharing information and cre-

ating knowledge for decision-making and taking action, working with information networks and networks of links, processes, etc.

- The third area is the creation, organization, and administration of human relations and processes between human systems as a whole and their external environment, i.e. the leadership and management of people and human systems.

The professional leadership, in the context of the above, is typical of the following activities and functions: proactive process of cognition, decision-making, taking action and leadership; creating cognition and knowledge sharing; creating and organizing relationships and processes; attraction in terms of inner, personal (personality, mental and psychophysical) “consistency” and “stability”.

It turns out that the conscious, reflected, proactive adaptability of an individual to the state changes is a major factor of professionalism and can be referred to as the mental mobility on the managerial continuum.

The mental mobility of a person depends on the movement of the mind. The movement of the mind allows for distinction, cognition, decision, and taking action. Once „mental movement“ occurs, conditions are created to differentiate between e.g. the real and potential, full and empty, concrete and abstract, etc. Mental mobility is primarily related to the concepts of the cognitive continuum and cognitive dissonance and refers to mobility in the inner and outer environment, or within their relationship. Mental mobility from the viewpoint of the current environment and its characteristics reduces e.g. the effect of the consequences of cognitive dissonance (Tavris and Aronson, 2012), fragility (Taleb, 2014) enables to reduce the risk of digital dementia (Spitzer, 2014) as a result of modern communication and information technologies and networks usage, and it also relates to the decision-making processes in various situational contexts.

**Table 1 » Forms of Leadership of Individuals and Human Systems for Managerial Continuum**

Dominant Form of Leadership	Conditions and Circumstances of Environment, Situation, and Task	Position Type (example)	The Leading Form Representation Ratio		
			A	M	L
Administration (A)	One way, one method. The task is well structured.	Head of Linear Process	70%	20%	10%
Management (M)	Multiple ways, their number, and functions are defined.	Single Unit Manager	30%	50%	20%
Leadership (L)	Numerous ways and methods, their number and functions are unlimited.	Single Unit Leader	5%	15%	80%

Source: own data processing

### 5. Mental Mobility on Managerial Continuum

Professional leadership is the quality of an individual that is saturated with the capabilities for situational performance and mental mobility on the relationship and managerial continuum. The Managerial Continuum is a pragmatic differentiation of the forms of leadership of individuals and human systems in relation to the requirements of the situation, its conditions, and circumstances, and the assigned role, activities, mission, etc.

Dominant forms, specifically for a defined managerial continuum, are administration, management, and leadership. Table 1 presents the conditions and circumstances of the environment and the situation of the assigned task, including the possible types of positions.

Percentage representation of the leading forms is just illustrative. It indicates the possible usability of individual modes of leadership, within the dominant form. In the case of leadership, it is e.g. about reacting and mastering an unexpected situation without an existing algorithm. The leader brings a proposal for a solution to the situation He is in charge of managing the situation. Afterwards, he retreats from the „position“ of a leader.

The administration is applied in standardized conditions that occur in the environment of firmly organized groups, units, institutions, government offices, etc., in an environment with well-defined

technological, well-structured or standardized procedures. Standardized and structured task situations are also the main theme of training and educating people. This is pointed out by Sternberg (2009, p. 126), who states that *“the unfortunate feature of contemporary education and evaluation of the educational process is the prevailing emphasis on well-structured problems.”*

The management is the quality for roles and functions in the more complex environment of the human system itself and its effects, in medium-structured conditions being a subject to gradual change and transformation. The essential prerequisite is the ability to change the approach according to the situation. An essential skill is the adaptation and prosperity of the system in a relatively stable environment, as well as ensuring the effective completion of its functions. Determining is the preservation of the capabilities of the human system as a whole.

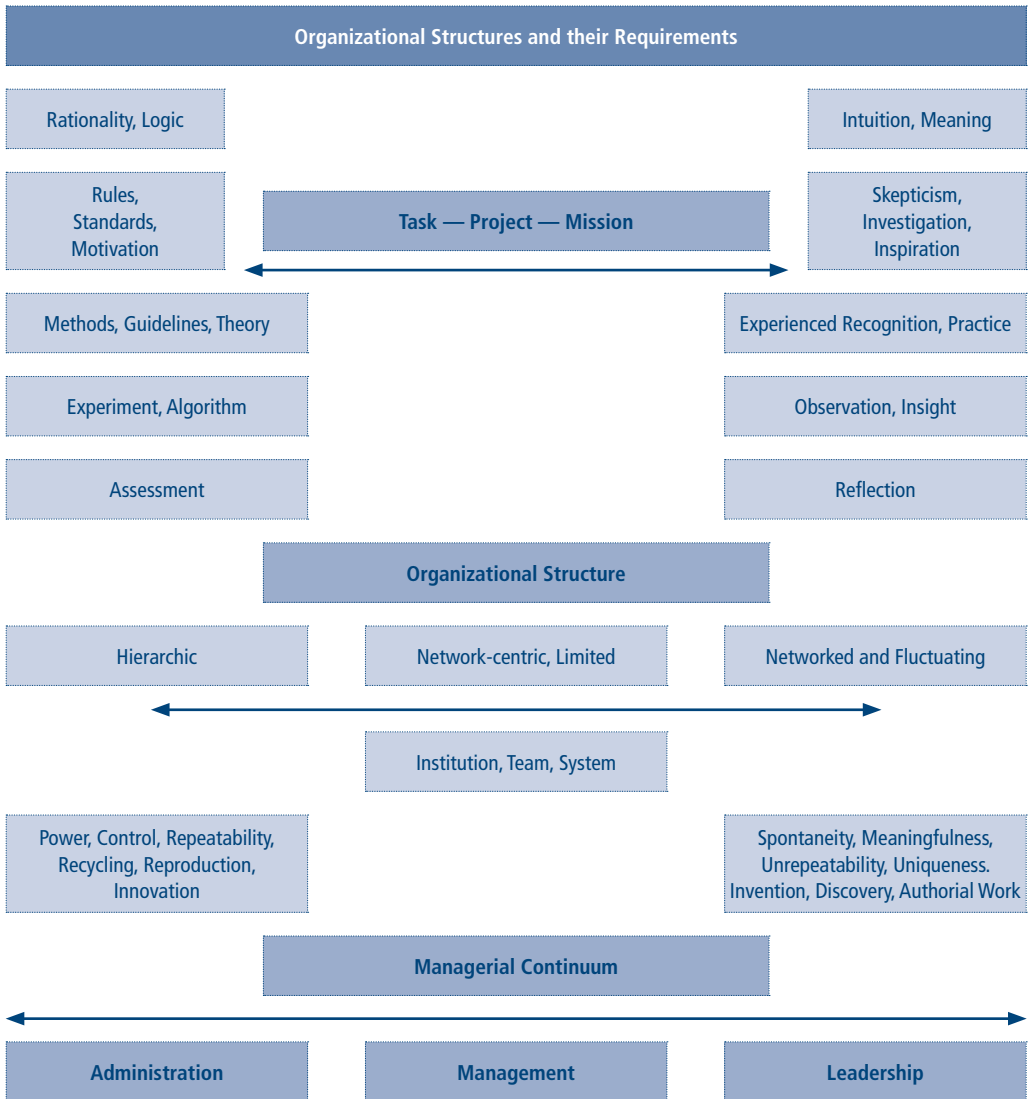
The leadership is the quality, the individual’s inner ability to lead in the changing or developing human systems, changing, unstable conditions and circumstances of the situations and environments. Leaders are the visionaries, creators of values, strategies, development, and change. They create, develop or change existing models and direction of orientation. Leadership is the ability to take any direction. By its nature, leadership is close to the art.

In terms of the factor of time, the administra- →

tion is the most stable form. Leadership, on the contrary, is the “least stable” in time, because in this case fulfilling the task or the meaning of the assignment changes the conditions and requirements for the way of cognition, the character of decision-making and leadership. The leadership

transforms into the forms of management or administration and organizing. In other words, the quality of a leader has to manifest itself and then, after fulfilling the task or mission, consciously retreat and give way to the quality of a ruler or process administrator (head, manager), or transform

**Figure 2 » Options of Mental Mobility on Managerial Continuum**



Source: own data processing



into a different quality. This situation mobility is given by the ability of mental mobility on the managerial continuum (Figure 2).

The basis of the managerial continuum represents three dominant forms of the leading process: administration, management, and leadership. The left side of the continuum shown represents the requirements that relate to management processes. The stability of the organizational structure over time is high, the structure is “descriptive”. The power is centralized, conditions are standardized, situations and tasks are structured. Individual positions or functions are narrowly focused. The adaptability to the change is low, the concept is rather mechanistic, linear. Also, the sensitivity of the system to external change is lower. Processes are algorithmized, feedback is a form of record keeping and control.

The right side of the continuum presents leadership requirements. The system is self-organized and self-organizing. The stability of the organizational structure over time is low as it changes over time and is difficult to describe. If necessary, the system can temporarily operate on the left side of the continuum. Power is distributed, bound to situationally dominant activity, function, and process. The adaptability to both internal and external change is high, resulting in easy substitution, rapid generation of a new process. Sensitivity to the external environment change is also high. Feedback is permanent and complex. Processes and algorithms are created in the process of solving situations and tasks. The right side of the continuum presents leadership requirements. The system is self-organized, self-organizing. The stability of the organizational structure over time is low as it changes over time, but it is also difficult to describe. If necessary, the system can temporarily act on the left side of the continuum. Power is distributed, bound to situationally dominant activity, function, and process. The adaptability of both internal and external changes is high, resulting in easy representation, rapid generation of a new process. Sensitivity to change in the environment is

also high. Feedback is permanent and comprehensive. Processes and algorithms are created in the process of solving situations and tasks.

Mobility on the managerial continuum shows the flexible leader’s adaptability in a given situational context according to the characteristics of the task – assignment. Basic managerial functions are respected from a psychological point of view, i. e. cognition, decision-making, taking action, and sharing. The background of these functions is underpinned by critical thinking and mental mobility.

From the above, the specific demands on the quality of professional managers and leaders often arise, such as the ability to act pragmatically and behave the way which is considered inadmissible or even psychopathic in usual situations (Dutton, 2016).

## 6. Conclusion

The characteristics, influences, and possible trends of development in the current environment place specific requirements not only on managers and leaders who are already active in this environment but also on the preparation of managers and leaders to work in this environment. As professionalism is not only given by hard and soft skills but above all the personal quality, at the background of which natural potentials of people into personal skills (subtle skills) are cultivated and constantly developed.

Professional leadership, in the conception of Connatural Management approach, represents a change in the thinking of managers. It concerns both cognition and decision-making, as well as the leadership of individuals and human systems. This change is organized from the inner environment of an individual and is related to the ability and skill of mental mobility. The basic principle is an inner attitude that is proactive, receptive, listening and observing in nature. That is why we consider professional leadership as quality.

Connatural Management is intended to support the development of natural potential. This is relat-

ed to processes, in psychology often referred to as self-recognition, self-concept, and self-development. The question is, to which extend an individual is able and, above all, willing to learn about himself and consciously work on the development and cultivation of his personal potential and resources.

If an individual is supposed to manage (organize, lead, or arrange) people, things, processes or

systems and environment, he must start with himself. This process is initiated by the movement of an individual's own mind by the method of reflection. It means firstly recognize and organize an individual's own, natural environment, mind, and thinking, e.g. through methods and principles of inner work (intention, reflection, meditation). This is the basis for further possible improvement in professional leadership and professional mastery.

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## Professional Leadership as a Potential and Quality

### ABSTRACT

*The article reflects the view of the Connatural Management approach that defines professional leadership as a potential and quality for the leadership of people and human systems. The authors discuss in detail the relationship and managerial continuum, the mental mobility of an individual, which is a prerequisite for professional leadership. In this context, professional leadership is not considered as a position, but as a capability of situational manifestation and mental mobility on the relationship and management continuum in decision-making, management, and leadership processes, in the conditions of the given situation and specific tasks.*

### KEYWORDS

*Connatural Management Approach; Professional leadership; Managerial Continuum, Mental Mobility*

### JEL CLASSIFICATION

*M12; M14*



# Selected Issues of the Czech and the Slovak Insurance Market

- ▶ Karina Benetti » Newton College; email: karina.benetti@newtoncollege.cz, karina.benetti@tul.cz
- ▶ Katarína Izáková » Matej Bel University; email: katarina.izakova@umb.sk

## \* 1. Introduction

The April 1990 was a breakthrough for the Czech and Slovak Federative Republic (CSFR). This year, the market economy was introduced, the existing monopolies were gradually abolished, and the privatization of state property in all areas began.

In year 1991 starts demonopolization based on a newly adopted Insurance Act, the possibility of setting up new insurance companies, the emergence of a competitive environment – the end of the monopoly status of Slovenská štátna poisťovňa in the Slovakia and Česká poisťovňa in the Czechia. In 1992, thanks to privatization, Česká poisťovňa and Slovenská štátna poisťovňa was established. This year, the Czechoslovak insurance market was demonopolized (Majtánová et al, 2006).

By splitting the Czech and Slovak Federative Republic on 1 January 1993, conditions were created for the independent development of the Czech and Slovak insurance market.

The paper goal is to compare by the selected indicators Czech and Slovak insurance market trends for 1993–2015. For the Czech Republic, the analysis will be carried out over the 1993–2017 period (for the Slovak insurance market, it was not possible to obtain data for 2016 and 2017).

## 2. Materials and Methods

The research is based on the study of development of gross premium written in life and non-life insurance in the Czech and Slovak insurance market. For the analysis were used secondary data from the Czech National Bank, from the Slovak Insurance Association, from the Czech Statistical Office, Statistical Office of the Slovak Republic. This research is partly in line with the results of the survey from Mužáková (2009), Přečková and Izáková (2012) and Benetti (2017). In the research were particular used this scientific methods: method of deduction, methods of graphical and tabular representation of data, comparative analysis and synthesis of partial knowledge.

## 3. Results and Discussion

The results of elementary statistical analysis, by selected characteristics, of development of gross premium written in life insurance are given below. The development of the percentage ratio of gross premium written in life insurance versus non-life insurance for The Czech Republic is illustrated in Figure 1 and for the Slovak Republic is illustrated in Figure 2. This figures shows the importance of life and non-life insurance on the Czech and Slovak insurance market.

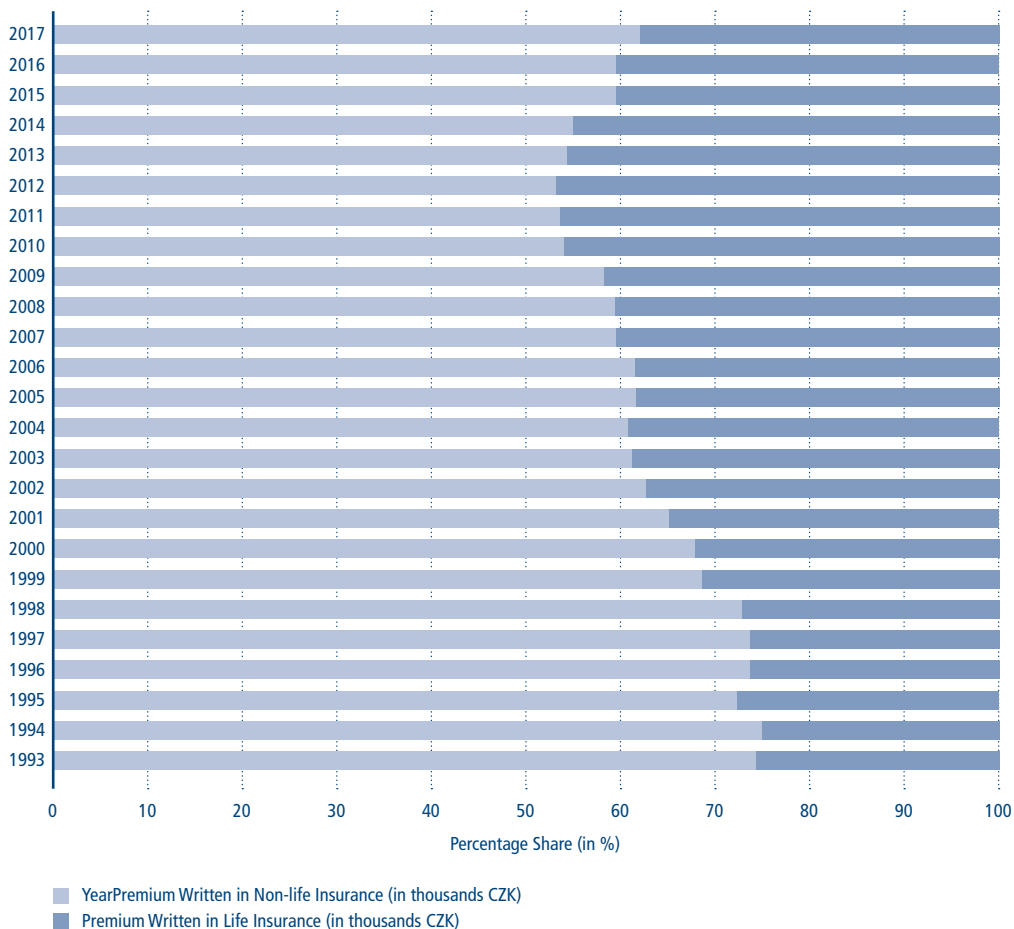
It can be seen from the above picture that, except for minor fluctuations, the non-life to life insurance ratio in the Czech Republic decreased until 2013. The last four years, due to the decline in gross premium written in life insurance, have been rising again.

A similar situation in the ratio of gross written premiums to non-life versus life insurance is also in the Slovak Republic. Here the development of the

non-life versus life insurance ratio decreases until 2013, then the ratio is rising again (see figure 2).

For the last reference year, this ratio was 45, 75% vs. 54.25% on the Slovak insurance market (non-life vs. life insurance). The Czech insurance market recorded this ratio of 59.33% versus 40.67% (non-life vs. life insurance) this year. According to these data, the Slovak insurance market may appear to be healthier in view of the higher viability

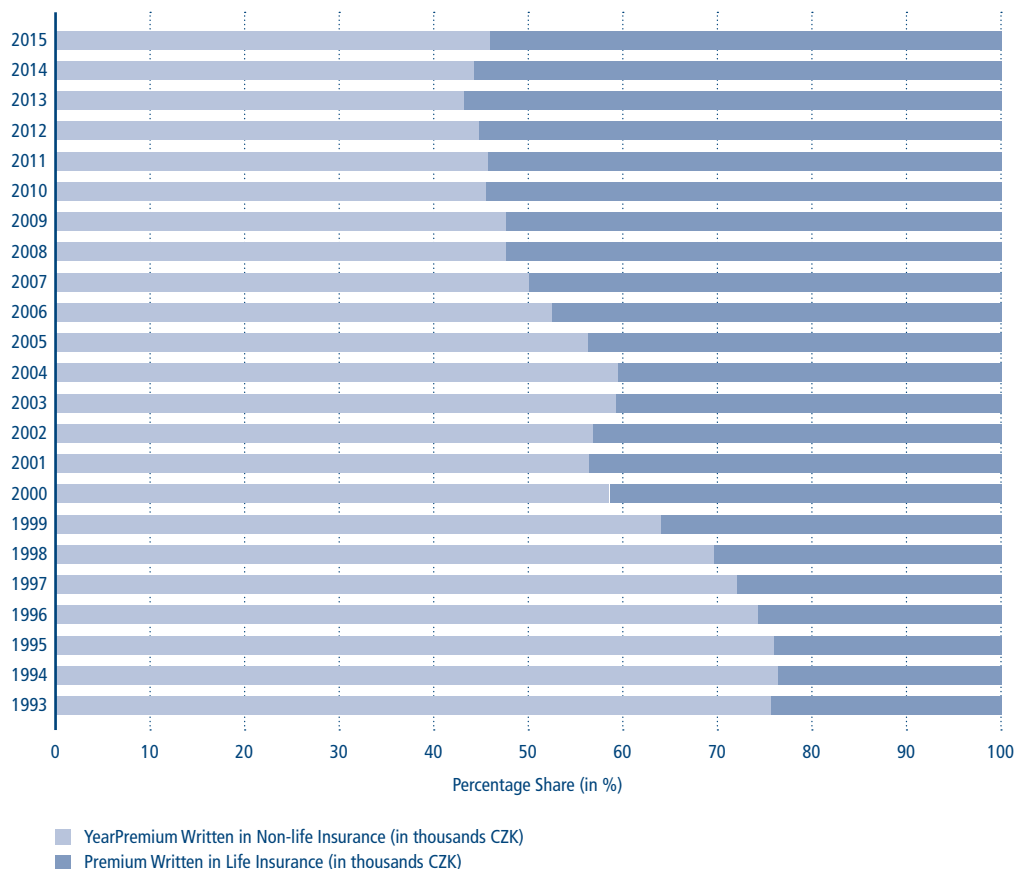
**Figure 1 » Development of the Percentage Ratio of Gross Premium Written in Life Insurance Versus Non-life Insurance (Czech Insurance Market)**



Source: own from Czech National Bank (2018)



**Figure 2 » Development of the Percentage Ratio of Gross Premium Written in Life Insurance versus Non-life Insurance (Slovak Insurance Market)**



Source: own from Slovak Insurance Association (2016)

of life insurance. However, only a proportion of it cannot be said, for us to make conclusions. Other must perform more detailed analysis – the best insurance indicators, which will be discussed below.

The development of gross premiums written in non-life and life insurance with year-on-year change in the Czech Republic is illustrated in Table 1 and in the Slovak Republic in Table 2.

The above table shows that the largest decrease in gross written premiums written of life insurance was in 2015 by more than 12 percentage points. On the contrary, the largest increase in this indicator

over the reference period was in 1991. Within the gross written premiums of non-life insurance, the largest decrease was in 2016 – was more than 3 percentage points, while the largest increase (excluding 1994) was in 1996.

The Slovak insurance market recorded the largest increase in gross premiums written of life insurance in 2000, the largest decline in this indicator in 2009. The same year saw the largest decline in the gross written premiums written in non-life insurance. The largest increase in this indicator over the reporting period was in 1998.

For the clarity of the development of selected indicators of insurance markets, the figures below are presented. Figure 3 illustrates the development of gross written premiums in the Czech Republic, Figure 4 illustrates the development of year-on-

year changes in premiums written in the Czech Republic.

Figure 5 illustrates the development of gross written premiums in the Slovak Republic, Figure 6 illustrates the development of year-on-year

**Table 1 » Development of the Gross Premium Written in Life Insurance Versus Non-life Insurance with Year on Year Change (Czech Insurance Market)**

Year	Total Premium Written	Year-on-year Change	Premium Written in Non-life Insurance	Year-on-year change	Premium Written in Life Insurance	Year-on-year change
	(in thousands CZK)	(%)	(in thousands CZK)	(%)	(in thousands CZK)	(%)
1993	22 792 000		16 915 000		5 877 000	
1994	29 669 000	30.17	22 222 000	31.37	7 447 000	26.71
1995	33 795 705	13.91	24 453 990	10.04	9 341 715	25.44
1996	41 124 681	21.69	30 187 465	23.45	10 937 216	17.08
1997	47 984 710	16.68	35 292 424	16.91	12 692 286	16.05
1998	55 637 346	15.95	40 547 974	14.89	15 089 372	18.89
1999	62 784 116	12.85	42 990 785	6.02	19 793 331	31.17
2000	70 589 346	12.43	47 819 214	11.23	22 770 132	15.04
2001	80 744 203	14.39	52 462 237	9.71	28 281 966	24.21
2002	90 660 347	12.28	56 624 001	7.93	34 036 346	20.35
2003	105 945 872	16.86	64 817 070	14.47	41 128 802	20.84
2004	112 578 203	6.26	68 377 194	5.49	44 201 009	7.47
2005	117 079 423	4.00	72 125 154	5.48	44 954 269	1.70
2006	122 123 137	4.31	74 889 748	3.83	47 233 389	5.07
2007	132 896 066	8.82	78 767 841	5.18	54 128 225	14.60
2008	139 851 960	5.23	82 942 866	5.30	56 909 094	5.14
2009	144 170 953	3.09	83 961 630	1.23	60 209 323	5.80
2010	155 996 358	8.20	84 231 496	0.32	71 764 862	19.19
2011	155 092 582	-0.58	83 083 478	-1.36	72 009 104	0.34
2012	153 598 866	-0.96	81 549 574	-1.85	72 049 292	0.06
2013	156 573 066	1.94	84 996 033	4.23	71 577 033	-0.66
2014	157 786 464	0.77	86 600 000	1.89	71 186 464	-0.55
2015	153 449 468	-2.75	91 034 191	5.12	62 415 277	-12.32
2016	147 216 555	-4.06	87 625 284	-3.74	59 591 271	-4.52
2017	150 837 625	2.46	93 256 642	6.43	57 580 983	-3.37

Source: own from Czech National Bank (2018)

**Table 2 » Development of the Gross Premium Written in Life Insurance versus Non-life Insurance with Year on Year Change (Slovak Insurance Market)**

Year	Total Premium Written	Year-on-year change	Premium Written in Non-life Insurance	Year-on-year change	Premium Written in Life Insurance	Year-on-year change
	(in thousands SKK)	(%)	(in thousands SKK)	(%)	(in thousands SKK)	(%)
1993	8 074 903		6 103 726		1 971 177	
1994	8 983 014	11.25	6 864 631	12.47	2 118 383	7.47
1995	10 705 807	19.18	8 151 751	18.75	2 554 056	20.57
1996	13 785 844	28.77	10 241 108	25.63	3 544 736	38.79
1997	16 968 414	23.09	12 245 012	19.57	4 723 402	33.25
1998	21 281 484	25.42	14 794 922	20.82	6 486 562	37.33
1999	23 658 920	11.17	15 149 395	2.40	8 509 525	31.19
2000	27 321 642	15.48	15 974 292	5.45	11 347 350	33.35
2001	31 858 348	16.60	17 980 567	12.56	13 877 781	22.30
2002	36 283 377	13.89	20 608 766	14.62	15 674 611	12.95
2003	41 811 465	15.24	24 803 490	20.35	17 007 975	8.51
2004	47 956 455	14.70	28 522 843	15.00	19 433 612	14.26
2005	50 519 435	5.34	28 487 990	-0.12	22 031 445	13.37
2006	53 757 131	6.41	28 253 178	-0.82	25 503 953	15.76
2007	57 690 192	7.32	28 888 305	2.25	28 801 887	12.93
2008	63 490 875	10.05	30 177 669	4.46	33 313 206	15.66
2009	61 068 625	<b>-3.82</b>	29 072 132	<b>-3.66</b>	31 996 493	<b>-3.95</b>
2010	62 273 575	1.97	28 338 444	-2.52	33 935 131	6.06
2011	63 565 649	2.07	29 058 907	2.54	34 506 742	1.68
2012	63 695 944	0.20	28 581 289	-1.64	35 114 655	1.76
2013	65 363 689	2.62	28 243 155	-1.18	37 120 534	5.71
2014	65 698 428	0.51	29 078 893	2.96	36 619 535	-1.35
2015	67 111 660	2.15	30 704 961	5.59	36 406 699	-0.58

Source: own from Slovak Insurance Association (2016)

changes in premiums written in the Czech Republic.

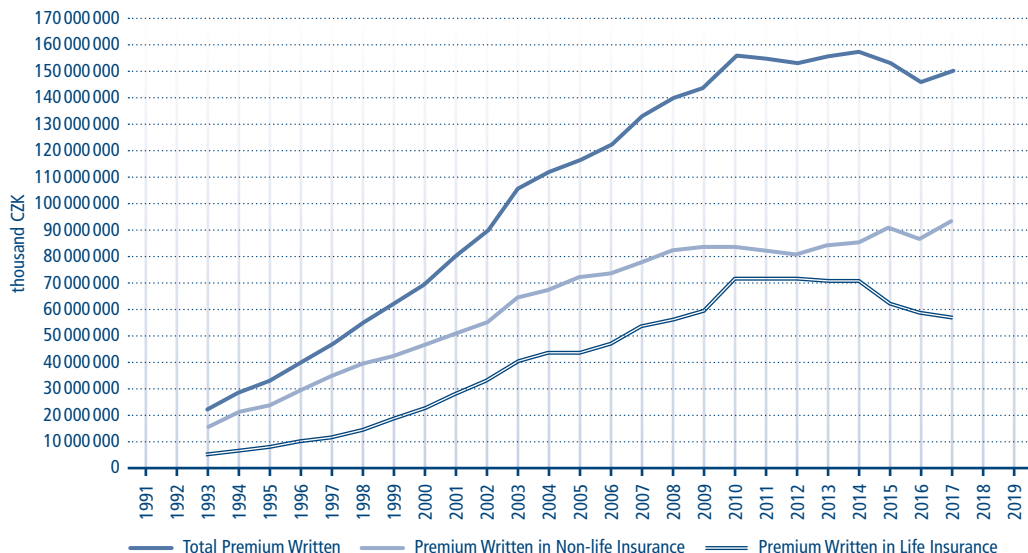
Other indicators, which were chosen for comparison of the insurance market of the Czech and Slovak Republics, were insurance indices. The first indicator is insurance to GDP and the second indicator is insurance per capita. The results of the de-

velopment of these indicators for the Czech Republic are shown in Table 3 and in Table 4 for the Slovak Republic.

Now, thanks to the above analysis results, we can now compare the development of insurance in the Czech Republic and the Slovak Republic in the monitored period. The last monitored year was the

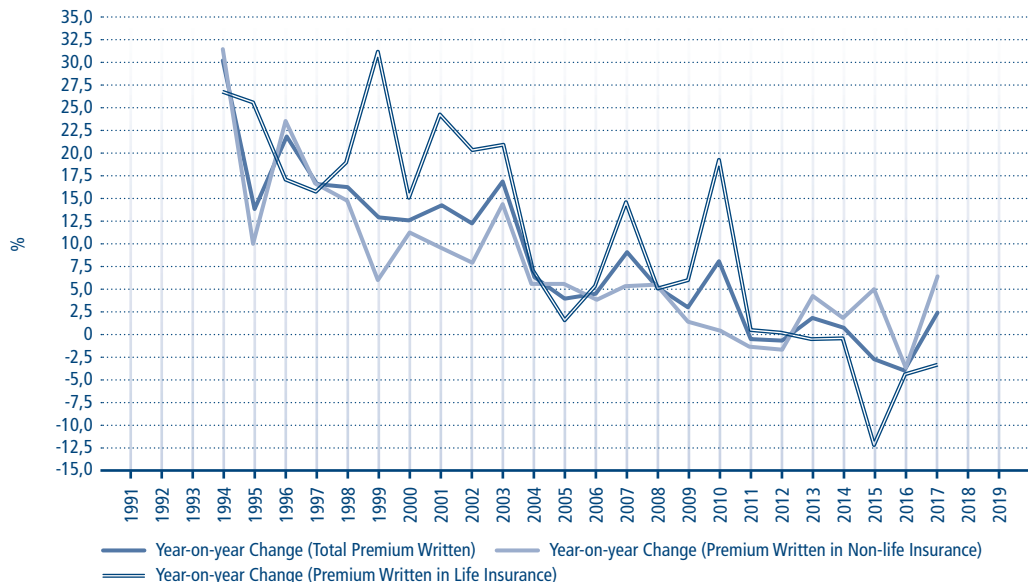


**Figure 3 » Development of the Gross Premium Written in Life Insurance versus Non-life Insurance (Czech Insurance Market)**



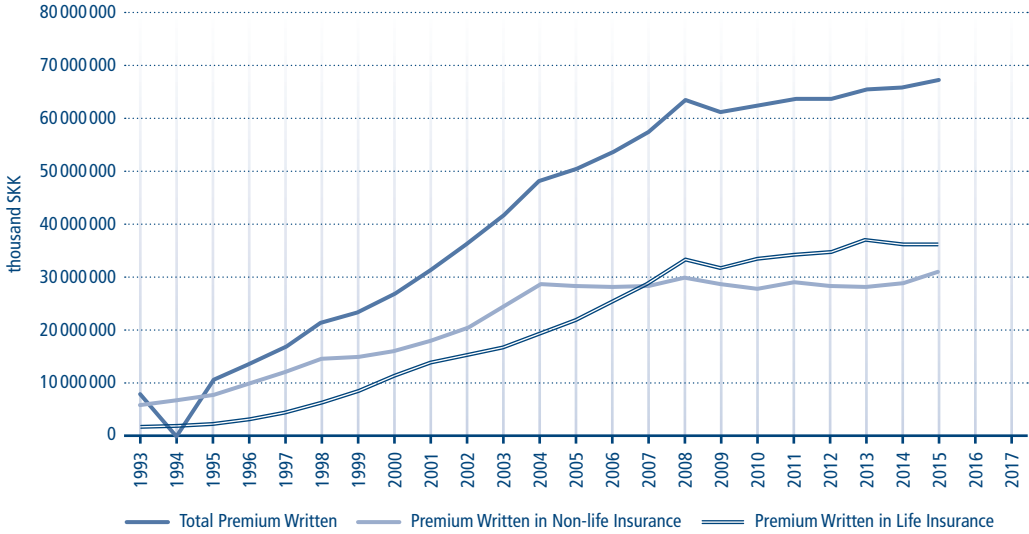
Source: own from Table 1

**Figure 4 » Development of Year-on-year Changes in The Gross Premium Written in Life Insurance and Non-life Insurance (Czech Insurance Market)**



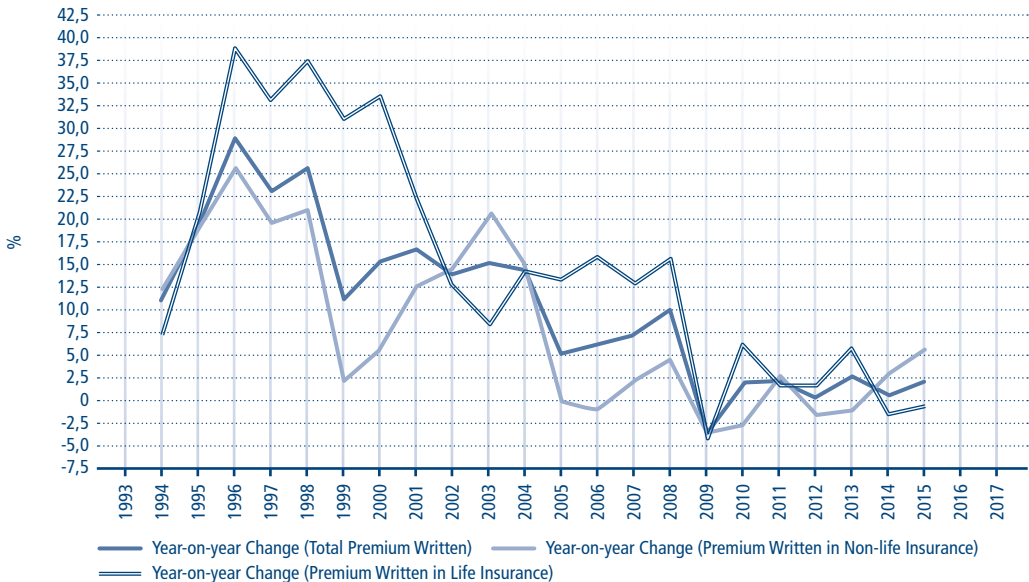
Source: own from Table 1

→ **Figure 5 » Development of the Gross Premium Written in Life Insurance versus Non-life Insurance (Slovak Insurance Market)**



Source: own from Table 2

**Figure 6 » Development of Year-on-year Changes in The Gross Premium Written in Life Insurance and Non-life Insurance (Slovak Insurance Market)**



Source: own from Table 2

**Table 3 » Development of Insurance to GDP and Insurance per Capita (Czech Insurance Market)**

Year	GDP in mil. CZK	Gross Premium Written to GDP			Mid Year Population in the Czech Republic	Gross Premium Written per Capita		
		in %				in CZK		
		Total	Non-life Insurance	Life Insurance		Total	Non-life Insurance	Life Insurance
1993	1 201 088	1.90	1.41	0.49	10 330 607	2 206	1 637	569
1994	1 370 455	2.16	1.62	0.54	10 336 162	2 870	2 150	720
1995	1 586 447	2.13	1.54	0.59	10 330 759	3 271	2 367	904
1996	1 818 342	2.26	1.66	0.60	10 315 353	3 987	2 926	1 060
1997	1 958 725	2.45	1.80	0.65	10 303 642	4 657	3 425	1 232
1998	2 146 389	2.59	1.89	0.70	10 294 943	5 404	3 939	1 466
1999	2 242 417	2.80	1.92	0.88	10 282 784	6 106	4 181	1 925
2000	2 379 393	2.97	2.01	0.96	10 272 503	6 872	4 655	2 217
2001	2 568 309	3.14	2.04	1.10	10 224 192	7 897	5 131	2 766
2002	2 681 644	3.38	2.11	1.27	10 200 774	8 888	5 551	3 337
2003	2 810 382	3.77	2.31	1.46	10 201 651	10 385	6 354	4 032
2004	3 062 444	3.68	2.23	1.44	10 206 923	11 030	6 699	4 330
2005	3 264 931	3.59	2.21	1.38	10 234 092	11 440	7 048	4 393
2006	3 512 798	3.48	2.13	1.34	10 266 646	11 895	7 294	4 601
2007	3 840 117	3.46	2.05	1.41	10 322 689	12 874	7 631	5 244
2008	4 024 117	3.48	2.06	1.41	10 429 692	13 409	7 953	5 456
2009	3 930 409	3.67	2.14	1.53	10 491 492	13 742	8 003	5 739
2010	3 962 464	3.94	2.13	1.81	10 517 247	14 832	8 009	6 824
2011	4 033 755	3.84	2.06	1.79	10 496 672	14 775	7 915	6 860
2012	4 059 912	3.78	2.01	1.77	10 509 286	14 616	7 760	6 856
2013	4 098 128	3.82	2.07	1.75	10 510 719	14 897	8 087	6 810
2014	4 313 789	3.66	2.01	1.65	10 524 783	14 992	8 228	6 764
2015	4 595 783	3.34	1.98	1.36	10 542 942	14 555	8 635	5 920
2016	4 767 990	3.09	1.84	1.25	10 565 284	13 934	8 294	5 640
2017	5 045 188	2.99	1.85	1.14	10 589 526	14 244	8 806	5 438

Source: own from Czech National Bank (2018) and Czech Statistical Office (2018a), (2018b)

year 2015 within the Slovak insurance market. In this year, the share of total premiums written to GDP was 2.83%, of which non-life insurance was 1.3% and life insurance was 1.54%. In the same year in the Czech Republic, the share of total pre-

miums written to GDP was 3.34%, of which non-life insurance was 1.98% and life insurance was 1.33%. Another interesting indicator is the share of premiums written per capita (this indicator is a bit misleading, but it also counts with people in un-

**Table 4 » Development of Insurance to GDP and Insurance per Capita (Slovak Insurance Market)**

Year	GDP in mil. SKK	Gross Premium Written to GDP			Mid Year Population in the Czech Republic	Gross Premium Written per Capita		
		in %				in SKK		
		Total	Non-life Insurance	Life Insurance		Total	Non-life Insurance	Life Insurance
1993	411 371	1.96	1.48	0.48	5 336 000	1 513	1 144	369
1994	495 663	1.81	1.38	0.43	5 356 000	1 677	1 282	396
1995	581 703	1.84	1.40	0.44	5 368 000	1 994	1 519	476
1996	648 161	2.13	1.58	0.55	5 379 000	2 563	1 904	659
1997	718 565	2.36	1.70	0.66	5 388 000	3 149	2 273	877
1998	787 915	2.70	1.88	0.82	5 393 000	3 946	2 743	1 203
1999	846 149	2.80	1.79	1.01	5 399 000	4 382	2 806	1 576
2000	938 485	2.91	1.70	1.21	5 403 000	5 057	2 957	2 100
2001	1 019 916	3.12	1.76	1.36	5 379 000	5 923	3 343	2 580
2002	1 108 034	3.27	1.86	1.41	5 379 000	6 745	3 831	2 914
2003	1 222 603	3.42	2.03	1.39	5 380 000	7 772	4 610	3 161
2004	1 359 526	3.53	2.10	1.43	5 385 000	8 906	5 297	3 609
2005	1 484 609	3.40	1.92	1.48	5 389 000	9 375	5 286	4 088
2006	1 659 370	3.24	1.70	1.54	5 394 000	9 966	5 238	4 728
2007	1 854 406	3.11	1.56	1.55	5 401 000	10 681	5 349	5 333
2008	2 013 682	3.15	1.50	1.65	5 412 000	11 731	5 576	6 155
2009	1 891 762	3.23	1.54	1.69	5 425 000	11 257	5 359	5 898
2010	1 980 604	3.14	1.43	1.71	5 435 000	11 458	5 214	6 244
2011	2 080 441	3.06	1.40	1.66	5 404 000	11 763	5 377	6 385
2012	2 187 961	2.91	1.31	1.60	5 411 000	11 772	5 282	6 489
2013	2 234 445	2.93	1.26	1.66	5 416 000	12 069	5 215	6 854
2014	2 257 823	2.91	1.29	1.62	5 421 000	12 119	5 364	6 755
2015	2 370 494	2.83	1.30	1.54	5 426 000	12 369	5 659	6 710

Source: own from Slovak Insurance Association (2016) and Statistical Office of the Slovak Republic (2016)

productive age, ie younger than fifteen and over 65), but it is still a good indicator for international comparisons (Benetti, 2017).

Within the Slovak insurance market, the ratio of gross written premiums per capita in 2015 in total SKK 12,369, of which SKK 5,659 for non-life insurance and SKK 6,710 for life insurance. It can be

said that, on average, people in the Slovak Republic spent an average of SKK 559 per month on life insurance.

In the Czech Republic for 2015, the statutory premiums per capita are set at CZK 14,555, of which CZK 8,635 for non-life insurance and CZK 5,920 for life insurance. Again, people in the Czech

Republic spent an average of 493 CZK per life insurance in 2015 on average.

#### 4. Discussion and Conclusion

From the above comparison, it is clear that even if GDP in Slovakia does not reach the same level as in the Czech Republic, people in Slovakia make more use of life insurance products than people in the Czech Republic. If we look at the development of gross premium written for the Czech Republic after 2015, it is clear from its development that it still

has a decreasing trend. From this it can be concluded that the life insurance market in the Czech Republic has ongoing problems, people use the products of this market less and less. This trend would deserve attention in further research.

#### Acknowledgement

The paper was written under the support of the project “1/0608/19 Nexus financií a rastu v štátoch Vyšehradskej skupiny” and of the specific research of EF TUL.

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#### Selected Issues of the Czech and the Slovak Insurance Market

##### ABSTRACT

The paper deals with the comparison of the selected indicators of the insurance market in the Czech and Slovak Republics, through which the insurance markets are analysed in the years 1993–2015. The time period has been chosen since 1993 because this year the Czech and Slovak Federal Republic are divided into two separate states, and both insurance markets are developing separately. The aim of the article is to find the main differences in selected indicators of the Czech and Slovak insurance market in the period 1993–2015. →

→ **KEYWORDS**

*Gross premium written; life insurance; non-life insurance.*

**JEL CLASSIFICATION**

*C10; G22*



# Strategic CSR: the Importance of the CSR Filter

► Karina Benetti » NEWTON College, a.s.; email: karina.benetti@newtoncollege.cz

## \* 1. Introduction

The paper focuses on Strategic Corporate Social Responsibility (CSR), which is also one of the EU's priorities. Corporate Social Responsibility works perfectly if it is based on self-regulation of business, where, among other things, it monitors and ensures respect for their rights, ethical standards and international standards. This form of business includes responsibility for the impact of its activities on the environment, consumers, employees, municipalities, stakeholders and other members of the public sphere. CSR activities do not only bring a lot of potential business benefits to the company but also some dangers. One of the important components of the proper functioning of the CSR business strategy that has not been included in the implementation of the CSR strategy is that it is necessary to set up a CSR filter that matches the company's strategy with external environmental barriers.

## 2. Materials and Methods

The research is based on the study of CSR and the role of CSR filter. In the research, scientific methods were particular used: method of deduction, methods of graphical and tabular representation of data, comparative analysis and synthesis of partial knowledge.

The study of the problem of CSR and CSR filter was carried out in three stages:

1. theoretical analysis of the category "CSR";
2. the development of the CSR – responsive and strategic CSR;
3. the role of the CSR filter in the business strategy.

## 3. Results

### 3.1 Corporate Social Responsibility

Corporate Social Responsibility (CSR) is a specific manifestation of organizational culture that appeals to change the orientation of companies from short-term goals to long-term, from maximal to optimal profits. CSR firms behave voluntarily to take into account the needs of their internal and external environments to contribute to sustainable development, to be transparent and generally to help improve the overall state of society within and beyond its commercial operations. Small and medium-sized enterprises are characterized by their strong dependence on the local environment – the majority of employees are recruited at the site, and most of their customers are also located in or nearby. For this reason, the questions of the satisfaction of stakeholders are, in fact, subsistence questions; whether they are employees, customers, contractors, the public or government. Contribut-



ing to better environmental conditions is of direct interest to these businesses, as its stability also strongly influences their commercial success (Steiner et al, 2008).

In particular, social responsibility is reflected in the integration of positive attitudes, practices or programs into the company's business strategy at the level of its top management. It requires shifting the view of its own social role from the "profit only" level to the wider view where the company focuses not only on economic growth but also on the environmental and social aspects of its activities. We have at least two of the following definitions of corporate social responsibility:

- CSR is the voluntary integration of social and environmental considerations into day-to-day corporate operations and interactions with internal and external stakeholders. (Commission of the European Communities, Green Paper, 2001);
- CSR is a way of doing business that meets or goes beyond ethical, legal, commercial, and social expectations. (Business for Social Responsibility, 1997).

CSR basically stands on three basic pillars: economic, social and environmental:

- CSR in the economic sphere (Corporate Business Code, Transparency, Applying Corporate Governance, Rejection of Corruption, Relations with Shareholders, Customer Behavior, Supplier Behavior, Investor Behavior, Intellectual Property Protection);
- Social CSR (corporate philanthropy, health and safety of employees, human resources development, compliance with HSW<sup>1</sup> standards, child labour prohibition, work-life balance, equal opportunities for women and men, ethnic minorities, health disabled and elderly, provision of re-training for dismissed employees, job security, human rights);
- CSR in the environmental field (organic production, products and services, recycling, use

of environmental inputs, protection of natural resources). (Steinerová et al, 2008).

Here is one fundamental question: "Why be a socially responsible company?" Behaviour in line with the basic principles of CSR brings a number of benefits, notably of a non-financial nature, but of no importance for a good and sustainable business. Just as tangible assets in the form of real estate, inventory, or financial assets are important for the company, intangible assets such as human capital, brand value, reputation (goodwill management), or trust and partnership relationships are key to it and can provide competitive advantage, if non-financial information about it is public. (Pakšiová and Lovciová, 2018) Socially responsible corporate behaviour can provide an opportunity not only for innovation, greater attraction for investors, enhanced credibility, but also greater employee loyalty and productivity, differentiation from competition, reduction of risk management costs, building political capital (improving the position for current and future negotiations) lower risk of boycotts and strikes, financial savings associated with negative environmental impacts of business (Trnková, 2004).

Sometimes, CSR is mistakenly confused about philanthropy (donation) or law-abiding behaviour. Corporate philanthropy is one of the integral parts of CSR, but CSR is not as such. Behaviour in accordance with the law is certainly correct, but it is something the company must do. The concept of CSR can be characterized by the fact that it goes beyond the legal regulations, it represents the implementation of managerial visions that go further than is necessary in the legal framework. Even more difficult is the differentiation of CSR from PR (public relations) and marketing. Research from Western Europe shows that a large number of companies see CSR as part of the PR as something that can be "blown". The risk that the whole activity slides into a state where more money is published as a glossy publication than a thing itself,

<sup>1</sup> *Health and Safety at Work*



unfortunately exists realistically (Trnková, 2004). In the study conducted by Horvath international team (Horváth et al, 2017) found comparable results. In Central and Eastern European countries, CSR issues focus more on legally required reporting methods. The same situation is according to a comparative study, both in the Czech Republic and the Slovak Republic (Peters et al, 2017).

The trend of corporate social responsibility worldwide has grown in recent years (although some slowdowns can be seen in the context of the economic crisis, the effects of which should be stagnating in the years to come), mainly due to consumer pressure and the growing global interconnection of the world. Corporate Social Responsibility is considered part of the concept of sustainable development and is internationally supported by the UN, the EU, the OECD and a number of international non-governmental organizations.

### 3.2 Strategic Corporate Social Responsibility

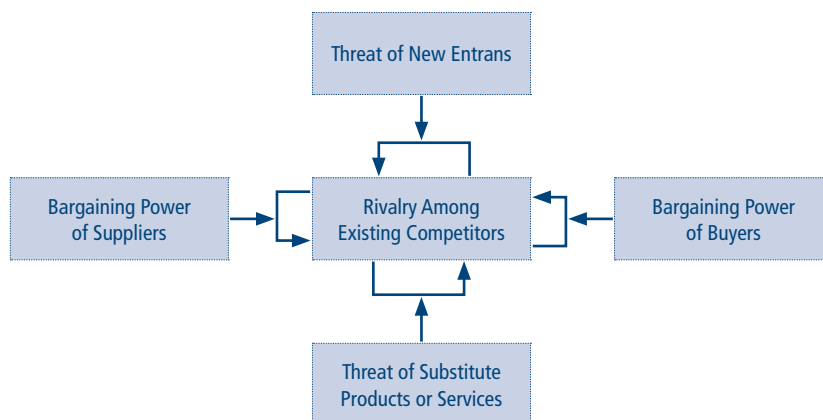
CSR is one of the possible strategies of the company, therefore its implementation into the company's practice always with the tools of strategic management. Very important analyses of strategic

management include analyses of interdependencies of companies that can be analysed by the same tools used to analyse competitive position and developmental analyses. The most well-known analysis of competitive position is, for example, Porter's Model of Five Forces (see in figure 1) published for the first time in 1979 (Porter, 1979), which is illustrated in figure 1. In this way, the firm can focus on CSR activities that are as efficient as possible. Thus, the firm can set up a "positive" CSR program that produces the maximum social benefits as well as business benefits (Porter and Kramer, 2006).

In the context of the strategic deployment of CSR, the concept of Strategic CSR (Strategic CSR) has been introduced, meaning companies want to go beyond good practice and do things differently than competitors. The above-mentioned Porter model of five forces can be used to set the CSR correctly.

As mentioned above, Porter's Five-Force Model was published more than thirty years ago and was a revolutionary link in the „sense“ of the strategy. Interestingly, it is still up to date after so many years, because it includes five basic „external forces“ (as opposed to Figure 2, which develops more

**Figure 1 » The Five Forces That Shape Industry Competition**



Source: Porter (1979)

of the „internal power“ of an enterprise) influencing the position of a firm on a given market among current competitors.

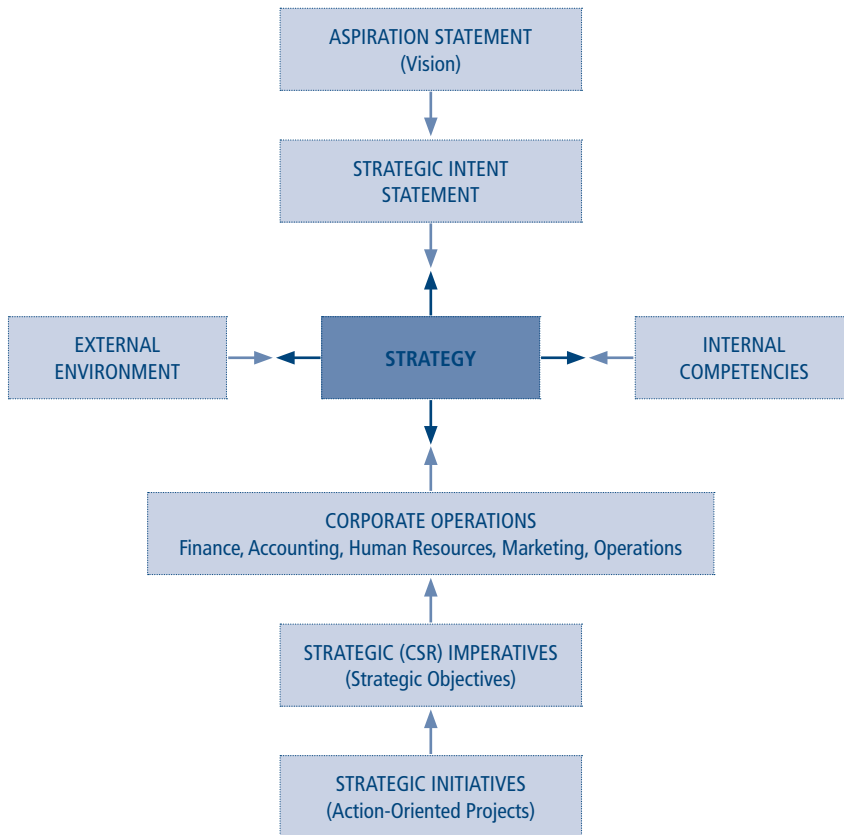
Some authors within the Porter Five-Force model not only mention the supplier’s bargaining power, but also the negotiating power of the buyers, which is really important in some sectors.

However, this model has many critics from academics and strategists like S. Neill, and especially K. P. Coyne and S. Subramaniam (Coyne and Subramaniam, 1996), who have put forward three controversial assumptions on which a model of five competing forces is based:

- buyers, competitors and suppliers are not related and do not co-operate or talk;
- that a source of value is a structural advantage (creating barriers to entry);
- that uncertainty is low, allowing market participants to plan and respond to competitive behaviour.

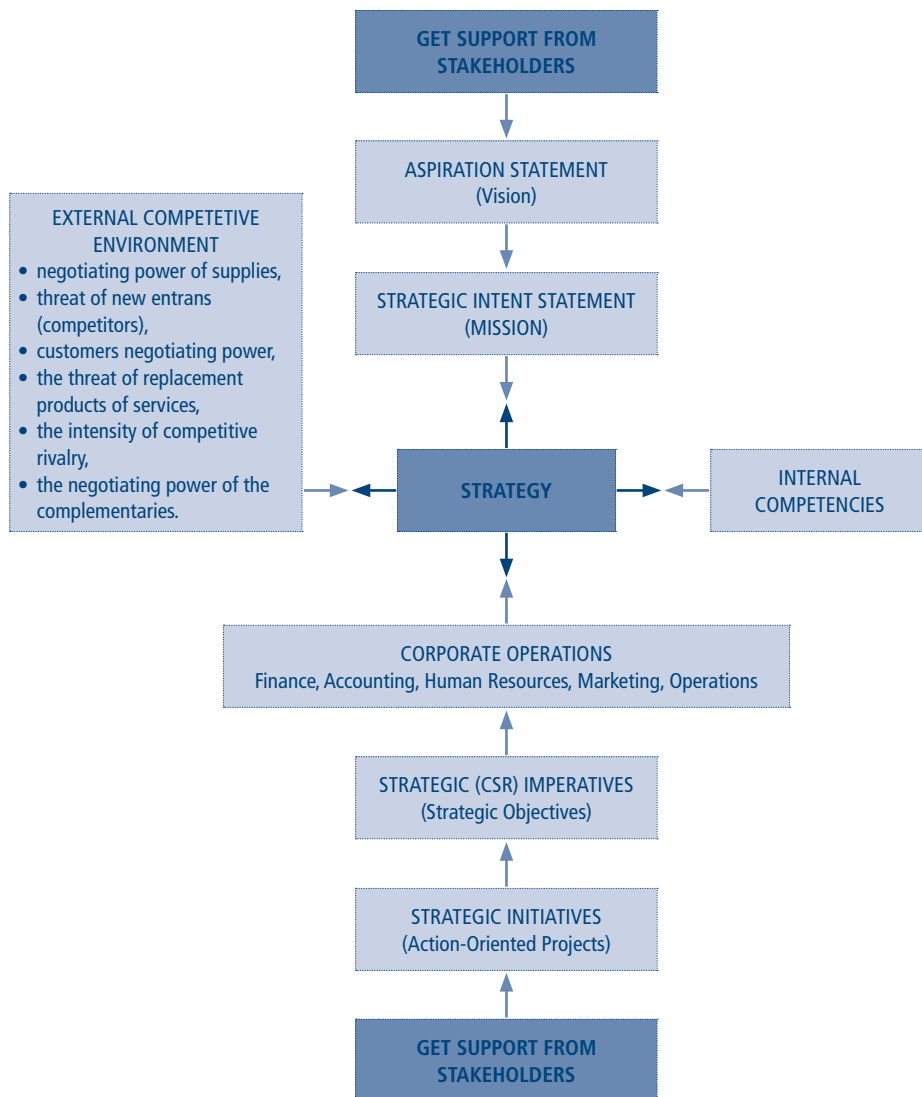
The work of A. M. Brandenburger and BJ Nalebuff in the mid-1990s (Brandenburg and Nalebuff, 1995), which contributed to Porter’s analysis of five forces by Porter’s power of six complementary to help explain the “strategic alliance” reasons. Complementary is a company that directly sells a

**Figure 2 » Strategic CSR Model**



Source: Wether and Chandler (2010)

**Figure 3 » Strategic CSR Model Complemented by the Porter Model Of Five Forces and The Approach of A. M. Brandenburg and B. J. Nalebuff and Approach from K. Benetti**



Source: model addition of own approach from Porter (1979) and Wether and Chandler (2010)

product or service that adds a product or service to another company by adding common value to the customer (such as Intel and Microsoft processors... Pentium and Windows, etc.). The work of A.

M. Brandenburg and B. J. Nalebuff can be added to the Porter five-stroke model by adding 6th power to complementary negotiating power.

As mentioned above, the internal strategy is →

also influenced by the “internal forces” shown in Figure 2, where from the formulation of the objectives through the formulation of the strategic plan, the management of a business with a significant influence of stakeholders builds a strategy whose successful implementation influences internal competence and Also, the correct setting and timing of strategic initiatives (eg through action-oriented projects), based on strategic goals that are realized through well-established corporate operations (finance, accounting, human resources, marketing, and other operations).

Furthermore, the external environment can be influenced by the company’s strategy, which we can imagine in the competitive environment as the above-mentioned „external forces“. Instead of classical external environments, we can rather re-construct individual „external forces“, among which forces within the Porter 5 model, including the 6th power of A. Brandenburg and B. J. Nalebuff (see figure 3). These two approaches have been complemented by the acquisition of support for the introduction of a CSR filter from stakeholders.

### 3.3 Strategic and Responsive Corporate Social Responsibility

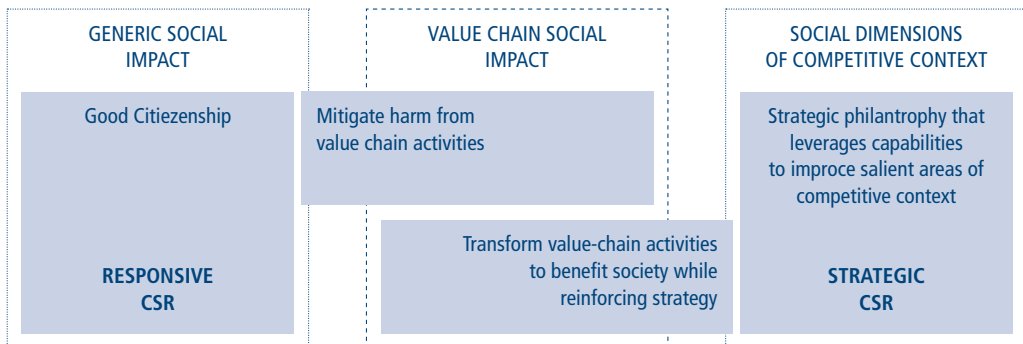
In the context of strategic CSR, another important concept that has emerged in recent years, namely sensitive CSR (responsive CSR), means that companies only want to create a reputation (good reputation management) and improve relationships with stakeholders parties and therefore their main objective is not to have a certain competitive advantage, as is the case for CSR. It is necessary to emphasize that in corporate practice there is a strategic and sensitive CSR (see Figure 4) as part of a strategic approach to socially integrating a company into society.

The company may not only introduce a strategic CSR or just a sensitive CSR, but can both implement at least in a certain proportion at the same time. As far as resources are concerned (Porter and Kramer, 2006), a substantial part of the company’s resources and attention takes on the implementation of strategic CSR, which has the most significant social impacts and uses the greatest social benefits.

Sensitive CSR has the two most important elements:

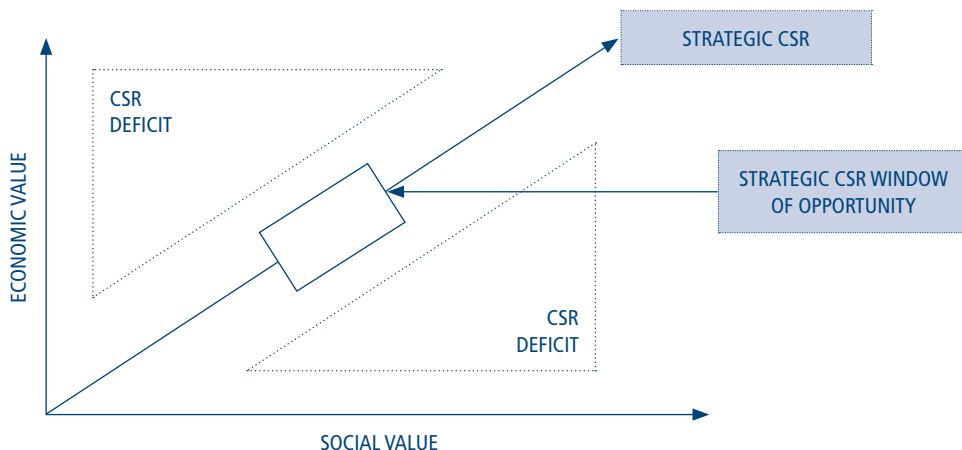
1. it operates within the framework of good citizenship, attuned to the evolving social concerns of the stakeholders and

Figure 4 » Corporate Involvement in Society: A Strategic Approach



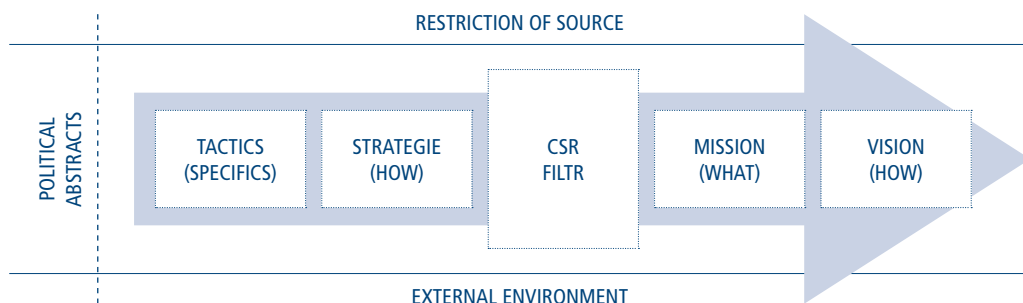
Source: Porter and Kramer (2006)

**Figure 5 » The CSR Deficit and Strategic CSR Window of Opportunity**



Source: Wether and Chandler (2010)

**Figure 6 » Strategic Constraints and CSR Filter**



Source: Wether and Chandler (2010)

- mitigates current or foreseeable adverse effects from business activity.

The main tasks of the company’s management include the right setting of the proportion of sensitive and strategic CSR. If the proportion is not correctly set, there are CSR deficits (see Figure 5) in terms of social value (CSR) and economic value (strategic CSR).

Figure 5 shows that if a strategic and sensitive CSR is not set correctly, the company comes up

with the opportunity and its loss is the CSR deficit, both on the social value of the sensitive CSR and on the economic value represented by the strategic CSR.

### 3.4 Setting CSR Filter in the Firms Strategy

If we return to classical strategic management, especially its main goal, which is to strive for a sustainable corporate mission and vision that depends on the strategy and tactics that are being

→ evaluated by the CSR filter idea within organizational policy and the barriers (limitations) of the external environment (not just the environment), according to which the company must operate (Přivratská and Mužáková, 2010). Then the CSR filter allows the company's strategy to be aligned with external obstacles within the environment (not just the environment). The relationship between the strategic constraint and the CSR filter is illustrated in Figure 6.

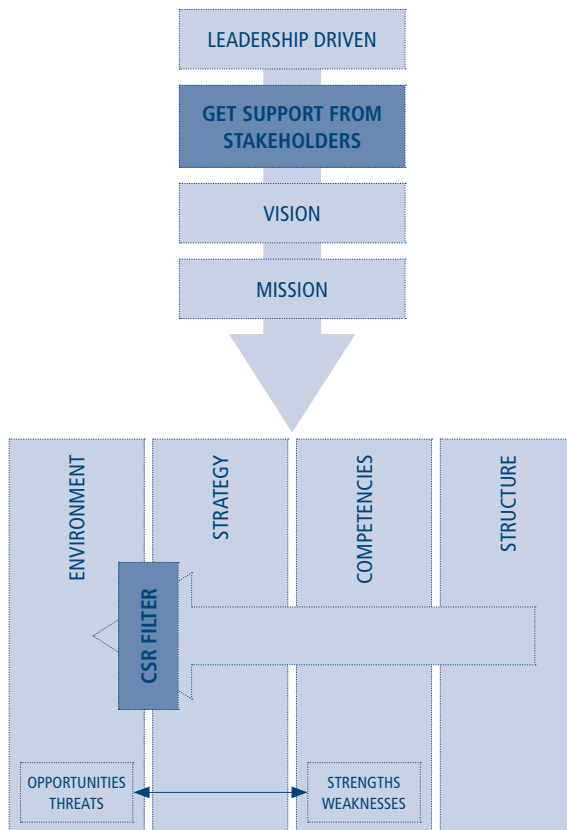
A more detailed view of the implementation of the CSR filter into the corporate strategy is presented in Figure 7 where the feasible corporate strategy is limited by corporate vision and missions that are

determined by the management of the company, to which the stakeholders are mainly affected. It can be seen from the picture that any strategy developed by the company is limited by the CSR filter that identifies a number of strategies that are acceptable to stakeholders (Benetti, 2016).

The connection between the company's internal strengths and external opportunities are driven by strategic axiom that says that success depends on the competitive position based on strengths.

For strategists, linking strengths with opportunities in a globalized business environment requires understanding both of these components. In order to remain competitive, companies must

**Figure 7 » Business Strategy and CSR Filter**



Source: model addition of own approach from Wether, Chandler (2010)

first establish a CSR filter in formulating and implementing their strategy, first amongst their corporate strategy and the environment in which the company operates.

In order to better understand the role of the CSR filter in a company strategy, it is important to analyse the complex ties that an enterprise has within its corporate competencies, strategies and structures in relation to its operating environment. Thus, the CSR filter identifies a series of strategies that are acceptable to stakeholders.

#### 4. Discussion

Introducing a CSR filter into a corporate strategy is key to maintaining the company's competitiveness. The CSR filter therefore helps align the company's own business strategy with external barriers. However, it is a question of whether the

introduction of this CSR filter is effective for all businesses regardless of their business or not. This aspect should be explored in further research.

#### 5. Conclusion

For quality implementation of CSR into corporate strategy, it is important to maintain the proper proportion between the economic value (strategic CSR) and social value (sensitive CSR) firm to prevent CSR deficits. For these purposes, a CSR filter has been introduced to align the business strategy with external obstacles within the environment (not just the environment) and also identifies a range of strategies that are acceptable to stakeholders. For this reason, models need to be complemented by the issue of getting support from the introduction of a CSR filter from stakeholders (see Figures 3 and 7).

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## Strategic CSR: the Importance of the CSR Filter

### ABSTRACT

*The paper focuses on the strategic corporate social responsibility, which belongs to one of the priorities of the European Union. Corporate Social Responsibility is working perfectly, if based on self-regulation of business, where among other things monitoring and ensuring respect for their rights, ethical norms and international standards take place. This form of business includes responsibility for the consequences of their actions on the environment, consumers, employees, communities, stakeholders and other members of the public sphere. CSR activities do not bring us a lot of potential business benefits, but it brings also some dangers. One of the important components of the correct functioning of the CSR strategy of the company, which by this time were not included in the implementation of CSR strategy, is the need to correctly set up a CSR filter that allows the alignment of business strategy with external obstacles in the environment. Article aims to provide a conceptual map of the correct settings of CSR filter within the company strategy so to achieve maximum efficiency of CSR filter. In the research were used these scientific methods: induction, comparative analysis and synthesis of partial knowledge.*

### KEYWORDS

*CSR, CSR Filter, Environment, Self-Regulation of Business, Strategic Corporate Social Responsibility*

### JEL CLASSIFICATION

*L10, L21, M14*





# Burnout Syndrome in the clergy of the Czechoslovak Hussite Church

- ▶ **Mgr. Tibor A. Brečka, MBA** » Department of Psychiatry, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague, Czech Republic; Institute of Humanities, Newton College, Czech Republic email: tibor.brecka@seznam.cz
- ▶ **Martina Vňuková, MSc.** » Department of Psychiatry, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague, Czech Republic; email: martinavnukova@yahoo.com
- ▶ **Doc. PhDr. et PhDr. Radek Ptáček, Ph.D., MBA** » Department of Psychiatry, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague, Czech Republic; email: ptacek@neuro.cz
- ▶ **prof. MUDr. Jiří Raboch, DrSc.** » Department of Psychiatry, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague, Czech Republic; email: raboch@lf1.cuni.cz

## \* 1. Introduction

The burnout syndrome is a theme which is relevant for almost all professions, but it is topical especially for human service professions. The profession of a clergyman can be also classified in this category. Does it mean that also clergymen are at higher risk of burnout syndrome and, if yes, in which way? Is this profession specific in some ways as regards the burnout syndrome?

At first, it is essential to ask who is actually a clergyman. Generally speaking, a clergyman is a person working in an employment relationship to a religious community or a church. In the Czech Republic, there are 21 registered churches and religious communities according to the Act No 3/2002 Coll. on freedom of religious expression and the position of churches and religious societies. It is thus clear that there are differences between the clergymen of respective churches and religious communities, which are caused by the differences in their specific traditions. In spite of that, there is an important common feature – the service of

higher order, which Christian churches (and not only they) refer to as God. It is this transcendent feature of its profession, which is significant for it. Each Church and religious community has then its own description and differentiation of this profession.

The description and differentiation of clergyman's profession in the Czechoslovak Hussite Church is defined mainly by the Constitution of the Czechoslovak Hussite Church and by the Code of Spiritual Service of the Czechoslovak Hussite Church. It would be a mistake to suppose that the profession of a clergyman is connected only to the transcendent element; on the contrary, apart from the sacral service, it is connected to pastoral care and also to purely secular, managerial activities, especially as concerns the clergymen whose responsibility is to administer a religious community, i.e. parish priests, or to supervise other ecclesiastical legal persons.

In general, the situation of clergyman is specific, especially in connection to the Act No 428/2012 Coll. on property settlement with churches and re-



religious institutions and on amending certain laws (the property settlement with churches and religious institutions), which radically changes the previous method of financing churches and religious communities and makes the churches and religious communities responsible for securing their own funding without the contribution of the state. This influences and will influence also the behaviour and life of clergymen.

## *2. Stress, Depressivity and the Burnout Syndrome of Clergymen*

Even if the profession of a clergyman is reported to be the happiest profession whatsoever (Forbes 2011), it does not mean that they would not experience stress. In the Czech Republic, one of the first studies of this theme was published by Kašparů (Kašparů 1995); however, no research results investigating the theme more in depth have been published yet. According to the researchers, clergymen experience a higher level of stress (e.g. Blanton 1992, Kieren and Munro 1988 or Ritchmond et al. 1985) and are in danger of burnout syndrome (Berry et al. 2012, Robbins et al. 2012, Willimon 1989). In spite of that, more than 70% do not think about leaving this profession (Francis et al. 2017). The factor which makes the risk of burnout syndrome of clergymen higher is the higher level of extraversion, neuroticism and psychoticism (Francis et al. 2004). Clergymen are aware of the issues concerning the syndrome as well as of being the vulnerable group (Tahel, Cahová 2008), which was confirmed also in the reactions to this research.

For the public, it is necessary to emphasise that the burnout syndrome and depressivity are two distinct phenomena, which have to be distinguished from psycho-spiritual crisis (DSM 5 V62.89, MKN 10 Z65.8) or from the so called dark night of the soul (St. John of the Cross, 1995).

### *2.1 The Description of the Method and the Sample*

The data collection was carried out in 2016 on a sample of the clergymen of the Czechoslovak Hussite Church from three dioceses; the chosen method was an anonymous interview survey consisting of the introductory part (sex, age, seniority, education, marital status), Beck Depression Inventory – Second Edition (BDI II), Shirom-Melamed Burnout Measure (SMBM) and 4 open qualitative questions (motivation, stress, satisfaction of needs). The sample consisted of 48 clergymen from the Czechoslovak Hussite Church, from three dioceses, 22 men and 26 women in the age from 30 to 70, working as clergymen from 1 to 43 years.

The results of BDI II show that, on average, men mention a lower level of depressivity than women; however, the difference is not significant as both groups show only a slight risk. The lowest score mentioned was 0, the highest were 22 and even 35, which shows that, among clergymen, there are also people with mild or even severe manifestations. Both highest scores concerned women; the lowest score of 0 was reached by three men and one woman.

The results also demonstrated that the marital status is not relevant as concerns the threat of depressivity. The only difference in the level of depressivity is noted with regard to the married versus the divorced, with the divorced having higher score. The average depressivity of the married is 7.33 and of the divorced 16.83.

The SMBM investigates not only the overall degree of being vulnerable to the burnout syndrome, but it has three individual dimensions of subscale, in which the degree of depressivity is manifested, i. e. the following three subscales of the SMBM: P = physical fatigue 5 items, E = emotional exhaustion 3 items, C = cognitive weariness 5 items.

The above mentioned data show that men have generally only very mild manifestations (with significant differences in physical, emotional and overall burnout); the same is relevant for women,

who, however, are close to the level of mild manifestations, which is classified from the score of 43 point. In the researched sample, women are thus slightly more at risk of being vulnerable to burnout syndrome than men. The lowest score of 15 was in two cases by two men; the highest score 70 was reached by one of the women, which is close to the borderline of severe manifestations of burnout syndrome.

The highest score was reached by the respondents in the dimensions of physical fatigue, emotional exhaustion and, finally, cognitive weariness. Similar conclusions were formulated by López Herrera (López Herrera et al., 2014). In case of clergymen, the score of physical fatigue can be surprising, but it can be explained at least by two factors. The first is the fact that the work of a clergyman is really also about physical work (which is usual not known by wider public); a clergyman often works as a repairer or workman of various kinds. The second factor is that, in Christianity, we can often observe a certain dichotomy between body and soul, i.e. between the physical and the mental, as we can observe in antiquity or medieval scholasticism. It is thus probable that clergymen are able to cope with the burnout syndrome on emotional and cognitive level by defense mechanisms; nevertheless, with regard to the clear interconnection of human body and mind, the symptoms are displayed on the physical level. A certain tendency to underestimate one's own physical aspect and its importance can be problematic and endangering.

The investigated sample did not show any correlation between age and the risk of burnout syndrome nor between seniority and the risk of burnout syndrome.

Generally speaking, the clergymen from our sample were not seriously at risk of depressivity and burnout syndrome; however, some individuals were at higher risk. The similar findings are concluded by Janda (Janda 2010). It means that it would be a mistake to generalise the whole group as being not at risk; it is necessary not to underes-

timate the signals of approaching burnout, which should be observed not only by individual clergymen but also by their superiors within visitations and other activities connected with the role of superiors, namely vicars and bishops.

## 2.2 Qualitative Questions

The answers to the first qualitative question "what do you consider as the biggest source of stress?" concerned the problems in the Church as organisation and the attitude of the superiors (13 respondents), then the personal relationships with the believers and other people (6 respondents), then there were anxieties concerning the combination of work and family and the related problems from the area of finance.

The second question was aimed at finding out the biggest motivation of the respondents for their profession. The most frequent answers reflected the struggle to give something to people and help them (18 respondents), and faith (15 respondents). It is highly probable that there is a transcendent outreach in the background of these answers. For some, the motivation was appreciation (4 respondents) and even the freedom of the profession and the possibility to organize own time.

The third question was directed to the satisfied needs. The most frequent answers were connected to the need of meaningfulness, to the importance of working on something which transcends us and for the one who transcend us (16 respondents). The answers referring to the need of interpersonal contact and communication was of similar frequency (12 respondents); some found important the form of work organisation, which means the possibility to organize own working time, variability and possibility to be creative (5 respondents).

Contrastingly, the fourth question was directed to unsatisfied needs. Similarly to the first question, there is a frequent theme of insufficient support of the superiors and higher need of mutual encounter and sharing (17 respondents). It is also interesting that the answer "none / I do not know" appeared →

quite often. Is it possible that they would have no unsatisfied needs? The more probable explanation is that there are several of them, and the respondents had a problem to choose the most relevant one or that they are not aware of them, i.e. on conscious level; however, their unsatisfied needs might have been denied or suppressed. It also opens the question to what extent we are able to identify our needs. The impossibility to identify one's own needs is one of the factors standing at the source of burnout syndrome. The need to relax and have more free time was named (4 respondents) as well; after that, there was also a lack of visible work results, which is quite frequent problem of intellectual workers.

### 3. Conclusion

To summarize, it is possible to say that the clergymen of our sample were only slightly at risk of depressions and burnout syndrome even though some of them show higher level of vulnerability. It

can be thus pointed out that our conclusions are in line of other researches in this area (Berry et al. 2012, Robbins et al. 2012, Willimon 1989). It seems that being married is a protective factor since the divorced have higher scores than the married. It would be interesting to compare the risk of depression and burnout syndrome between the clergymen who can get married (i.e. for whom the celibate is canceled or voluntary) and the clergymen who have the obligation of celibacy. Other interesting question would be to what extent the practice of confession can serve as a protective factor, which was impossible to be researched on our sample as the practice of confession is low in the Czechoslovak Hussite Church.

Based on the answers to the qualitative questions, this paper shows that, similarly to other professions (Gundersen 2001, Brečka et al. 2018), one of the essential problems is the question of administration, bureaucracy and relationships at the workplace.

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## Burnout Syndrome in the clergy of the Czechoslovak Hussite

### ABSTRACT

We present the conclusions of our research into the problem of threats of depression and burnout syndrome at the Czechoslovak Hussite Church (CHC). We examined a sample of 48 clergy from the Church of the Czechoslovak Hussite, three dioceses, 22 men and 26 women aged 30 to 70, working as a spiritual one from 1 to 43 years. As a method we used a questionnaire survey consisting of an introductory section, the Beck Depression Inventory (BDI II), the Shirom-Melamed Burnout Measure (SMBM) and 4 open qualitative questions. The results of BDI-II show that men tend to report a lower depression rate than women, but the difference is not significant, but the two groups have a moderate threat overall. In general, men in SMBM have only very mild symptoms (where a significant difference in physical, emotional and total burnout has been found), women too. The highest score was achieved by the respondents in the dimension of physical fatigue. Generally speaking, the clergy in our sample were not seriously threatened by depression and burnout syndrome, but at selected individuals the threat was higher. Overall, the clergy in our sample are only slightly at risk from depression and burnout syndrome, yet some of them are more at risk. It turns out that marriage is a protective factor, because the divorced had higher score than the married. As with other professions, the answers to the qualitative questions show that one of the fundamental issues is the issue of administration, bureaucracy and relationships at the workplace.



→ **KEYWORDS**

*Burnout Syndrome, Depression, Clergy*

**JEL CLASSIFICATION**

*I10, J28*



# Bühlmann & Bühlmann-Straub Credibility for Extreme Claims Applied on Non-Life Egyptian Insurance Market: (An Actuarial Approach)

- ▶ Mahmoud Elsayed » Cairo University, Faculty of Commerce, Mathematics and Insurance Department.  
email: mah.elsayed\_njk@foc.cu.edu.eg
- ▶ Amr Soliman » Cairo University, Faculty of Commerce, Mathematics and Insurance Department.  
email: s.amr@foc.cu.edu.eg

## \* 1. Introduction

The idea of credibility theory is one of the most important and essential tool in actuarial mathematics, dealing with posterior distribution as a weighted average of prior distributions and likelihood. Credibility theory has been discovered and derived during the 18<sup>th</sup> century by Bayes (1763). Moreover, Bühlmann (1967) and Bühlmann-Straub (1970) introduced a multivariate generalization of the credibility model for claim reserving.

Insurance companies pay more attention on the tail behaviour of the distribution of claims (i.e. catastrophic claims). In Egypt each insurer deals with several branches, so they should focus on the risk of insolvency not only the profit since claims distributions have heavy tails. Furthermore, insurers are highly interested in meeting the regulators' requirements.

Bühlmann's approach is used to predict net premium based on the prior information for insurer's claims as a linear predictor assuming that data are identically distributed. This method is called the greatest accuracy approach. On the other hand, Bühlmann-Straub approach is an extent of Bühl-

mann credibility where data are not identically distributed, this method overcome the limitation of Bühlmann approach.

Our data used in this paper is collected from non-life insurance market based on records published in Financial Regulatory Authority (FRA) for six branches. These branches have been chosen according to claims that consist of extreme losses as shown in Table (1) and Table (2).

The above table illustrates that claim amounts increase gradually for each branch. The table also shows negative claims referred to the amount of incurred claims are less than the estimated claims as presented in Figure (1).

Table (2) shows the number of extreme claims (i.e. catastrophic claims) incurred on each branch. In addition, fire and engineering branches have more extreme losses than other branches according to the incurred claims exceed the estimated claims.

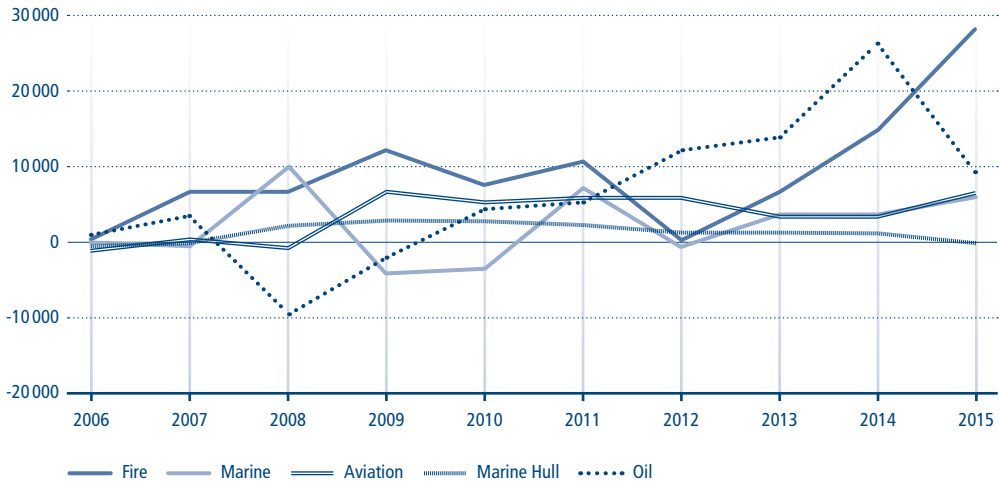
In This paper we consider a development of Bühlmann and Bühlmann-Straub credibility models as a joint distribution of the claim amounts and the number of observed extreme losses, in order to predict the upcoming year net credible premium. →

**Table 1 » Amount of Claims for each branch (In Thousands)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fire	5497	65297	61483	115663	75427	107814	7263	63364	143552	278888
Marine	5864	-2353	96940	-42237	-35977	71269	-4200	35626	35772	56315
Aviation	-3881	5981	-7642	64401	51437	60300	56716	36316	35768	63877
Marine-Hull	1693	6364	23918	30870	29421	21157	16253	11613	9451	-2903
Oil	7789	31731	-95640	-26175	37721	50855	116960	132100	259030	94182
Engineering	10003	11944	35093	46771	29512	42453	23349	43299	60304	74950

Source: Financial Regulatory Authority (FRA).

**Figure 1 » Amount of Claims for each branch**



Source: Authors' calculations.

**Table 2 » Number of extreme losses for each branch**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fire	1	7	7	13	8	12	1	7	16	30
Marine	0	0	1	0	0	1	0	0	0	1
Aviation	0	0	0	1	0	1	0	0	0	1
Marin-Hull	0	0	0	0	0	0	0	0	0	0
Oil	0	0	0	0	0	0	1	1	1	1
Engineering	1	1	4	6	4	5	3	5	7	9

Source: Authors' calculations.



One of the most important concerns for the insurance industry is the tail behaviour of loss distributions, where the tail of loss distribution is demonstrated by extreme events. This article introduced an approach that modified Bühlmann and Bühlmann-Straub credibility models by taking into account the tail behaviour of claims in order to predict credible premiums.

The aim of this paper is to improve Bühlmann and Bühlmann-Straub credibility models in order to estimate the net credible premium for as a linear function of the prior claims and the number of extreme events.

The remainder of this paper is organized as follows. Section 2 Literature Review, Section 3 Data and Methodology, Section 4 Models, Section 5 Empirical Findings. Finally, Section 6 Conclusions

## 2. Review of the Literature

Norberg (2011) presented the greatest accuracy credibility theory and explained the basic ideas, techniques and practical application of the Bayesian credibility theory.

Loisel and Trufin (2013), they considered the discrete-time ruin model to determine the characteristics of the ruin probability in the heavy tailed claim amounts. Then apply the Bühlmann credibility to estimate net premiums.

Happ et al, (2014), applied Bühlmann-Straub credibility to claim reserving nonlife chain-ladder. They used a multivariate credibility of  $N$  correlated portfolios to estimate the conditional mean square error of the ultimate claims and compared the estimated results with the multivariate additive method.

Jindrová and Kopeck (2017), considered Bühlmann and Bühlmann-Straub empirical credibility to estimate the credibility premiums and net premiums for catastrophic claim amounts and economic losses for different regions. They applied Bühlmann and Bühlmann-Straub credibility for short term insurance taking into consideration two types of data i.e. past data from risk itself and col-

lateral data from other sources considered to be relevant.

Jindrová and Pacáková, (2015), demonstrated classical Bayesian approach to estimate the probability of critical illness insurance. Thus, they used age and sex for different groups in order to calculate risk premiums.

Jindrová and Seinerová (2015), applied the Bühlmann Straub model to measure the cost of healthcare insurance and the corresponding credibility factor, and concluded the for large companies the estimation of the healthcare cost is reliable while for small sized companies its meaningless without the referral to data from the whole market. In addition, Bayesian analysis is considered a useful technique for healthcare insurance.

Gao (2016) illustrated modelling claim reserving using Bayesian analysis, this study classified into two sessions. First session, introduced Bayesian methodology for claim reserving. Second session, proposed a compound model as a probabilistic approach and the Bayesian expansion models by applying Monte Carlo simulation for claim reserving.

Pacáková (2013) applied Bayesian credibility analysis to estimate parameters for several statistical distributions with given prior distribution. Furthermore, estimate the credibility premium or credibility number of claims in insurance.

Linda and Kubanová (2012) used real data from five insurance companies to calculate premiums for motor third-party liability insurance based on Bühlmann-Straub credibility as a methodology to improve the quality of net premium estimation.

Seinerová (2015) illustrated and application of Bühlmann Straub model to estimate the credibility costs by combining individual and collective experience throughout the credibility factor as a confidence level. This model is applied for health care insurance.

Atanasiu (2005) illustrated how to estimate the insurance cost using the greatest accuracy theory, by applying Bühlmann-Straub model. Furthermore, this study considered the development of

Bayesian credibility theory to measure the credibility net premium.

Boland (2007) illustrated an introduction on credibility theory; he applied Bayesian analysis in different fields (i.e. insurance and actuarial sciences). Furthermore, he used R package as statistical software to analyse the empirical results.

Hendrych and Cipra (2017) demonstrated the dynamic linear system of simultaneous equations for non-life insurance market in Czech; they used these equations to estimate the desired variables i.e. (outstanding claims, unearned premiums, other technical provision and loadings). This approach might motivate development of internal models applicable in the Solvency II framework.

Merz and Wüthrich (2009) discussed the issue of claim reserving position in the financial statements and discovered the huge portion of claims reserves. Moreover, they estimate and adequate amount of claim reserves for all branches and entire market.

### 3. Data and Methodology

Credibility theory is an actuarial approach used to calculate the short term insurance premiums. This approach is used to estimate premiums for each risk based on two ingredients: past data from the risk itself and data collected from other sources.

Data adopted in this paper are incurred claims from six different branches and the number of extreme losses observed from each branch for the period from 2006 to 2015. These data are reported in the Financial Regulatory Authority (FRA) for non-life insurance companies.

In this research we fit a statistical distribution for each risk (i.e. each branch) and estimate the statistical characteristics for each branch. Also we simulate the incurred claims in order to observe the number of extreme losses to apply Bühlmann-Straub credibility to predict the net premium as a linear function of the prior claims and the number of extreme events.

All statistical methods and calculations will be performed using the R Package that is an open source environment for mathematical and statistical computations. The {actuar} package is used to apply Bühlmann and Bühlmann-Straub credibility.

## 4. Models

### 4.1 Bühlmann credibility model

The Bühlmann credibility model assumes that statistical distribution, random variables  $\{X_1, X_2, \dots, X_N, X_{N+1}, \dots\}$  are independently and identically distributed (*i.i.d.*).

As mentioned above the credibility premium consists of two ingredients, then

$$C = Z P_r + (1 - Z) \mu \tag{1}$$

where  $C$  represents the estimated pure premium,  $P_r$  referred to the estimation based on the prior data for each branch and  $Z$  is the credibility factor which is a number between 0 and 1 that measure how much reliance the insurer is ready to face its own risk.

The Bühlmann credibility approach estimates the credibility premium from each risk; this model has been derived in Bühlmann (1976), and concluded the following results

$$E(m(\theta)|x) = Z \bar{x} + (1 - Z) E(m(\theta)) \tag{2}$$

and the credibility factor

$$Z = \frac{n}{n + \frac{E(s^2(\theta))}{VAR(E(m(\theta)))}} \tag{3}$$

where  $E(m(\theta))$  is the collective premium,  $E(s^2(\theta))$  is within risk variance and  $VAR(E(m(\theta)))$  between risk variance.

$$E(m(\theta)) = \bar{X} \tag{4}$$

$$E(s^2(\theta)) = \frac{1}{N} \sum_{i=1}^N \frac{1}{N-1} \sum_{j=1}^n (X_{ij} - \bar{X}_i)^2 \tag{5}$$

Where

$$m(\theta) = E[X_{ij} | \theta_i]$$

$$s^2(\theta) = VAR[X_{ij} | \theta_i]$$

And

$$VAR(E(m(\theta))) = \frac{1}{N-1} \sum_{i=1}^N (\bar{X}_i - \bar{X})^2 - \frac{1}{Nn} \sum_{i=1}^N \frac{1}{n-1} \sum_{j=1}^n (X_{ij} - \bar{X}_i)^2 \quad (6)$$

The derivations of the above quantities can be found in Bühlmann (1967).

### 4.2 Bühlmann-Straub credibility model

The Bühlmann-Straub model doesn't assume that the random variables  $\{X_1, X_2, \dots, X_N, X_{N+1}, \dots\}$  are independently and identically distributed (**i.i.d**) as an extent to Bühlmann credibility model.

According to Bühlmann-Straub (1970) the estimation of the net credible premium for the  $i$ -th risk can be expressed as follows:

$$E(m(\theta)|x) = Z_i \bar{X} + (1 - Z_i) \bar{X} \quad (7)$$

The credibility factor for each  $i$  risk  $Z_i$  is calculated from the formula

$$Z_i = \frac{P_i}{P_i + \frac{E(s^2(\theta))}{VAR(E(m(\theta)))}} \quad (8)$$

where

$$E(s^2(\theta)) = \frac{1}{N(n-1)} \sum_{i=1}^N \sum_{j=1}^n P_{ij} (X_{ij} - \bar{X}_i)^2 \quad (9)$$

$$VAR(E(m(\theta))) = P^* \left\{ \begin{aligned} &\frac{1}{Nn-1} \sum_{i=1}^N \sum_{j=1}^n P_{ij} (X_{ij} - \bar{X})^2 \\ &- \frac{1}{N(n-1)} \sum_{i=1}^N \sum_{j=1}^n (X_{ij} - \bar{X}_i)^2 \end{aligned} \right\} \quad (10)$$

$$\bar{X}_i = \frac{1}{P_i} \sum_{j=1}^n P_{ij} X_{ij} = \frac{1}{P_i} \sum_{j=1}^n Y_{ij} \quad (11)$$

$$\bar{X} = \frac{1}{P} \sum_{i=1}^N P_i \bar{X}_i \quad (12)$$

$$P^* = \frac{1}{N(n-1)} \sum_{i=1}^N P_i \left(1 - \frac{P_i}{P}\right) \quad (13)$$

and  $P_{ij}$  is the number of extreme losses of the  $i$ -th risk in year  $j$ .

## 5. Empirical Findings

### 5.1 Descriptive analysis

We will start this section by determining the statistical characteristics of each risk (i.e. branch of insurance).

Tables (3) summarize the statistical characteristics of each insurance branch, showing the four moments and the quartiles.

**Table 3 » Descriptive analysis for claim amounts per branch**

	Mean	Median	Q <sub>1</sub>	Q <sub>3</sub>	St.Dev.	Skewness	Kurtosis
Fire	92424.8	70362	61953.25	113700.8	78736.62	1.50	3.20
Marine	21701.9	20745	-3738.25	51179.25	45488.71	0.16	-0.86
Aviation	36327.3	43876.5	13427.75	59404	28356.91	-0.67	-1.32
Marine-hull	14783.7	13933	7135.75	23227.75	11512.32	-0.02	-1.17
Oil	60855.3	44288	13774.5	111265.5	97166.49	0.56	1.16
Engineering	37767.8	38773	24889.75	45903	20398.71	0.35	-0.22

Source: Authors' calculations.

**Table 4 » Summary of parameters estimated for each risk**

Branch	Distribution	Estimated Parameter	Standard Error
Fire	Lognormal	$\mu = 10.96$ $\sigma = 1.19$	0.1969544 0.1392662
Marine	Normal	$\mu = 21701.90$ $\sigma = 43154.38$	11863.28 11863.28
Aviation	Normal	$\mu = 36327.30$ $\sigma = 26901.73$	8507.601 5671.734
Marine-Hull	Normal	$\mu = 14783.70$ $\sigma = 10921.54$	3424.635 2473.666
Oil	Normal	$\mu = 60855.30$ $\sigma = 92180.22$	N/A N/A
Engineering	Lognormal	$\mu = 10.37$ $\sigma = 0.63$	0.1969544 0.1392662

Source: Authors' calculations based on results from R Package.

Table (4) summarizes the results obtained from fitting a statistical distribution of each insurance branch and the estimated parameters for each distribution after performing 1000 simulations. See Appendix.

### 5.2 Application of Bühlmann credibility approach

In this section we are about to estimate the quantities  $E(m(\theta))$ ,  $E(s^2(\theta))$  and  $VAR(E(m(\theta)))$  in order to calculate the credibility factor  $Z$ , then estimate the credibility premiums for each branch of insurance based on data from Table (1).

From equations (1) to (6), we calculate the quantities mentioned above and these results are summarized in Table (5).

Where

$$E(m(\theta)) = 43976.8, E(s^2(\theta)) = 3177126666, \\ VAR(E(m(\theta))) = 49780078 \text{ and the credibility factor } Z = 0.6104139.$$

### 5.2 Application of Bühlmann-Straub credibility approach

Bühlmann-Straub credibility approach is applied to calculate the net credible premium for each branch  $i$ , ( $i = 1, 2 \dots N, N=6$ ) based on the number of extreme events per year  $j$ , ( $j = 1, 2 \dots n, n=10$ ).

From equations (11) to (13), we obtain the results in Table (6).

$$\text{where } P_i = \sum_{j=1}^n P_{ij}, Y_i = \sum_{j=1}^n Y_{ij}$$

Table (6) presents the number of extreme events for each branch of insurance ( $P_i$ ), also the total amount of claims incurred per branch ( $Y_i$ ) in order to calculate the average insured extreme events ( $\bar{X}_i$ ).

According to equations (7) to (10) the credibility factor  $Z_i$  is calculated for each branch of insurance, then the value of net premiums are estimated using Bühlmann-Straub model in Table (7).

Table (7) provides the net premiums for each branch of insurance showing how much money each branch will need to cover extreme events in year 2016.

where

$E(m(\theta)) = 96097.37$ ,  $E(s^2(\theta)) = 15012766748$  and  $VAR(E(m(\theta))) = 3589046514$ .

### 6. Conclusion

Bühlmann and Bühlmann-Straub credibility approaches represent a recent development of the Bayesian credibility theory; these models apply the greatest accuracy theory. In this study we im-

**Table 5 » Results of Bühlmann Credibility Model**

Branch	Mean (	Credibility Premium (C)
Fire	92424.8	73550.13
Marine	21701.9	30379.89
Aviation	36327.3	39307.44
Marine-Hull	14783.7	26156.92
Oil	60855.3	54279.67
Engineering	37767.8	40186.74

Source: Authors' calculations based on results from R Package.

**Table 6 » Computed characteristics of Branches**

Branch	Total number of extremes (P <sub>i</sub> )	Total amount of Claims (Y <sub>i</sub> )	
Fire	102	924248	9061
Marine	3	217019	72340
Aviation	3	363273	121091
Marine-Hull	1	147837	147837
Oil	4	608553	152138
Engineering	45	377678	8393

Source: Authors' calculations.

**Table 7 » Credibility factors and estimates of net insurance premiums per branch in 2016**

Branch	Credibility factor (Z <sub>i</sub> )	Net Insurance Premium
Fire	0.9606063	148894.09
Marine	0.4176563	87219.65
Aviation	0.4176563	82215.29
Marine-Hull	0.1929407	83512.35
Oil	0.4888219	122723.80
Engineering	0.9149514	52019.00

Source: Authors' calculations based on result from R Package.

proved Bühlmann and Bühlmann-Straub credibility models as a joint distribution in order to estimate the net credible premium using incurred claims and extreme losses. However, we adopt Bühlmann-Straub credibility because it doesn't assume that risks are independently and identically distributed (*i.i.d.*). Our research concentrates on six branches of Egyptian non-life insurance market during the period from 2006 to 2015. Furthermore, these branches include extreme events to predict

the credibility net premium for the upcoming year 2016 for each branch of insurance as shown Table (7). Moreover, this process show how much money each branch will need to cover extreme events in order to manage risks.

Future research may consider fluctuation in claim amounts resulted from extreme losses or lapses in insurance policies, based on the economic changes that happens in the Egyptian insurance market.

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### Appendix

Figure 2 » pdf, CDF and Cullen and Frey graph for fire claims

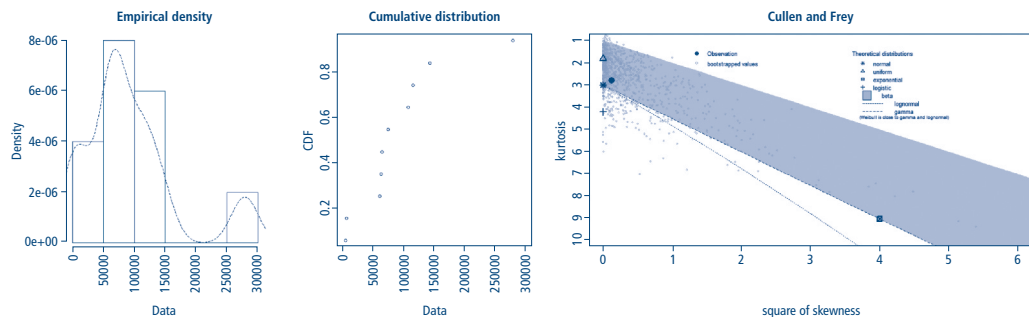


Figure 3 » pdf, CDF and Cullen and Frey graph for marine claims

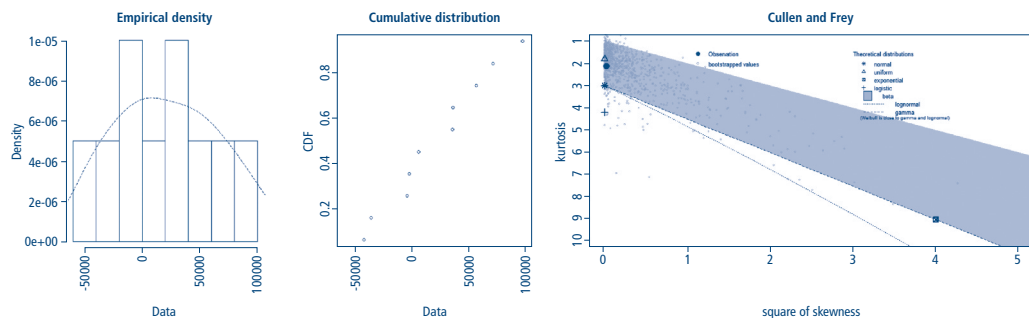
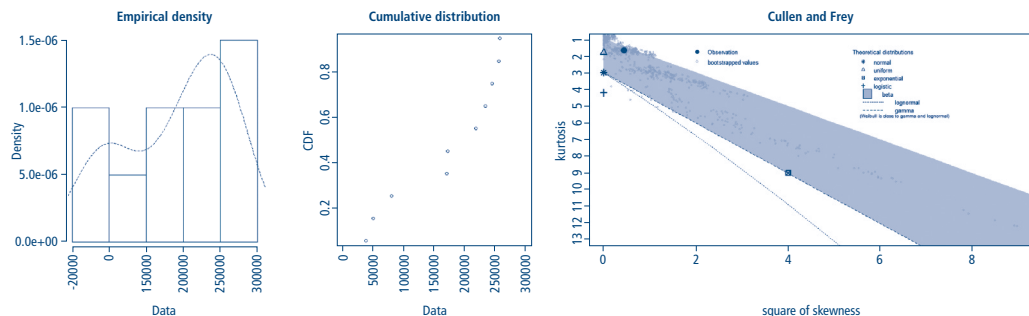
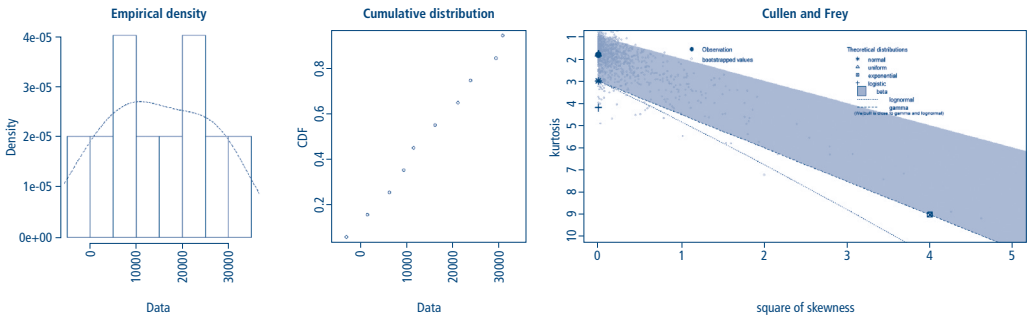


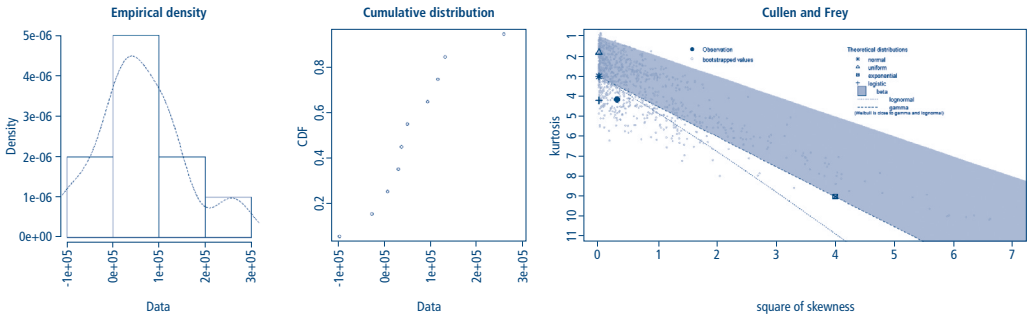
Figure 4 » pdf, CDF and Cullen and Frey graph for aviation claims



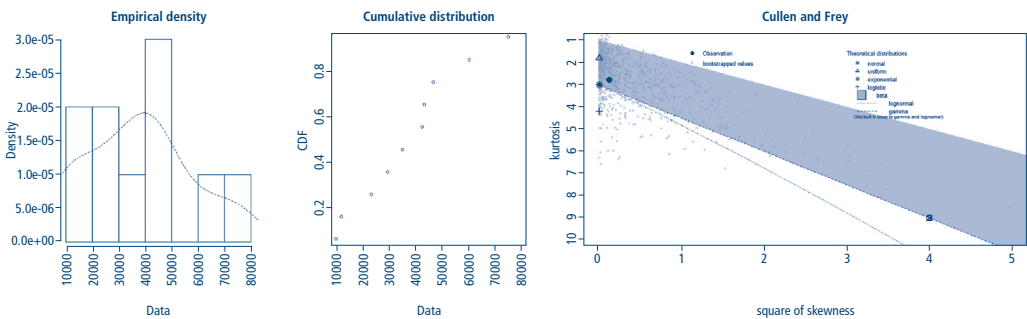
→ **Figure 5** » pdf, CDF and Cullen and Frey graph for marine-hull claims



**Figure 6** » pdf, CDF and Cullen and Frey graph for oil claims



**Figure 7** » pdf, CDF and Cullen and Frey graph for engineering claims



Figures (2) to (7) present the density function and the distribution function of incurred claims for each branch, also it shows Cullen and Frey graph that gives the best fit for each distribution. ✕



# Corruption and Institutional Economics: Is There A Way To Get Out? Case Studies from Egypt & Czech Republic

- ▶ Taghreed Hassouba » Cairo university; email: taghreedhassouba@feps.edu.eg
- ▶ Karina Benetti » Newton College; email: karina.benetti@newtoncollege.cz, karina.benetti@tul.cz

## \* 1. Introduction

Through every nation's journey towards development, maintaining social welfare and achieving higher economic growth, corruption remained as a commonly hidden ghost that slows down the wheel to success and in some cases stops its progress completely. It is perceived as a virus in a community which – if not healed – keeps spelling over until it covers the whole society. Due to its critical role, corruption has been defined in various ways by many scholars and international institutions including the World Bank which framed it as “the abuse of public officer for a private gain”.

There are many factors that have been participated in the recent attention that corruption is receiving today compared to earlier times. The domination of democracy, as a political doctrine and commonly widespread goal too many nations which required adoption of subsequent principles including ending corruption, plays a countable role (Harris-White and White, 1996:2). Moreover the prediction of many scholars that corruption is not only epidemic but also expected to increase sheds more light towards the phenomenon (Harris-White, and White, 1996:1). In addition, the current worldwide attention to sustainable development 2030 agenda triggers a constant reference to corruption as a barrier to new development re-

forms. The sixteenth goal in SDGs, “Peace, justice, and strong institutions” aims to oppose corruption, increase transparency, and enhance availability of information.

No doubt the power of government institutions and legal system determine the extent and degree of the virus pervasiveness. To state it differently the efficiency through which public institutions operate can limit corruption and also can pave the way which can be translated into many commonly known forms such as bribes, misusing public funds ... etc. That power keeps a whole responsibility on government shoulders, which is entitled to do the appropriate efforts to control corruption pervasiveness and lessen its effects.

The main objective of this paper is to discuss the relationship between institutions and corruption while focusing on governmental efforts and institutional initiatives to reduce this level of corruption.

It will be discussing the role of institutions in contributing to the flourishing of the economy. The paper uses a qualitative methodology, where case studies of other countries on the same topic have been discussed in order to support the main focus which is not only the Egyptian case. As Egypt and the Czech Republic encountered several corrupt political and economic institutions that led to a downturn in the economy, it adds significance



when discussing it. The paper concludes with some policy recommendations as a result of the lessons learned mainly from the Egyptian case and other cases to be mentioned. The results of the study appear that the corruption-growth relationship in the framework of institutions can definitely be an obstacle for economic growth, especially in developing economies.

## 2. Methodology

The research is based on the study about the relationship between corruption and institutional economics over the period 1996 to 2017.

For the analysis were used secondary data from the Transparency International, namely Corruption Perceptions Index and Corruption Rank.

In the research were particular used this scientific methods: method of deduction, methods of graphical and tabular representation of data, comparative analysis and synthesis of partial knowledge.

## 3. Literature Review

Nguyen & Pham (2016) examined the impact of corruption in the context of transaction cost economics for the public healthcare services in Vietnam. They analysed transaction costs of corruption according to the order in which the transactions were operated starting with the searching and information costs then the negotiation costs then the monitoring and enforcement costs. They made a survey to investigate the relationship in question taking a sample of 274 observations which showed that corruption in the public healthcare services exist in 2 forms: market corruption and parochial corruption. In addition to a quantitative analysis using Logit Regression Models and Multinomial Logit Model which concluded that parochial corruption had a higher level of stability compared with market corruption because it is harder to detect.

Lisciandra and Millemaci (2015) studied the ef-

fect of corruption on economic growth in Italy on a regional level using a panel data from 1968 to 2011 and they found a negative significant relation between corruption and long term economic growth on average and for each Italian region. So if there is no corruption the economic growth will be maximized. This effect is nonlinear so that the negative effect of corruption on economic growth becomes small as corruption increases.

Mousavi and Pourkiani (2013) found that administrative corruption is a phenomenon that is considered to be one of the main problems in the world that affect negatively the social development of any nation. It is very complicated that many government programs against corruption have failed because of Socio-cultural, economic, political and administrative factors. As in Iran it effects social and national development negatively in addition to the cost that the country and the people bear as in the macro level by increasing the gap between the poor and the rich which lead the people not to trust the social system.

Another study on cross sectional countries showed that the increase in the rule of law in developing countries decreases corruption however, it doesn't decrease it too much in developed countries as it already applies the law (Mendonca & Fonseca, 2012).

Ebben& De Vaal (2009) investigated the impact of corruption as a part of the institutional framework on economic growth. They constructed a two-layer model to capture the direct and indirect effects that corruption has on economic growth. The first layer models the direct relationship between corruption on economic growth and the second layer models how the interplay between corruption and institutions affects this relationship. In addition, they included other institutional settings such as the type of the political system and the degree of protection of property rights which can also be considered as features of the institutional environment affecting the relation between corruption and growth. They found that corruption will have different effects in different institutional settings

and the effects of corruption on the economy will therefore differ from place to place and from time to time. Herzfeld and Weiss (2003) showed in their study on cross-sectional and panel data that there is a significant inter-relationship between an effective legal system and corruption.

Gyimah (2002) studies the impact of corruption on economic growth and income inequality in African countries using a dynamic panel estimator and a panel data during 1990's. He found that corruption directly decreases economic growth and indirectly through decreasing the investment in physical capital. He found also that corruption has a positive relation with income inequality which makes poor people bear the effect of corruption on the economy not the rich people.

Lambsdorff (1999) reviewed and studied a large variety of empirical researches on the causes and consequences of corruption. In his study of the causes of corruption he pointed out the most common causes that were tackled by the previous researchers, which include Policy Distortion, Lack of Competition, Public Institutions, Public Salaries, Cultural Determinants and Poverty and Inequality. Regarding his research on the impact and consequences of corruption which focuses on Institutional quality, GDP<sup>1</sup>, Government expenditures, FDI<sup>2</sup> and international flows of goods, aid and capital. In his conclusion on the impact of corruption he found that some studies agreed on the direction of the effect whether positive, negative or no effect at all. With respect to the causes of corruption not all results were consistent as well.

Shleifer and Vishny (1993) theoretically concluded that corruption is linked to inefficient government institutions and political processes. It is worth mentioning the role of the independent judiciary systems in decreasing the level of corruption, even if it is possible that the judges could be bribed, but still it plays an important role.

To conclude, corruption has a negative effect

on all aspects of the economy and it hinders economic growth and economic development as well. The empirical evidence agrees that administrative corruption is linked to the effectiveness of institutions. With a strong judiciary system and well organized rules and regulations, administrative corruption is minimized and vice versa. It is proved also that there is a negative relation between administrative corruption and economic growth. So countries should exert effort in enacting laws to fight corruption and ensure the enforcement of these laws.

### 5. Stylized Facts

There is a raising concern about corruption nowadays globally due to its effect on economic growth, economic development and the welfare of the society. Corruption is defined by the World Bank as "The abuse of public officer for a private gain". According to that any action that doesn't follow the set of rules and regulations in order to achieve a private gain is considered administrative corruption. According to World Bank, bribes paid by individuals and firms amount to \$1 trillion annually accounting for 5% of GDP (Healy and Serafeim, 2016).

Macrae (1982) refers to corruption as "an arrangement that involves an exchange between two parties (the demander and the supplier) which has an influence on the allocation of resources either immediately or in the future; and involves the use or abuse of public or collective responsibility for private ends. This definition is in line with the definition of the World Bank. Thus the risk of corruption in the corporate sector is a very significant issue that needs to be tackled. Corruption risk is defined by Transparency International (TI).

Examples on administrative corruption can be concluded in several forms. The misuseage of power to get money or gifts, forge in governmental pa-

<sup>1</sup> Gross Domestic Product

<sup>2</sup> Foreign Direct Investment

pers for private interest, the usage of public funds for personal interest, the misuse of the organization's properties such as cars, giving wrong financial statements to evade from taxes, extracting illegal permits and discrimination among different people (Ali, 2017). Becker and Stigler (1974), Rose-Ackerman (1975, 1978), Banfield (1975), and Klitgaard (1988, 1991) studied corruption from a microeconomic perspective and developed principal-agent models. The basic idea behind these models is that incentives to engage in crime depend on expected rewards and on the probability of being caught.

The TI Corruption Perceptions Index (CPI) ranks countries in terms of the degree of corruption perceived among public officials and politicians. It is a composite index, drawing on 14 polls and surveys from seven independent institutions carried out among business people, including residents, and country analysts. The surveys used in compiling its CPI tend to ask questions in line with the misuse of public power for private benefits, with a focus, for example, on bribe-taking by public officials in public procurement. Another indicator, which can be for international comparisons about the corruption used in the research is the IT Corruption Rank. The Corruption Perceptions Index ranks countries and territories based on how corrupt their public sector is perceived to be. A country or territory's rank indicates its position relative to the other countries and territories in the index.

Institutions are the set of formal and informal rules and constraints that regulates the political, social and economic interactions (North, 2010). Private firms, non-profitable and international organizations use several surveys to explain the aspects of what is called "The quality of institutions". These aspects include protecting the property rights, corruption and the enforcement of rule of law (Popescu, 2003).

Finally, corruption is one of the critical issues that prevail in many countries; it is more persistent in developing countries than in developed coun-

tries. According to Mashal (2011) it can be caused by several factors:

- Motivation to earn income is extremely strong due to: Poverty, Low salaries (wages), High risks of all kinds (illness, accidents and unemployment); (lack of insurance).
- Opportunities to engage in corruption are numerous, more regulations lead to higher opportunities for corruption.
- Weak legislative and judicial systems:
- Law and principles of ethics are poorly developed.
- Population relative to natural resources is large.
- Political instability and weak political will.

Based on the previous elaboration, Corruption is expected to deteriorate management quality through three main channels. First, corruption may urge managers to engage in activities that are not directly productive, such as alluring public officials through unofficial payments or gifts in exchange for various services, licenses or contracts. In a corrupt environment, the marginal payoffs of overseeing employees and coordinating the production process may be lower than those of negotiating with public officials. As a result managerial rewards are less linked to the efficiency of the production process and managers would be expected to trade off aspects of operational efficiency in order to deal with a corrupt public sector (Dal Bo and Rossi, 2007). Firm owners may also favor managers with local ties in their recruitment strategy instead of focusing on the human capital, experience and management skills of managers.

Second, firms may adopt specific forms of governance to deal with the conditions of a corrupt business environment. For example; regulatory extortion may put pressure on firms to maintain secrecy for some of their activities. Similarly, managers may have to conceal their illegal interactions with the state. This can create a lack of trust between co-workers and undermine management quality (La Porta et al., 1997). Finally, in a corrupt environment, firms may pay bribes to outbid competing parties in public procurement and influence

government regulations which also has spill over effects on other firms. Public procurement processes and regulations would in turn not impose sufficient pressure for the development of effective firm strategies, firm restructuring, and employee empowerment, resulting in lower management quality. For example, Yakovlev and Zhuravskaya (2013) show that the most corrupt regions in Russia delay or circumvent the implementation of liberalization policies.

### 6. Case Studies from Other Developing Countries

This paper represents a qualitative method for explaining the effect of institutional corruption on the economic growth. Case studies for some developing countries will be represented in this section to have a better understanding of how the institutional corruption can hinder economic growth and the reason of considering the developing countries is the weak institutional governance and organization.

Developing countries have greater probability of having institutional corruption because of the absence of strong rules and regulations governing the political and economic systems.

Nowadays, most developing countries such as in Africa have weak institutional governance leading to corruption and affecting their growth negatively while Asian countries with higher centralized system have good and stable institutions, which makes them in continuous growth. (Salma Haj Fraj & Amira Lachhab, 2015)

Nigeria and Zaire or Democratic republic of Congo (DRC) are two African countries, which we can see their loss due to corruption in the last few years. (Wouter Ebben & Albert de Vaal, 2011)

Nigeria is an example for institutional corruption; it is one of the most corrupted countries in the world. Due to institutional corruption, citizens suffered a lot and this corruption affected the country's economy and the overall welfare of the country.

The corruption in Nigeria appears in several forms, which are Bribery, Abuse of Discretion and Abuse of Office, Stealing, Fraud, and Misappropriation and Extortion and the personal benefit was the main purpose in institutions in Nigeria, as we can say that the state interest came at the end. Bribery is one of the most common features of corruption as it was estimated to be \$1.5 trillion in bribes each year, 2% of the global GDP (World Bank, 2017) and it can be defined as "Dishonestly persuade (someone) to act in one's favor by a gift of money or other inducement." (The Oxford English Dictionary).

Bribery took place in organizations to do work for self-interest and using the government power of personal benefit not for the sake of the country.

Stealing and fraud prevailed as a result of weak regulations and laws; there was no such enforcing laws to prevent them, money that could be used for the benefit of the country also was stolen for personal benefit.

Finally, extortion also was one of the main manifestation for corruption, we can see weak institutional organization for the police authority in Nigeria, the power was used to protect special people and they used extortion on victims to gain money.

All these forms of corruption affected the country's welfare leading to weak political, economic development and security. For the economic dimension, we can say that Nigeria had very little domestic investment as well as failing to attract foreign investment and production, the country's resources were wasted, and this all led to inefficient economics system making people who do not deserve it to remain in Business and have power while other efficient business went out of business. (Nnamdi Ikpeze, 2013)

Taking the case of Zaire (Democratic Republic of Congo now), institutional corruption led to lack of economic development leading to state failure, people in this country are very poor, hungry and they expect the least from the government. This is all due to institutional corruption and weak organizations.

Looking at the history, Zaire was a predatory state under the presidency of Mobutu Sese Seko who was a dictator and the citizens had very weak power in their state, there was no equality between the citizens and elites took power due to unfair systems in the country.

The state infrastructure in Zaire was outdated preventing it from coping with the external world and having sustainable economic growth and this is a very good example for the importance of good institutional organizations for any country to prevent it from failure.

The institutional corruption in Zaire led to the inability to make a good taxing system, good legislative, executive and judiciary systems leading to corrupted governmental institutions, it also failed to maintain a strong economic system making it depending on external loans.

These weak systems made the country's economy fall and dependent to foreign aid and people were starving due to the absence of good political strategy helping in having strong institutions to save the country from this corruption leaving it with no hope to survive again.

We can conclude from Zaire case that the institutional corruption, which benefited the elite only, hindered the economic development in it to extreme levels leading to state failure and this is the worst result, which an institutional corruption can lead to. (Adam Zachariah Trautman, 2013).

As corruption existed all around the world not only in Africa, this paper will represent another case, which is Armenia. We can see that Armenia also had institutional corruption in many institutional sectors health, educational, military as well as the persistence of money laundering which are forms of corruption affecting the economic development of any country. (A team of PFA members and outside experts, 2013)

As it was mentioned before, Armenia had several corruption manifestations as bribery, extortion,

theft of governmental resources, misuse of public property and funds and many other features resulting from weak and corrupted institutions.

Institutions were not transparent enough, monopoly existed, also there was no good political and economic systems leading to more corruption.

For the economic dimension, Institutional corruption in Armenia hindered economic development, as it reduced the resources and funds, which can be used for public investment and reduced trust of other countries to encourage investments in the country and because of increased risk the rate of return on investments also decreased.

Institutional corruption also affected human capital, which is very important for economic development in addition; Armenia like most of the corrupted countries had weak and corrupted tax system leading to tax evasion reducing the economic development more and more. (Voskanyan, 2000)

Finally, we can say that the institutional corruption in Nigeria, DRC<sup>3</sup> and Armenia hindered economic growth mainly by shifting resources away from important investments.

In addition to increasing the government spending in order to fight the corruption, reducing foreign investments, also institutional corruption in the educational sector reduces the human capital and these not the only complications of institutional corruption on economic growth but at the end they all lead to wasting the country's resources available for economic development.

## 7. Corruption in Egypt and in the Czech Republic

The Global Corruption Barometer, which is published annually by TI, provides the most comprehensive information on the level of corruption in the country. The latest country-specific report was issued in 2013. More aggregate information was is-

<sup>3</sup> Democratic Republic of the Congo

sued for the period 2014–2016. Another important source of information on the level of corruption in the country is the Business Anti-Corruption Portal. Conclusions on the level of corruption in the countries surveyed are given below.

### 7.1 Specification of Corruption in Egypt and in the Czech Republic

Corruption is an obstacle for businesses in Egypt. Bribery, embezzlement, tampering with official documents and extortion are among the forms of corruption encountered. A culture of nepotism and favouritism has tainted Egypt's economy and its investment climate. *Baksheesh*, literally meaning bribery, is part of Egyptians' everyday life.

There are many reasons behind corruption: economic, administrative, legal, institutional and social reasons beside the lack of transparency. The economic reasons can be summarized as following: the low income levels and inequality in income distribution, excessive government spending which drive the country's resources in the wrong direction and the expansion of establishing special funds<sup>4</sup>. The legal reasons are the weak protection of witnesses, experts, victims and who report for corrupt behaviour, legal proceedings take a lot of time and the weak implementation of penalties on corruption crimes. The social reasons are as following: the weak effect of social values traditions in combating corruption, the weak trust of people in governments, nepotism and not taking the social responsibility and the social acceptance of small corruption.

Concerning the institutional and administrative reasons behind the high level of corruption in Egypt can be summarized as following: First, the challenges that face some of the monitoring entities like the restrictions on the procedures that are related to verification of those who are employed in high positions in the administrative sector of the

state, lack of power of the monitoring entities to do their role and the lack of human and physical resources to some other monitoring entities. Second, some monitoring entities that responsible for combating corruption in Egypt don't have the full independence as they follow the executive authority. Third, the lack of coordination between the monitoring entities. Fourth, Lack of full awareness among citizens of anti-corruption entities. Fifth, bureaucracy and the complexity of the procedures. Finally, the absence of a good governance framework. (Ministry of Planning, 2014)

Briefly speaking, a poor legal framework and a widespread culture of corruption leave businesses reliant on strong connections and the use of middlemen (known as *wasta*) to operate, and well-connected businesses enjoy privileged treatment. Egypt's Penal Code criminalizes several forms of corruption such as active and passive bribery and abuse of office, but existing legislation is unevenly enforced, leading government officials to act with impunity. Facilitation payments and gifts are an established part of "getting things done," despite these practices being criminalized under Egyptian law.

As a result of the above reasons, several forms of corruption are deeply rooted in the Egyptian society. First, petty corruption, Petty corruption is generally defined as a bribe – paid by ordinary citizens. In the Egyptian society, petty corruption takes several names such as grease or facilitation. Petty corruption is defined by the Egyptian citizens as an extra cost the person has to bear to get work done. According to TI, petty corruption is most common in the following sectors, police, registry, and permit service. In addition to the previous sectors, petty corruption is observed in the private sector. The second type of corruption is grand corruption. Grand corruption is mainly observed in acquiring the permits in construction and infrastructure sectors. In addition to, Nepotism is high-

<sup>4</sup> Special funds are fees imposed on citizens and exist is funds that follow some entities that are outside the public budget and so can't be monitored by the Egyptian parliament.



ly noted in the Egyptian economy. Employment is affected by the personal network connections. Nepotism leads to a negative impact on the economy resulting in inefficiency and frustrating innovation. Thus, grand corruption is considered as one of the barriers to do business in Egypt. Grand corruption can be traced to the partial liberalization economic system in Egypt that created a corrupt comrade capitalism. Finally, political corruption, political corruption is one the reasons behind 25 revolutions. Separation of power and lack of transparency and accountability is one of the causes of political corruption in Egypt. (Transparency International, 2015).

The results of the Global Corruption Barometer (2013) reveals that:

- 72% of respondents in Egypt who felt that political parties were corrupt/extremely corrupt;
- 71% of respondents in Egypt who felt that parliament/legislature was corrupt/extremely corrupt;
- 45% of respondents in Egypt who felt that military was corrupt/extremely corrupt;
- 32% of respondents in Egypt who felt that NGOs were corrupt/extremely corrupt;
- 80% of respondents in Egypt who felt that media was corrupt/extremely corrupt;
- 31% of respondents in Egypt who felt that religious bodies were corrupt/extremely corrupt;
- 48% of respondents in Egypt who felt that business was corrupt/extremely corrupt;
- 67% of respondents in Egypt who felt that education systems were corrupt/extremely corrupt;
- 65% of respondents in Egypt who felt that judiciary was corrupt/extremely corrupt;
- 73% of respondents in Egypt who felt that medical and health services were corrupt/extremely corrupt;
- 78% of respondents in Egypt who felt that police were corrupt/extremely corrupt;
- 76% of respondents in Egypt who felt that public officials and civil servants were corrupt/extremely corrupt.

The results for the Czech Republic will be listed below.

Corruption can impede in the Czech Republic in a number of business sectors. Corruption risks in the public procurement sector are perceived to be especially high, but many other sectors, including the public administration, carry moderate corruption risks. Patronage and nepotism are considered especially problematic in the country.

Patronage and nepotism are considered especially problematic in the country. The Criminal Code criminalizes attempted corruption, extortion, active and passive bribery, bribery of foreign officials and money laundering. The Czech Republic prohibits facilitation payments and any gift given with the intent to illegally influence decision-making may be considered a bribe. Criminal liability for legal entities covers domestic and foreign corporate entities registered in the Czech Republic. Nonetheless, the government does not implement the legal anti-corruption framework effectively. Although the majority of citizens do not encounter petty corruption in their daily lives, bribes or gifts are occasionally needed to speed up public administration processes.

The results of the Global Corruption Barometer (2013) reveals that:

- 73 % of the surveyed Czechs consider political parties to be “corrupt” or “extremely corrupt”;
- 59% of respondents in the Czech Republic who felt that parliament / legislature was corrupt/extremely corrupt;
- 47% of respondents in the Czech Republic who felt that military was corrupt/extremely corrupt;
- 20% of respondents in the Czech Republic who felt that NGOs were corrupt/extremely corrupt;
- 28% of respondents in the Czech Republic who felt that media was corrupt/extremely corrupt;
- 17% of respondents in the Czech Republic who felt that religious bodies were corrupt/extremely corrupt;
- 45% of respondents in the Czech Republic who felt that business was corrupt/extremely corrupt;
- 30% of respondents in the Czech Republic who felt that education systems were corrupt/extremely corrupt;



- 52% of respondents in the Czech Republic who felt that judiciary was corrupt/extremely corrupt;
- 43% of respondents in the Czech Republic who felt that medical and health services were corrupt/extremely corrupt;
- 54% of respondents in the Czech Republic who felt that police were corrupt/extremely corrupt;
- 71% of respondents in the Czech Republic who felt that public officials and civil servants were corrupt/extremely corrupt.

## 7.2 Egypt's and Czech Republics Corruption Index

A country's index indicates its position relative to the other countries and territories included in the index. This year's index includes 176 countries and territories.

According to the Corruption Perceptions Index (CPI)<sup>5</sup> in 2017 Egypt was ranked the 117 out of 176 countries analyzed, with a score of 32 (Transparency International, 2017). Egypt's score of 32 indicates that it is relatively corrupt compared to other countries such as New Zealand and Denmark with scores of 89 and 88 respectively.

Czech Republic scored 57 points out of 100 on the 2017 Corruption Perceptions Index reported by TI. Corruption Index in Czech Republic averaged 47.71 points from 1996 until 2017, reaching an all-time high of 57 points in 2017 and a record low of 37 points in 2002.

Czech Republic is decreased in the ranking of the (CPI) in 2017 between world countries as its rank decreased from 47 in 2016 with score 55 to 42 with score 57 in 2017. Here is very interesting, that the score was increased for 2 points. The immediate two-point improvement brought about a single sub-factor, namely the Sustainable Government Index (SGI), which detected that in the Czech Repub-

lic some anti-corruption laws were put into practice in 2017, in other words, their implementation took place (eg the register of final owners, financing of political parties, regulation of gambling). However, SGI is no longer evaluating the quality of legislation or the implementation itself.

In all other aspects of the CPI rating, the Czech Republic has stagnated.

Egypt scored 32 points out of 100 on the 2017 Corruption Perceptions Index reported by TI. Corruption Index in Egypt averaged 31.97 points from 1996 until 2017, reaching an all-time high of 37 points in 2014 and a record low of 28 points in 2008.

Egypt is falling in the ranking of the CPI in 2017 between world countries as its rank decreased from 108 in 2016 with score 34 to 117 in 2017.

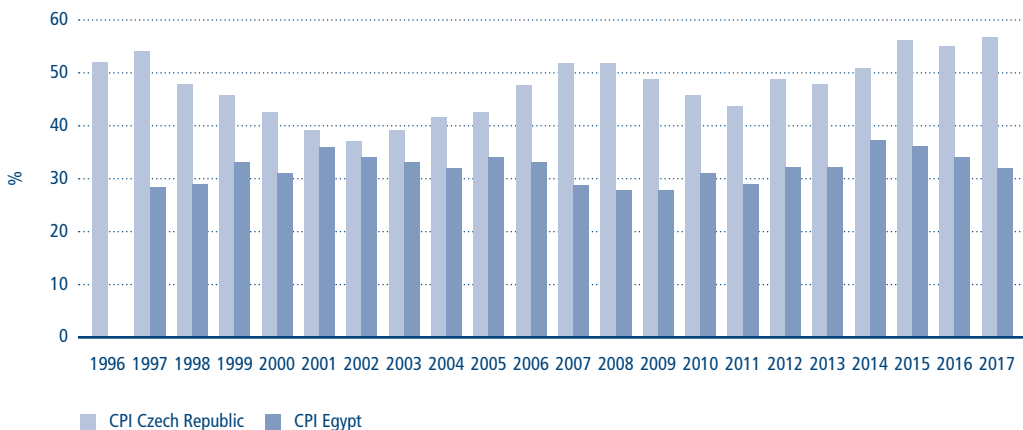
Figure 1 indicates that the level of CPI in Egypt reached its highest level in 2014 with score 37, then this score started to decrease to reach its lowest level in 2017 which reflects Egypt's deterioration in corruption level. Therefore, Egypt needs for a program to control the level of corruption, as the corruption index has dropped which puts Egypt in a critical problem concerning corruption within its organizations.

The CPI 1996–2011: The Corruption Perceptions Index ranks countries/territories based on how corrupt their public sector is perceived to be. A country/territory's score indicates the perceived level of public sector corruption on a scale of 0–10, where 0 means that a country is perceived as highly corrupt and 10 means that a country is perceived as very clean. A country's rank indicates its position relative to the other countries/territories included in the index.

The CPI 2012–now: The Corruption Perceptions Index ranks countries and territories based on how corrupt their public sector is perceived to be. A country or territory's score indicates the perceived

<sup>5</sup> *Corruption perceptions index (CPI) "ranks 180 countries by their perceived levels of public sector corruption according to experts and businesspeople, uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean" (Transparency international organization, 2017)*

**Figure 1 » Development of the Egypt's and Czech Republic's Corruption Perception Index**



Source: own from Transparency International Organization

Note:  
1996: CPI Egypt — no data

level of public sector corruption on a scale of 0–100, where 0 means that a country is perceived as highly corrupt and 100 means it is perceived as very clean. It is a point why we recalculate the results of CPI for Egypt and Czech Republic over the years 1996–2011 according to the methodology in force since 2012.

There are several challenges faced by different sectors of the society to decrease the level of corruption. Besides, Egypt adopted a strategy to combat corruption between 2014 and 2018 but the corruption perceptions index of Egypt shows that the strategy failed to control or to decrease level of corruption, as corruption increased.

### 7.3 Egypt's and Czech Republic's Corruption Rank

Egypt is the 117 least corrupt nation out of 175 countries, according to the 2017 Corruption Perceptions Index reported by TI. Corruption Rank in Egypt averaged 86.48 from 1996 until 2017, reach-

ing an all-time high of 118 in 2012 and a record low of 41 in 1996.

Czech Republic is the 42 least corrupt nation out of 175 countries, according to the 2017 Corruption Perceptions Index reported by TI. Corruption Rank in Czech Republic averaged 45.68 from 1996 until 2017, reaching an all-time high of 57 in 2011 and a record low of 25 in 1996.

The comparison of the Corruption Rank<sup>6</sup> for the Czech Republic and Egypt see in Figure 2

### 7.4 The Impact of Corruption on Economic Growth

Nowadays, researchers try to link economic growth to corruption. Corruption has substantial effect on different aspects of the economy; those effects can be mirrored through the distortion of relative prices, discouraging savings and investments, and obstructing economic growth and development. In order to enhance the economic performance in different nations governments often

<sup>6</sup> A country's rank indicates its position relative to other countries.

**Figure 2 » Development of the Egypt's and Czech Republic's Corruption Rank**



Source: Trading Economics (2018)

rely on efficient institutions and good governance.

Egypt suffered in the past years from political instability and that contributed significantly to poor governance. The impact of poor governance can be reflected in: poverty and food insecurity and unemployment.

### Poverty and Food Insecurity

Both Economic and Political instability resulting from corruption have a role in pushing the poverty line up. Hence, about 27.8% of the Egyptian population is living below the poverty line (Central Agency for Public Mobilization and Statistics (CAPMAS), 2015). Especially the rural areas in Upper Egypt continue to score the highest poverty rates.

Food Insecurity is defined as “People’s inability to have adequate and nutritious food” (World Food Programme (WFP), 2013). It is mainly caused by the sharp increases in food prices due to inflation. This increase in food prices contributes to an increase in poverty rates.

It can be noticed that corruption and poverty go hand in hand; the effect of corruption is heavier on

poor people compared to other social classes. Corrupted governments and institutions tend to offer low quality services to poor people which contributes to their existing problem.

### Unemployment

There is a positive relation between corruption and unemployment. Unemployment rates can also increase due to political instability; in the case of Egypt Unemployment rates soared after the Egyptian revolution in 2011 (CAPMAS, 2013). Such high rates lead to increasing corruption in the sense that people can be involved in unethical actions to generate money.

To sum up, there is a negative relationship between corruption and economic growth. High levels of Corruption lead to low levels of GDP and vice versa. However, economic development cannot always be attributed to low levels of corruption.

That corruption have a negative impact on economic growth in the group of EU-28 countries confirm Linhartova and Zidova (2016). Which influence have a corruption on economic growth in the OECD countries reported Kotlanova and Kotlan

(2013). However, in recent years, none of the authors have dealt with the influence of corruption on the economic growth in the Czech Republic. The impact of corruption in the Czech Republic can be divided into two areas – political corruption and business corruption. Both areas than have ultimately an impact on the economic growth in the Czech Republic.

### Political Corruption

A series of political corruption cases has damaged the image of Nečas' administration (see corruption cases below), which is reflected in TI Global Corruption Barometer 2013 (Transparency International, 2013), which reveals that 73 % of the surveyed Czechs consider political parties to be "corrupt" or "extremely corrupt".

### Business Corruption

In the World Economic Forum's Global Competitiveness Report 2013–2014 (World Economic Forum, 2013), surveyed business executives cite corruption as the most problematic factor for doing business in the country. Another study by Ernst & Young's (2012) – Global Fraud Survey, shows that 80% of surveyed companies perceive bribery and corruption to be widespread in the business sector, and fewer than 10% state that between 2009 and 2011 their companies "very frequently/always" conducted due diligence on fraud and corruption-related risks before or after acquiring a new business.

Although the business environment is characterized by a clear set of rules and little interference, corruption in the Czech Republic remains an obstacle to doing business in public procurement, awarding of subsidies and direct interactions between public and private sectors. (Transparency International, 2011)

In recent years, there have been many cases of corruption in the Czech Republic, unfortunately, many of them were among the cases of so-called hidden corruption, which is very poorly proved. One of the biggest cases of the corruption in the

Czech Republic of recent years is that of the former health minister and regional governor, David Rath, allegedly caught red handed with cash taken as bribes. Currently, the issue of corruption in the Czech Republic is associated with Prime Minister Andrej Babiš.

The best overview of the current situation regarding corruption in the Czech Republic David Ondráčka (2017): "The corruption is becoming much more sophisticated than what it used to be. You see that every big case is followed by money laundering using offshore companies and it's extremely difficult for journalists, activists, or investigators to trace the money. We see that some powerful groups are really able to influence and rig the rules of the game so they actually don't have to do anything illegal. They are able to adjust regulations so that they legitimizes their behavior. I think that's what needs to be discussed because this is the form of grand corruption that we are talking about." According to him, anti-corruption legislation should be introduced with greater efficiency.

## 8. Discussion and Conclusion

This section can be divided into main parts. First, the measures and policies suggested by international organizations to be undertaken by the Egyptian authority to lower the corruption levels. Second, the policies suggested by the authors of this research paper to apply on the Egyptian case. Third, the recommendations by the authors of this research paper to apply on the Czech Republic case.

### First, Policies Suggested by International Organizations

The TI gave some recommendations to decrease the level of corruption in Egypt. The government should adopt further civil service reform by introducing greater public transparency requirements. Also the government should expand the opportunities for citizen involvement in monitoring public sector activities. "Civil society organizations

should commit themselves to the highest standards of accountability and transparency in their own internal functioning and operations” (Transparency International, 2010). Campaigns that increase the awareness of people about anti-corruption should be adopted. Improving the institutional framework and easing procedures is needed. Broaden the scope of information in order to increase the level of transparency. Implement a verification procedure. “Facilitate the work and cooperation of oversight bodies”. (Transparency International, 2015)

### **Second, the Policies Suggested by the Research Paper**

We need a complete framework that covers all aspects related to institutional corruption in Egypt, different stages to eradicate the corruption is a must. As mentioned previously, major change in the institutional sector takes time, which calls for long-term plans as well as short-term ones to combat that critical problem.

#### **On the long run**

**First** we should downsize the number of civil servants working in the government and raise their wages; one of the main reasons behind corruption is that civil servants are underpaid which affects their motivation and incentives to work and they may find themselves under pressure to accept bribes and work illegally to be able to supplement their families with the necessary income. so in our opinion the first policy recommendation should be to decrease the number of civil servants in the government to be able to pay them fairly.

**Second** thing is that we should cut red tape; as what causes corruption or institutional corruption specifically is the high correlation between corruption and the existence of red tape in the government system, so our second recommendation is to cut the red tape as the existence of bureaucracy generally and the needless regulations slows down every single interaction therefore if we eliminate many of the needless regulations while safeguard-

ing the essential regulations for the state this could decrease the institutional corruption.

**Third** thing is deploying smart technologies; the use of online platforms and technology in general to facilitate government’s interaction with the citizens has proven in many countries that it decreases corruption as it cuts a lot of the corruption caused by the red tape and bribes. Using readily available technologies encourages the one to one relationship between the officials and citizens.

**Fourth** thing is to combat corruption; we should also eliminate the opportunity of corruption by creating incentives to citizens to abide by the rules and regulations and by closing off loopholes and eliminating any institutions that encourage corrupt behavior as well as creating a system that harshly punishes those who violate the rules.

**Fifth** thing is awareness and education; there should be awareness campaigns regarding the disadvantages of institutional corruption and specially its disadvantages on the economy.

The ministry of education could put lessons about the importance of integrity in the core curriculum of primary students as well as presenting them with different activities to make it easier for them to understand it and have it as a core principle growing up. The ministry of high education could also organize sessions and events to educate university students on how crucial it is to stay away from corruption when joining the labor force. The government should also start campaigns on media platforms featuring familiar celebrities to encourage employees to work with integrity and refuse bribery or any sort of action against the law. Campaigns should also be well directed towards different segments of the society, for big investors are much different than middle-class people. When it comes to big investors, the campaigns should be explaining how bribery for example is an extra cost for them that they could easily eliminate by following the law. While on the other hand, middle class people who are more vulnerable to taking bribes or taking actions against the law in return for a sum of money should be giv-

en incentives to stay away from such actions by offering to give them a bonus on calling an unlawful action out and they won't be facing any legal issues on calling it.

### On the Short Term

The government should set strong legislations to fight any attempts to go around the law. Also they should work on facilitating the rigidity of the red tape to get people to have more trust in the law and how it works. This way the country could get over corruption and get better ranking on the scale.

In sum, according to the World Bank, bribes that are paid by individuals and firms are amounting to \$1 trillion, accounting for 5% of GDP (Healy and Serafeim, 2016).

The results showed that Egypt is on its infancy towards controlling the high level of corruption through adopting different strategies. The paper concluded with policy recommendations that were suggested by different international organizations including TI and other policies suggested by the paper to be adopted. Eventually, through setting new legislations, Egypt is on its way towards getting over corruption.

### Third, the Recommendations for the Czech Republic

Recommendations for the Czech Republic are follows – firstly to reduce the potential for corruption in the policy area. This area is related to the influence of politicians on the public procurement sec-

tor, making the implementation of anti-corruption legislation more effective. Other measures to be implemented (Laboutkova, 2018): “we should introduce transparent lobbying rules, focus on proactive information provision with relevant political content and equal access for all and, last but not least, clarify the motivation for greater transparency of decision-making. Such motivation should not only be the pressure of external institutions to improve the functioning of public administration and the reduction of the corruption environment (such as the State Service Act), but also to restore citizens' confidence in government, politics and democratic principles as such.”

This brings us to an obvious conclusion, that corruption has a major impact on the economic growth and welfare of any society globally.

This study tried to investigate the relationship between Corruption in institutions and institutional economics which has an indirect effect on economic growth. The paper utilized different indices related to corruption to monitor the level of corruption in Egypt and in the Czech Republic.

Further research could focus on the quantitative aspects of the impact of corruption on economic growth.

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**Corruption and Institutional Economics: Is There A Way To Get Out? Case Studies from Egypt & Czech Republic**

**ABSTRACT**

*Corruption has been considered as one of the most prevalent challenges in enhancing economic growth and improving the quality of life of citizens across the globe. It has been proved by the World Bank that systemic persistent corruption is an increasingly serious threat to economic growth. Corruption represents different perspectives owed to numerous aspects including cultural background, political background, etc. This paper uses data from Egypt and the Czech Republic to investigate the relationship between corruption and institutional economics by doing descriptive analysis over the period 1996 to 2017. To express the perceived level of corruption we used the Corruption Perception Index and Corruption Rank drawing up by Transparency International. The paper results indicated that increasing corruption in institutions is negatively correlated with economic growth. Policy makers, therefore, are exerting efforts to develop different policies and setting strong legislations to eradicate the level of corruption in Egypt and in the Czech Republic gradually.*

**KEYWORDS**

*Corruption; economic growth; Corruption Perceptions Index; Corruption Rank.*

**JEL CLASSIFICATION**

*E60; K40; O11*





# Competitiveness of Czech Spa Famous Cities: A Comparative Study

- ▶ Ludmila Navrátilová » NEWTON College; email: ludmila.navratilova@newtoncollege.cz
- ▶ Petra Koudelková » NEWTON College; email: petra.koudelkova@is.newtoncollege.cz

## \* 1. Introduction

Tourism is an important part of the social life of people around the world. It has a positive impact on the quality of life. Tourism actively participates in the economic growth of the state, contributes to GDP and creates new jobs in the destination. It also helps to raise local awareness of the nature value. The tourism tax largely contributes to maintain and protect the cultural and natural heritage. That means that tourism is important part of service economy. In addition it is one of the fastest growing industry and the main source of foreign income for appreciable number of developing countries (Királová, 2003).

Many companies, institutions, as well as whole destinations, are competing to attract new tourists. The cities themselves are also involved in this competition. US experts estimate that more than half of the world's population lives in cities. It can be said that the main economic power is concentrated in the cities and they are sometimes referred to as the "economic engine" of the world economy. They also have to compete for investment, financial support from European funds, state subsidies and other sources, or income from business activities, including tourism.

The competitiveness of cities in tourism is dealt with by many authors, such as Bovaird (1993), Le-

ver (1993) and others. In their publications they emphasize the importance of competitiveness in terms of investment, population, funds, labor, tourism etc. (Bovaird, 1993; Lever 1993). The most used definition of competitiveness in tourism is: *"Tourism competitiveness for a destination is about the ability of the place to optimise its attractiveness for residents and non-residents, to deliver quality, innovative, and attractive (e.g. providing good value for money) tourism services to consumers and to gain market shares on the domestic and global market places, while ensuring that the available resources supporting tourism are used efficiently and in a sustainable way."* (Dupeyrs and MacCallum, 2013).

Then competitiveness of urban tourism reflects the city's ability to emphasize its attractiveness for tourists, to provide goods and services for tourists better than other cities (Királová, 2003). There are numbers of approaches to measure the competitiveness of cities. Most of them are based on a set of indicators. Indicators monitor the ability of a destination to deliver quality and competitive tourism services, monitor the attractiveness of a destination and describe policy responses and economic opportunities (Dupeyrs and MacCallum, 2013). The second possibility is to use model of some factors. The general used is so called conceptual model of the competitiveness of the city. →

Conceptual tourism city's competitiveness model includes both internal and external environment factors. Evaluation of the competitiveness of urban tourism is carried out based on the conceptual model of the competence of urban tourism (Čibinskiene, 2015). The model was used for this study dealing with city tourism competitiveness of Bohemia's spa triangle (Karlovy Vary, Mariánské Lázně and Františkovy Lázně).

Due to the importance of the competitiveness of cities in the tourism industry in one geographical area, authors have decided to deal with this issue in selected Czech spa cities (Karlovy Vary, Mariánské Lázně and Františkovy Lázně). The main aim of the research was to evaluate their competitiveness and preparedness for the changing habits of tourists. Secondary we also focused on determining which city has potentially better conditions for attracting more tourists from the point of view of the quantity of attractions. The conceptual model of the competitiveness of city tourism was used in the research.

## 2. Spa tourism in the Czech Republic

Since the 19<sup>th</sup> century, the Bohemian Baths had an international character and were visited by guests from number of European and later non-European countries. This development was not interrupted even after the nationalization of Czechoslovakia spa after 1945. After 1989, number of foreign visi-

tors to Czech spa rapidly increased and numbers of these foreign visitors gradually reached residents' attendance.

Traditional visitors to the spa towns, especially the Bohemia's spa triangle, were Germans for many years. After 2014 this trend changed and visitors from Germany have not been coming to the Bohemia's spa triangle so often. It was due to increased competitors in Germany and other neighbouring cities but also due to the loss of international character in some spa towns and the dominance of another nationality in the given city (e. g. the Carlsbad Russians). The Russians have also been among the traditional visitors of Czech spa towns since the 19<sup>th</sup> century (Attl, 2015).

According to data from the Czech Statistical Office, domestic tourists have been dominant in recent years. 47% of tourist were foreign tourists in the spa towns in 2017 and domestic tourists have been dominant in recent years. Country of origin of foreign tourists in 2017 was Germany (199.000 people), Russia (65.000 people) and then Thailand (18.000 people) (Báčová, 2018).

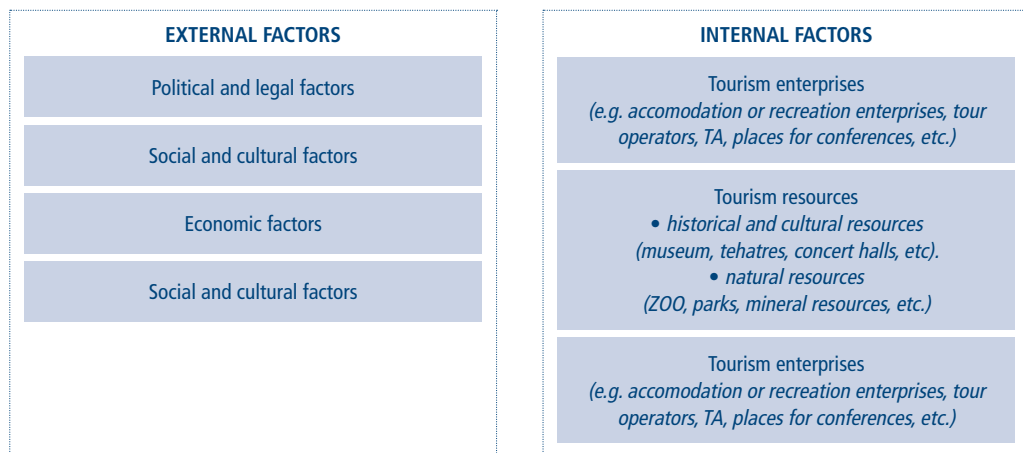
Year 2017 brought an increase in the number of tourists and revival of tourism in spa towns. Past years have been much weaker in the number of visitors and overnight stays. In the future, it is advisable to maintain the trend of revitalization of tourism in the Czech spa resorts as the spa has undergone a significant change and decrease in the number of visitors at the time when health insur-

**Table 1 » Numbers of visitors — West Bohemian Spa**

Year	Number of Guests	Non Residents	Residents	Number of Overnight Stays	Non Residents	Residents
2012	809 043	515 255	293 788	4 776 815	3 458 006	1 318 809
2013	787 084	526 089	260 995	4 583 144	3 484 586	1 098 558
2014	776 671	517 323	259 348	4 502 589	3 338 609	1 163 980
2015	850 891	534 115	316 776	4 617 361	3 106 372	1 510 989
2016	948 871	586 469	362 402	4 846 451	3 189 061	1 657 390
2017	1 038 270	655 293	382 977	5 160 766	3 495 241	1 665 525

Source: Own research based on data of CZSO, 2018.

**Figure 1 » Conceptual model of competitiveness of city tourism**



Source: own processing according to Bovaird, 1993

ance companies stopped paying full packages of medical stays.

The paper is focused on West Bohemian Spas (Bohemia’s spa triangle) because it is the most popular spa of domestic and foreign tourists in the Czech Republic.

Table 1 shows the development of tourism indicators in 2012–2017. Unfortunately, for the year 2018, the data were not available at the time of the article writing. Spa as Západočeské lázně, Lázně Jáchymov and Lázně Kynžvart are also included into following table. However, last two mentioned spa cities does not contribute as much as cities of Bohemia’s spa triangle.

The table shows the growth of tourists visiting West Bohemian spa region in 2017 and previous years.

### 3. Methodology

#### 3.1 Data collection

The research was carried out in the second half of the year 2018 and was focused on the analysis of factors influencing the competitiveness of selected cities (Karlovy Vary, Mariánské Lázně, Františkovy

Lázně). For the analysis was used mentioned conceptual model of the competitiveness of city tourism. Internal and external factor of this model are shown in Figure 1.

#### 3.2 Research design

In the case of a model used, it would be desirable to characterize each internal factor so that a truly in-depth competitiveness analysis can be carried out. However, the ambition of this paper is to make a basic assessment of competitiveness and to compare cities with each other. From this reason quantitative analysis of individual factors is sufficient.

The research was divided into two parts. In the first part the cities are described to gain a deeper knowledge about them. Then an analysis of external and internal factors was carried out and it was followed by the benchmarking of internal factors.

#### 3.3 Research questions

Three research questions were defined:

RQ<sub>1</sub>: Do chosen spa cities offer enough tourist attractions?

→ RQ<sub>2</sub>: Does the attractiveness correspond to the character of the city?

RQ<sub>3</sub>: What city can offer the most of tourist attractions?

#### 4. Results of the research

This section focuses on the presentation and analysis of research results.

##### 4.1 External Factors of Bohemia's spa triangle

Factors of external environment include political and legal situation, economical situation of the city, social and cultural factors and ecological and natural factors. External factors correspond to SLEPT(e) analysis.

###### Political and legal factors

Cities of Mariánské Lázně, Karlovy Vary and Františkovy Lázně are located in the west of Bohemia. Therefore, it is influenced by the legislation of the Czech Republic that is a parliamentary, democratic and pluralist republic. The President is the head of state and is elected by direct public vote for a five-year term. The political situation in the Czech Republic can be characterized as relatively stable, although it faces certain problems. However, these problems do not have a major impact on spa tourism.

###### Economic factors

National economy has been rising in recent years. It has a positive impact on wages and salaries, employment, leisure time and, therefore, tourism. In the first half of the year 2018, the Czech economy grew by 3.0% year-on-year. Growth is slowing from last year's 4.3%, basically to potential product growth. Gross domestic product growth was based solely on gross domestic demand. This development is reflected in record public finance surpluses. In 2017, the general government of the Czech Republic ended with a positive balance of 1.5 % of

GDP; for the first time, all three of the basic components contributed to the surplus: not only local governments and social security funds, but also the central government. The unemployment rate at the end of 2018 was 2.8% (Kurzy.cz, 2019).

###### Social and cultural factors

The Bohemia's spa triangle can offer a rich cultural history. Due to numerous cultural and historical heritage, it can continue to develop in this area. All three cities also have several theaters, concert halls, cinemas and galleries. The education of the population is gradually growing across the whole country. People spend more time doing their interests. Specifics can be seen across different generations.

###### Ecological and natural factors

Western Bohemia is characterized by a large number of parks and forests. There are also ponds that are not significantly polluted yet. A large number of parks and forests in cities and the surrounding areas have the impact on the microclimate. Trees cleanse the air, regulate moisture, relieve extremes and enrich the air with oxygen. The summers are relatively cooler and wetter, the winters are moderately cold. In the wider area of Mariánské Lázně springs up to 100 mineral springs containing carbon dioxide and mineral salts, from which 53 springs are preserved and still used.

##### 4.2 Internal Factors of Bohemia's spa triangle

Firstly, individual cities were briefly described. Then the researchers analysed individual internal factors. Their figures are presented in Table 2.

###### Mariánské lázně

Mariánské Lázně is the second largest Czech spa with a great wealth of mineral springs. It is about 51,81 km<sup>2</sup>. About 13.000 inhabitants live there (Mariánské Lázně, 2018). Directly in the area there are 40 and in the immediate surroundings almost

100 springs. The territory of the present spa belonged to the Premonstratensian monastery in Teplé whose abbot K. K. Reitenberg asserted the construction of the first baths at the beginning of 19<sup>th</sup> century by the monastery doctor J. J. Nehr. The main spa promenade and an important building monument is the pseudo-Baroque cast iron colonnade from 1889. Drinks are provided with the

sources of Cross, Karolin and Rudolph. In front of the colonnade, a singing fountain enjoys great attention. The most famous other sources are Ferdinand, Lesní and Ambrož. Mariánské Lázně is a tourist town. People are here to watch the sights, but most tourists visit spa city of Mariánské Lázně mainly because of the spas location (Zoologická zahrada v Mariánských lázních, 2018).

**Table 2 » Internal factors of the Bohemia's spa triangle**

	Mariánské Lázně (51,81 km <sup>2</sup> )	Karlovy Vary (59.1 km <sup>2</sup> )	Františkovy Lázně (25.74 km <sup>2</sup> )
<b>Tourism Enterprises</b>			
Accommodation and recreation	122	212	90
Conference places	15	28	8
<b>Historical-culture resources</b>			
Theaters and cinemas	3	4	3
Concert halls	1	4	1
Museum and galleries	2	11	11
Night life (well-known clubs, bars)	5	22	7
Events in open spaces of the city	NA	16	12
Theme parks	5	11	3
Other objects of historical-culture heritage	29	35	17
<b>Natural resources</b>			
Parks	6	10	5
ZOO	0	3	0
Botanical garden	0	1	0
Water resources		2	2
Mineral resources	40	14	22
Other objects of natural heritage	23	7	9
<b>Infrastructure and other</b>			
Public transport	1	1	1
Camping	5	4	2
Bike Trails	8	4	4
Hiking trails	8	22	10
TIC	1	6	1
Exchanges	6	5	3

Source: Own research



### → Karlovy Vary (Carlsbad)

It is spread over an area of 59.1 km<sup>2</sup> where approximately 50 000 inhabitants live. Carlsbad is the largest and most famous Czech spa town with a 600-year tradition, thanks to its high-quality thermal healing springs, it is also famous worldwide. The spa is accessible both by car and by air. The city offers a unique combination of spa and relaxation stays with a wide range of other events, Karlovy Vary International Film Festival included. The region is declared not only by spa, but also by a wide range of gastronomic specialties.

Carlsbad mineral water is formed at depths of about 2500 metres under the Earth's surface. In public places there are 14 accessible springs that differ from each other by the temperature and amount of dissolved carbon dioxide. Each source is different and with different effect according to temperature and gas differences. Most elements of the periodic table are present in the Carlsbad sources and more than 40 elements necessary for the human organism are commonly analysed (Karlovy Vary, 2019).

### Františkovy Lázně

This city has 5.350 inhabitants and it is spread over an area of 25.74 km<sup>2</sup>. The city is also located in the western part of the Czech Republic. It is named after Emperor Franz I. who was considered as the founder of this town. The beginnings of Františkovy Lázně as towns date back to 1793. English parks were created all around the city and it is referred to as a garden town. Tourists here also use the possibility of cycling and there are unprecedented hiking trails that can be handled by children or seniors as well. Among other things there are also educational walkways, tennis, and golf and miniature golf courses. Aquaforum Aquapark is one of these attractive places. Františkovy Lázně due to the possibilities can offer to the tourists very active relaxation. The water mineral sources of Františkovy Lázně are concentrated in the valley of Slatinný potok. They are the largest source of cold acidic fluids in the Czech Republic minerals and

carbon dioxide. Františkovy Lázně is exceptional mineral springs that have high carbon dioxide content, are ferrous mud and naturally occurring carbon dioxide (Lázně Františkovy Lázně, 2019).

The table shows an overview of the various factors that occur in the cities and in what number. The cities could also be compared.

## 5. Discussion

From the analysis it is obvious that all the cities have plenty of different attractions for tourists. There are many natural heritage sites as well as many cultural and historical heritage sites. Tourists can choose from a wide range of accommodation as well as restaurants (their numbers are not listed in the table because the final number could not be found). It could be said that the cities of Karlovy Vary, Mariánské Lázně and Františkovy Lázně offer sufficient number of tourist attractions of various character (RQ<sub>1</sub>).

Answer to RQ<sub>2</sub> can be formulated as the offered attractiveness corresponds more or less to the characters of the cities. In thy city of Mariánské Lázně, however, there are fewer museums, galleries and concert halls than it would be in the city with rich cultural life. On the other hand, Karlovy Vary can offer a relatively small number of natural heritage sites. However, this cannot normally be influenced. There should also be more touristic informational centres in Mariánské Lázně and Františkovy Lázně.

If we look at the results in Table 2, we can find that city of Karlovy Vary has the greatest prerequisites for attracting new tourists because of the amount of tourist attraction (answer to RQ<sub>3</sub>). City of Mariánské Lázně can be found in the second place and then Františkovy Lázně. This result is based on the number of accommodation facilities, objects of cultural-historical heritage, objects of natural, mineral springs, etc.

In this case, however, an important determinant, such as the size of the city or the number of inhabitants, was not considered. The population

**Table 3 » Recalculation of internal factors of the Bohemia’s spa triangle (converted to one square meter)**

	Mariánské Lázně	Karlovy Vary	Františkovy Lázně
Accommodation and recreation	2.354	3.587	3.535
Conference places	0.289	0.473	0.310
Objects of natural heritage	0.443	0.118	0.349
Objects of historical-culture heritage	0.559	0.592	0.660
Theaters, cinemas, museums and galleries	0.097	0.253	0.505

Source: Own research

produces economic value and the size of the city is predestined by a number of natural, cultural and historical attractions. From the Table 3 is obvious that city of Františkovy Lázně has better assumptions for attracting tourism. It is based on number of tourist attractions.

### 6. Conclusion

Tourism in the Czech Republic as well as in the world is getting a steady growth. Destinations are increasingly trying to attract new tourists and for this reason organize various events, repair cultural and historical objects, maintain natural monuments and reservations and try to come up with new, modern types of tourism. Cities focus on so-called urban tourism where are no natural, cultural or historical attractions, so called artificial attractions (sport events, conferences, festivals etc.) are created to attract new tourists. Destinations and cities naturally compete. In the future, it will be desirable to focus more on the competitiveness of individual cities, as the “fight” on tourists can be stronger.

The article explores the competitiveness of western spa towns (Karlovy Vary, Mariánské Lázně

and Františkovy Lázně) using one of many different models. The results have shown that cities are accustomed to tourism and are well equipped. But there is the space for further development.

The conceptual model of competitiveness of urban tourism has shown its weaknesses. Without any in-depth qualitative analysis of individual factors, competent conclusions cannot be drawn. In addition, it does not take into account the size of the city, which may be limiting for further development. This knowledge is limited, but on the other hand this limit represents an opportunity for further research on the topic. The used model of competitiveness seems to be inadequate as it does not examine the size of the city, the population, the number of places that tourism produces in the city and all factors must be complemented by in-depth qualitative analysis.

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## Competitiveness of Czech Spa Famous Cities: A Comparative Study

### ABSTRACT

*Current trends in spa area show that more and more people use the spa as a possibility of active holidays with the potential to re-fuel their life or to recover from an illness or injury. The purpose of this article is therefore to discover contemporary competitiveness of known and important spa cities for the tourism in the Czech Republic and discuss how spa cities are prepared for changing habits of customers. The qualitative and quantitative analysis will be used in final evaluation of spa tourism competitiveness as well as expert evaluation. The conceptual model of the competitiveness of city tourism will be applied in the research. This model evaluates external as well as internal environment factors. The contribution also tests its functionality in terms of Czech spa towns. The result of the paper should be beneficial not only for spa cities included to this research but also for other spa/wellness cities or centres in the Czech Republic.*

### KEYWORDS

*Tourism, Bohemia's spa triangle, Competitiveness, Czech Republic*

### JEL CLASSIFICATION

*L83, Z30, Z32, Z33*





# Selected issues of sustainable health care financing

► Jan Mertl » Vysoká škola finanční a správní; email: jan.mertl@outlook.com

## \* 1. Introduction

Sustainable financing of health systems is a complex task solved worldwide with varying success. It has special properties, because while it poses a challenge that is probably never fully achieved, the importance of health systems is of such a nature that even if it partially fails, we still must run the health system at the level that is attainable.

Of course, there are many factors that influence the sustainability – they can be classified into major groups as medical, social and economic. From this classification outcomes also the fact that they differ among the countries – because the situation is never the same and attainable results are perceived by the citizens of a particular country (almost) exclusively, which introduces special criterial functions of health and health policy that are perceived as acceptable and “good enough” for the health system.

Additionally, there are several objective measures that can be used to depict the performance of health systems in the international comparison. They include for example health expenditure ratio to GDP, ratio of public and private expenditure on health care, demographic indicators such as life expectancy, indicators of quality of life such as QALY (Prieto & Sacristán, 2003) or HDI (Stanton, 2007), and also the health facilities and staff numbers. We can find them for the OECD countries in the OECD

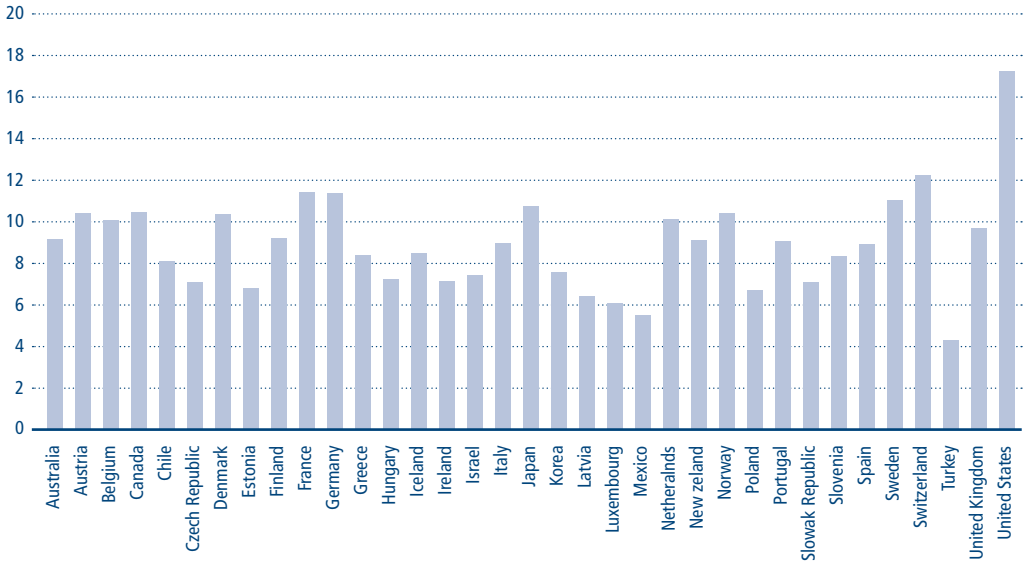
Health database (OECD, 2018). We also outcome of the fact, that in Czechia some of the parameters, such as quality of life in good health, are still worse than in European countries (Bartošek, 2018).

The aim of this paper is to show selected important socioeconomic factors of health care sustainability and the relationships among them. We use a brief comparison of macroeconomic indicators, complex scheme of effectiveness' dimensions and assess the possibilities to create fiscal space for health. Then in the conclusions we make some recommendations for improving sustainability.

## 2. Macroeconomic indicators of health system

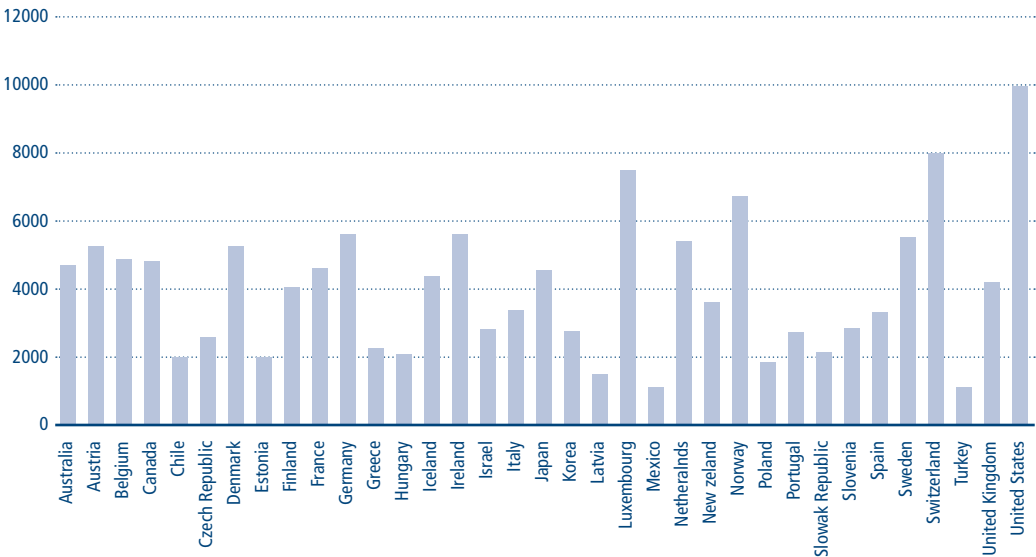
The main comparable health policy indicator is the volume of health expenditure to GDP. Of course, this indicator depends both on the actual volume of health expenditure and the GDP fluctuations, still when we do a comparison Czech Republic is among the countries with low overall health expenditure. This is also true for the expenditure per capita which is seen at the following graph. This poses significant challenge for the health policy since maintaining health status of the population with fewer resources is difficult, on the other hand it cannot be said that the more we allocate for health care the better results we get, as it is seen on the case of the United States' health system. →

**Figure 1 » Health expenditure as a GDP share, % GDP, 2017**



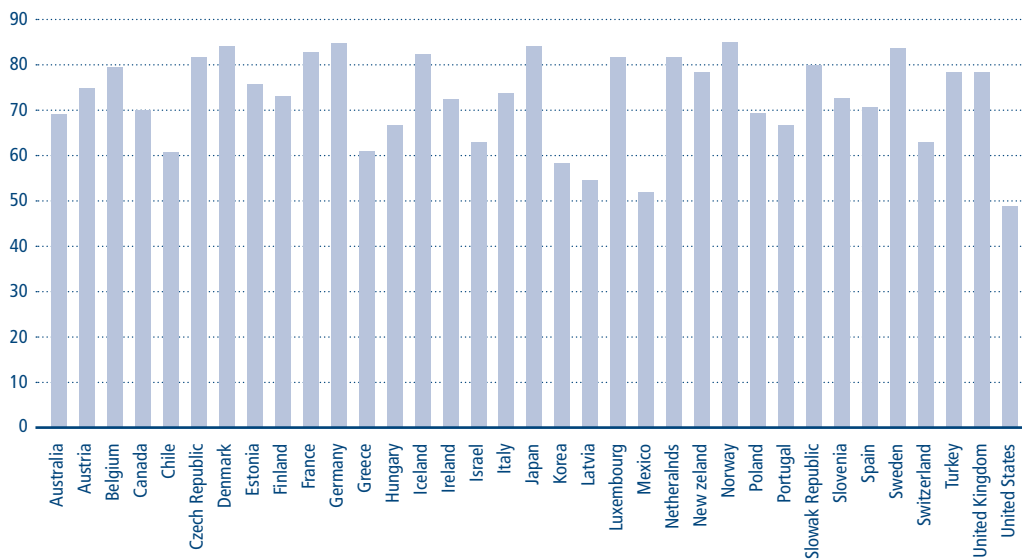
Source: (OECD, 2018).  
 Interesting are also per capita health expenditure (in PPPs).

**Figure 2 » Health expenditure per capita, USD PPP, 2017**



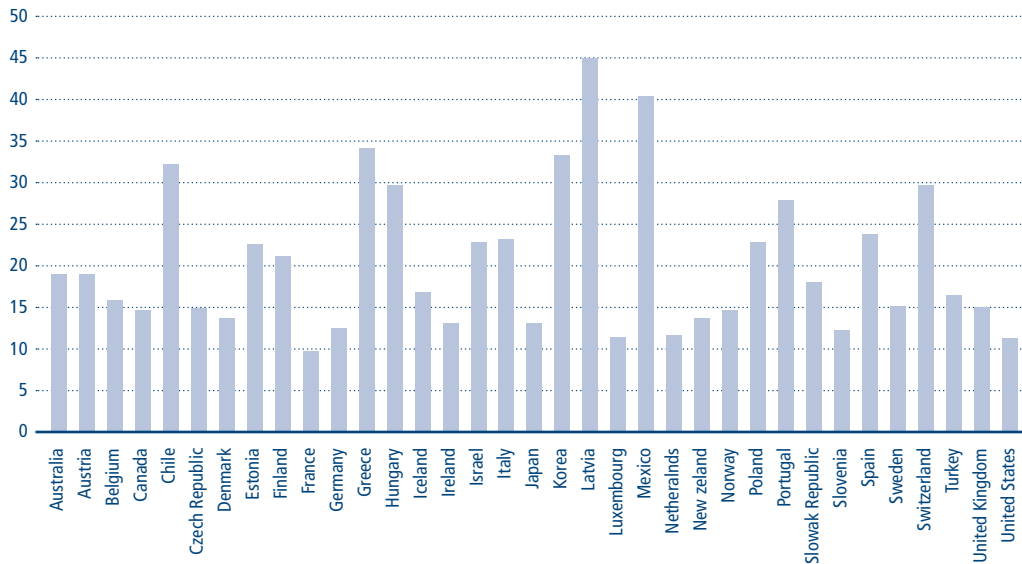
Source: (OECD, 2018).

**Figure 3 » Government and compulsory health insurance schemes, % of total health exp., 2017**



Source: (OECD, 2018).

**Figure 4 » Out of pocket health expenditure, % of total health exp., 2016**



Source: (OECD, 2018).

From those data, we can see that health expenditure in Czechia is based on government financing, but the share of this financing as of 2017 is not exceptionally high (as it was around the year 2000 where it reached almost 90 percent while most other countries had 70–80 percent). Generally, there is a trend to finance health care primarily from government-run and compulsory health insurance schemes. Also, in the United States, where the share is low, after ObamaCare (if it is maintained in the future) the new schemes could be considered as compulsory (Ringel, Girosi, Cordova, Price, & McGlynn, 2010), which will add approximately 30 percent of share to compulsory schemes.

As for the out of pocket health expenditures, it is clear the especially in developed countries this form of financing health care is not popular and neither the core pillar of health financing. This speaks about the health financing construction in those countries where out of pocket payments are often seen as regulatory or supplementary payments. But also, it suggests that market failure in direct transactions (Arrow, 1963) is present in health care and that the people prefer utilization of indirect schemes of health financing, at least for the majority of care.

### 3. Dimensions of effectiveness and sustainability

Health economics and policy is a multi-layered and multidisciplinary field. When analysing healthcare from the socioeconomic point of view, it is also appropriate to define the linkages of this view to the related views, as the result is the result of their synergy, and each of these views has its rationality and its criteria. Of course, the answer to this question is not necessarily and cannot be universal, and that its questioning is an easy task – the variation of health and health care views is practically spread over the whole spectrum of the spectrum of opinion. Approaches include the formulation of criteria relevant to the practical implementation of the sys-

tem (economic and financial sustainability, concrete implementation, political acceptability) to partial efficiency criteria (cost, social acceptability, regional accessibility, etc.).

Let us therefore emphasize the essential aspects that are key to determining the effectiveness in health care. The first, inherently present, is the constant conflict between economic efficiency and other criteria that the health system should meet. It hides not only the pressure on the efficiency of the healthcare system per se, but also the pressure of competing public systems such as education or transport to make healthcare spending more resource than is objectively necessary – and therefore effective. The second is a grouping of partial criteria into blocks that can be used to analyse the criteria from the theoretical point of view.

These approaches lead to the breakdown of the critical efficiency of the health system into three basic dimensions – economic dimension, qualitative dimension and social dimension. Fulfilling these efficiency dimensions can be transposed as follows:

- financial criteria (e.g. costs, financial stability, economic rationality) contained in the economic dimension (Schieber, Baeza, Kress, & Maier, 2006),
- medical criteria (such as the number and success of transplants, neonatal mortality) contained in the qualitative dimension (Campbell, Roland, & Buetow, 2000),
- equity criteria (e.g. availability of health care in individual social groups) contained in the social dimension (Goddard & Smith, 2001),
- the ethical criteria contained both in the qualitative dimension and in the social dimension.

The basic drawback lies in the fact that the efficiencies in these dimensions can be difficult to achieve at the same time. Typically, success can easily be achieved in two of them, and the more the two dimensions are fulfilled, the third becomes more difficult.

*If we try to illustrate the statement by example, then if the health system will meet social and qual-*

itative dimensions well, it will probably have problems with economic criteria. If it meets the economic and qualitative criteria well, it will likely have problems with the social dimension. Finally, even if it meets the economic and social criteria, it can ultimately be a problem with the quality of a universal, though cheap, care.

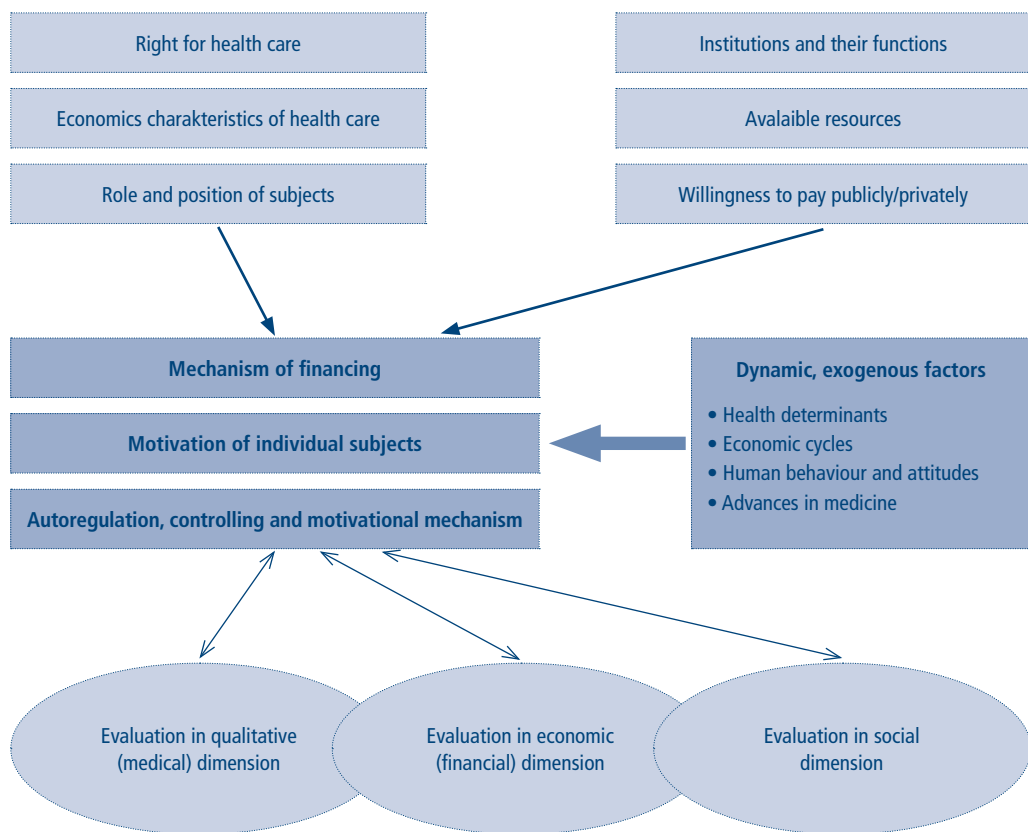
It follows from this that in the design of the health care system concepts, the advocates of all these approaches will always encounter and, depending on which aspect they will put more emphasis, the health system can always “move” to two of the three dimensions mentioned. Achieving a consensus is a task which can perhaps be com-

pared to another similar task in the field of economic policy, which is to monitor the macroeconomic objectives in the form of magical rectangle (inflation, unemployment, GDP growth, balance of payments).

The role of defined efficiency dimensions in assessing the entire health system can be summarized in the following diagram.

We can see that the results are affected both by internal factors that can be adjusted by changing the system’s settings, and also by external factors that the system must adapt to. From that is clear, that the system must not be set statically, that there is no single optimal setting that can be com-

**Figure 5 » Dynamic factors of health care sustainability**



Source: (Mertl, 2007)



puted in advance as optimal and the reactions should be built into parameters of the system and ability of the actors to react on the changing conditions. Many suggestions on how to reform health care in Czechia fail to admit this, they are seeking for optimal economic balance, how to solve population ageing in health and many other issues that have their merit, but in my opinion, more important than targeting the reform on specific issues is to set the system in such a way that it is able to react on the factors that are (albeit broadly) described on this picture.

#### 4. Fiscal space for health

Generally, several possibilities how to allocate resources for universal health care exist in theory. First, we can treat health care system equally to police, army, justice and other “traditional” public finance areas financed from general taxation. In this approach, the health system is one of the important economic sectors and the level of health care expenditure is determined centrally by public choice and fiscal priorities. Hence, the position, power and governance quality of the Ministry of Health is crucial, because the fiscal process is mainly determined by the government legislation procedures and respected negotiations. The risks of this approach include poor public governance practices and health budget being under threat, especially at times when the whole government budget is tight (Warden, 1997).

Second, we can establish one or more independent health insurance companies, which operate on social health insurance principle – solidarity according to health status and usually wealth (income). This creates a parafiscal payment, which after central risk-adjusted redistribution becomes an income of those health insurance companies (company). They then have their own balance and budget, usually supervised by the public policy. When there are more insurance companies, the question of risk selection and the issue of character of competition between them appears. This meth-

od is usually based on allocating a share of personal (work) income to health care, either as social health insurance contribution or payroll health tax. They can be also supplemented by health tax on consumption of selected commodities (Bloom, Cashin, & Sparkes, 2017).

Third, we can do a strict regulation (especially regarding risk classification targeting community ratings) of commercial subjects selling private health insurance on the market and provide a government subsidy for the citizens so that everyone can afford that product, at least on the universal (standard) level. This approach emerged from the private health insurance markets and their failures, when the public choice decided to keep its principles as viable, and simultaneously wanted to achieve also goals that social health systems achieved. Still the questions about effectiveness of those (usually large) subsidies appear, and in some countries, the government enters the market by creating large programs for the poorer or sicker social groups (USA: Medicare, Medicaid).

Those are model approaches; in many countries, they slightly overlap or a big main system of one character is created, simultaneously a small “side” system is run on different principle – e.g. the case of Germany and social (90 % of people) and private (10 % of people) health insurance there (Busse, Blümel, Knieps, & Bärnighausen, 2017). The reasons for this approach are different characteristics and performance of the means of financing in the social groups’ spectrum. If well organized, it does not have to possess a significant threat as every citizen can choose the subsystem, which he will participate in, however from the theoretical point of view some systems look like a mess. To overcome this, we can usually identify the main or dominant health care financing approach for that country and then the supplemental ones used (Donabedian, 1971).

From the fiscal policy point of view, those possibilities imply the following budget schemes:

1. A government expenditure program for health care – allocation within a health budget as a

part of central public finance schemes. When allocating resources on the central level, supported by respected legislation determining the price level and amount of health care provided, the health sector is financed at the “pure” principles of public sector financing and allocation. In this scheme, the majority of health expenditure can be seen as more discrete, because the government can decide about them individually and annually, although it does not have direct control of some variables that influence their need (e.g. drug prices etc.)

2. An independent institutional framework for financing health care, where the public choice variability and central government role is limited, and the principal fiscal goal is to collect and allocate the agreed amount of money to specialized institutions (health insurance companies), usually through central redistribution scheme since risk-selection must be compensated. In this scheme, the public finance flows be more mandatory, since they automatically allocate for health the public resources defined by law (Bloom, Cashin, & Sparkes, 2017).
3. A subsidy scheme, when the people receive support based on their social status so that they can buy a highly regulated health insurance product commercially. In this scheme the income differentiation and level of regulation is important for the government position and fiscal volume of health expenditure.

It is worth noting, that selection of those schemes is a result of the health financing system selection and configuration, fiscal policy alone cannot select a scheme on its own.

These approaches then constitute what is captured at the WHO level as fiscal space for health (Tandon & Cashin, 2010). The concept of fiscal space in health helps to place health within the context of the broader economic and fiscal environment and looks at ways to improve the use of sector resources. All countries, whatever their levels of income, face the question of how to find resources for health in a sustainable and realistic

manner. Fiscal space commonly refers to the budgetary room in which a government can provide resources for public purposes without undermining fiscal sustainability (WHO, 2018).

As it results from previous research, viable and sustainable way of financing universal part of the system (and thus creating fiscal space for health) in Czechia is to keep earmarked health tax on income (wages), and supplement it with fiscal subsidy in the form of payment from government budget to the central health fund (Mertl, 2017). There is inverse relationship between the percentage of health tax rate and the fiscal subsidy. Since the health tax rate is sensitive because it is a part of indirect labour costs it is desirable to introduce more flexible (automatic) adjusting mechanisms of the fiscal subsidy (Mertl, 2016), that can better react to the macroeconomic situation than the current one which is determined solely by public choice and the number of “state insured persons”. This group comes from the beginning of the 1990s and consist of citizens with no taxable active income (wage, self-employed profits).

#### 4. Conclusions

Conclusions of this paper are probably more normative than is usual for the conference papers of its kind. But the reason is, when we talk about sustainability of health, everybody is interested in what should we do to make it happen. The reader can be assured that the normative statements are well supported in the literature and are formulated with intention to improve the abilities and results of the health system.

We can say that important factors of health system sustainability (especially for Czechia) are:

##### 1. **Creating fiscal space for health that will sustain economic cycles and provide enough and stable funding for universal health care financing**

In this area, several previous analyses have been made, for Czechia the earmarked health

tax on income and fiscal subsidy to the central health fund at the current levels can be utilized as the best option. Second best approach (if preferred by the public finance theory) is to increase financing from general taxation and reduce the earmarked health tax rate.

## 2. Utilize dynamic elements in the system that can react to exogenous factors

As an example, the level of fiscal subsidy “for the state insured persons” should be dynamically adjusted according to real economic values (such as unemployment rate, GDP level etc). The content of universally available standard should (as transparently as possible) react to the advances in medicine, so that the stories in the news about people seeking help and financing for their care are minimized (Bezděková, 2018) and the Ministry of Health and the health insurance companies can clearly say which methods of treatment they can pay for. This means for example annual revision of the content of the standard according to the level of medical knowledge and costs of treatment. Health technology assessment and QALY analyses can help here.

## 3. Give the citizens possibility to transparently allocate private money for health care and services that are not required to maintain and improve their health status

We cannot imagine that everything possible will be paid from universal system, this is facilitated also with the rapid advances in medicine and services connected with treatment. The government should intentionally transform equity issues into the guarantee of required treatment’s provision – this means (relative) peace of mind for those citizens who cannot or do not want to pay more than the statutory contribution (health tax). On the other hand, for those who can and want to buy more care and services, simple and transparent schemes of financing should be introduced, such as health insur-

ance products (e.g. injury, inpatient care) and prepaid health packages.

## 4. Making the financial balance the result of the (working) health care system, not the primary aim of analyses

The analyses in the style “what will happen with the health system in 30 years if nothing happens and current demographic and health behaviour will continue” show some trends and statistical findings, but for the actual working of health system they are not as significant. The financial balance and population health status are the results of the system, not a function of planning or projection. So, while we should research what can happen, it need not mean that it will happen. Financial balance of the system (and the balance of bigger health facilities such as hospitals) should be taken as an indicator of system’s health and performance. When they are positive it means that the system has more space to “breathe” – employ more people at better wages, introduce new methods of treatment etc. When they are negative it means that in the next period we must economize on the services and costs, or rethink the volume of fiscal space in the universal part, or look at the content and construction of private schemes. While the health system can sometimes be perceived as a black hole for money (taxpayer’s and private), we should always distinguish between if we got the additional value for the money (provided that it is feasible within public or private space), or if we just spend more on the same set of care and services. This helps us to set priorities and the type of challenges we are facing.

### *Acknowledgement*

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## **Selected issues of sustainable health care financing**

### **ABSTRACT**

*The paper deals with important macroeconomic issues of health care financing, which are important for overall stability and performance of Czech economy. These include fiscal space for health, the configuration of universal health care financing and possibilities of voluntary extensions to universally available care. The approach is compatible with the WHO and OECD approach to financing health care systems. The paper will depict areas that we should focus on to improve health system sustainability, without making significant compromises in availability and quality of care.*

### **KEYWORDS**

*health insurance, health systems, public finance*

### **JEL CLASSIFICATION**

*I13, H20, H51*

×

# Current trends of consumer buying behaviour in demand for organic food and superfoods in the Czech Republic

- ▶ Ludmila Navrátilová » NEWTON College; email: ludmila.navratilova@newtoncollege.cz
- ▶ Klauďie Mroščáková » NEWTON Academy; email: klauďie.mroscaakova1@is.newtonacademy.cz

## \* 1. Introduction

Nowadays consumers around the world are surrounded and even overwhelmed by information what and where to buy for eating and how to take care about themselves. New trends of healthy nutrition are undoubtedly important for younger consumers who are most willing to pay a premium for health attributes (Nielsen, 2015). In general, consumers buying organic food and superfood seek fresh, natural and minimally processed foods because of beneficial ingredients that help fight different diseases and promote their good health.

Business of healthy categories of food, including organic food and superfood are growing faster than unhealthy categories (Nielsen, 2015). Technavio analysts forecast the global health and wellness food market to grow at a CAGR of around 6% during the forecast period for 2018–2022, according to their latest market research report. However, the growth momentum of the market is expected to accelerate due to a decline in the year-over-year growth (Business Wire, 2018).

Report of Global Food & Drink Trends 2018 mentioned that according to Amazon, after acquisition of premium grocer Whole Foods Market in 2017, it is important to deliver “*high-quality, natural and organic food affordable for everyone.*” (Whole Food market, 2017; Mintel, 2018).

Answer for the following questions: What about customers in the Czech Republic? And What is current demand for healthy food in the Czech Republic especially by younger generation of customers? as aim can bring following paper.

## 2. Theoretical framework

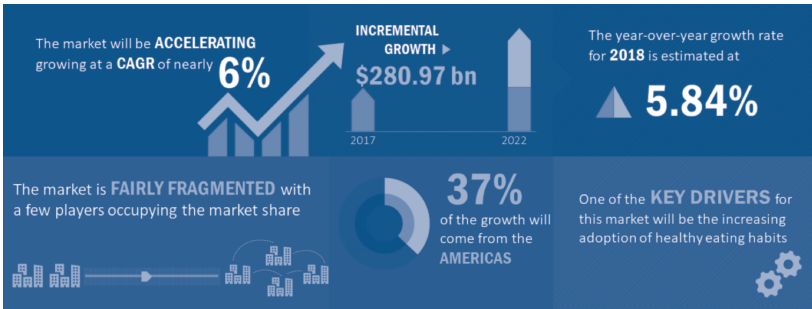
### 2.1 Organic food

The concept of organic food is often confused with the term organic product. These terms are not the same but complement each other (Podnikatel.cz, 2008). A bioproduct is a raw material of plant or animal origin that must be developed by law in organic farming and it is subject to a valid certificate (Act No. 242/2000 Coll., On Organic Agriculture, Legislation on Organic Farming and Organic Food Production) (Ministry of Agriculture, 2015). Organic products can be raw materials, such as fruits, vegetables, cereals, milk, meat, eggs, but also livestock. Bioproducts serve for the production of organic food (Podnikatel.cz, 2008).

Bio League of Consumers of Food and Friends of Organic Farming (2010) states that organic food must be made of those raw materials that strictly comply with the conditions laid down in the Act on Organic Farming No. 242/2000 Coll., At the same



Picture 1 » Global health and wellness food market in 2018 — 2022



Source: Technavio, 2018 In Business Wire, 2018

time Regulation Council Regulation (EC) No. 834/2007 on organic production and labeling of organic products and Commission Regulation (EC) No. 889/2008. Dvorský and Urban (2014, p. 11) state that it is also necessary to “*comply with the generally binding legislation governing the production, processing, marketing, labeling and control of agricultural products.*” In organic farming that is friendly to plants, food, animals and nature, no fertilizers, pesticides and genetically modified organisms should be used (Svobodová, 2017).

For the average consumer, it is essential to know that organic food must be the origin of organic farming, must be produced without the use of chemical and synthetic substances and treated with care (Dvorský and Urban, 2014). Organic food is high quality food and has a distinct and true flavour, notably due to the non-use of pesticides and other chemicals (Bio League of Consumers of Food and Friends of Organic Farming, 2010).

Organic food packaged, produced, checked, certified from EU countries must have a logo on the packaging that has been approved by the European Union on 1 July 2010, with the organization control code and the designation of the origin of the raw materials. The logo presents the motif of the leaf, which is depicted by the stars on a green background (Svobodová, 2017). Organic food produced, packaged, inspected and certified in the

Czech Republic must also contain the Czech logo, the so-called bio-zebra (Act No. 242/2000 Coll. on Organic Farming, Legislation on Organic Farming and Organic Food Production, 2015), see Picture 2.

## 2.2 Superfood

The term superfood is used in connection with a more modern healthy diet which was first used in the US. Superfoods can be considered as medicines of nature and as a suitable supplement to healthy eating which is undoubtedly also associated with the consumption of organic food (Bingemerová, 2015). The concept is not uniformly defined. Generally, superfoods is food that is nutritionally rich and beneficial to health (Superpotraviny.cz, 2014). Superfoods are “*herbal foods that contain valuable nutrients in unusually high concentration. It delivers vitamins, minerals, easily digestible proteins, valuable fatty acids, and secondary herbal substances, the enormous health effects of which scientists are gradually discovering*” (Bingemerová, 2015, p. 8). Most superfoods come from countries outside the EU. Superfoods, if possible, should be consumed raw. If heat treatment is required, heat treatment is recommended to maintain nutrients up to 42° C (Arndt, 2015).

Lists of superfoods may vary, length and content (Arndt, 2015). This paper introduces the list of

superfoods with which Bingemerová (2015) works and includes list of 25 items of superfoods. See Table 1. Other superfoods include, for example, garlic, aloe vera, chilli, rosehips, turmeric, mulberries, olives, buckthorn or even stevia and many others (Bingemerová, 2015).

Superfoods do not have any legislative designations. Manufacturers and sellers are referred to by the word „superfood“ on the basis of the food information obtained. Therefore, there may be food on the market that indicate that it is superfoods but they can only be misleading advertising. However, if a vendor or a distributor can demonstrate or at least claim that the food contains a large amount of nutrients and has a truly beneficial effect on the body, it can be branded as a superfood with pure conscience. Then it would not be a misleading advertisement. However, labeling has not yet been legislated in any way and it is therefore advisable to orient it in supermarkets to avoid that the label

is being misused to the benefit of the entrepreneur and the consumer is misled (Mroščáková, 2018).

### 3. Methodology of research

#### 3.1 Data collection

Data obtained for this research were collected by secondary research (theoretical background) and mainly by primary research as part of bachelor thesis of co-author Mroščáková, where Dr. Navrátilová as supervisor provided supervision and expert consultation.

Quantitative and qualitative research was selected for the collection of primary information. Data retrieval was performed using the questioning method (personal and online). For both types of questioning, the same tool was used, a questionnaire that consisted of 24 questions about consumers buying behaviour in the demand for organic

**Picture 2 » Logo of organic food: European Union and the Czech Republic**



Source: Havel, 2018

**Table 1 » List of superfoods**

acai berries	blueberries	pomegranate	coconut	quinoa
aronia berries	chia seeds	green vegetables	flax seeds	sprouts
algae (chlorella, spirulina, wakame, nori etc.)	cereal grains (wheat, barley, spelt)	hemp seeds	maca	wild herbs (nettle, dandelion, etc.)
avocado	earth almonds	ginger	moringa	walnuts
bee products	goji berries	coca	physalis	cinnamon

Source: own processing according to Bingemerová, 2015

→ food and superfoods. The online questioning method was implemented electronically on the Facebook social network. Personal interviews took place in different places, e. g. in a hospital, a fitness centre or at school.

The responses from the electronic questionnaire survey were processed electronically directly on the website (www.click4survey.com) where the electronic questionnaire was created and then distributed. Data obtained by personal questioning were placed on the above mentioned website. All data were therefore evaluated together.

The questionnaire survey was conducted in February 2018 and 430 respondents participated in the research. 19 women participated in the personal interview, 411 respondents attended online interview (regardless of gender). The authors got 423 respondents who correctly finished the questionnaire. The research evaluate date from part of the sample file (206 respondents) who are interested in organic food and superfood and moreover they do shopping themselves as two basic conditions for target respondents and correct data validation.

### 3.2 Pre-survey

The pre-survey was conducted in a small group of people, which is consisted of eight respondents. Four respondents a questionnaire were sent via the Facebook social network. These people had the opportunity to comment on each question if the questionnaire if questions were formulated incomprehensibly. In the second half of the group, the type of personal interview was tested. Respondents were also given the opportunity to comment on each issue in case of confusion. After the pre-research and the possible adjustment of the questionnaire, the implementation phase of its own marketing research was launched.

### 3.3 Research questions

- RQ<sub>1</sub>: What type of consumer most does want organic food and superfoods?
- RQ<sub>2</sub>: What factors affect the purchasing behaviour of the consumer most in the demand for organic food and superfoods?
- RQ<sub>3</sub>: What is consumer know-how and awareness about organic food and superfoods?
- RQ<sub>4</sub>: What type of organic food and superfoods do consumers most often ask for and where?
- RQ<sub>5</sub>: What is the monthly consumer spending for buying organic food and superfoods?

### 3.4 Research design

The research was divided into 10 parts and 4 sections:

- 
- 1st research part: Demographic data of respondents
- 
- 2nd research part: Attitude to healthy eating and healthy lifestyle
- 
- 3rd research part: Information and consumer awareness of organic food
  - 4th research part: Factors influencing the demand for organic food
  - 5th research part: Demanded organic food and place of purchase
  - 6th research part: Monthly consumer spending on organic food purchase
- 
- 7th research part: Information and consumer awareness of superfoods
  - 8th research part: Factors influencing the demand for superfoods
  - 9th research part: Demanded superfood and place of purchase
  - 10th research part: Monthly consumer spending on superfoods purchase
-

#### 4. Data analysis and interpretation

##### **RQ<sub>1</sub>: What type of consumer most does want organic food and superfoods?**

Based on the results of the 1<sup>st</sup> research part about demographic data of respondents, organic food and superfoods are mostly demanded by women aged between 21–35 years. This category of woman is significant for 75% of surveyed women. Highest achieved education is almost balanced on two levels. 49% are women aged 21–35 with a secondary education (with a school-leaving examination/vocational certificate. 48%, they are women aged 21–35 years with university education. This group of women aged 21–35 years from 44% reported a monthly net income up to 10.000 CZK. This category of monthly net income was reported by 61% of women aged 21–25 having completed secondary education. It is possible, therefore, to deduce that these women may continue to study and during their studies they earn some but less money. Another large group was defined, after the connection of net income of 15.001–20.000 CZK and 20.001–30.000 CZK, where we can find 37% of women aged 21–35 years. This category of monthly net income was from 64% of women aged 26–35 years.

##### **RQ<sub>2</sub>: What factors affect the purchasing behaviour of the consumer most in the demand for organic food and superfoods?**

In this part purchasing behaviour was evaluated and analysis was made on base of the 2<sup>nd</sup>, 4<sup>th</sup> and 8<sup>th</sup> part of the research. The results about **personal factor**, very important part of consumer lifestyle, show that this factor can affect 95% of consumers in purchasing organic food and superfoods. Another factor influencing the consumer is the **cultural factor**. It is clear from the results of the large-scale research that consumers receive information about organic food and superfoods on social networks, over 70%. **Psychological factors** (motivation, perception, learning, beliefs, attitudes) being as well part of consumer behaviour show that most con-

sumers buy organic food and superfood for their health, more than 80% of respondents. The factor that discourages consumers from buying this food is higher price, 73% of respondents. **Social factor** (group members, reference groups, family, the role of the individual and the social status) was investigated in particular from the point of view of what percentage of the information received about organic food and superfood is from family and friends, i. e. group members or reference groups. Furthermore, from the point of view of how many percent of the reference/member groups can influence the motivation of buying organic food and superfood. The research showed that the social factor can affect the consumer's purchasing behaviour by 55% (demand for organic food) of the information passed from family and friends by 65% (demand for superfood).

##### **RQ<sub>3</sub>: What is consumer know-how and awareness about organic food and superfoods?**

The data about consumer know-how and awareness of organic food and superfoods come from the 3<sup>rd</sup> and 7<sup>th</sup> research part. In the field of **organic food**, it is clear from the results that most consumers know what the concept of "organic food" means, more than 80% of respondents. What really gives them a guarantee that they buy bio quality food knew 59% of asked consumers. A sign of organic food was cited by most consumers as 62% of the term "bio" or "eco". The largest source of information about organic food comes from social networks, by 70%. The results show that consumer know-how and awareness of organic food has the majority of consumers who demand them. From the results of consumer know-how and awareness of **superfoods**, almost all respondents know what the term "superfoods" means, 92%. The theoretical part of this paper states that superfoods do not have any legislative designation that would really give us a guarantee that the food contains many nutrients beneficial to our body, so it is good to know what food is superfoods, according to research 75% of respondents know it. Information →



about superfood respondents gain from social networks, 72% of them. The results therefore show that most of consumers who demand superfood are aware what to buy.

**RQ4: What type of organic food and superfoods do consumers most often ask for and where?**

Based on the results of the 5<sup>th</sup> and 9<sup>th</sup> research part evaluating the kinds and the place of purchase of organic food and superfood show that consumers mostly from organic food demand fruit, vegetables, dry food and dairy products. These products are commonly available in hypermarkets, supermarkets or discount stores where consumers buy the most of organic food, 82%. Other places to buy organic food in most consumers go to health food stores and popular drugstore DM markt. Here consumers most often ask for dry foods, pastries and sweets.

Chia seeds are most demanded item. The percentage of almonds, avocados and ginger was almost same, about 65% of demanded superfood. 63% of respondents said they also buy goji, coconut oil, algae such as chlorella or spirulina, and barley, certain types of seeds, such as flax or hemp seeds, turmeric, garlic and honey. Most superfoods are available in hypermarkets, supermarkets, or discount markets where consumers buy this food most often, by 81%. As stated in the theoretical part of the paper, many superfoods are of foreign and exotic origin. That is why health food store is a popular supermarket for most consumers where they can buy many other superfoods that are not available in hypermarkets, supermarkets or in discount stores.

**RQ5: What is the monthly consumer spending for buying organic food and superfoods?**

Based on the results of the 6<sup>th</sup> and 10<sup>th</sup> research part evaluating the monthly consumption of organic food and superfoods, consumers spend an amount of 101-500 CZK per month for organic food, 51% of respondents and same amount of the

money, 53% of customers demanding superfood.

**5. Summary of current trends in the Czech Republic**

1. Organic foods and superfoods are most often required by women aged from 21 to 35 years.
2. Personal and psychological factors mostly affect consumer buying behaviour. Cultural and social factors are important as well.
3. Consumers are aware of organic food and superfoods, they are informed and mostly know what guarantees them that they are actually buying good quality of organic food and/or superfoods.
4. Information about organic food and superfoods nowadays customers get through social networks.
5. Customers mostly demand fruit, vegetables, dry food and dairy products as organic food.
6. Customers mostly demand chia seeds, then almonds, avocados, ginger, goji, coconut oil, flex and hemp seeds, algae, barley, turmeric, garlic and honey.
7. The monthly amount spent by most consumers for the purchase of organic food and superfoods can be up to 2.000 CZK.
8. Hypermarkets, supermarkets or discount stores are the most frequent places for consumers to buy organic food and superfoods.
9. Health food stores are the second most popular places for most consumers to buy organic food and superfoods.

**6. Conclusion**

The main objective of the paper was to investigate and describe the current trends of consumer behaviour in the demand for organic food and superfoods based on a questionnaire survey. The research has shown the trends what consumers most commonly demand in area of organic food and superfood, what places are most sought after for buying this food and how much customers spend on



buying organic food/superfoods. Trends in the paper further describe factors influencing consumer buying behaviour and assessing their strength. It also assesses consumers' knowledge and awareness of this healthy kinds of food.

People are gradually adopting healthy and active lifestyles and changing their eating habits by consuming unprocessed and whole grain food full of balanced nutrition as this research has confirmed. Younger generation of customers/consumers in the Czech market is very interested in

healthy life style as buying organic food and superfoods. Economic prosperity and online information specially from social networks help to younger generation effort good quality food and follow current trends in healthy eating.

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## **Current trends of consumer buying behaviour in demand for organic food and superfoods in the Czech Republic**

### **ABSTRACT**

*The paper presents area of organic food and superfood in the Czech market and consumer buying behaviour in this very fast-growing food industry. The aim of the article is to determine current trends of consumer buying behaviour through primary and secondary marketing research, find products that consumers are looking for, how they get information and what kind of factors influence their purchasing behaviour. The qualitative and quantitative analysis will be used in the following marketing research. The result of the paper should be useful for producers and dealers of organic food and superfood to easily understand consumers' needs.*

### **KEYWORDS**

*Organic food, superfood, trends in buying behaviour, young consumer, Czech Republic*

### **JEL CLASSIFICATION**

*L66, Q18, D12, P36, M31*

×

# Indexing of Threefolding Management

► Jiří Nesiba, PhD., PhD., » Newton College; email: jiri.nesiba@newtoncollege.cz

**My aim was not to build up an enterprise but to form men.**

Tomáš Baťa, *My Economic Philosophy, 1930*, In.

Tomáš BAŤA, *Reflections and Speeches*.

Tomáš Baťa Foundation, 3rd Edition, 2016, p.90.

## \* 1. Introduction

The article describes the proposal of a methodology for indexing Threefolding Management (TM) in private small and medium-sized companies in the current EU. TM is emerged from Social Treefolding Theory (STT). The author shows how TM and STT are related to the current theory of CSR (*Corporate Social Responsibility*). Ta je nejrozšířenějším nástrojem managementu v rámci business ethics. The relationship between TM and CSR is the first part of the work presented. It is shown how Social Threefolding Theory sets the context of CSR, their similarities and differences, the historical context and the practical application. The article on the example of CSR international standards and certifications demonstrates their inadequacy to real demand for sustainable development. As an alternative, it is proposed to use the STT theory to create a management tool in the form of Threefolding Management (TM).

In the second part, this paper shows how TM empirically examines indexing, called the Threefolding Management Index (further TMI). TMI is

set to measure management within EU's private small and medium-sized enterprises (SMEs), e.g. SME concerns with EC 250 employees and annual turnover up to EUR 50 million through all fields of industry and service (European Commission Decision, 2003).

It is a proposal of initial diagnostics mainly for those companies that are beginning to think about implementing some elements of STT. The TMI methodology on a sample minimal  $\hat{=}$  0,3 and maximum 3 points scale.

By answering the proposed 33 questions, companies can measure how are set up with TM. The basis of the TMI methodology is simplicity and practicality. It serves as a guideline where and how intensively implement the CSR elements that are based on the division of company management according to economic, political (legal) and spiritual (cultural) elements. The companies are indexed according to points and then classified into one of the 3 categories. →

## 2. How to index Social Threefolding Management?

### 2.1. Correlation of Social Threefolding Management and CSR

Today is widely speaking about CSR management, because of results from rising global social, economic and environmental risks. Even after several decades of efforts to implement CSR methods and so limit global risk, the state of economy, ecology and social trends did not turn to the positive trends. Rather uncertainty and global risks have become more current, so there is a question about the success of CSR management (Wisser, 2010). CSR theory originated with the emergence of the first economic and ecological post-war crises from the 1970s in the Western world. Therefore, CSR theory fulfilled its role as a partial approach to the *ad hoc* issue of global risks but failed to address the causes of current global problems and business ethics because they do not have a philosophical holistic background (Sandel 2012, Klein 2015).

One way is to look for an alternative to the current CSR. View historically the models that preceded CSR and which dealt with *business ethics*. One way is Social Threefolding Theory.

Therefore, this contribution goes back to the original social philosophy that a hundred years ago became an inspiration for today's CSR approach. Social Threefolding Theory results from a comprehensive anthroposophical philosophy designed most notably by the Austrian philosopher Rudolf Steiner (1869-1924). If we convert the classical STT theory to the present, we will create the Threefolding Management model.

The most notable similarities between CSR and TM include the three divisions of management between society, nature and the economy. However, similarity here ends. Both approaches offer different management. What makes up CSR can be characterized as the acceptance of voluntary commitments into the company's management, based on three views – economic, environmental and social

(in popular form it appears as an abbreviation for 3P – People, Planet, Profit, or 3E – Economy, Environment, Ethics-Equity, generally as a *triple bottom line*). The approach of CSR management results from voluntary commitments towards the mentioned three categories. CSR management is reflected in other theories about the relationship between the company and its environment, where the approach to voluntary acceptance of a genuinely ethical commitment that is perceived as a pillar of credibility for the public, citizens, or clients is analyzed (Pedersen, 2014). These categories are to be balanced in the institution, they are dependent on each other. (Kašparová, Kunc, 2013). The interconnection of CSR elements addresses corporate ethics with regard to participative groups and stakeholders (eg Weiss, 2014) or overall integrity management (eg, Bowie, 2013).

Despite that, CSR management has its limits. It is criticized by the fact that it can only be a marketing tool of the company as so-called pretentious ethics. Most commonly, it appears as so-called *pinkwashing*, *whitewashing* (generally a term that shows the contradiction between appearing with the impression of ethics and reality), such as *bluewashing* (linking a firm's name to such a project or institution that creates a high level of trust in the public) or so-called *greenwashing* ethics in the area of ecological approach). These attitudes arise from legitimate companies' concern that voluntary undertakings reduce their competitiveness and that information on management principles can be misused in a competitive struggle within a given economic sector. In general, CSR can address only partial issues and comes with partial solutions such as green economy, sustainable development (Taticchi, Carbone, Albino, 2013).

Social Threefolding Theory was based on holistic anthroposophical philosophy. This theory reflected the disruption of social ties, economic destruction and damage to natural resources.

after the First World War. The TM uses similarly three basic rules that should be respected – the economic, legal and spiritual (cultural) sector, ba-

sically talks about the institution as about a “social organism”.

TM is a CSR approach similar but different in the overall concept of an institution as a social organism. TM, like CSR, applies three basic elements – economic (meaning environmental), legal (meaning legal), and spiritual (meaning cultural). It can even be said that the elements are to some extent analogous to CSR and TM. However, where CSR talks about the interconnection of all elements, TM claims, on the contrary, the greatest possible independence of individual sectors. Just misunderstanding different interpretations can lead to a misconception of the similarity between CSR and TM, even if management is a different approach (Findeli, 2008).

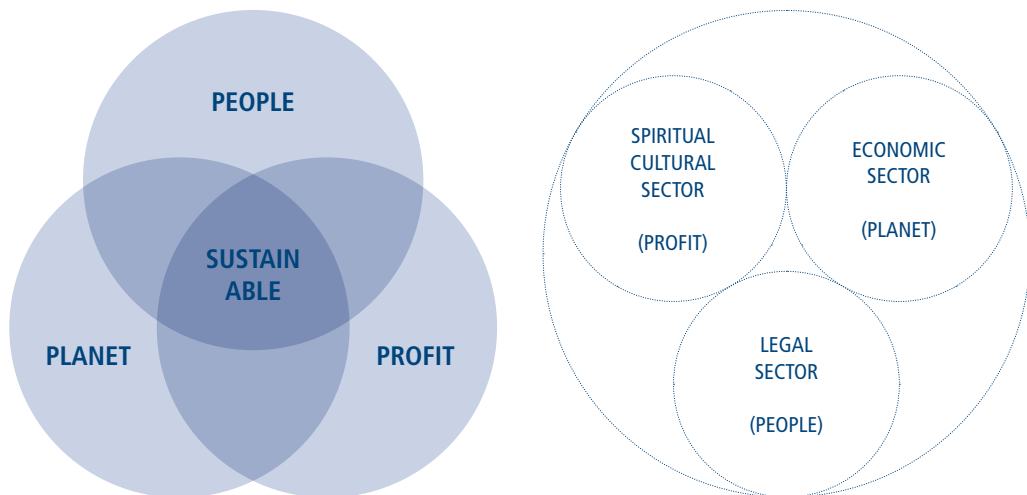
TM originated after the First World War in response to the destructive approach of then-politics and business, which led to war. Namely the unilateral preference of one of the three elements of a social organism in state management, for example, as capitalism preferred only economics, or com-

munism only social aspects, theocracy highlighted spiritual sector (Dolan, Rajak, 2016). Both in the national economy and in corporate life, these elements should be independent and equally important. Thus, in an institution, there must be three elements independent, equal, and free from one another (Steiner, 2017, 2018).

This element of mutual independence, equity and freedom in the current CSR is missing.

With the independence of three sectors, TM can better focus on ownership forms, redefining profitability, employee motivation, financial reward. These solutions go beyond the mass popularization of CSR methodology. There is a risk that CSR will serve to enhance customer / business confidence without an ethical level being embedded, with social trefolding attitude can be avoided that the CSR is just a marketing tool and does not change management (e.g., CSR Trust 2020, 2017). By TM is company observed as a kind of social organism, where all parts must be independent by their functions.

**Table 1 » Graphical representation of the similarity and diversity of CSR to TM**



Source: own processing



## 2.2. Company as a social organism

The theory of social structure as a living social organism has already been spoken in ancient philosophy. The complexity of understanding the human group as an organism has led to many misunderstandings and problems in the long-term retention of a group subject to changing social laws. The concept of a social organism appears in the philosophy of Aristotle, in the thinking of Christian theologians (often under the concepts of analogy, signatures, correspondence), in the modern times of Thomas Hobbes or at the time of the emergence of modern sociological theories in the 19th century, f.e. by August Comte (MacLay, 1990). In modern times, under the influence of biological knowledge about relationships in nature, this concept has experienced scientific interest. Mainly in the sociological environment, it is possible to draw the roots of interest by the philosopher Herbert Spencer (1820–1903), who in the middle of the 19th century claimed at the time of the Darwinist view of the development of animal species in his breakthrough study called *The Social Organism* “...is a general outline of the evidence which justifies the comparison of societies to living organism. That they gradually increase in mass; that they become little by little more complex; that at a same time their parts grow more mutually dependent; and that they continue to live and grow as wholes” (Spencer, 1891). From a different point of view, the social organism as well as the French sociology of *fin de siècle*, particularly in the form of a functional theory of organization organization, most notably by Émil Durkheim (Durkheim, 2014).

At present, interest in the social organism is linked to biology or anthropology. The sociobiological theory of consiliency, as suggested by its founder O. Wilson in the 1970s is today generally accepted theory of the relationship between social and biological (Alcock, 2003).

Similar parallels between social and biological can be found in the theories of constructivism or systemic theory. The most popular and responsive

to this approach was the work of philosophers Francis Varela and Humberto R. Maturana, who work with biological terminology that they apply to the social environment. Their work served as an inspiration for a variety of industries, from physics, psychotherapy to management (Maturana, Varela, 1992). In parallel with this theory, the theory of social constructivism developed in the social sciences and sociology, describing the group of terms of social interaction, social dynamics, etc. Admitting the social construction of reality means to admit the variability and relativity of the established definitions with regard to ethics. The American linguist, John Searle, talked about “social ontology” (Searle, 1995).

In the management environment, this issue has become a center of interest since the 1950s. With regard to the division of organic and mechanical management. An organic organization is a fluid and flexible network of multi-talented individuals who perform a variety of tasks. Thanks to management use the theory of organic organization has become an early business practice.

Greater interconnection, wider participation and a common business goal can not be defined clearly, but it is also cost-effective (Hamel 2007, Hsieh 2013). Organic concept of “new leadership” CSR prefers to support the potential of all employees, which then leads to fair play company and CSR naturally, without certificates and dearly paid standards. Often, the analytical cognitive economic concept of management, the promotion of the emotional potential (Daniel Goleman) or the moral (Aaron Haas) potential of the employees is spoken. So that these are in harmony (Covey, 2012).

From this point of view, the difficulties of unambiguous definition of the ethical or unethical behavior of companies will be more realistic demonstrated, because it is very difficult to define a lively phenomenon. Even a company is an organism that is changeable and adapts to the conditions. Therefore, the creation of universal and immutable standards for all types of cultures and

types of industry and services is risky and the nature of the problem can escape (Rawie, 1990).

If we give an example of a practice where the organization is conceived as a social organism directly in the practice of management, we can mention biggest Czech interwar entrepreneur Tomáš Baťa, who, based on parallel principles, tried to manage his enterprise and his approach to management uses aspects of this theory (Baťa, 2016). Baťa, inspired by American taylorism and fordism, perceived as a business model the creation of trust between the owner and the employees, the decentralization of production, the project management, the greatest responsibility of the employees who had as much a business plan as possible, and thus naturally sought for greater efficiency in production. employee, manager should always be a model for employees.

### 2.3. Risk of interpreting current CSR standards and certifications

If, according to the above theories, it does not perceive and describe the company as a specific species of a social organism, a perceptual bias can arise about the actual state of the ethical approach of management. This deficiency is reflected, for example, in current standards and CSR certifications. In spite of their high degree of sophistication, however, they hardly take into account intercultural differences or differences in economic subjects by focus, even within the EU. In addition, a number of standards are based on voluntary reporting and trust in objective quality certification. According to the Decock-Good methodology, it is possible to quantify the results of business ethics according to five procedures – analysis of annual reports, environmental pollution index, company reputation

**Table 2 » Relationship of CSR Standards to Threefolding Management**

Standards	Cultural Sector	Economic Sector	Legislative Sector	Performance Indicators
OECD Guidelines for Multinational Enterprises	NO	YES	YES	NO
AA 1000 AccountAbility/Assurance Standard	YES	YES	NO	NO
Social Audit Network	YES	YES	YES	NO
ETHIBEL	YES		YES	NO
EFQM	NO	NO	NO	NO
SA 8000 — Social Accountability International	NO	NO	YES	NO
ISO 26000	YES	YES	YES	YES (partly)
Global Reporting Initiative (GRI)	YES	YES	YES	YES (partly)
London Benchmarking Group	NO	NO	NO	YES
Corporate Responsibility Index	YES	NO	NO	YES
Corporate Giving Standard	NO	NO	NO	YES
Corporate Community Involvement Index	YES	YES	NO	YES (partly)
Dow Jones Sustainability Index	NO	YES	YES	YES
EMAS	NO	NO	YES	YES
UN Global Compact	YES	NO	YES	NO

Source: own processing, Directive 2014/95/EU; Executive Summary — Multistaker Forum CSR 2015; Enterprise 2020; Kašparová — Kunz, 2013.

index, rating agencies and questionnaire survey (Pavlík, Bělčík, 2010, p.106–107). Contemporary certification then evaluates only a part of these recommendations that can not distinguish between intercultural differences or between business-to-business activities. An objective CSR approach provides access to these standards, which should be discussed with stakeholders (participating groups) (Miraglio et al., 2007). Such an ethical certificate works with the confidence of clients that it has been provided on the basis of an appreciation of all objective facts. An important fact is that none of them is a full quantitative standard for measuring CSR (Corporate Social Responsibility, 2018). The situation inside the enterprise is so-called, that is, the information is submitted to the headquarters of the certificate provider. Certificates are for a fixed period (usually 3 years), then rechecked and checked again. The following table represents selected standards where none meets TM requirements.

Despite the fact that within the EU a broad agenda of supporting tools for the implementation of CSR standards has been established, the Coordination Committee of the European Multistakeholder Forum on Corporate Social Responsibility has not yet been trusted in standards. No state has yet made a tax or other financial advantage for holding a license to any of the CSR certificates (tax assignment). The EU acts more as a coordinator among organizations primarily involved in CSR, such as the European Business Network for Corporate Social Responsibility (CSR Europe, 2018), Sustainable Investment Forum Europe (2018), or SME United (2018). It turns out that even these most sophisticated instruments are not a guarantee of real business ethics.

CSR standards are too complex, expensive and inefficient, for example, at present neither a state or public institution in Czech Republic does not report and is not licensed for CSR certification. This is caused by a attitude to solution from above. On the other hand, there is a great popularity of ethical labeling (see 3.1.), More precisely targeted.

Consequently, the concept of a company as a social organism requires a bottom-up approach, ie the motivation of employees, management and owners. This corresponds to the different forms of ownership of the institution. Rudolf Steiner advocated cooperative forms (germ. *Genossenschaft*). Today can be called stakeholder capitalism, because he thought that conventional shareholder capitalism *and* state socialism, though in different ways, tend to absorb the state and human rights into the economic process and transform laws into mere commodities (Steiner, 1999, p. 46). Steiner held freely self-organizing forms of *cooperative* economic life, in a society where there is freedom of speech, of culture, and of religion. In his theories, Steiner was more concerned with the rule of the state according to the STT principles. Nevertheless, this management element has been freely implemented in the management of companies since its creation in the 1920s. Therefore, this article explores possible ways to measure implementation rates even for companies that can voluntarily implement these elements under the influence of CSR management policies that are moving closer to ST principles and gaining wider popularity through projects such as Fair Trade (Institut für Soziale Dreigliederung, 2018).

#### 2.4. TMI questionnaire methodology

For these reasons, it may seem effective to create a certain level of TM measurement using exact indicators. They refer to the measure of implementation of instruments standing on the theory of Social Threefolding. Quantitative investigation and arithmetic index as a result may be a variant of how to recognize the current state of TM.

TM instruments can be most easily measured using a questionnaire survey directly in the company. In order to maintain objectivity, it is necessary to obtain data from multiple sources, which may differ in qualitative interpretation (similar to CSR standards being asked by a stakeholder). Best of three employees in terms of management set-



tings – interpreting the owner, manager and line staff. In the case of a cooperative, three independent shareholders. For easier and more effective work, we need to inquire as many quantifiable documents as possible, reflecting the quality of society and the level of implementation of ethical tools testifying to Social Threefolding. Therefore, in the drafting of this paper, we include in each category 11 questions that refer each to one specific indicator. In sum, therefore, it is about obtaining data on 33 indicators. Due to the variability of the current state of the company, it is necessary to consider the scatter on the answers. Again with regard to the practicality of the interpretation of the research, we propose three points for each question. Each sector may have a scatter of 11–33 points. If we ask more workers, we need to create a TMI for each area.

TMI is calculated in each sector according to this equation:

$$\frac{\text{Number of gained points}}{\text{Number of possible maximum points}} = \text{TMI (sector 1,2,3)}$$

From this simple formula, data can be obtained for individual sectors. Maximum number 1 and minimum  $\hat{=} 0,3$ . Because we measure all three sectors, the individual data from three sectors (together 33 queries and measured indicators) need

to be summed to get the resulting number. So the end result is minimal  $\hat{=} 0,3$  and maximum 3.

$$\text{TMI (sector 1)} + \text{TMI (sector 2)} + \text{TMI (sector 3)} = \text{TMI (complexive)}$$

The formal aspect of CSR research is thus oriented to a simple statistical function. It is not only possible to determine the ratio in the individual sectors of the company (ie the rate of implementation of ethical instruments), but this ratio should not be targeted to one of the sectors. At the same time, the total result of a particular company can be determined. The company may get a scoring score of 0,9–3. It is therefore possible to use existing methodology of structuring companies according to the application and implementation of CSR. In the 1990s, the first study of CSR came in similar fashion, when this management tool began to progressively develop, for example the Reidenbach and Robin stages of corporate ethics (Reidenbach, Robin 1990). For the purposes of TMI, we can use psychological tools to determine the moral competencies of an individual in the form of Kohlberg's stages of moral development (Kohlberg et al., 1983). However, for research purposes related to social macroeconomics behavior of companies. For ease of diagnosis, point scores are added to each stage.

The survey itself can serve as education in this area. Businesses can naturally implement Social

**Table 3 » Three levels of TMI complexive**

Degree of development by TMI	Charakteristics	TMI complexive
Postconventional	Ethicle Principle Orientation, Principle Driven, Social Contract Orientation.	2,5–3
Conventional	Authority orientation, Reaction mechanisms, Responsive, Social Responsibility if profitable.	1,5–2,49
Preconventional	Focus on law, Profitability, Operational or Crisis management.	0,9–1,49

Source: own processing



→ Threefolding elements without actually working on the TM business background. This fact is evidenced by a number of current successful practice examples that use TM management in their management without formally and purposefully shaping management in this direction (Chouinard, Stanley, 2012).

### 3. Selected measurable CSR instruments as TMI indicators

#### 3.1. Ethical Labeling

At present, ethical or integrity management is becoming increasingly popular with ethical, organic or BIO brand implementation for a particular product, service. This tool is called “ethical labeling”. The value of goods and services classified under the various ethical brands in the EU is increasing year after year, ethical labels are the most popular ethical instrumen (Euromonitor, 2016). The EU law on pre-packaged foods says that if 95% of the ingredients in a packet are produced organically then you can label it organic (Council Regulation EC No. 834/2007). That means no chemical fertilizers, no antibiotics and no GM, with animals fed organic food and there’s an emphasis on their welfare. At a basic level an ethically produced product should not harm the environment and should fairly support the suppliers, growers or producers associated with it. The discrepancy comes between companies who are willing to prove it, often with other accreditation and those who are happy to slap it on a website and add a few lines about a CSR policy.

Ethical labeling covers mainly areas such as food, fashion, pharmaceuticals, forestry, breeding animals, plants and agriculture. The most famous ethical label is the FairTrade concept, but other brands include Seafood Save, UTZ Certified, Global Recycle Standard, Forest Stewardship Council, Fair Wild, Ecover, 100% Natural Products, Climatop, Certipur, Carbonzero, Green Business Bureau ... etc. Currently, there are a number of hun-

dreds of different ethical brands, often labeled Eco Labels (Ecolabel Index, 2018). Licenses holding similar labels (or national ones) are an indicator for a particular type of economic management in relation to the environment in particular. Therefore, they can be an indicator of economics in TM.

#### 3.2. Code of Conduct

The very existence of a written *Code of (Professional) Conduct (Code of Practice, Code of Ethics)* is an indicator of company culture. In terms of TM, it intervenes in the legal and cultural spheres. Ethical Codes is a written public engagement of the company, and it is possible to read a lot about the company, about the stakeholders, suppliers, about the clients, about the overall ethical setting of the company.

Codes are either mandatory (an employee may receive a conduct by a signing work contract and in case of violating are subject to termination of work contract) or non-binding (compliance is voluntary). Professional codes formulate the basic goals and values of a given organization and present them externally. The Code can be characterized as a written set of guidelines issued by organizations for their employees and management to help them carry out their activities in accordance with the organization’s values and ethical standards. It is therefore related to ethical management in both private and public institutions. It is a written document that attempts to define mainly philosophical principles and to formulate values that are recognized by the organization. Codes therefore define the organization’s ethical parameters and determine what is acceptable and what is not. They are a subordinate norm that is voluntarily approved and accepted by an institution or organization and used for self-regulation. It gives the public, clients or employees the opportunity to control the organization’s internal functioning (Stevens, 1994).

All persons associated with the organization must be aware of the laws and regulations that are potentially applicable in each particular case.

Corporate philanthropy: company donations to charity, including cash, goods, and services, sometimes via a corporate foundation
Community volunteering: company-organized volunteer activities, sometimes while an employee receives pay for pro-bono work on behalf of a non-profit organization
Socially-responsible business practices: ethically produced products which appeal to a customer segment
Cause promotions: company-funded advocacy campaigns
Cause-related marketing: donations to charity based on product sales
Corporate social marketing: company-funded behavior-change campaigns

Source: Lee, Kotler 2013

Thus, ethical codes help to ensure that all individuals know the rules forward and that they always follow (Wulf, 2012). Corporate codes include provisions that affect the quality of products and services, compliance with local laws and regulations, environmental protection, as well as principles such as transparency, fairness and honesty (Kaptein, 2004). Thus, distrust of the institution is eliminated without having to regulate the government level (Pitt, Groskaufmanis, 1990).

The influence of the code may be direct – the employee agrees to the code and acts according to it, or indirect – if another employee warns that it is acting in contradiction with the Code and he subsequently modifies the behaviour (Schwartz, 2001). Codes are effective if they are embedded in organizational culture and sufficiently communicated. Employees must be familiar with the content of the Code and must consider them as their own, not just forced by the leadership (Stevens, 2008). These codes are therefore self-regulatory, although they are often the result of public pressure (Van Hulten, Bentinck, 2011). The ethical regime of the parliament can be created either by means of a code of ethics or a combination of constitutional rules and procedures, as well as administrative, civil and criminal provisions.

The Code can be perceived not only as an external information tool, but also for the working environment within the company. Code shows a com-

pany strategy. Whether the ethical code is linked to other internal documents, ethical instruments, perceived issues of sustainable development, how the code of ethics is regularly upgraded.

### 3.3. Corporate Social Responsibility Initiatives

It is generally reflected in corporate culture. Corporate initiatives show the company’s economic, spiritual, as well as legal background. Today, the most common factor is whitewashing, ie pretended ethics. TM can therefore explore the importance of corporate social initiatives for the development of the employees themselves and the overall market where the company operates. So the company coordinates at its own expense a project that develops a social aspect within the triple bottom line (see above). These can be projects for employees (support for work-life balance programs, corporate benefits, support programs for former employees in retirement age, support for health care, etc.). At the same time, we can include projects that deal with the development of the economic segment (btw, announcement of student competition...). Social projects for the public, support for people in need, ecological projects. They can be divided into basic categories such as Corporate social responsibility includes six types of corporate social initiatives:



Unlike corporate philanthropy, these are initiatives that the company itself coordinates and pays. As explained below, philanthropy and donation mean that the company pays a certain amount of finance outside the firm's projects and devotes a specific part of the finance without the possibility of directly influencing the cost effectiveness.

### 3.4. Participating in CSR competitions

The ethical award gives the potential client references to the institution's ethical management (Wulf K., 2012). As a regular client does not study the CSR (ethics) in more detail, he/she is most interested in award logo and design. Therefore CSR award logo fulfills marketing service and sophisticated branding. The ethical logo of a CSR award for ethical organization can influence the client's decision for buying goods or using a service (Fischhof, 2013). This derives from the confidence of the public in the objective CSR evaluation of the whole competition and the quality of the CSR award. The client taking into account the ethical implications of his behavioural economy, gains the feeling that the use of the service or the purchase of the product helps to solve ecological or social imperfections while at the same time acquiring a quality product, often at the money price that is more expensive than a regular competitor (Cialdini, R.B., 1993). As a result, CSR awards are based on public confidence that they are objective and correspond to reality. Therefore, there is a growing risk that institutions may tend to use this branding to promote their own corporate image, regardless of the true quality of the products. For companies, receiving awards for ethical management means interesting marketing support and a message to clients about the credibility of their business (Lewis, Potter, 2011).

One of the popular elements of CSR promotion (and presentation of CSR management for public) is the support for awards of ethical management. It concerns all organizations, managers, many products and services that meet the conditions of the

three mentioned institutional responsibilities (social, economic, ecological). CSR competitions are becoming increasingly popular, with a view to comprehensive marketing institutions responding to higher sensitive public attitudes towards emphasizing the reduction of social and environmental risks by purchasing an environmentally or ethically produced product and service. If an organization promotes through the CSR, it is a strong signal to the public about the ethical level of the institution.

In the European environment, for example, the European SCR Award, The Natura 2000 Award, The Corporate Engagement Awards, World's Most Ethical Companies, The Ethical Corporation Responsible Business Awards, the International CSR Excellence Awards, SDG's ... etc. In addition, a number of other national awards for the best employers, the product of a particular segment, services. From the point of view of TM, this is a clear indicator of the effort to improve management.

### 3.5. Ethical (CSR) audit

Ethical (social) audit belongs among the non-economic audits of the company. The audit is primarily focused on the systematic evaluation of the ethical program in the company and the verification of ethical standards (Kreikenbaum, 2000). An ethical audit allows for the consistency of proceedings, unambiguous or ambiguous interpretation of the rules. Institutional standards are the basis of ethical management, and their fulfillment is the basis of ethical reflection in the company (Putnová, Seknička, 2016). Ethical audit is related to the overall corporate culture and is a close part of internal processes and planning (Urban, 2014).

Company size often prevents management from overseeing the concrete consequences of its decisions. Therefore, the analysis of the social climate of the company suggests the ethical implications of the negotiations. Additionally, the implementation of various measures or changes takes place with a certain time lag. An ethical audit of

fers feedback to management in this regard. At the same time, the audit contributes to employee motivation, because their opinions are interested in management, are important to them. This reduces the stress burden because the problems can be presented in a legitimate way without employees having to feel like “troublemakers” (Morimoto, Ash & Hope, 2004).

Ethical and social audit is the means to keep moral risks in the company under surveillance. The audit identifies how transparency is ensured for all stakeholder groups. Accurate and timely information is a prerequisite for good, long-term cooperation for these groups. Most often the employees complain about opacity or lack of communication. It is in the interest of companies themselves to be readable not only for their own employees but also for the community, which is territorially, economically and ecologically related to the company. Sufficient transparency and openness deepens the positive link between individual groups and strengthens confidence and loyalty to the company (Rahim, Idow, 2015). Efforts to implement an analysis of a company’s ethical or social behavior are a fact that can testify to the pursuit of business ethics.

### *3.6. Existence of philanthropy, donation and sponsorship*

Another indicator of TM is whether and how the company implements its philanthropic activity. Unlike other rules, philanthropy, sponsorship, and donation is a specific category where an economic aspect can be counted. So what a great percentage of the company’s profit is dedicated to such voluntary activity. Often, this activity is influenced by legal options for tax depreciation. These issues vary according to national legislation across the EU. This is not, therefore, a clear comparative criterion, however, based on the ratio of finance to the philanthropic (sponsorship) area to the company’s total profit, this element can be included in the TMI indicators.

### *3.7. Cultural education*

Other clear indicator of TM, for example, the training and education of employees. Employee training and education helps to further develop the company culture. Employees can therefore increase their expertise at the employer’s expense. Under TM, a wider view of employee training can be explored, not only in terms of expertise but also in the personal interest of employees. The level of education is one of the most important components of the spiritual cultural sector. It is possible to examine how an employee or employer looks at education, how important it is for culture, whether the training objectives match the interests of the employee and management aims.

### *3.8. Human Resource Management*

Another area of TM indicators is human resource management, which reflects corporate culture generally, but also points to relationships within a company. If a corporate culture uses more participative involvement of all employees in decision-making and working environment, a higher CSR standard can be estimated. Human resource management thus reflects employee access or loyalty to the company, what modern methods of work the company employs (coaching, mentoring, team-building, work-life balance, advisory in various life aspects ... etc.). From the point of view of the company as a social organism, this field allows for a wide range of instruments, including professional life in the company (holding regular meetings, clear rules of the career order, written setting of rewards and benefits etc.). Alternatively, how does the company work to break the counterproductive efficiency of work (mobbing, bossing), or whether it works with verifying the moral competence of the personality (especially senior management), even if the psychological tests verify only to a certain extent and fail to verify the integrity of the personality exactly (Barret, 2001).



→ 4. *TMI questionnaire design*

Researching TM can also be done by means of quantitative research. So whether and how the firm has implemented certain management elements that correspond to STT. Presented questions need not be copied originally, but they should examine the indicators of one sector – economic, legal and cultural. The research on the indicator has three variants of the answer DEFINITELY YES – PARTLY – DEFINITELY NO. Each is assigned a score of 1, 2, 3. As pointed out above, according to the MT principles, the three sectors should be independent and should create the principles of the social organism in the company. Therefore, questions are conceived with respect to the philosophy of Rudolf Steiner. By assigning the individual points to the answer to each question, an image will arise to what extent the company has implemented all three independent principles – economic, legal and cultural. This methodology builds on hundred years tradition of STT and stands on the current global initiatives of The Social Threefolding (Im Puls für die Zukunft, 2018). The way of finding the current state is conditioned by time and cultural habits, so it is possible to otherwise structure the questions. The pattern is inspiration rather than a strictly necessary necessity. Questions are chosen in view of clarity and simplicity in the EU environment within small and medium enterprises (SME).

4.1. *Economical sector (11 indicators)*

According to Rudolf Steiner, the economic sector is mainly based on natural opportunities that stimulate business conditions. The economy is just a matter of finance. It can be said that the economy is, according to MT, implementing today's principles leading to sustainable development. According to MT salary and staff costs are to be separated from production costs and transferred to the legislative sector. Rudolf Steiner (or economist René

Egli) came up with an observation that says work is a natural human need, and the means of life of an individual are not related to this need. In the second half of the 20th century, the thesis found its expression in the movement for the introduction of basic unconditional income, a contribution which would provide the citizen with the basic necessities of living (housing, food, clothes, education, etc.). That is why the company can be explored in economic contexts with regard to sustainable development and relation to the living and social environment:

1. Is the company's code of ethics also applicable to (sub) suppliers?
2. Is the company a member of a professional association that has the competence to solve CSR management for its members?
3. Does the company have a CSR award over the past 5 years (for product, service, employee)?
4. Is there a rule (internal directives) on dividing the company's financial income (f.e. among employees, investments, owners)?
5. Has the company received ethical labeling or CSR certification for a product, service, manufacturing principle or service?
6. Is management valued periodically and anonymously by stakeholders (employees, management, stakeholders, suppliers), is a report open to employees and third parties, to the public?
7. Is the company adapting social and environmental standards with suppliers towards higher ethical management standards?
8. Is the company engaged in the reduction of waste (water, waste management, waste management, sustainable production, local production...).
9. Does the firm regularly satisfy clients and publish these outcomes?
10. Can staff co-decide with the company's management on economic planning issues?
11. Does the company provide voluntary safety and health programs for employees or stakeholders?

#### 4.2. Legal (political) sector (11 indicators)

The most important feature of this sector is that according to the STT principles, financial valuation of employees should result from the setting of a legislative internal directive, not from the economic sector. Legislative sector deals with evaluations, workplace relationships, evaluation, human resources. The following areas of questions should be identified:

1. Is there a motivational factor for an employee to acquire a company share?
2. Has the company conducted a social (ethical) audit or quality management audit over the last 5 years?
3. Over the last year is the company's average turnover fluctuation below 0.2?
4. Does majority of the employees work under regular employment contracts (paid social and medical insurance)?
5. Does the company have the internal (written) procedures for violating ethical rules with clearly stated responsible persons (comitee, board)?
6. If the company has a job position that solves career rules (salaries, incentive benefits, changes in company ownership), are its representatives part of the company management?
7. Is fixed salary and bonuses set according to clear written company-published principles, everyone can get acquainted with them?
8. Are there clear rules of career order, approved by all employees?
9. Is the management system rather horizontal than the vertical?
10. Are long-term (medium-term) goals set for all employees, can they influence and decide on them?
11. Does the company provide flexible working hours (or substitute)?

#### 4.3. Spiritual (cultural) sector (11 indicators)

According to STT, the spirituous (cultural) sector allows every employee to develop their natural talents and potential in a company culture. To combine work and family situations. It encourages work flexibility and the use of creativity or a field of study. Allows the trainees to take part in the training. It is all about corporate culture. Therefore, the following factors can be observed:

1. May every employee participate in training hours of their personal choice?
2. Does the company prefer the knowledge, skills and experience of a worker rather than a field of study in unskilled jobs?
3. Does the company create its own social initiatives: for employees and public?
4. Does the company operate an ethical form of philanthropy, sponsorship, or donation beyond tax benefits?
5. Does the company have a working position where it addresses the corporate culture so that the responsible representative is part of the company management?
6. Are employees regularly valued for extraordinary work outside of work to improve work, cultural or cultural business environment?
7. Does the company help workers who get into a difficult out-of-life life situation (family member loss, home problems, health complications ... etc)?
8. Does the company have written motivational factors for voluntary work to improve corporate culture?
9. Can employees be positively evaluated for business activities outside of working hours?
10. Does the firm have the possibility to contribute some (non) financial benefit in the case of exceptional life situations (birth of the childrens, specific medical treatment, family problems ... etc.) in written form in internal materials?
11. Do the written and oral management requirements for employees and employees have the





same importance to managers of corporate management as they appear both in annual reports?

## 5. Conclusion

This paper deals with the theoretical background of business ethics by implementing Social Threefolding Theory into CSR management, which author calls Threefolding Management. Author shows the limits of current CSR management and proposes the implementation of the Threefolding management elements that perceive the institution as a *social organism*. This conceived approach more closely corresponds to the implementation of business ethics than current CSR management as a subsidiary part of management. According to Threefolding Theory, the firm must stand in three independent sectors – economic, legal and cultural (spiritual). If these elements meet, it maintains sustainable development for nature and human society. Which are the elements that declare CSR management.

These three sectors, according to STT founder Rudolf Steiner, are to be completely separate as separate social organisms. The author of the paper

therefore suggests a questionnaire survey methodology in specific small and medium-sized enterprises within the EU, to what extent the TM has implemented the given elements. The output is a point assessment of companies using the Threefolding Management Index. The presented work is a theoretical work, a proposal of methodology that can be used in the research of contemporary business ethics. As a result, not only the overall state of implementation of the indicators but also their associated ratio in the corporate management. The degree of objectivity is guaranteed by the fact that respondents are more independent from the company – from owner, management, and employees. The proposed methodology determines, according to the percentage share of the result, how each sector is represented and how all sectors are represented together. Questions are generally chosen to be used in a variety of cultural contexts in the best possible way. The resulting index (TMI) will show a quantifiable rate of implementation of ethical instruments. Depending on the implementation rate, companies can be grouped into three basic categories according to the design of L. Kohlberg – pre-conventional, conventional and postconventional.

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## **Indexing of Threefolding Management**

### **ABSTRACT**

*The presented paper examines new ways to explore business ethics. The author proposes a new approach to analysis using Social Treefolding Theory (STT), based on management theories regarding company culture as a social organism. Social Organism is set up on three main issues – economy, society and environment, similar as current CSR management claims. Author shows how Threefolding theory influenced CSR management. The article features the terminology of Threefolding Management (TM). Author proposes in the theoretical approach to investigate the current state of TM by means of research in companies on the analysis of individual indicators (33 indicators correspond to 33 research questions). Depending on their score range, the final result can be indexed in the final evaluation, called the Threefolding Management Index (TMI). For indexation, the author proposes the formula and the result of the division of companies into three stages – preconventional, conventional and postconventional. Unlike the CSR, however, these TMs are supposed to be fully independent, according to the STT speaker of the Austrian philosopher Rudolf Steiner. The article shows possible ways to implement STT into current management through ethics business.*

### **KEYWORDS**

*Corporate Social Responsibility (CSR), Social Treefolding Theory, Rudolf Steiner*

### **JEL CLASSIFICATION**

*C43; J8; Q5*

x

# Entrepreneurial activity and economic development indicators in the Czech regions

- ▶ Jana Novosáková » Newton College; email: jana.novosakova@newtoncollege.cz
- ▶ Jiří Novosák » Newton College; email: jiri.novosak@newtoncollege.cz
- ▶ Oldřich Hájek » Newton College; email: oldrich.hajek@newtoncollege.cz
- ▶ Blanka Vytrhlíková » Newton College; email: blanka.vytrhlikova@newtoncollege.cz

## \* 1. Introduction

Entrepreneurial activity is broadly accepted to be one of the drivers of economic development and the regional level of spatial decomposition is not an exception (Fritsch, 2011). Although a number of authors examined the relationship between entrepreneurial activity and regional development, the research on this topic is still rather scarce in post-socialist countries (e. g., Wyrwich, 2012 as an exception). This research gap is our motivation for designing this paper. We would like to analyse anticipated connection between regional entrepreneurial activity on one hand and particular indicators of regional economic development on the other. Our main hypothesis is based on the idea, that regions with higher entrepreneurial activity has also relatively better economic development indicators.

In the first section of the paper, the theoretical background of entrepreneurial activity and economic development issue is briefly introduced. Second section focuses on the methodological approach used in this paper. Following part draw up the results of empirical analysis. The tables and pictures are used in this regard. Final section of the paper concludes and provides discussion of the analysed issue.

## 2. Theoretical background

In this section of the paper, we introduce theoretical background of the entrepreneurial activity and economic development issue. Firstly, the definition of entrepreneurial activity is the question for scholars to be answered. Particular authors use in their studies various pool of entrepreneurial entities. Some studies include all entrepreneurial subjects in economy (Fotopoulos, 2013; Lee, Florida and Acs, 2004), entrepreneurs as individuals work on their own account (Novosáková, 2017), some exclude big enterprises (Armington and Acs, 2002), some studies examine only newly established entrepreneurial subjects (Armington and Acs, 2002; Audretsch and Fritsch, 1994) or entrepreneurial subjects with growth potential (Stam, 2007), some studies focus on the quality of entrepreneurial subjects and its relationship to regional development (Stearns et al., 1995; Huggins and Williams, 2009; Van Stel and Suddle, 2008).

Beside the question of definition of entrepreneurial activity, researchers solve also the problem of standardization of the variable. Current scholars use two methodological approaches. The first one standardize the number of chosen entrepreneurial entities by the number of all existing entrepreneurial subjects in the region – it is called ecological

approach. The second approach standardize the number of chosen entrepreneurial activity by the number of economically active population or total population of the region – it is called labour market approach (Fotopoulos, 2013, Bishop, 2012; Fritsch, 2007). Because the first approach could be a source of the bias (Fotopoulos, 2013), most authors use the labour market approach in their research.

Another question to be mentioned is the regional level of research. In this regard, Blair and Premus (1987) provide the classification of spatial decomposition and distinguish macro-, mezzo- and micro-level of examination.

The relationship between entrepreneurial activity and regional economic development is intensively discussed between scholars. Acs (2006) concludes that it exist overall positive relationship between entrepreneurial activity and regional socio-economic development. However, this question is much more complex and is connected, among other, with the quality of entrepreneurial entities, push or pull motivation of individuals to establish a business or motivation of large enterprises to participate at regional market, competition between entrepreneurial entities and crowding-out effect etc. (see, e. g., Acs, 2006; Sternberg, 2012; Fritsch, 2011; Wennekers et al., 2005 for discussion)

Relationship between entrepreneurial activity and particular indicators of economic development evaluated in our paper was examined in literature and can be summarized in following theses:

- Unemployment rate is usually connected with two opposite processes in regional entrepreneurial activity formation (Fotopoulos, 2013). Firstly, it can be understood as an indicator of poor regional economic performance and low purchase power. In this regard, the relationship between unemployment rate and entrepreneurial activity is inverse (see, e. g., Cieřlik, 2005, Acs, 2006). Other studies (e. g., Fritsch and Noseleit, 2013; Baptista, Escária and Madruga, 2008) indicate that entrepreneurial activity can

be (under certain conditions) positively connected with regional unemployment rate, when unemployed population represents the reservoir of potential entrepreneurs. Moreover, the regions with higher unemployment can be perceived as regions with lower entrepreneurial costs. Other authors, e. g. Delfmann et al. (2014) or Armington and Acs (2002), didn't prove any relationship. The final relationship between entrepreneurial activity and unemployment rate depends on the power of described influences of unemployment in particular areas.

- Regional GDP was found by researchers to be positively related to entrepreneurial activity and vice versa, when better regional GDP is perceived to provide competitive advantage, agglomeration economies, better purchase power etc. (see, e. g., Wennekers et al., 2005; Armington and Acs, 2002; Audretsch and Fritsch, 1994; Fotopoulos, 2013 for discussion).
- Migration rate is usually perceived as an indicator of regional attractiveness and is positively related to entrepreneurial activity. Delfmann et al. (2014), Lee, Florida and Acs (2004) or Armington and Acs (2002), Wennekers et al. (2005) prove this thesis. Their studies speak about the proximity of this variable to agglomeration economies, source of entrepreneurial creativity and opportunities, and source of work-force.

It is noteworthy to mention the issue of persistence in the processes and relationships between economic development indicators and entrepreneurial activity over time (e. g., Fotopoulos, 2013 or Sutaria and Hicks, 2004). Moreover, path-dependence and spatial spill-overs play their role (Anderson and Koster, 2011; Fritsch and Mueller, 2007 and others).

### 3. Methodology

In this section of the paper, we introduce the methodological approach to the issue. We introduce the construction of particular analysed indicators and their statistical evaluation.



Entrepreneurial activity is perceived to be the driver of regional economic development – thus it influences the other indicators included into our analysis. The main objective of the paper is to analyse, whether or not there exists the positive relationship between regional entrepreneurial activity on one hand and the indicators of regional economic development on the other.

The regional decomposition of the Czech Republic is used as a geographical level of our analysis. Fourteen administrative regions are used to be specific. These regions corresponds with internationally understood NUTS 4 units. This geographical level was chosen with regard to the availability of data about entrepreneurial activity and particular economic development indicators.

In our analysis, we use data of the Czech Statistical Office and Public database for years 2010 and 2016. The main reason for using this approach is primarily the availability of official data about chosen indicators.

Let us now turn our attention to the construction of particular indicators which are going to be analysed:

- Entrepreneurial activity is understood as a variable influencing the economic development of regions, respectively other indicators analysed in this paper. It is measured through the number of entrepreneurial entities in particular regions of the Czech Republic – the persons work on their own account according to the methodology of the Czech Statistical Office. The absolute number of entrepreneurial entities is standardized by the regional population between 15 and 64 years of age – thus, labour market approach is followed.
- Unemployment rate is a traditionally used proxy indicator of economic development, performance and wealth. We use data from Public database of the Czech Statistical Office for years 2010 and 2016 according to the methodology of the Czech Statistical Office. Thus, the variable is expressed as the unemployment rate in percent.

- Regional GDP is another proxy variable closely connected with the economic development and performance. We use the data about regional GDP per capita from the Public database of the Czech Statistical Office in years 2010 and 2016. Regarding this, the methodology of the Czech Statistical Office for construction of this variable is valid.
- The third indicator, related to the regional economic development, is regional migration rate. This variable expresses also the regional attractiveness for inhabitants, which furtherly enhance the economic performance of the area. The data from the Czech Statistical Office in two time periods – aggregate data for year 2010 and 2016 are taken into account. Migration rate is measured as a share of the net migration per total regional population.

Introduced variables are analysed in several steps. Firstly, we mention the overview of the values of each evaluated variable. The basic statistics of minimum, maximum mean values and values of standard deviation are presented.

Secondly, the correlation analysis is applied. The entrepreneurial activity takes a role of the explaining variable and the three other variables are understood as explained variables. In this paper, we use traditional Pearson's correlation coefficient to express the potential correlation dependence.

The final step of methodological approach is anchored in the Z-standardization of the indicators of unemployment, regional GDP and migration rate into the indicator of regional economic development. The Z-standardization is applied according to the following relationship:

$$Z - score = \frac{xk - \bar{x}}{stdev}$$

where  $x$  expresses the value of the indicator,  $k$  the particular region,  $\bar{x}$  the mean value of the indicator in all regions and  $stdev$  the standard deviation. The Z-scores of particular indicators are consequently transformed into one indicator of regional eco-

conomic development through the mean values of z-scores calculated before.

The statistical results are appended by the graphical visualization of particular variables in the ArcGIS programme interface.

After introduced steps, the evaluation of the scores of entrepreneurial activity and regional economic development are compared to find out, whether or not the regions with relatively higher values of the first indicator have also relatively higher values of the second one.

#### 4. Empirical analysis

Our analysis starts with the overview of basic descriptive statistics of evaluated indicators. Table 1 provides information about particular indicators in two years of our interest – maximum, minimum,

mean value and standard deviation. The values of indicators point out several findings:

- Ústecký, Moravskoslezský and Karlovarský regions can be labelled as regions with relatively worst results of economic performance, according to the values of all the indicators.
- Prague can be understood as the growth pole of the Czech Republic, when it has relatively best values of the evaluated indicators.
- The values of standard deviation show that there is increasing divergence between entrepreneurial activity in regions, comparing the two time periods, as well as in case of the regional GDP. The opposite is true in case of unemployment rate. Differences between the regional migration rates seem to be relatively stable.

The second step of our methodological approach focuses on the correlation relationship be-

**Table 1 » Entrepreneurial activity in Czech regions**

Indicator	Statistics	2010	2016
Entrepreneurial activity	Minimum	107,93 (USK)	114,71 (USK)
	Maximum	172,66 (PHA)	198,37 (PHA)
	Mean	135,84	145,00
	Standard deviation	15,76	20,29
Unemployment rate	Minimum	3,75 (PHA)	2,25 (PHA)
	Maximum	11,16 (USK)	6,91 (MSK)
	Mean	7,54	3,99
	Standard deviation	2,11	1,15
GDP	Minimum	269857 (KVK)	300894 (KVK)
	Maximum	813342 (PHA)	937542 (PHA)
	Mean	348238	416384
	Standard deviation	130951	148762
Migration rate	Minimum	-3,18 (MSK)	-2,37 (KVK)
	Maximum	11,67 (SCK)	8,07 (PHA)
	Mean	0,73	1,04
	Standard deviation	3,47	3,22

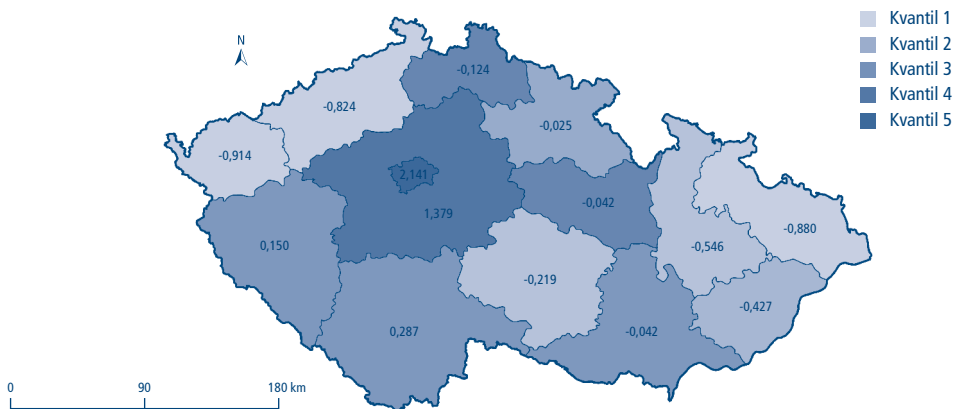
USK — Ústecký region, PHA — Prague, MSK — Moravskoslezský region, KVK — Karlovarský region, SCK — Středočeský region  
Source: based on data of the Czech Statistical Office

**Table 2 » Pearson's correlation coefficients**

Variable	Pearson's correlation 2010	Pearson's correlation 2016
	Entrepreneurial activity	
Unemployment rate	-0,865	-0,773
GDP	0,693	0,795
Migration rate	0,560	0,727

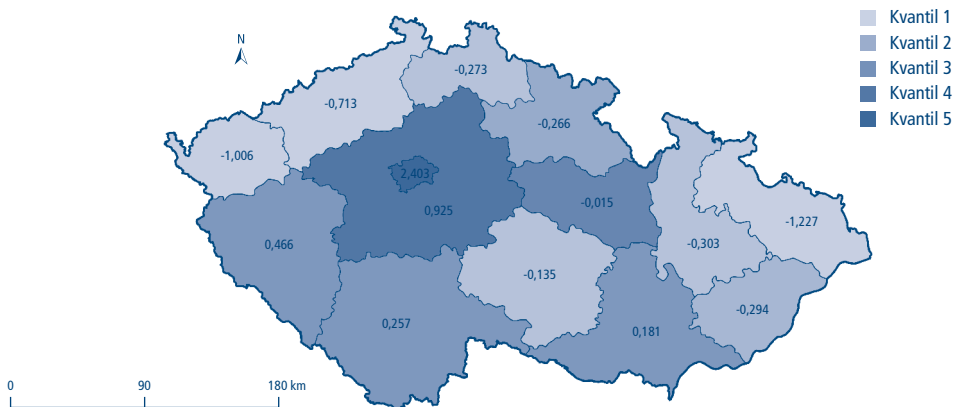
Source: based on data of the Czech Statistical Office

**Figure 1 » Regional economic performance in 2010**



Source: based on data of the Czech Statistical Office

**Figure 2 » Regional economic performance in 2016**



Source: based on data of the Czech Statistical Office

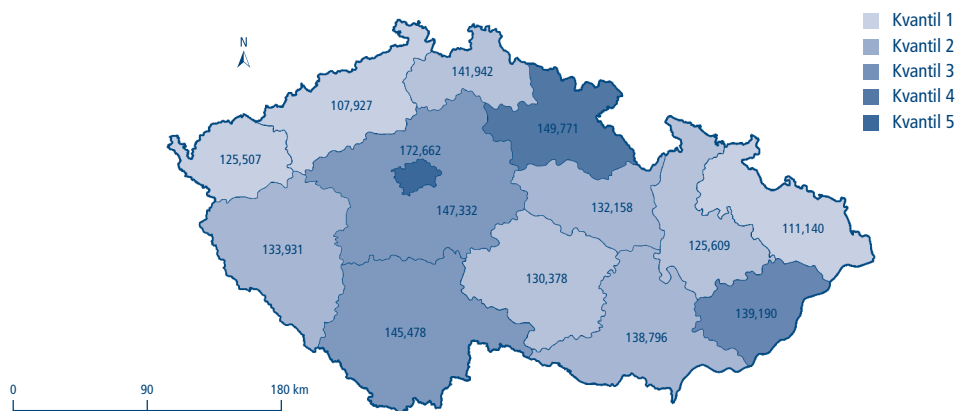


tween entrepreneurial activity on one hand and the economic development indicators on the other. Table 2 introduces the results of correlation analysis – Pearson’s correlation coefficients are presented. The negative correlation was revealed for relationship between the entrepreneurial activity and unemployment rate in both years. Regarding this finding, regions with more intensive entrepreneurial activity perform lower rates of unemployment.

Correlation between entrepreneurial activity and GDP and migration rate reaches positive values and tends to be increasing between the two years of evaluation. Again, these results indicates that entrepreneurial activity positively influences economic performance of the Czech regions.

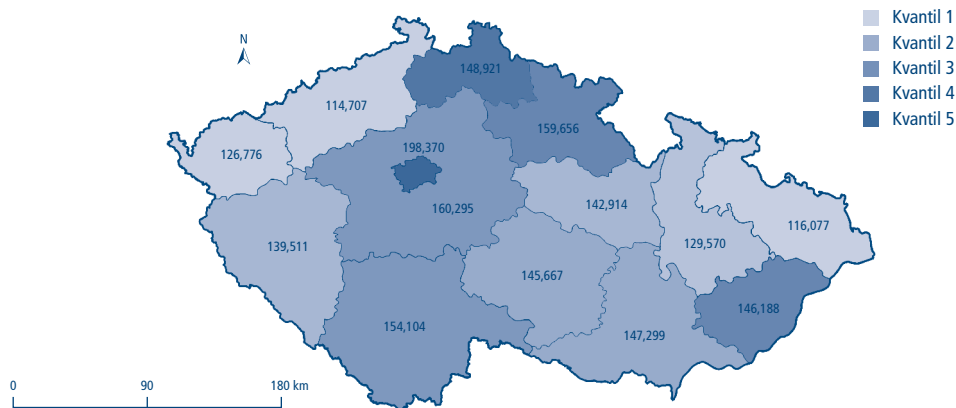
Computed values of aggregated z-scores, in other words values of economic performance indicator, of particular regions are illustrated in figures 1,

**Figure 3 » Entrepreneurial activity in 2010**



Source: based on data of the Czech Statistical Office

**Figure 4 » Entrepreneurial activity in 2016**



Source: based on data of the Czech Statistical Office

2, 3 and 4, specific values of the indicator within regional ranking are shown as well. Values of economic performance indicator in both evaluated years show relative stability in regional ranking. Exception is in this regard especially decreasing economic performance of Královéhradecký region and increasing economic performance of Vysočina region.

The most significant increase in the economic performance indicator reach Prague and Plzeňský regions. On the contrary, Středočeský, Moravskoslezský and Královéhradecký regions perform the most significant decrease.

The overall economic performance of the Czech regions, measured by the mean value, is worse in year 2016 (-1,269), compared to year 2010 (1,189). Furthermore, the standard deviation indicates increasing divergence between regional economic performance between years 2010 (0,821) and 2016 (0,858).

To compare the values of economic performance and the level of entrepreneurial activity, ranking of regions according to entrepreneurial activity is designed (figure 3 and 4).

In this comparison, the ranking of regions in year 2010 indicates that regions with relatively better values of economic performance has also relatively higher values of entrepreneurial activity. The most significant exception is represented by Královéhradecký, Liberecký and Zlínský regions that settle better ranking positions in case of entrepreneurial activity, than in case of economic performance ranking. The opposite is true especially in case of Plzeňský region. In year 2016, the similar findings can be revealed.

It was computed also correlation coefficient for both time periods between entrepreneurial activity and economic performance. The positive relationship was revealed with higher value in year 2016 (0,891), compared to year 2010 (0,861).

## 5. Conclusion and discussion of empirical results

Regarding abovementioned findings of empirical analysis, we can summarize several conclusions for broad socio-economic framework of relevant issue. This is the task for final part of the paper.

Firstly, the persistence of economic performance of the Czech regions in time can be observed. The worst values of three analysed indicators related to economic development perform regions that are traditionally perceived as structurally disadvantaged areas – Moravskoslezský, Ústecký and Karlovarský region to be specific. On the other hand, Prague and Středočeský region reach the best values of the three indicators. We can understand this situation in wider socio-economic context of last almost thirty years of the Czech Republic. Although it exist governmental efforts and public policies targeting to regional economic convergence and structural disadvantage shrinkage, the regional economic differences and poor position of the weakest areas seems to persist. Moreover, there is some evidence of strengthening position of Prague as the main growth-pole of the Czech Republic. Its economic development and also attractiveness reach better results in 2016 compared to 2010 and to the Středočeský region, what point at decreasing sub-urbanization pressures in last decade. Suburbanization and consequent processes were one of the drivers of socio-economic development of particular regions in first twenty years of the Czech Republic history.

Secondly, the relationship between entrepreneurial activity and three evaluated economic development indicators shows following trends:

- The relationship between entrepreneurial activity and unemployment rate is inverse. Source of this relationship can be embedded into two considerations. Firstly, new entrepreneurs and entrepreneurial entities are the source of jobs in regions. In this regard, the quality of entrepreneurial entities has to be considered. Only competitive entrepreneurial entities with growth

potential are the long-term source of regional employment. Secondly, entrepreneurship is one of the life- or escape-strategies for unemployed people. Motivation of people to become entrepreneur is influenced by several factors, such as entrepreneurial tradition of the region, personal experience and risk perception, social system of a country and the economic situation of the region or demand power.

- The relationship between entrepreneurial activity and regional GDP is positive. The higher entrepreneurial activity is connected with better regional economic results, strengthening of demand power, affinity of people to spend money etc. Potential entrepreneurs are more likely to establish their business in regions with higher GDP performance. On the other hand, in these region we can observe the higher enterprise mortality rates, because of stronger competition or market saturation. Even though, the positive outcomes of high regional GDP levels overcome the possible negatives.
- The relationship between entrepreneurial activity and regional migration rate is positive. Thus, the migration processes motivated by either better economic conditions of some regions, compared to the others; either stronger demand power; or better employment opportunities can be observed. Accordingly, more attractive regions represent strong basis of potential entrepreneurs, new and creative ideas to be grasp by new entrepreneurial entities. On the other hand, the situation of regions with long-term negative migration scores are threatened by deepening of socio-economic recession.

Considering overall economic performance, evaluated in previous section. The conclusions mentioned above seem to be consistent. The best scores of economic performance reach Prague, Středočeský, Plzeňský and Jihomoravský region. In other words, the wider hinterland of the biggest Czech metropolises perform the best values. Exception in this sense represents the Moravskoslezský region with the third biggest city of the

Czech Republic – Ostrava. There, together with Ústecký and Karlovarský region, the values of economic performance are the lowest. Apparently, the negatives of structural disadvantage beat the positives of agglomeration. Let us mention one more note to this issue – the mean value of economic performance indicator shows that the over-all economic performance of the Czech regions seems to be better in the second year of our analysis. Such trend can be connected with better performance of national and European economy, positive expectations of particular economic actors, and also with possible positive impacts of public policy and interventions.

Finally, let turn our attention to the relationship between economic performance of regions and entrepreneurial activity, which is the objective of this paper. Following the results of empirical analysis, the regions with the best values of economic performance indicators have the best values of entrepreneurial activity as well. This is true especially in case of year 2016. Interesting is the result of Jihomoravský region with the Moravian capital city of Brno, which has relatively high value of economic performance but average level of entrepreneurial activity. In case of Královéhradecký region, it is noteworthy relatively high level of entrepreneurial activity that is not connected with better economic performance results in 2010. Public interventions can be one of the sources of this disbalance. The weakest economic performance results of so-called structurally disadvantaged regions in both evaluated time-periods are accompanied by the weakest levels of entrepreneurial activity. Thus, abovementioned conclusions are supported. All the findings about the relationship between economic performance and entrepreneurial activity in the Czech regions are supported by the positive values of Pearson's correlation coefficients, calculated for both time-periods, 2010 and 2016.

Our paper focuses on relationship between economic performance and entrepreneurial activity in relatively short time between years 2010 and 2016, with the regional (NUTS4) decomposition of the

Czech Republic. We worked with relatively limited basis of indicators related to economic development – regional unemployment rate, region GDP and migration rate; and entrepreneurship – number of all entrepreneurial entities per regional population. For further research, some recommendations can be formulated:

- The analysis of longer time-period could be one of the future challenges. Thus, the reasons and impacts of various socio-economic processes would be revealed.
- The focus on smaller administrative or economic regional units would be relevant. The results

of analysis based on different regional units could support or oppose findings of our paper.

- Further research could include more robust basis of indicators related to economic development and performance of regions and also to entrepreneurial activity. Regarding this, various forms entrepreneurial entities, their size or sectors of economy would be evaluated.
- Lastly, the methodological approach used in this paper could be redesigned. The results of clustering, PCA analysis, regression analysis or other socio-econometric methods could support or disprove or hypothesis and conclusions.

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## Entrepreneurial activity and economic development indicators in the Czech regions

### ABSTRACT

*The paper deals with the issue of entrepreneurial activity, which is perceived to be one of the drivers of economic development in regions. In this regard, we would like to compare the level of entrepreneurial activity in particular regions of the Czech Republic in years 2010 and 2016, and the level of chosen regional economic indicators, usually used for a measurement of economic development. For this analysis, we used the data of the Czech Statistical Office and Public database of the Czech Statistical Office for years 2010 and 2016. Official data availability justify the time period we evaluated. From geographical perspective, we use the level of the Czech administrative regions (14). In this paper, we evaluate the number of persons working on their own account to express the level of entrepreneurial activity on one hand, and several economic indicators on the other. We chose the indicator of regional GDP, regional unemployment rate and regional migration rate as an indicator of regional attractiveness. Thus, we would like to analyse, whether or not there is a positive relationship between entrepreneurial activity and regional economic wealth.*

### KEYWORDS

*Entrepreneurial activity, regional economy, regional development, Czech Republic*

### JEL CLASSIFICATION

*R11; L26; P25*



# Developments in legal framework changes in reporting requirements for CSR in Slovakia

► Renata Pakšiová » University of Economics, Faculty of Economic Informatics,  
Department of Accountancy and Auditing; email: renata.paksiova@euba.sk

## \* 1. Introduction

It is increasingly recognized that sustainability not only poses ethical issues but also has a direct impact on the economic performance of companies and countries. The interest in sustainability and its impact on business has been steadily increasing. There is a change in the development of the framework for reporting financial and non-financial information according to the broader spectrum expectations of information determinants. The European Union is still more concerning with issues of environmental, social and financial sustainability in the context of the reporting of true and fair image of the business entity. At present, report regulations are not limited to the financial situation of an entity but extends to its impact on the society in which it operates that concerns the environmental and the social environment. The user of this information in question takes an overall view of all the available aspects of the assessment of companies' activities in the social environment and therefore setting standardized reporting methods for both financial and non-financial information is important not only at present but also in the near future. The aim of this paper is the theoretical analysis of development requirements for reporting and disclosure of non-financial information according to legislation in the Slovak Republic.

The Slovak Republic, as an EU Member State, have an obligation of legal framework for reporting non-financial information as a CSR reporting in line with EU requirements and the legislative framework applicable in the European Union. Šebestová, Krejčí and Šiška (2018) mention importance of active cooperation of supporting tools in sustainable economic growth.

## 2. The short history of understanding sustainability and reporting requirements for CSR

Terms "sustainability" comes from the 70's, initially used in connection with the idea that an uncontrolled growth of anything (population, production, consumption, pollution, etc.) is not sustainable when resources are limited (Petera, P. and Wagner, J., 2015 or Martinat et al., 2016). The Friedman and Miles model (2002) concentrates on the analysis of the organization/stakeholder relationship, which is not exclusively from the organization perspective and which is capable of illuminating why and how organization/stakeholder relations change over time, what is important as well. Stakeholder engagement is recognized as a key process to align firm and stakeholder interests and to identify material content for sustainability reporting (Moratis and Brandt, 2017). For the prop-

er functioning of strategic CSR in each organization, it is also important to have a correctly implemented CSR filter (Benetti, 2016). In the present the societal pressure on the corporate social responsibility of undertakings is increasing. Their impact is directly connected with the economic, social, and environmental sustainability, thus requires business operation focused on a balanced sustainable growth in all the aspects mentioned above (Pakšiová, 2016). Non-financial and financial reporting provides shareholders and other stakeholders with a meaningful, comprehensive view of the position and performance of companies and groups in the past, present and predictable future, what it is the reason, why they are so strongly regulated. In the present there are many international frameworks regulating disclosing of the non-financial information, however they are all voluntary, such as ISO Standard 26000, Eco-Management and Audit Scheme (EMAS); Global Reporting Initiative; OECD Guideline for transnational corporations; Global Compact UN initiative, main principles for entrepreneurship and human rights for implementing UN framework “protect, respect and remedy”; ILO trilateral statement on the principles for transnational corporations and social policy. Despite efforts to globally unify the starting points of non-financial reporting standardisation, the degree of standardisation and law enforcement remains low and formally insufficient. It still does not have the level of financial information reporting standardisation.

### 2.1 Europe Union and requirements for CSR reporting

Despite the sui generis status of the European Union (EU) and the alleged chronic EU blurring of the distinction between truth and reality and between law and politics (MacGregor, 2013; Turečková and Nevima, 2017 or Lovciová, 2018) in a business and competition context (Pakšiová, 2018 or MacGregor, 2017), the EU has become committed to CSR and CSR reporting (Ondrušová and Kňazko-

vá, 2017 or MacGregor, 2018). Indeed, the combined effect and impact of the economic crises and other negative events have significantly contributed to the shifting of the focus to the development of regulations on financial, corporate management, corporate governance and liabilities matters, in the EU (Staníčková, 2017 or MacGregor, 2019). Recently the European Union gave its clear position towards the support of socially responsible undertakings, among others, in its EU Horizon 2020 programme priorities, as well as in its specification of cross-sectional priorities — climate action and sustainable development; gender equality and the social sciences and humanities — SSH (European Commission, a and b). Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC write: *“The management report and the consolidated management report are important elements of financial reporting. A fair review of the development of the business and of its position should be provided, in a manner consistent with the size and complexity of the business. The information should not be restricted to the financial aspects of the undertaking’s business, and there should be an analysis of environmental and social aspects of the business necessary for an understanding of the undertaking’s development, performance or position. In cases where the consolidated management report and the parent undertaking management report are presented in a single report, it may be appropriate to give greater emphasis to those matters which are significant to the undertakings included in the consolidation taken as a whole. However, having regard to the potential burden placed on small and medium-sized undertakings, it is appropriate to provide that Member States may choose to waive the obligation to provide non-financial information in the management report of such undertakings.”* Directive 2014/95/EU: Disclo- →



sure of non-financial and diversity information requires certain large companies to disclose relevant non-financial information to provide investors and other stakeholders with a more complete picture of their development, performance and position and of the impact of their activity. The directive applies to certain large companies and groups with more than 500 employees. Such companies are required to give a review of policies, principal risks and outcomes, including on environmental matters, social and employee aspects, respect for human rights,

anti-corruption and bribery issues, diversity on boards of directors. If companies do not have a policy on one of these areas, the non-financial statement should explain why not. Companies are given the freedom to disclose this information in the way they find useful or in a separate report. In preparing their statements, companies may use national, European or international guidelines such as the UN Global Compact. Member States of EU, Slovakia as well, had brought into force the laws, regulations and administrative provisions neces-

**Table 1 » Entities obligatory to compile Annual Report in Slovakia**

Topic	The wording effective	Paragraphs from Act No. 431/2002 Coll. on Accounting as amended
Who is required to compile an Annual Report?	as of 1 January 2003	An accounting entity required to have its financial statements audited under article 19 of act on accounting, except for an accounting entity — a branch of foreign bank, a branch of a foreign asset management company, a branch of an insurance company from another Member State, a branch of a foreign insurance company, a branch of a reinsurance company from another Member State and a branch of a foreign reinsurance company and a branch of a foreign broker shall be required to issue an annual report.
Entity required to have its financial statements audited	as of 1 January 2010	Individual financial statements must be audited if the accounting entity: a) is a company, which is required to create share capital, or a cooperative, if, as at the date of financial statements and for the immediately preceding accounting period, at least two of the following conditions have been met: 1. its total assets exceeded EUR 1,000,000; total assets are defined as total assets determined from the balance sheet before adjustments. The accounting entity shall be obliged to adjust valuation of the assets value, to create provisions and to deduct the assets in accordance with the accounting principles and accounting methods to the balance sheet date; 2. its net turnover exceeded EUR 2,000,000; 3. its average calculated number of employees exceeded 30 in a single accounting period;
	as of 1 January 2010	b) is an enterprise and cooperative whose securities have been admitted to trading on a regulated market,
	as of 1 January 2005	c) is a subject to this requirement under a separate regulation (for example, Act no. 483/2001 Coll., Act no. 34/2002 Coll.)
	as of 1 January 2005	d) should prepare its financial statements by EU adopted IFRS (by regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards (special edition OJ, chapter 13/vol. 29; OJ L 243, 11. 9. 2002), as amended by Regulation (EC) No. 297/2008 of the European Parliament and of the Council of 11 March 2008, (OJ L 97, 9. 4. 2008), Commission Regulation (EC) No 1126/2008 of 3 November 2008 adopting certain international accounting standards in accordance with Regulation (EC) of the European Parliament and of the Council No. 1606/2002 (OJ L 320, 29. 11. 2008) as amended).

Source: Own processing according to the Act No. 431/2002 Coll. on Accounting and its amendments.



**Table 2 » Quality and content requirements of the annual report information in Slovakia**

Topic	The wording effective	Paragraphs from Act No. 431/2002 Coll. on Accounting as amended
The Annual Report contains	as of 1 January 2003	The annual report shall contain, unless stated otherwise by a separate regulation, the financial statements for the relevant accounting period, including the auditor's report thereon and especially information on: <ol style="list-style-type: none"> <li>a) the development of the accounting entity, its current position and material risks and uncertainties to which the accounting entity is exposed; such information shall be provided in the form of a balanced and comprehensive analysis of the situation and development forecast and shall contain important financial and non-financial indicators, including information on the impact of the accounting entity's activities on the environment and employment, with a reference to the respective information presented in the financial statements,</li> <li>b) the events of special importance that occurred after the end of the accounting period for which the annual report is prepared,</li> <li>c) the expected future development of the accounting entity's activities,</li> <li>d) the costs associated with research and development activities,</li> <li>e) the acquisition of the accounting entity's treasury shares, temporary certificates, ownership interests and shares, and temporary certificates and ownership interests of a parent accounting entity,</li> <li>f) the proposal for the distribution of profits or settlement of losses,</li> <li>g) the information required by special regulations, and</li> <li>h) whether the accounting entity has a branch abroad.</li> </ol>
Basic principle of the information reporting and verify	as of 1 January 2003	The annual report of the accounting unit according this act must provide a true and fair view and the compliance of the annual report with the entity's financial statements must be verify by an auditor within one year from the termination of the accounting period.

Source: Own processing according to the Act No. 431/2002 Coll. on Accounting and its amendments.

sary to comply with this Directive by 6 December 2016. The European Commission produced non-binding guidelines on how to report non-financial information with explanation methodology for reporting non-financial information (European Commission, c; Publications Europa, 2018).

### 2.1 Requirements for CSR reporting in Slovakia and their time development

Member States, Slovakia as well, provided that all the provisions referred in the EU Directives are to apply to undertaking reporting for the financial year starting on 1 January 2017 or during the calendar year 2017. In general, the preparation of the annual report by entity with audited financial statements in Slovakia is governed by the Act on Accounting (Act No. 431/2002 Coll. on Accounting

as amended) entirely from its first version effective from 2003. Concretisation of entities required have their financial statements audited, and the effective provisions and the effective dates of the amended act are given in Table 1.

The basic quality and content requirements of the annual report with the effective provisions and the effective dates of the amended act on accounting are given in Table 2.

If it is a material for an assessment of total on- and off-balance sheet assets, total equity and liabilities, and the financial position of an accounting entity that uses instruments according to a separate regulation, the accounting entity is also required to provide in its annual report information on the following:

- the objectives and methods of risk management in the accounting entity, including its policy for



**Table 3 » Entities reporting the non-financial information**

Topic	The wording effective	Paragraphs from Act No. 431/2002 Coll. on Accounting as amended
Annual report and non-financial information	as of 1 January 2017	A public-interest entity, with the exception of an accounting unit the National Bank of Slovakia with the average calculated number of employees for the accounting period exceeding 500 employees, will also provide in its annual report the non-financial information regarding the development, performance, position and effect of the accounting unit activity on the environmental, social and employment issues, information regarding the respecting of human rights and information concerning the fight against bribery and corruption (hereinafter referred to as the "social responsibility area").
Public interest entity	as of 1 January 2015	A public interest entity is considered an accounting unit that has issued securities admitted to trading on a regulated market in any Member State of the European Union ("Member State"), bank, branch of a foreign bank, the Export-Import Bank of the Slovak Republic, insurance company, a branch office of a foreign insurance company, reinsurance company, a branch office of a foreign reinsurance company, health insurance company, asset management company, a branch office of a foreign asset management company, pension asset management company, supplementary pension asset management company, stock exchange, central securities depository, securities trader, payment institution, electronic money institution, collective investment entity, pension fund, a branch office of a foreign financial institution and an following accounting unit:
Special criteria for business entity as a public interest entity	as of 1 January 2015	an accounting entity is a company that has met, in at least two successive accounting periods, no fewer than two of the following requirements: a) It is total assets exceeded EUR 170,000,000; while total assets being defined as total assets ascertained from the balance sheet before adjustments, b) It is net turnover exceeded EUR 170,000,000, c) The average calculated number of employees exceeded 2,000 in a particular accounting period.

Source: Own processing according to the Act No. 431/2002 Coll. on Accounting and its amendments.

ensuring the main types of planned transactions in which hedging derivatives will be used, and

- price risks, credit risks, liquidity risks and risks related to cash flows, to which the accounting entity is exposed.

The new extended requirements in relation to CSR concern the reporting of non-financial information by enterprises as defined in the amended and supplemented Act on accounting with effective dates (Table 3).

Information about basic requirements of non-financial reporting, form, nature, content, connection, frameworks, relief and verification, and the effective provisions and the effective dates of the amended act on accounting are given in Table 4.

In the Slovak Act on Accounting there are special requirements for the content of the annual reports, which have been issued by an accounting units that has been admitted to trading on a regulated market and as well a large accounting units which are a companies and a public-interest units operating in the mining industry or in natural forest logging. A total number of accounting units in Slovakia with such specific requirements applied for is low, while in some sectors according to the economic activity classification it is even zero.

Requirements for a consolidated annual report are set out accordingly with the requirements for information disclosing in an individual annual report (Lovciová, 2017). Even in case the information

Table 4 » Reporting of non-financial information in Slovakia

Topic	The wording effective	Paragraphs from Act No. 431/2002 Coll. on Accounting as amended
Report form and information nature	as of 1 January 2017	A public-interest entity, with the exception of an accounting unit the National Bank of Slovakia, will also provide in its annual report non-financial information regarding the development, performance, position and effect of the accounting unit activity on the environmental, social and employment issues, information regarding the respecting of human rights and information concerning the fight against bribery and corruption (hereinafter referred to as the "social responsibility area").
The content of the information	as of 1 January 2017	It will provide at least: <ul style="list-style-type: none"> <li>a) a brief description of the business model;</li> <li>b) a description and the results of the policy applied by the accounting unit in the social responsibility area;</li> <li>c) a description of the main risks related to the accounting unit impact on the social responsibility area, which ensue from the accounting unit activity that could have adverse consequences, and when appropriate, also a description of the business relations, products or services provided by the accounting unit and a description of the way in which the accounting unit manages the above risks;</li> <li>d) significant non-financial information regarding the accounting unit activity according to the individual activities.</li> </ul>
Connection with financial information	as of 1 January 2017	It will provide a reference to the sums shown in the financial statements and an explanation of such sums as regards their impact on the social responsibility area, if appropriate.
Use of framework	as of 1 January 2017	As regards information provided according to requirements of non-financial information reporting by Act on Accounting, a public-interest entity can use the European Union framework or another an international framework governing non-financial information as a base if it accurately specifies which framework was used.
Exemption in reporting	as of 1 January 2017	A public-interest entity which is a subsidiary accounting unit is not obliged to provide the information according to requirements of non-financial information reporting by Act on Accounting, provided that the information about such a subject and its subsidiary accounting units is comprised in the annual report or in a similar report issued by the parent accounting unit. If a public-interest entity does not publish information according to requirements of non-financial information reporting by Act on Accounting, in its annual report it will provide the reasons due to which it did not publish such information.
Audit of non-financial information	as of 1 January 2016	The annual report of the accounting unit according this act must provide a true and fair view and must be verify by an auditor within one year from the termination of the accounting period. The auditor must in the context of non-financial information reporting: <ul style="list-style-type: none"> <li>• provide its opinion regarding compliance of the annual report with the financial statements, with the exception of the annual report according to a special regulation;</li> <li>• provide its opinion whether the annual report comprises information according to the Act on Accounting;</li> <li>• specify whether any significant misstatement was found in the annual report based on the findings obtained about the accounting unit and specify the character of each misstatement ascertained.</li> </ul>

Source: Own processing according to the Act No. 431/2002 Coll. on Accounting and its amendments.



disclosed in the consolidated annual report is required with the need to identify a specific business within a group, it is not necessary to disclose such information separately in an individual annual report of the individual business.

#### 4. Conclusion

When evaluating information on entrepreneurial entities, corporate social responsibility reporting is getting more and more prominent position. However, it is of an utmost importance to know that the reporting is only the second step following the real activities implemented to protect the environment, ensure green production or service provision, protect limited natural resources, ensure health and safety of employees, respect equal opportunities policies, carry out corporate philanthropy, fight against corruption and ensure society-wide life quality growth. These activities are mostly carried out by business on a voluntary basis and their reporting should be understood as a competitive advantage. Recently there have been significant changes in reporting requirements for non-financial information in the context of CSR both in the European Union and in Slovakia. In practice, businesses often see the implementation of these new reporting duties as an administrative burden and costs rises in preparing basic documents for reporting of business CSR. These changes have already been applying as of January 1, 2016, or 2017 in case of enterprises with extended reporting requirements. Following the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU

as regards disclosure of non-financial and diversity information by certain large undertakings and groups, Slovakia transposed the requirements for reporting in the annual report into Act no. 431/2002 Coll. on accounting. Comparison of provided information, mainly among businesses, is made impossible due to inconsistency and almost non-existent formal requirements for non-financial information reporting in an annual report comparing to the financial information reporting that have a standardised form of disclosed outputs (accounting statements) in the Slovak Republic.

Examination of a development in time of legal regulation in Slovakia and its specific changes in the context of CSR and reporting and disclosing requirements follow that the most of the changes regard a deepening of an annual report content aimed at CSR of a precisely specified business groups. These business groups are public-interest entities, businesses that had emitted securities accepted for trading on a regulated market and large accounting units which are companies and a public-interest entities operating in the mining industry or in natural forest. In Slovakia, none of the given groups is very numerous, even though criteria for inclusion into these groups are set out more rigorously compared to EU Directives in Slovakia.

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## Developments in legal framework changes in reporting requirements for CSR in Slovakia

### ABSTRACT

Recently there have been significant changes in reporting requirements for non-financial information in the context of CSR both in the European Union and in Slovakia. Such changes have already been applying as of January 1, 2016, or 2017 in case of the number of enterprises with extended reporting requirements. Following the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, Slovakia transposed the requirements for reporting in the annual report into Act no. 431/2002 Coll. on accounting. These requirements concern mainly large enterprises as the category of medium-sized enterprises has not been introduced into the Slovak law. Most of the more specific reporting requirements for non-financial information relate to areas of corporate social responsibility in relation to the sustainability and sustainable development of not only businesses but also of the societies they operate in. In particular, the information should be related to social and environmental domains, and this information should be linked to the financial information. The aim of this paper is to analyse developments in legal framework changes in reporting requirements for CSR in Slovakia as this is a very actual topic.

### KEYWORDS

Reporting Requirements; CSR; Legal Framework Changes in Slovakia

### JEL CLASSIFICATION

M00; M14; M40; M48



# The potential of Data Science to optimize processes in Human Resources Management and its use in the Czech Republic

- ▶ PhDr. et Mgr. Barbora Pánková, MBA » NEWTON College, Praha; email: barbora.pankova@newton.cz
- ▶ Bc. Sonja Kešelj » email: sonja.keselj@yahoo.com

## \* 1. Introduction

The potential of data science methods to unlock valuable insights is making it increasingly popular to use analytics in all business areas, including human resources management. The business titans of the digital era are those companies, that are able to gather and process Big Data in order to better understand needs of their customers – such as Google, Amazon or Facebook. Considering the fact that these hugely successful companies use data to analyse human behaviour patterns, it is only logical that human resources management, as the face of every business that is focused on humans could potentially largely profit from analytics as well.

The main goal of this paper is to provide a basic overview of the benefits of applying Data Science methods in the human resources field, especially on the examples of predicting employee turnover and optimizing recruiting processes. In the second part, the article places focus on measuring the use of Data Science in the Czech Republic amongst HR professionals, which is achieved by a field research of both qualitative and quantitative character.

This paper is based on the Bachelor degree thesis *Use of Data Science for Optimization of Human Resources Management*, successfully defended at Newton College in June 2018, and represents a concise overview of the results of its research.

## 2. Application of Data Science on HR processes

The issues commonly handled by HR department include recruiting, retention and motivation of employees, which all directly influence the structure of workforce and thus have immense impact on the total performance of employees. As a result, Biro (2016) argues that the use of analytics can not only influence performance of HR, but its smart use is also capable of indirectly improving general business outcomes.

According to Biro, working with talent and business data combined is necessary to develop such a data-driven workforce plan that could have potential to optimize talent investments and thus business performance as well. Such plan would, furthermore, monitor and predict the trend of a wide range of HR related activities, such as retention, recruiting, attrition, productivity, as well as development and motivation of employees (Biro, 2016).

According to Biro (2016), the following areas of human resources management can be improved using advanced analytic methods:

Turnover – predicting the highest risk of attrition based on job position, function or location, in order to take steps on specific direction, to avoid possible losses;





Retention – similarly, the goal is to predict the highest risk of churn, to help redistributing resources accordingly;

Risk – monitoring performance levels and job satisfaction do determine potential losses or performance drops;

Talent – predicting performance levels among new hires, in order to adjust onboarding process for them individually;

Futurecasting – modelling possible changes across organization, in order to identify necessary adjustments in various HR processes (Biro, 2016).

### 2.1 Predicting Employee Turnover

In case of thriving job markets, where the attrition is typically very high, having means to predict employee turnover can become extremely valuable for making business decisions and developing strategies for future periods. Depending on the resources an organization is willing to invest into addressing the issue of attrition, analytical methods with different levels of complexity can be applied. Monitoring applicable metrics may be useful, yet with predictive tools it is possible to build a model that will reliably forecast the attrition trend of the given market.

According to Dancho, the most usual approach to modelling employee turnover is using logistic regression, but the trend is leaning towards machine learning algorithms as they get improved and increasingly available, which in turn is explained by the constantly enlarging amount of data available for training them (Dancho, 2017).

Furthermore, according to Cook (2017a), the importance of workforce analytics and data driven hiring decisions is higher than ever. Understanding of human capital dynamics enables HR to optimize the size and cost of the workforce ensuring it is aligned with business needs. A lack of understanding and data behind the workforce turnover metrics has long limited the role of HR in creating informed decisions – therefore, in order to reduce the turnover, the HR needs to become more data-

driven, using not only descriptive, but also explanatory and predictive analytics.

The employee turnover includes both voluntary (retirement, resignation) and involuntary leavers (redundancies, poor performance or other cases when the employees are forced to leave organization) and might not be necessarily negative, as the leaving of the employees that are not a right fit or in the case when there is a more suitable candidate might lead to workforce skills optimization. Therefore, according to John Boudreau, a professor at the Marshall School of Business, the deployment of HR analytics enhances not only the reduction of the turnover, but also a long-term workforce value.

The key steps in a selection of a right workforce analytics framework are the following:

1. Identifying the retention problem by analysing the resignation rate and its impacts on business metrics – i.e. understanding which category of employees are leaving and how it affects the business targets and morale.
2. Analysing the root causes of the workforce turnover – it is important not to follow single metrics, but also to analyse the correlation between resignations and compensation ratio, promotion wait time, pay increases, tenure, performance, and training opportunities.
3. Determining who can be saved – it is important to understand which are the key groups of employees to keep by analysing the retention rate across locations, functions, tenure, age, diversity groups and performance level.
4. Tailoring a retention program to address career advancement, learning & development and onboarding needs, as well as to predict retirement trends and ensure the junior workforce is enabled and prepared to take over the tasks from the senior leavers (Cook, 2017a).

### 2.2 Optimizing Recruiting Processes

Success of any business or organization in general, is in large measure determined by the quality of the human workforce behind it. As a result, finding



quality candidates in an efficient way can lead to improvement in performance and business results, as well as to saving considerable amounts of money and time. As use of Data Science becomes more frequent in fields operating with human capital, recruitment is also being newly shaped by data-driven approach.

According to Cook (2017b), gathering and analysing employee data and tracking relevant metrics is key to acquiring and retaining needed talent at optimum price. The very process of recruitment produces considerable amount of data, that could be analysed in depth, yet in many cases the data is dispersed across different systems within organization, which could make the potential locked behind it seem less attainable. However, the effort of putting the data together to enable analysis and construction of data-driven strategies for recruitment, have the potential to yield multiple benefits, not only for HR department, but business in general (Cook, 2017b).

Data analytics can provide valuable insights concerning the time needed for recruiting employees to specific roles, which allows HR professionals to inform stakeholders more precisely, or to detect processes that could potentially slow down the hiring process and in return eliminate or improve them.

Another important benefit that can be obtained by using Data Science methods to analyse hiring processes is improving candidate experience throughout the period of recruiting. Although this has been one of the focus topics in recent years, there is much room left for improvement, as factors influencing candidates' impressions are not necessarily intuitive. Predictive analytics, however, allows identifying significant factors which may lead to quality candidates withdrawing from the process.

Cook introduces another positive impact of data-driven recruiting, which is reflected in increased diversity of new hires. Analytical approach can provide constant overview of hiring trends and help insure that high level of diversity is sustained across all significant demographic indicators. This,

as a result, can assist in creating and maintaining positive public image of the organization.

Finally, data-driven approach can be very useful in keeping the hiring rate balanced, by creating more precise hiring strategies. Maintaining such balanced recruiting plans could ensure keeping both productivity and hiring costs at optimum level (Cook, 2017b).

### *2.3 Decision-making tools and methods in HR*

Including analytics in HR processes does not automatically entail use of advanced analytics methods, such as predictive analysis or machine learning algorithms. Furthermore, it is not always necessary to use complex methods in order to extract useful information from data, especially in case of efficiently created and sustained databases.

It could be argued that there is a scale of possible approaches to decision making within HR, based on the complexity of the tools used. According to Pavelka (2016), such a scale consists of the following methods:

1. Expert estimate – this approach entails typical managerial decisions based on intuition and previous experience. As expected, the success of this method increases over time, with experience gathered over the years.
2. Reporting – as the name suggests, this method relies on using a set of reports, such as balance sheets, as a basis for making business related decisions. Such reports provide information only about the past development and considering the time needed for their preparation, the information is often outdated.
3. Metrics – monitoring specific indicators in real time enables a current overview of the state of business. They are usually presented in groups of related information, to better illustrate the state of specific issue in HR. Furthermore, using metrics provides us with both absolute information and ratios, which can be very useful for benchmarking analysis.



4. Predictive analysis – as much as current and historic data provide useful insights, the true potential of data analysis lies in the ability to predict future trends and thus influence plans for upcoming periods. To unlock this information, multiple predictive analysis tools are used, amongst most common being regression analysis, that helps determine correlation between different factors or events influencing business performance.
5. Strategic data analysis – in order to create an organization's strategy for the following few years, data from all departments is gathered, together with external information, such as demographic or geopolitical data. A sensitivity analysis can then be performed, in order to assess different scenarios and adjust the strategy accordingly (Pavelka, 2016).

### 3. Use of Data Science in the Czech Republic

In order to establish whether Data Science is applied in the Czech Republic and, followingly, to quantify and characterize the scale of its usage, a short field research has been carried out, in the form of a quantitative research analysis based on the survey data, as well as a qualitative research analysis in the form of open interview with one of the experts in the field. Although the former method produces better measurable results, acquiring data was a relatively challenging task. This is mostly due to the increasingly restrictive companies' policies regarding sharing any type of the workforce-related data, but also due to a frequent lack of publicly available contacts to HR departments.

#### 3.1 Survey Analysis

The survey examining the level of data analysis utilization has been sent out to multiple companies across the country, representing different size categories, industries and origin, in attempt to obtain as diverse data sample as possible. Furthermore, to insure the competency of the respond-

ents, the survey has been forwarded exclusively to HR departments of the selected companies.

However, out of 41 addressed companies, only 26 responses have been received, which accounts for a 63% response rate. As this is not a sufficiently large data sample to form statistically significant conclusions, the results of the survey presented below may serve only as a certain indicator of the current trend in data analysis use in the Czech Republic.

From the structural point of view, the survey was comprised of 10 questions, which gathered information that could be clustered into two groups. The first set of questions was designed to examine a few basic characteristics of the surveyed organization, in order to be able to better analyse correlations and distinguish more important factors from the others. The goal of the second group of questions was to establish if data analytics was used in surveyed companies and, based on the outcome, to further examine the topics on which it is applied or, instead, to better understand the reasons of not using it.

The first part three questions were dedicated to obtaining insights into the main characteristics of the companies included in the research. The first question addressed the size of the company, or its Czech division – as illustrated in Figure 1, majority of the surveyed companies belong to the medium size group, with 53.85% of total responses falling into the category. Large size group follows with 30.77% of respondents, while the remaining 15.38% of respondents work in the small-size companies. The second question was focused on the origin of the surveyed companies and it only distinguished between the companies being domestic or international, without further specifications of regions in the latter case. Respondents were relatively equally distributed, with 57.69% working in companies of international origin and 42.31% being employed by domestic Czech companies. The third question examined distribution of the companies across different industries. As illustrated below, a clear majority of the companies involved

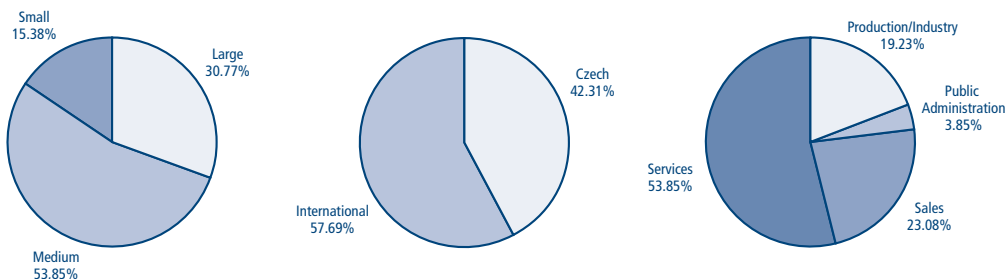
in the research belonged to Services, accounting for 53.85% of the total responses, followed by Sales making up 23.08% of the total sample, while 19.23% of the respondents worked in Manufacturing. Lastly, a rather negligible share of the respondents worked in Public Administration, accounting for only 3.85% of the total respondents' sample.

As mentioned before, the survey was sent out exclusively to HR departments of the researched companies, yet respondents could have been responsible for managing different HR processes or their combinations, depending on the internal hierarchy of the companies they were employed at. According to the survey results presented in Figure

2 below, Recruitment is the most frequent area of expertise employing 39.58% of the respondents, followed by Administration with 25% share and Compensation and Benefits with 22.92% share of the total sample:

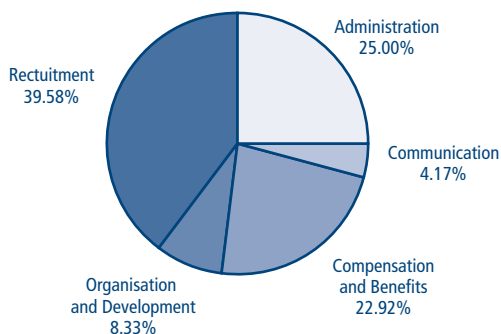
These numbers reflect cumulative responses only, not the distribution among the respondents. To illustrate, only 46.15% of respondents were managing a single HR process, while 26.92% of respondents were responsible for two and the remaining 23.08% for three processes. There was one respondent in the sample, whose scope of work covered no less than four different processes.

**Figure 1 » Survey sample by: company size, origin and industries**



Source: authors

**Figure 2 » Survey sample based on managed HR processes**



Source: authors



The remaining questions focused on whether the data analysis is used in surveyed companies and further examined two possible scenarios based on the given answer. The first question only established, if the surveyed company's HR department used any kind of data analysis without specifying level of complexity, in order to get an initial, broad overview. Majority of respondents voted positively with **61.54%** of the total sample confirming the use of some form of data analysis, while the remaining **38.46%** responded their department did not use any kind of data analysis.

To better understand the level of complexity of analytical tools used, the survey included a question, where respondents could have selected different tools and methods they had used in their decision-making process. The selection of offered choices was scaled by the usage and complexity of analytical tools, including the option where analytics was not necessary. Therefore, the question was applicable to all the respondents. As it could be expected, the scale of utilization of the specific methods dropped with the increase in the level of their complexity, with respondents opting for the offered choices as following:

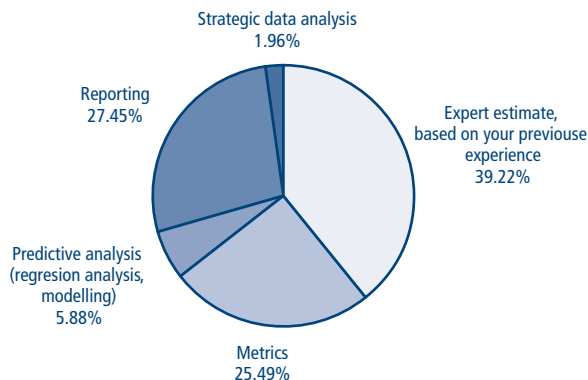
The remaining four questions were focused on the specific group of respondents, based on whether data analytics is used in their team or not. In

case the team was using some type of analytics tools, respondents were asked to select one or more specific topics, on which those tools were applied. Of all the provided options, two stood out – issues regarding Recruiting, its costs and trends, and Employee turnover, respectively accounting for 35.29% and 29.41% shares of the total responses:

On the other hand, the respondents, who replied that their team had not used any of the analytic tools, were asked what could persuade them to initiate their usage. The main goal of this open question was to try to obtain an insight into possible reasons behind the lack of HR analytics use in the Czech Republic, as well as to suggest potential approaches on how to better introduce it to the domestic market. The responses can be divided into three different groups, where: three respondents claimed they had no decision-making power or knowledge about management decisions, and the equal number of respondents provided a budget lack and restrictions as a main reason for not using analytics. The remaining four respondents would consider using analytics, if they saw a successful example and if a good and non-costly solution was provided to them.

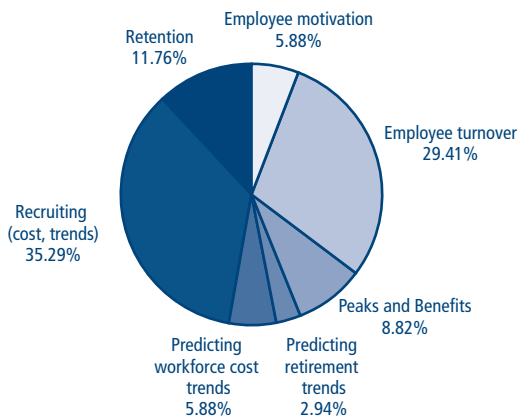
As informative as the charts introduced above may be, plotting the relationships across different

**Figure 3 » Use of decision-making tools and methods**



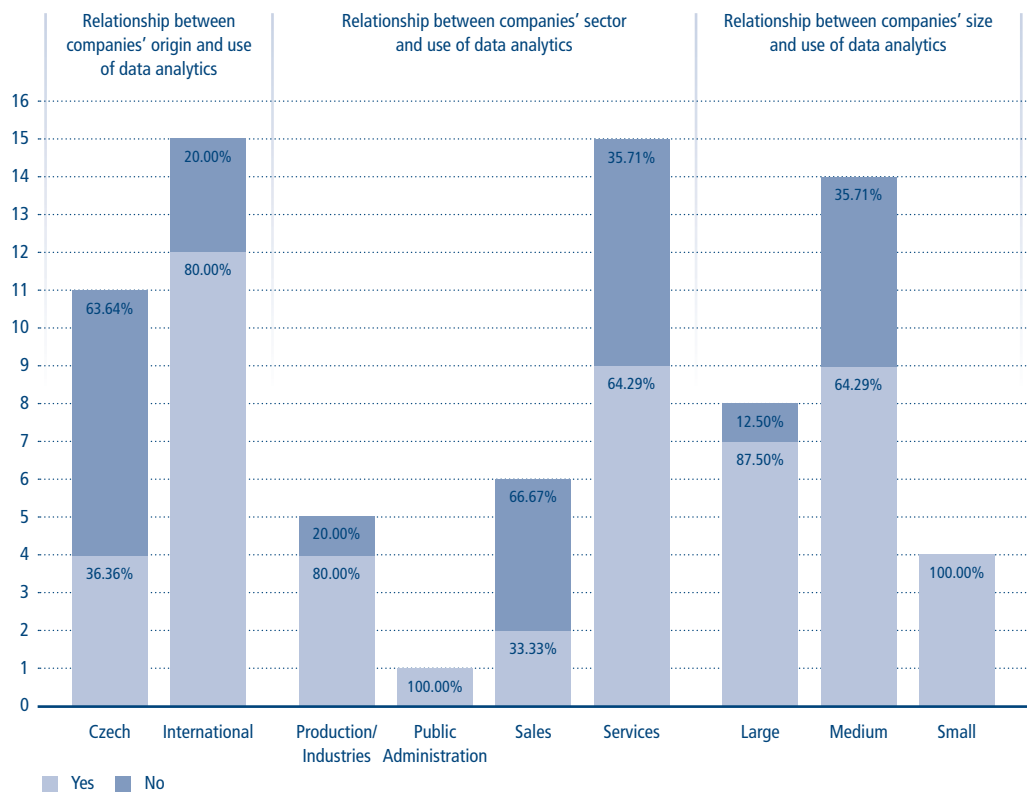
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Figure 4 » HR-related issues addressed by analytics tools



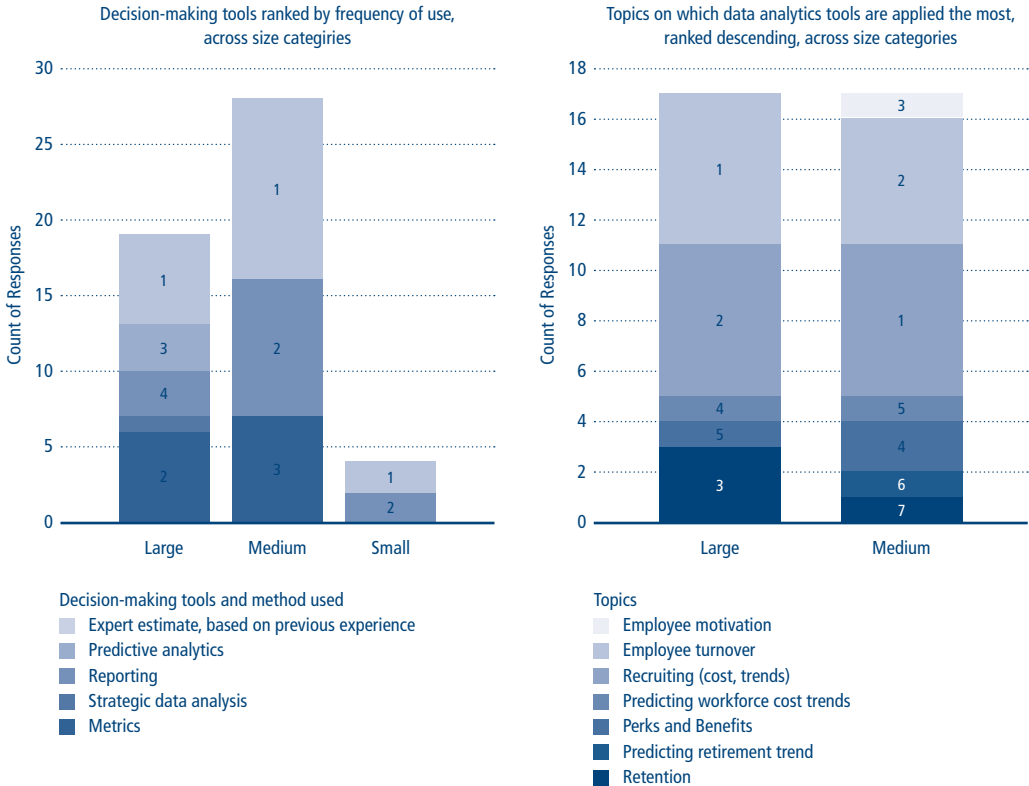
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Figure 5 » Relationships between companies' characteristics and the scale of use of analytics tools



Source: authors

**Figure 6 » Decision-making tools ranked by frequency of use across size categories; HR topics ranked by use of analytics tools across size categories**



Source: authors

questions could provide much more valuable insights into resulting decisions. Primarily, it may be useful to revise responses across different categories of respondents, based on given characteristics of their employing companies.

As visible in the Figure 5 above, distribution of responses on whether data analytics is used in HR departments of surveyed companies varies significantly across organizations of different origin, size and industry. More specifically, 80% of international companies with legal entities in the Czech Republic were using analytics tools, which is considerably higher than 26.36% rate amongst domestic organizations. Similarly, companies that were

large or medium in size had more respondents replying positively, while no usage of data analytics tools was registered amongst the surveyed small-size companies.

Distribution of responses was, however, slightly more varied across the different industries and business sectors of the surveyed companies, as per figure above.

In order to better compare introduced numbers, it is also necessary to take into account the number of respondents in each category, which varies considerably, as illustrated in the chart above.

Based on the size of the surveyed companies, Figure 6 illustrates the level of complexity of deci-

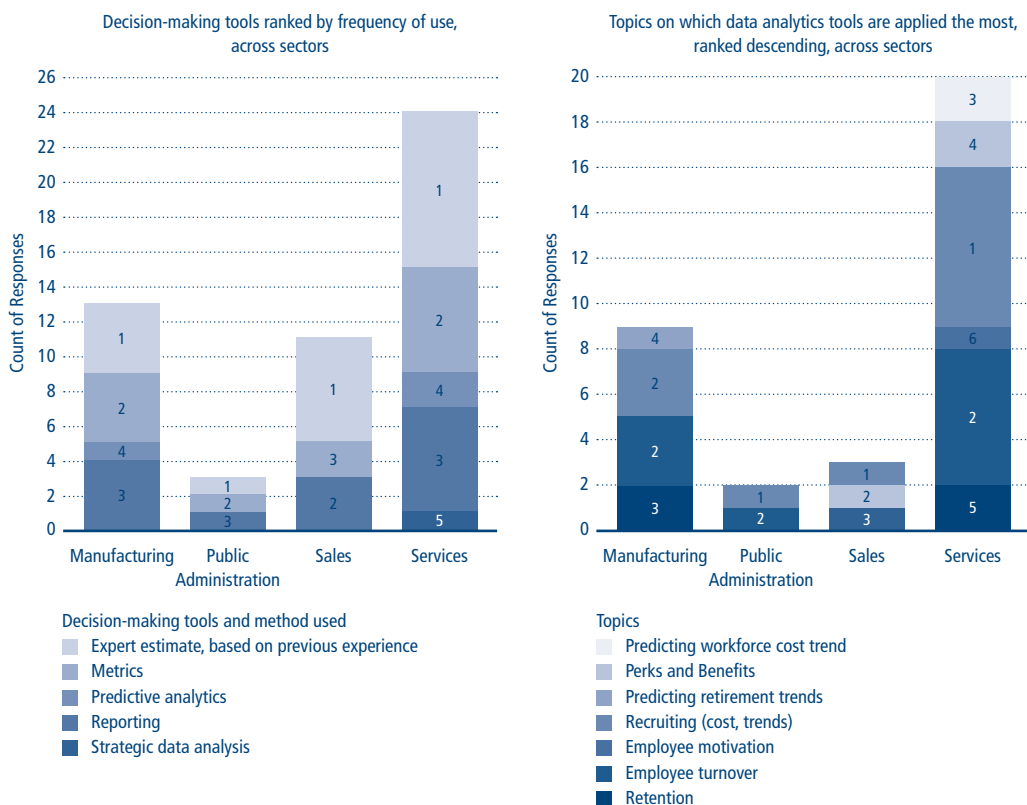
sion-making tools and methods used by their employees, as well as the areas of focus, in case analytics tools are used. In both cases responses are ranked descending, based on the frequency of use.

Upon initial analysis of the first bar chart, it can be concluded that across all size categories, the most used method in decision making is, indeed, the simplest not including any analysis tools, which is Expert estimate based on the previously gained knowledge. Furthermore, in case of companies of small and medium size, the frequency of utilization drops with the increase in complexity, with Reporting being ranked as the second and following Metrics ranked as the third most common-

ly used method. Respondents from small companies, however, opted only for the first two methods, and in both aforementioned companies' categories none of the respondents claimed using a more sophisticated analytical tools, that would require Data Science methods – such as regression analysis, modelling or machine learning algorithms. Strategic data analysis was not used, either.

In case of large companies, the ranking of used methods was slightly different, where use of more complex, Predictive analytics was recorded, ranking in the third place. Moreover, one of the large surveyed organization's HR department uses Strategic data analysis as well, earning it the last, fifth

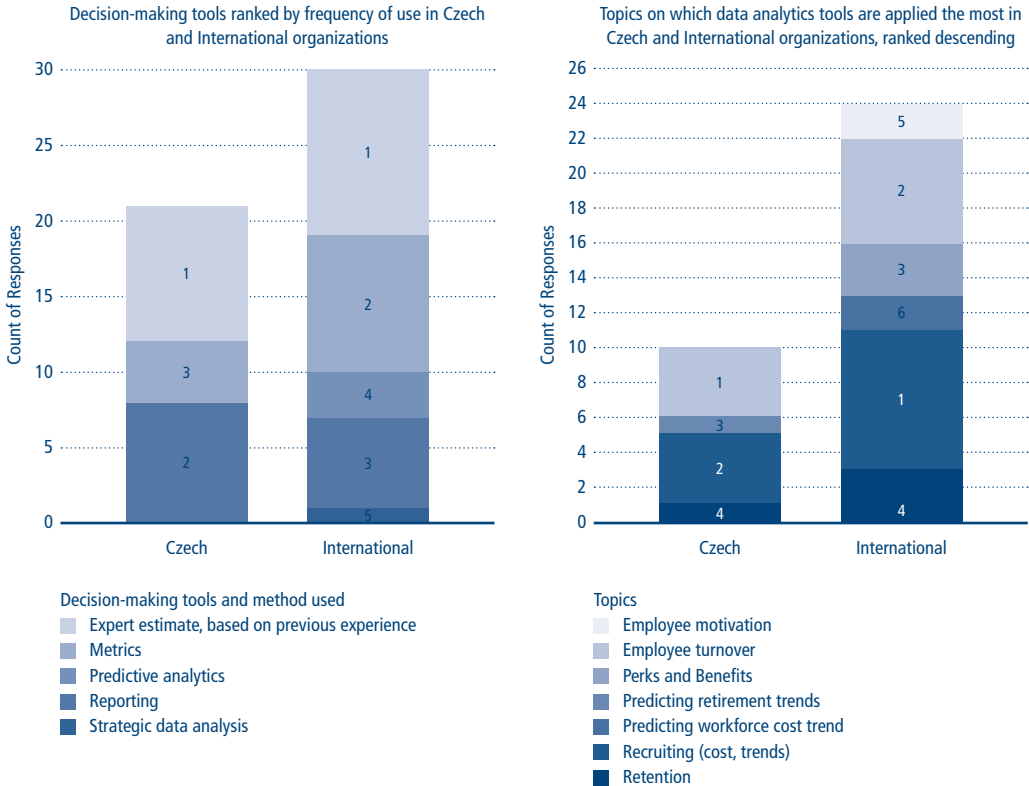
**Figure 7 » Decision-making tools ranked by frequency of use across industries; HR topics ranked by use of analytics tools across industries**



Source: authors



**Figure 8 » Decision-making tools ranked by frequency of use in companies of different origin; HR topics ranked by use of analytics tools in companies of different origin**



Source: authors

place in the scale of the most commonly used data analysis methods.

The second bar chart displays how certain topics, representing current issues in HR management, are ranked, based on how often respondents used data analytics tools to address them. In both large and medium sized companies two topics stood out – tracking or modelling Recruiting costs and trends, as well as Employee turnover.

Similar to the analysis based on the size of the companies, the charts above provide an illustration of decision making tools and addressed HR topics across different business areas and industries, ranked by their frequency of usage.

Figure 7 demonstrates that, as before, the most commonly used method in decision-making is Expert estimate, followed by Reporting and Metrics. The research has shown the use of Predictive analytics tools amongst the surveyed Services and Manufacturing companies, while one of the Services companies has also confirmed the use of Strategic data analysis as well. Furthermore, companies from different industries and business areas were addressing diverse issues in HR when using analytics tools. Consistently with the total ranking, the issues of tracking Recruiting costs and Employee turnover were of highest ranking across all the industries, however, the number of issues of interest



varied from one industry to another. Services companies were interested in tracking six out of seven topics, in contrast to the Sales companies, whose representatives tracked only three.

The final two charts provide an overview of the decision-making tools and addressed HR topics in Czech and international companies separately, ranked descending by their frequency of use. Upon the initial analysis of the charts above, it could be concluded that, within the surveyed sample, the HR departments of the International companies include larger number of methods in their decision-making process, using more complex analytics tools as well, such as Predictive analytics. In a similar fashion, the figure shows that international organizations were applying the used analytics tools on a more diversified number of issues than it was the case of Czech companies.

### 3.2 Structured Interview

The main goal of qualitative research was to gather insights from people who had been or have the potential to be involved in the use of data analytics in HR management, and in this way obtain an insight into the current trends in the field, as well as potential directions of development. One of the interviews conducted was an interview with Mr. Jan Pavelka, the founder and CEO of Talterra, a Czech company that provides consulting services for HR.

According to Mr. Pavelka, the use of HR analytics is still in its infancy in the Czech Republic and, although “predictive analytics” and “data modeling” have become common catchphrases amongst local HR professionals in the last couple of years, the real level of data analytics utilization is still quite low. For example, Mr. Pavelka concluded, there is still no demand for complex solutions, such as strategic data analysis, as strategic planning for several years in advance remains of low priority on the domestic market.

One of the main reasons behind this shortage of demand, according to Mr. Pavelka, is that among HR professionals, who are heavily used to person-

alized approach to working with people, there is a lack of knowledge or understanding of the potential that is hidden behind the numerical outputs, emphasized by frequent absence of skills necessary for performing or interpreting data analysis outputs. Although Mr. Pavelka agrees that personalized approach is positive, he strongly believes that business decisions, overall, should be supported by data.

When asked if the way data is stored in an organization is influencing the level of complexity of possible analysis that could be designed, Mr. Pavelka agreed that its impact is, indeed, significant and sometimes even the broadly used methods of recording data are absent. Other times the very structure of an organization may be posing a difficulty — for example, if hierarchy across the firm is not clearly defined, it may mean that a crucial predictor would not easily be fitted into the model, thus influencing predictive analysis approach.

When discussing the possibilities of introducing HR analytics to a new client, Mr. Pavelka mentions a step-by-step approach, where possible methods are introduced to the client gradually, starting from the simpler ones. Furthermore, if data in needed form is missing, HR department can be instructed on how to correctly collect it, so that eventually the new data can provide ground for future, more thorough and complex analysis.

In order to better understand what the focus of Talterra’s clients demand is, a segment of the interview was dedicated to analysing what type of issues the clients address most commonly. The CEO of Talterra introduces several examples of the specific metrics that are most usually monitored, tied to specific HR processes:

Recruiting — according to Mr. Pavelka, most companies tend to focus on their recruiting processes and numerical indicators associated with the process, such as average number of applications received per position, recruiting success rate, recruiting costs per position, etc. On the contrary, Mr. Pavelka would rather have the clients focus on the quality of recruiting, which should be a key in-

indicator. This can be measured by tracking fluctuation of new hires within the first year or tracking their performance within first three months. Recruiting costs should, in his opinion, be secondary to this indicator.

Moreover, Mr. Pavelka believes it is generally always more efficient to first gain a clear understanding of which metrics are of the highest importance for a company and collect data accordingly to be able to measure them, rather than to simply choose metrics, which would be available based on the existing data and, hence, disregard their applicability and relevance for the business.

Another common area of focus for a vast number of companies are staffing costs and headcount budget, which is of a great strategic influence. Therefore, fluctuation naturally becomes one the primary metrics to follow and frequently used approach in this scenario is using survival analysis. Furthermore, Mr. Pavelka notes, an opportunity to track fluctuation from another perspective has arisen with the growing use of social networks in recruitment, primarily LinkedIn. Collecting such data would allow us to track fluctuation amongst competitor companies, in both directions, which could prove to be a very useful insight for companies in specific sectors, such as, for instance, the IT industry.

Another area of high importance for many companies is, undoubtedly, productivity. However, according to Mr. Pavelka, to calculate productivity as accurately as possible, a cross-functional approach is necessary, which would combine the relevant HR data with the general business data spanning across different departments of a company, such as Sales, Accounting or Marketing.

Retirement trend – according to Mr. Pavelka, even though this is an interesting metric with potential for influencing overall strategy, demand for its tracking is very low, where clients' lack of interest is explained by many new businesses having relatively young workforce. On the contrary, in those industries where the average employee age is higher, such as Manufacturing, this becomes more

of a relevant issue, that companies are willing to address.

Development – one of the key fields that should be tracked, according to Talterra's CEO, is developing employees by further training and building competencies, but, unfortunately, it seems that the currently most used analysis methods are simple statistics, which do not possess true value in this case. Instead, Mr. Pavelka introduces Scrap Learning as a suitable metric to follow, where it is measured what percentage of training material is later applied by the employee in practice. The measurement can be repeated after a certain period of time, in order to obtain even deeper insight into the effect of provided training, which can, in turn, lead to adjustments of the trainings accordingly. Furthermore, in case of some roles, it may be especially interesting to track a metric called time to competency, where the time between onboarding an employee and their obtaining a full job empowerment is tracked. Although it is not very frequently tracked, this metric can help companies better understand efficiency of their training and onboarding programs and, hence, invest more efficiently into strategic development of their employees.

The goal of the final phase of the interview was to analyze what potential steps could be taken in order to ensure a higher level of data analytics use in HR within the Czech Republic. According to Mr. Pavelka, the following actions would be recommendable:

1. Introducing the concept of analytics and its potential to HR professionals at an early stage of their careers, preferably even during the studies. This can be achieved by introducing new lectures to University programs and educating the future professionals on how to efficiently gather and store HR Data.
2. Sharing success stories, to demonstrate the potential of data analysis applied on Human Resources management. As analytics in HR is not yet widely used in the Czech Republic, it is fairly understandable there is a certain level of scepticism regarding its effectiveness. Accord-

ing to Mr. Pavelka, this can be addressed by bringing the examples of the success story to the public eye and show-cases illustrating specific outcomes of performed analysis.

3. Changing the approach of HR managers from strictly personalized to a more data driven approach. As useful as previously gathered experience and intuition can be, individualistic approach should slowly be abandoned at the top management levels, where the general business strategies are shaped and formed, thus leaving space for more data-driven decisions based on the relevant tracked metrics and indicators.

#### 4. Conclusion

While Data Science and Analytics might be terms that are rapidly gaining popularity within the general public, it can be concluded that their practical application in the Czech Republic is still at very early stages. The conducted survey has revealed that only 26.36% of the companies originating from the Czech Republic are actually using any of the data analytics methods, while 80% of the Czech branches of the large international corporations do use some form of the data analysis in their HR decision-making, suggesting the major driving force in application of data science in HR will rather come through further foreign investment.

The research has further revealed a rather disappointing trend that the companies are still majorly driven by the simplest data analytics methods – most commonly by an expert estimate based on the previous experiences, followed by reporting and metrics as the most commonly used data analytics methods, while strategic data analytics methods still remain significantly underused.

The analysis of the major areas of interest of the HR uncovered clear focus on recruitment cost-efficiency and employee turnover, which is again cost-associated, rather than, for instance, employees' retention, the success of development and onboarding programs or employees' motivation. Thus, it seems the companies are still short-term oriented in their HR decision-making, following the short-term performance indicators, that are directly transferable into their profit&loss statements rather than focusing on the strategic long-term investment into their workforce.

This leads to an overall conclusion that, although Data Science does provide us with an unprecedented potential for facts-based decision-making, the potential still remains largely unharnessed, which can be improved only by the consistent education of the top management and HR professionals in the field, as well as by focusing on the long-term strategic investment into the human capital.

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## **The potential of Data Science to optimize processes in Human Resources Management and its use in the Czech Republic**

### **ABSTRACT**

*The main focus of this paper is to analyse the potential of applying Data Science methods in the human resources field and provide a basic overview of the state of use of Data Science amongst HR professionals in the Czech Republic. The paper provides a concise theoretical framework for better understanding of strategic impact of insights unlocked from data on managing human resources, with special focus on issues of predicting employee turnover and optimizing recruiting processes. The article places further focus on measuring the use of Data Science amongst Czech professionals from the field, presenting the results of a small, but indicative research in the form of conducted survey. The results, together with the qualitative research and insights gathered from professionals, showed that implementation of analytics and data driven solutions in HR is still in its initial phase in the Czech Republic, but with considerable potential for future development.*

### **KEYWORDS**

*Data Science; Human Resources Management; Employee Turnover; Recruiting*

### **JEL CLASSIFICATION**

*C10, C18, C60, M50*



# Economic sanctions and trade wars: a threat for the world economy sustainability

- ▶ Michael Kroh » Univerzita Jana Ámose Komenského, Praha
- ▶ Ilona Švihlíková » Univerzita Jana Ámose Komenského, Praha; e-mail: [Ilona.svihlikova@gmail.com](mailto:Ilona.svihlikova@gmail.com)

## \* 1. Introduction

The issue of international trade order has gained importance with the new American president and its “America First” policy. Clearly the new American administration plans substantial shift from the previous policies as stated in the speech of U.S. Secretary of state, Pompeo. (Pompeo, 2018). Already realized steps including withdrawals from treaties and renegotiation of new treaties are taking place, inserting insecurity into global economy.

The shift of American policy can be viewed from different perspectives. Starting on the domestic front, the deindustrialization of U.S. together with stagnating wages was one of major issues of Trump’s election campaign. In broader context, the widespread usage of restrictive trade measures, from tariffs to sanctions (in the extra-territorial form) can reflect the relative weakening of U.S. hegemon position, thus pointing to geopolitics as the main reason for the change in trade paradigm.

The measures of Trump’s administration reveal however deep imbalances created by the liberal trade order. There are many crucial issues connected with World Trade Organization. We want to point out the three biggest according to us.

At first, the free trade itself does not guarantee gradual balancing of the economic level of weaker countries with the developed ones. On contrary,

under the same conditions, differences are constantly increasing due to the uneven distribution of comparative advantages. It is a basic feature of the oligopolistic market: the application of the equal rules to unequal partners.

At second, the handicap described above can be overcome by massive capital investments. However about 75 % world free capital circulates between economically advanced countries because there is a higher appreciation at a lower risk. Among the important factors there are free trade zones and custom unions.

Even neoclassical economists – at third – have pointed out in the past that the creation of free trade zones and customs unions has a discriminatory character for the rest of the world. A Canadian economist *Jacob Viner (1892-1970)* proved in the early 1950s that a preferential liberalization could also damage the country that gave the preference (later called “Viner’s ambivalence”). Viner linked the liberalization side to “business creation” and the discrimination side to “trade diversion”, and it is not possible to say whether the sum of these effects is positive or negative (Baldwin, Wyplosz, 2013).

If the current *liberal (free)* trade order does not enable less developed countries to “catch up” and preserves the head start of developed countries, it cannot be in no case marked as a *fair* trade. But we



**Table 1 » Shifts in world economy**

Share of world GDP in PPP, in %	1980	1990	2000	2010	2017
China	2.3 %	4.1 %	7.4 %	13.9 %	18.2 %
USA	21.6 %	21.8 %	20.5 %	16.8 %	15.3 %

Source: IMF Database (2018)

are of the opinion that a more balanced trade system that allows for plurality of economic development is possible.

## 2. American policy shift

The election campaign of Donald Trump, who was at the beginning considered to be an unlikely candidate, hinted to profound changes in American economic policy. However, the surprise when these election promises started to materialize, was nonetheless, big. Trump’s campaign included policy proposals that were sometimes in contradiction, however can be summarized in the following way.

The domestic issues hovered around the “dead American dream” (therefore the main campaign motto “Make America great again” and “America First”). The criticism was directed mainly to profound deindustrialization of American economy, stagnant wages with occasional remarks about the disastrous state of American infrastructure. One of the main measures set to deal with the domestic issues was the vast tax reform. However, mostly the reasons for the American “decay” are viewed to be from the outside. American president often talks about American being “abused”, “ripped off” and disadvantaged foreign powers – be it neighbours (Canada, Mexico), China (as the main American rival) or the international trade system (or rather the whole economic order as such). In Trump’s view the system and relations with other states or actors in economic relations are only “fair” if they are one-sidedly advantageous for USA.

This would suggest, together with the strong importance given to “external factors” who are to

blame for the “dead American dream”, that the issue is broader and included geopolitical factors. The steps taken by the American administration verify this assumption.

Table 1 demonstrates the rise of Chinese economy measured in purchasing power parity in % and a decline in the share of U.S. economy. Although measured by exchange rate the American economy is still the world’s biggest.

Although Trump’s political direction may be seen as a total breach from the previous administrations, the comparison needs careful examination. As for the main economic “challenger”, China was in disgrace by Obama’s administration, too. Firstly, there were efforts to label China as a currency manipulator. These tendencies prevail in the current administration as well, however due to the fact that Chinese renminbi (IMF, 2016) is a part of SDR, it is rather difficult. Secondly, Obama’s administration in the second term focused on securing two trade and investment deals. The former American president even stated that the trade rules cannot be written by China. Transpacific partnership was clearly meant to draw a circle line around China (China was excluded from the talks, although China expressed interest in them). Transatlantic trade and investment partnership were supposed to lower Russia’s influence in the EU. Both comprehensive treaties were off the table as Trump became president. His negotiating style focuses on bilateral approach, where he believes the US have a substantial leverage over other countries.

### 3. American restrictive trade policy

The new approach of American trade policy can be found in numerous examples. For the sake of clarity, the individual examples are listed:

- The withdrawal from the Paris climate treaty. Although the topic does not concern trade directly, the withdrawal represents a rift in the Western community and reflects different priorities of American administration.
- The withdrawal from the Iran nuclear deal (JCPOA) despite objections of Western partners of the treaty (Germany, France, UK). Imposition of sanction on Iran, including extra-territorial sanctions, ambition to lower Iranian oil exports to zero.
- Imposition of tariffs on steel and aluminium on the bases of national security concerns. the tariffs were imposed on allies, including Canada and EU.
- Renegotiation of NAFTA was the plan announced already in Obama's first election campaign. However, it was Trump's administration, which negotiated a new treaty. It is worth noting that American representatives used a favourable moment of change in Mexican leadership and negotiated firstly with Mexico, which put later Canada in a very difficult position. It is highly significant that the new treaty (USMCA) contains an article that does not allow the membership countries to form or enter into free trade area with a non-market economy (which is usually a reference do China), unless others agree with it.
- Criticism of the trade order, especially of WTO. American refuse to appoint judges for the Appellate Body of WTO, thus threatening the functioning of the organization. A reform of the WTO was agreed upon in the G20 summit declaration from Buenos Aires. The reform itself remains unclear.
- Continuing tensions with the EU. The main issue remains the tariffs on European vehicles. The visit by European Commission head, Jean

Claude Juncker, in the US prevented a direct clash, however, the negotiation is probably not running very smoothly, considering the remarks of trade commissioner, Malmström.

However significant the changes described above are, *China seems to be the primary target of American restrictions*. The wave of tariffs has been applied already, in total comprising goods for 250 b. USD. China stands under criticism for the alleged abuse of intellectual property via force technology transfers, limited market access and trade deficit. These issues are not exactly coherent but show the evolvement of criticism towards China. China, regarding its economic reality, could not be listed as a currency manipulator, but remains one of the followed countries under scrutiny. American president Trump acknowledged that he "was personally insulted" by the programme Made in China 2025, which aims to increase value added in Chinese economy and make China a technological power. However, lately the tensions strengthened, as vice-president Pence accused China of "political interference". The military tensions in the South China Sea are another sphere of clash between the two powers. Some analytics go as far as claiming a "new cold war", this time with China as the main enemy. The talks on the G20 summit in Buenos Aires opened a possibility of a deal. However, American steps show increasingly aggressive nature by arresting Huawei CEO Meng Wanzhou. The timing of the arrest shows the amount of pressure the American side is willing to use.

However, Donald Trump has reached a certain success. Most of the cost of the trade war between the United States and China has so far fallen to the Eastern Power. It was calculated by economists from EconPol Europe, a network of researchers in the European Union. US companies and consumers will pay only 4.5 percent more after the introduction of China's \$ 250 billion worth of Chinese goods while 20.5 percent of the cost goes to Chinese manufacturers (EconPol, 2018). Despite new customs the deficit of trade balance with China will increase at the end of 2018 by about 20 % (see table No. 2). →

China has further the highest trade balance surplus of all the countries with which the US trades.

The American unemployment rate has fallen to its lowest level since 1969, which, as the news release from the U.S. Bureau of Labour shows (BLS, 2018), highlights the strength of economic growth (about 3 %). The unemployment rate fell to 3.7% in September, in August 270,000 new jobs originated. However, the impact Trump's restrictive policy on employment is not obvious, it is a long-term issue. The economic growth can be caused by other factors, too. Moreover, according to The Economist the impact (Navrátil, 2016) of China on the US trade deficit is overestimated. It is necessary to realize that China largely still works as a factory for many US companies. Part of the imports from China to the US are thus the result of sales by US com-

panies. When we clear this effect, we come to the conclusion that China does not cause half, but only about 17% of the US trade deficit.

From the listed examples we can see several common features of the new American trade (and in broader sense) economic policy. As for the form of negotiation, multilateral approach is not considered to be suitable to pursue American interests, defined by the Trump administration. The clear strategy is to use American leverage in bilateral talks, which can be proven by American pressure on Japan, which would on the other hand prefer if USA joined the adjusted Transpacific treaty. At the same time, it is not distinguished between strategic allies and other countries, although the current situation shows that China is to be considered the prime rival.

**Table 2 » Development in US trade deficit with China since November 2017<sup>th</sup>**

Year	Month	Mil. USD
2017	November	-35,362.80
2017	December	-30,820.90
2017	<b>1 to 12</b>	<b>-375,576.40</b>
2018	January	-35,952.80
2018	February	-29,261.50
2018	March	-25,874.60
2018	April	-27,962.00
2018	May	-33,186.60
2018	June	-33,483.80
2018	July	-36,834.30
2018	August	-38,569.60
2018	September	-40,243.00
2018	October	-43,102.50
2018	<b>1 to 10</b>	<b>-344 470.70</b>
2018	<b>1 to 12*</b>	<b>-413 364.00</b>
	<b>2018–2017</b>	<b>-37786.70*</b>
	<b>2018/2017</b>	<b>-20 %*</b>

\*) Estimation

Source: United States Census Bureau



The steps taken prove that Trump's administration views the trade order differently from the previous ones and aims for a different system, more significantly marked by U.S. dominance. This however may not necessarily reflect the strength of the American economy, on the contrary its weaknesses.

USA use all possible instruments to achieve its goal of "America First." The binding WTO rules do not seem to be any obstacle, nor international treaties. Whatever stands in the way of "America First" policy seems to be abolished. Tariffs were imposed on the base of national security, the much-discussed issue of tariffs on European vehicles, as was indicated, could have the same base. This step and the fact that the tariffs were applied to allies (EU) shows that the motto "America First" is truly accented in the trade and economic policies. At the same time, it proves the interconnectedness of economy and geopolitics, as the economic arguments are weak and insufficient.

To achieve its goal, US uses extra-territorial sanctions, which breach the principles of the international law. In this case, the US take advantage of its widespread financial system, together with the dominant position of US dollar to "cut off" countries like Iran from the international financial system.

Sanctions are a tool connecting economic policy with geopolitics. Sanctions can be applied on individuals, companies, or whole countries. They are very variable, they can restrict trade with goods or services, target operation of given corporations, or restrict access to important goods or services. Sanctions are however known for their minimal impact on the policy change, they are supposed to bring.

Extraterritorial sanctions are restrictive measures that target economic activity of individuals, governments and corporations from third countries. They are considered to be a violation of sovereignty and international law. The usage of these measures indicates that US connects economic issues with geopolitical ones and that it is ready to breach international law to force its will on others.

Moreover, the timed arrest of Huawei CEO Meng Wanzhou proves that the American side is willing to use even such methods to gain concessions from the other side. Of course, such methods cannot stay without reactions from the affected countries.

#### 4. *Establishment of power blocs*

There are various reasons why globalization is threatened and weakened. After the Great Recession we can observe a weakening of globalization indicator, measuring trade over global output. The pattern preceding the outbreak of Great Recession in 2008 strongly connected international trade dynamics with world output, the former growing about two to three times more than the latter. This indicator actually showed that more goods are produced for trade, which means profound international division of labour. This pattern was not able to renew itself after 2008 and the current development is unclear, with rather big volatility.

Further reasons are of political origin and were partly explained in the previous section. Wide spread application of tariffs and other restrictive measures changes flows of goods, services and investment, which contributes to insecurity about further development and may have serious implications for global growth (IMF, 2018).

Furthermore, American administration does not hide its intention to bring back at least some industrial capacities positioned abroad. This process may be, to smaller extent, proceeding already, but the reason for this so-called onshoring, is the application of automation and robotization, not change in American economic policy (UNCTAD, 2016)

The prevailing form of international division of labour takes advantage of the cost's differences among countries. On the top with a transnational corporation (with origin/ mother company from US or other Western country) the deep division of labour connects not only countries, but continents. Specialization profiles of countries are more focused on certain operations, which correspond

to the value – added they get in the international distribution. This highly complex division of labour is possible thanks to mobility of capital, free flows of goods and services and low transport costs. Such type of division of labour naturally leads to high interconnectedness among economies, increased vulnerability and ability to transfer shocks and crises.

The usage of restrictive measures forces various actors to avoid certain companies and/or countries and destabilizes further the established patterns of trade and financial flows. As shown in the previous section, the motives for applying restrictive measures are mainly geopolitical.

There can be various reactions observed to the restrictive economic policies of Trump's administration. Firstly, there is a possibility of a deal, as the American president likes to claim. This was the case for Mexico and Canada. Negotiations are going on with the EU and also with China. Their success is however far from certain, as the interests of the parties differ profoundly.

Second possibility is policy tit-for-tat, so imposing retaliatory measures. China used trade restrictions as it was faced by two rounds of tariffs. However, Chinese response was asymmetrical, because its manoeuvring space is due to relatively low American imports much smaller. This nonetheless does not mean that there are no other possibilities of retaliation. Widely discussed is the possibility of sell-off of American Treasuries in the Chinese foreign exchange reserves.

Besides a rather unbalanced deal or engaging in probably long-lasting exhausting trade war, there is the possibility of “decoupling” and concentrating more on structures that are independent of USA. Extra-territorial sanction actually promote this thinking, as they effectively “cut off” whole corporations or countries, motivating them to find solution in common cooperation of the “excluded.”

First signs of such development could be seen in the proposal of German foreign minister, Heiko Maas, who advocated for financial structures inde-

pendent of the US. Also, the parties of the Iranian nuclear treaty that aim to preserve it, are trying to find ways of maintaining trade and financial flows with Iran. The discussion is hovering around a “special purpose vehicle.” This effort was strengthened by the SWIFT decision. Although the company is based in Brussels, it decided to obey American “instructions” and cut off several Iranian banks from the financial system.

For any alternative to thrive, it is necessary to have a different financial asset than the USD. However, the dominance of American dollar is substantial, as the recent analysis by ECB proved, euro is on equal position with the USD by international payments, but in other categories it lags behind. The situation by other currencies, including the Chinese renminbi is even more skewed in favour of USD. On the other hand, wide range of restrictive trade measures could actually increase motivation to promote alternatives to USD and dollar based financial system.

Non-US dominated structures are under way. The beginning of this directed effort can be seen in the long-term refusal of US to increase share of China and other emerging countries in International Monetary Bank or the World Bank. After 2008 the efforts of block arrangement are speeding up.

Led by US there were the projects of TTIP and TPP with broad agenda, considering not only trade rules, but also investment rules (with the arbitrary clause ISDS), intellectual property protection etc.

In 2009 the summit of the BRIC took place in Russia, discussing alternatives to American dollar (still a very current topic). BRIC later included also South Africa, but the recent development in Brazil means the group took a hit. More or less the axes of political and economic activity hovers around Russia and China, which have very strong partnership (also on the political and security level, e.g. Shanghai cooperation organization).

Russia offered to Europe special economic area shortly after the crisis (a free trade zone from Lisbon to Vladivostok), but this idea was rejected by the German chancellor. Afterwards, Russia started

to develop a less economically attractive structure – Eurasian economic union.

The biggest project, made in China is undoubtedly “One belt, one road.” This project is underpinned by the Asian investment and infrastructure bank. It envisions a globalization based on win-win principle. One belt, one road is not an organization, but rather a chain of common projects, which should offer benefits to all participants, as the Chinese side claims.

Tearing apart the existing connections does not have to lead to renewal of American hegemony, but to establishment of power blocs, which would have their own rules and would be rather closed with tense relations marked by lack of trust among the main actors. At the moment, events are going precisely in this direction.

### 5. *From free trade to fair trade?*

Since the late 1980s, it has become apparent that the global system of international trade created after the Second World War is undergoing a crisis. Even the break-up of the Soviet bloc did not bring about the desirable revival, although at a first glance it seemed to be a free trade victory over regulation. Conversely, the endless unsuccessful talks on further liberalization of international trade under the patronage of the World Trade Organization, known as the Doha Round, confirm that the free trade paradigm has hit admission limits not only in developing countries but also in developed countries. If there was not a violent intervention by Trump’s administration, sooner or later somebody else would appear. In this sense, his initiative signals need to reform the world economy. He at least “helped to open up the debate on these issues and increase the likelihood that trade may be set on a more progressive path than the one followed over the last four decades” (Baker, 2018).

One can only hope that also the greatest followers of the trade without barriers will engage in the necessary debate as soon as the shock of the introduction of US safeguarding tariffs not only to im-

ports from China but also to other territories, including the European Union, is lost. Perhaps they will understand in time that world trade must be done not only without unnecessary (we underline the “unnecessary”) barriers, but it must also be fair, i.e. not to damage many countries in the long run. Export and import are two sides of one and the same transaction, so if there are huge surpluses in the trade balance, there must be others who have deficits with all the resulting negatives. There is no wonder, therefore, that if the world’s strongest economy it is affected in such a way, it will start defending itself.

However, not all steps of US administration can be considered as way to a fairer world trade organization. As realists, we are aware of the close interdependence of international trade with the economy, but we prefer economic diplomacy to brutal pressure with the use of power superiority. Just a mere suspicion, the mere possibility is the excuse to “punish” competitors. That’s what Donald Trump is doing.

Economic sanctions damage not only the state that is their target but also the originator itself. The extraterritorial manner of their implementation also brings losses to third countries not involved in the conflict, including the own political allies. In the long run, their effect has faded away as they usually initiate retaliatory safeguarding measures (which it would before never dare to make) and in fact create the conditions for the development of domestic production in the target state. In the end, the state affected by the sanctions is economically recovering, but the losses of its own exporters remain and it is difficult to replace them. In addition, sanctions can be effective in the long run against a small and economically weak country, but not against giants such as China, Russia or Iran. But even in small countries they can miss the effect, an example being Cuba.

The US approach to intellectual property protection is also problematic, although it basically only uses international agreements that helped to push along with some other developed countries. →

Particularly complicate the situation is in the area of IT, where the algorithms are patented that prevent other competitors fairly to compete. An American economist Dean Baker from Center for Economic and Policy Research, Washington DC, writes: “There is no reason that progressives should want stronger protections for intellectual property in trade deals. It is not “our” property at stake, but rather the property of large US corporations” (Baker, 2018). It means that this part of Trump’s activities will bring no other working places for Americans.

The road to fair trade will be long and complicated. After the initial chaos, some calming is most

likely and the time for starting negotiations in order to set up fairer conditions of mutual business relations. The Chinese government’s statement on the reduction of retaliatory duties on US cars can be a good start in this respect. But the theory must say something to the problem, to break away from dogmas (above all about general convenience of unregulated world trade and about free trade zones or customs unions), and to admit that the world has radically changed since Adam Smith, David Ricardo and their neoclassical followers. And a new epoch needs a new theory and following praxis.

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## Economic sanctions and trade wars: a threat for the world economy sustainability

**ABSTRACT**

*The paper analyses the impacts of the U.S. restrictive trade policy on the system of world trade and on international relations. The paper briefly discusses the main causes that led to the change of U.S. trade policy in the context of more balanced access to the advantages of international trade. The paper also deals with the issue of sanctions, which are closely linked to geopolitics which encourage a shift towards economic blocs of powers. The issue of extra-territorial sanctions is paid special interest. These measures distort the traditional trade linkage, complicate investors' decision and can undermine the patterns of trade and investment. The paper also outlines positive solutions to the imbalances in trade, without threatening the world economy stability.*

**KEY WORDS**

*Sanctions, tariffs, U.S. trade policy, geopolitics*

**JEL CLASSIFICATION**

*F02, F13, F52*

# Are We Ready For The Crisis? Un/Readiness of the Czech Politics and Public Administration for the Crisis Development of the Czech Economy

► Doc. PhDr. Lukáš Valeš, Ph.D. » NEWTON College; e-mail: valesl@centrum.cz

\* *1. Un/Readiness of the Czech Politics  
and Public Administration for the Crisis  
Development of the Czech Economy*

The 2018 year has been significant for the Czech society as the year of the so-called “eighth” anniversaries. We have commemorated well-known and less well-known historical events that took place in the years ending with the number 8 in an unprecedented degree. The special chapter represent the eighth anniversaries of the twentieth century – 1918, 1938, 1948, 1968 etc. (Valeš et al. 2018, Kol. 1999). In this flood of historical data, we should remember that, even if the 21st century is just eighteen years old, it has also created an eight anniversary. It has become significant both for the Czech history (and the present) and literally the global world. On September 15, 2018, we commemorated (the term “celebrated”, would seem inappropriate in this context) ten years since the fall of the Lehman Brothers investment bank – the event generally seen as the beginning of the global economic crisis (or the Great Recession).

The aim of this study is not to describe and analyse the detailed causes, course, and results of this crisis. This was done by many Czech and world economists. Let us recall for example Klvačová 2009, Krugman 2009, Švihlíková 2010

etc. Probably the most illustrative report of the reasons and the history of the crisis shows the American documentary film *Inside Job*, which has been awarded the American Oscar thanks to its undeniable qualities. Despite the fact that the film and the authors have criticized the system of the world and especially the American financial system, its immorality and unbridled desire for profit, and the accurate capture of the fact that the people accountable for the crisis have never been taken to the court. On the contrary, a number of them have become leading economic figures of Barack Obama’s newly emerging presidential administration. Barack Obama defeated the Republican President Bush just because of the inappropriate handling of the crisis and based his campaign on the requirement of a fundamental review of the functioning and regulation of the US finance. None of that has happened though.

The main task of this study is to point out the crucial impact of this crisis on the political and public sphere, which significantly differs from the “normal” course of the economic crisis. In this context, the aim is to analyse the program documents of the Czech political parties, the government, and other public institutions, whether they are ready for another crisis being already reported due to the course of the economic cycle and some

of the initial signs. If we are not ready for the crisis and it has only a half of the impact on the economy and politics than the previous one, there is a high degree of probability we would have to fear another political earthquake. Along with the economic effect, that could have a fatal impact on the future and the very essence of democratic governance, which is facing an unprecedented crisis of legitimacy as the result of the last major economic crisis, and the fact that many of its causes and consequences have not been solved yet.

A similar major event of the economic history is to be mentioned here – the Great Depression of the early 1930s, which fundamentally influenced not only the destiny of democracy in all European countries but was the direct cause of the Second World War in which more than 72 million people deceased literally all over the world. The personalities of concrete politicians or political movements that have led the world astray, is secondary. Adolf Hitler's NSDAP won negligible 2.6% of votes and 12 mandates in the elections to the German Reichstag in 1928, a year before the crisis. The economic boom was peaking, international and domestic political circumstances were favourable to Germany, and most Germans believed in the legitimacy of the democratic and economic system. At the height of the economic crisis in November 1932, it was already 37.3% and 230 seats (Kirshaw, 2015). And that was just the beginning...

The recent world economic crisis of the early 21st century had also not only its economic losses of hundreds of billions of dollars, but it was a fundamental threat to the legitimacy of current politics and the economy. Unlike the situation after 1933 or after 1945, there was virtually no substantial correction of the current economic model. This could be due to the fact, that both German National Socialism and the Soviet central planning system in the 1930s and 1940s became a real alternative to the "free competition" of capitalism. To defend its position and to prevent both its disappearance and the demise of democracy as such, capitalism had to retreat in a way no one could think of ever be-

fore. The welfare state was born – a state of prosperity that, through a high taxation and massive redistribution of wealth from the rich to the poorer ensured a significant reduction in social inequalities in the society and a significant improvement in the economic level of all population strata. Generally, every working citizen regardless of his or her social origin or employment should have a share in post-war prosperity. This, along with nearly 30 years of post-war boom, has meant an incredible socio-economic boom of the Western world. This model has been so powerful, successful, and attractive that it has "wiped out" other alternatives and has become a model for the new democracies in Central and Eastern Europe with the fall of the Soviet empire. Paradoxically, this happened when the system was experiencing its disintegration culminating in the big economic crisis of 2008. The crisis has exposed and worsened many problems, including the massive indebtedness of a number of states, the relocation of companies to tax havens, a significant decline in corporate tax rates in public budgets, or a massive shifting of real industrial products from advanced countries to developing markets.

The social and economic consequences of the crisis in the 1930s and early 21st century are, in many ways, comparable, including their causes expressed by Petr Kain in his article for Lidové noviny with a distinctive headline: "The financial crisis has meant that the poor became poorer and the rich got richer." The introductory paragraph was no less eloquent: "It started as a problem in the US mortgage market and ended as a world crisis that has changed the world, not only the financial one. Without the financial crisis, Donald Trump might not sit in the White House, and the UK would probably not have to deal with the conditions of its retreat from the European Union today. The society would not be so strongly polarized, and the populists around the world would not celebrate their victory." (Kain, 2018)

As we have already stated, the second one of the crises has just finished the famous "work of de-

struction” from the previous period. At the latest in the second half of the 1970s, the current growth model of Western economies began stagnating. This reflected in both the lower GDP growth and higher government indebtedness and, last but not least, in lower corporate profitability. It has radically changed due to globalization, which opened up, in particular, thanks to a radical change in China’s economic policy, which, due to the massive reforms at the turn of the 1970s and 1980s, opened up to the world, capitalism and foreign investment. American and European firms then began to move their production plants to Asia (also to Indonesia, Bangladesh, etc.) where they could produce products at a fraction of the current wage costs and without including any harmful externalities – such as environmental costs. The next wave of globalization represents the fall of the Iron Curtain and the entry of another roughly 600 million people into the global labour market. This enabled a substantial increase in the profits of Western firms and sales of relatively low-priced goods produced at the “cheap East” in richer Western markets. Western workers were, this way partially compensated for their wages stagnation and actual decline by the second half of the 1990s, despite the fact, that unemployment began to rise sharply in the West due to the massive shift of jobs from the West to the East. Considering the existence of a number of so-called “tax havens”, the fact that companies could now be taxed on a global scale – not in the place where profits arose, but anywhere in the world, was another serious blow to the public budgets of Western democratic states. In addition, the states have had to overtake each other in attracting foreign direct investment, in particular, to overcome large multinational firms in an effort to attract their business plans to their territory. This was achieved with the help of investment incentives, further reduction of corporate taxes, tax holidays for large investments, etc. All of this done in favour of preserving, ideally expanding the supply of jobs. The result was, among others that the share of private companies in the tax revenue of the states has

fallen by two-thirds since the end of the 1980s. This tax loss replaced the “middle-class tax”. But this was not enough – especially the financial market “broke off” and started to create financial instruments, among others the so-called financial derivatives, the securitization system, etc., by which the financial institutions multiplied their incomes. The operations, though, were extremely risky based on the theoretical assumption that “the growth will be eternal” and property prices will continue to rise. Therefore, the crisis analytics speak in this connection about a moral hazard of bankers. The economic server business.center.com defines this term as: “the activity in a situation of asymmetric information, one economic subject (informed) which, in maximizing its benefit, reduces the benefit of other (uninformed) participants in the market transaction.” (Morální hazard, 2018)

Investment bankers did not tell their clients the risks of these new securities, even when it was obvious that their actual price was approaching zero. Instead, they were selling them until the very last minute to get as much as possible, as long as possible. Similarly, the rating agencies proceeded in rating the securities determining the resulting price by the rating of some agencies. The reward for the rating of these agencies provided the selling investment bank, depending on the credit stated by an agency. The higher the rating was, the higher the reward. Similarly, to the 1930s, the term “banksters” returned to the economic vocabulary – very closely related to another English expression of gangsters. “The term was born in the days of Great Depression (1929–1933), but now it was to symbolize the gangster behaviour of some bankers, which also led to a Great Recession.” (Zeman, 2018) This effect fully reflected in massive mortgage lending in the US 10–15 years before the crisis. The mortgages were provided on a massive scale to people who would not normally reach them – the so-called sub-prime mortgage. The mortgage sellers got the rewards according to the volume of mortgages sold unlike the creditworthiness of the clients.



This hazard was one of the main causes of the so-called mortgage crisis in the United States, which has become an imaginary detonator of the global financial crisis. When the economic conditions worsened, the people who shouldn't have received a mortgage, stopped paying it. Given the volume of sub-prime mortgages (hundreds of billions of dollars) this was a serious problem for the entire US economy. It was even more serious for the world financial system, especially for the mentioned financial derivatives. They were directly tied to mortgage payments and similar other debts (leases, study loans, consumer loans, etc.). When people were unable to pay back the mortgages in America, these derivatives also ceased to be profitable and their price collapsed immediately. Due to the interconnectedness of the global financial system, it was a disaster – no one knew how many people and what number of these derivatives, are in a private ownership and what their real value is. Banks stopped to trust and borrow money to each other. Investment banks, as already mentioned Lehman Brothers, Bear Stearns, Merrill Lynch, J. P. Morgan, or Dexi, collapsed and announced bankruptcies. The global financial system collapsed all of a sudden.

On the other hand, the politicians have had direct responsibility. Among other things, due to the very generous subsidies of the financial sector, they have significantly reduced state supervision and bank regulation. There were purely political reasons at play as well – the prime beneficiaries of the sub-prime mortgages were American ethnic minorities – Afro-Americans and Hispanics. The first ones radicalized, in particular, in the early 1990s due to their lower salaries and social status. Since Bill Clinton's, the American governments have sought to improve their social status and standard of living by improving access to mortgages. The American dream was available literally for everyone. No one has taken into account the fact that the income of these minorities remained the same, and they could not afford to live in their own homes (as well as many "white" Americans). Then

there was the third political reason, again linked to globalization and its negative impacts on the Western working world. Real wages in the US have shown stagnation since the late 1980s and early 1990s and, in some professions, a real decline. At the same time, property prices, study fees at American schools and other costs were increasing. American families had a record high indebtedness and extremely low savings. For many underprivileged Americans, but also the middle-class, government-supported sub-prime mortgages could "balance out" the standard of living that was proclaimed, but which was unattainable for a large proportion of ordinary US employees. The society – not just the state – has been indebted long before the crisis. This phenomenon was typical of almost all Western countries, including European ones concerning not only notorious Greece or Italy, but also today's economic leaders, headed by Germany or Austria.

To illustrate this, we can look at the table of the 15 most indebted EU countries according to the ratio of public debt to GDP, based on data from Eurostat economic sever finance.cz.:

The data clearly shows which economies have counselled the crisis and which failed. Generally, the European Union as a whole rather weakened. The high public budget deficit, which a number of countries are not capable of decreasing in the course of years, although experiencing an economic upturn in the economic cycle trajectory for several years, also suggests that the next crisis may be just as devastating for these economies as the previous one. Again, this concerns "favourite" examples from the European South – Greece, Italy, Spain, Portugal – like those from the north – Austria, Belgium, Great Britain, but also the second largest continental economy – France. Of course, the data on government debt and public finances represent just one, not the only indicator (important is as well GDP growth, export performance, the overall structure of the economy, etc.). Within Europe, however, this data is alarming. One of the key causes of the economic crisis is the very high



**Table 1 » The 15 most indebted EU countries according to the ratio of public debt to GDP**

Rank	Country	Public debts ratio to GDP of the country in the third quarter of 2007	Public debts ratio to GDP of the country in the third quarter of 2012	Public debts ratio to GDP of the country in the third quarter of 2017
1	Greece	102.2 %	154.7 %	177.4 %
2	Italy	102.0 %	123.2 %	134.1 %
3	Portugal	67.6 %	123.8 %	132.1 %
4	Belgium	92.4 %	106.1 %	106.1 %
5	Cyprus	54.3 %	77.8 %	103.2 %
6	Spain	36.9 %	78.6 %	98.7 %
7	France	65.8 %	89.2 %	98.4 %
8	GB	41.1 %	83.4 %	86.5 %
9	Croatia	37.9 %	69.1 %	81.0 %
10	Austria	75.1 %	82.3 %	80.4 %
11	Slovenia	23.3 %	48.1 %	78.4 %
12	Hungary	65.0 %	77.2 %	74.4 %
13	Ireland	27.5 %	120.5 %	72.4 %
14	Germany	64.1 %	80.0 %	65.1 %
15	Finland	32.8 %	51.9 %	60.4 %
	<b>Euro Zone</b>	<b>66.6 %</b>	<b>88.9 %</b>	<b>88.1 %</b>
	<b>European Union</b>	<b>58.8 %</b>	<b>83.7 %</b>	<b>82.5 %</b>

Source: Bureš (2018)

debt of states, among other things. In this respect, it is also clear that one of the main causes of the crisis has not been resolved – neither in the European, nor in the global context.

Jan Bureš and Petr Dušek, economists of Patria and ČSOB Financial Markets reflect on the situation in their article from July 2018 *Rozbřesk* (The Dawn): The global debt growth is uncontrollable. Will the developing economies pay the price?: “Global debt growth is picking up the speed. In the first quarter of this year, the global debt has risen by \$ 8 trillion according to the Washington Institute for International Finance (IIF), i.e. the fastest pace since the beginning of 2016. Currently, the global debt is at a record of \$ 247 trillion representing 318% of the world’s gross domestic product. Looking at the composition of sectors it is clear

that the debt growth occurs across sectors, with about three-quarters of the total debt falling to the private sector, the remaining quarter being the government sector. The interesting fact represents the development of the geographical distribution of debt, or its development over the course of time. While developed countries have been able to steady their aggregate debt, since the last financial crisis albeit at a high level (382% of GDP), we have seen a different trend among developing economies. Although they are burdened by a lower debt (211% of GDP), the debt has been growing steadily in recent years. Moreover, the debt is on the rise in the course of standardisation of the global interest rates, which raises concerns about the debt sustainability of some countries. Unlike the developed economies, the debt profile of developing coun-

tries is on average more vulnerable, due to shorter maturities, a larger share of debt denominated in a foreign currency or held by foreign countries.” (Bureš, Dušek, 2018) This results in countries such as Turkey, Argentina or Brazil getting into debt problems, with China, in particular, being accountable for almost half the global debt growth since 2007.” (Bureš, Dufek, 2018). Since 2008 the total debt has risen by at least 40% and continues to grow – especially in the segment of developing markets. Extremely negative is this trend not only in the public, especially in the private sector, the debt of which is growing rapidly and in developing countries again faster than in so-called advanced economies. As in the case of the previous crisis, the banks represent the riskiest segment.

The editors of the magazine *Argument* view the situation the same way. They cite the *South China Morning Post* and the article entitled “We still cannot imagine the full impact of the financial crisis”. “The banks, that we considered too big to fail, are nowadays even bigger. The big banks played a critical role in the crisis, so we expected them to downsize to avoid systemic risk. Instead, the largest US banks are even larger and have an even larger market share. Debts were too high ten years ago and hidden through so-called shadow banking. Today, due to historically low-interest rates, the debt is on the rise. Citigroup claims that global debt has risen to 217 % of gross domestic product and is about 40 percentage points higher than ten years ago. We are mainly concerned about China and its large share of the rise in new debt. While President Si was committed to shadow banking, it was a trade war with the United States, which led to the re-spinning of credits. The fall of the Chinese economy is not happening, but that does not mean that the Chinese economy will not be included. “The Minsky Moment” – a point where the price of assets collapses... Unconventional use of monetary instruments, such as quantitative easing, artificially drove up asset prices, from shares to real estate. The result is the largest reallocation of wealth in history, as SCMP warns. The poor do not benefit

from the growth. They have been affected by inhumane cuts. President Trump would not get to the White House without the support of these people. Their anger may be a real danger.” (Plně dopady, 2018)

It is obvious, that the political consequences of the last economic crisis are equally serious, and as the Chinese daily rightly points out, we still feel the impact of the crisis in politics. After a series of defeats, the European Socialist Left virtually ceased to exist as a relevant political force. The coup de grace is likely to be the votes in the European Parliament in 2019. A classic example is the Czech Social Democratic Party, which now struggles for its very existence on the Czech political scene. It is indifferent whether these countries are post-communist or traditional democratic states such as Germany or the Netherlands. In a number of countries, substantially more radical alternative appeared – whether declared (Greek Syriza) or real (Jean-Luc Mélenchon and his movement of Refractory France). In particular, the combination of the unresolved consequences of the economic crisis and the crises that have emerged alongside it (or with it) – the deep crisis of the European integration process, the Euro Zone crisis, the migration crisis, etc., are on the rise especially of alternative Right wings such as the Swedish Democrats or the German Alternatives for Germany. In addition to the existing “political order”, we should mention President Trump, French President Emmanuel Macron, and the President of the Czech Government and the ANO political party Andrej Babiš. All these lines show that the original party system of European and non-European democracies fell apart and the traditional alternation of right and left, one major right-wing and one major left-wing party, is in a large part of these countries – at least temporarily – the past.

It would seem that the European and the Czech political parties would pay extraordinary attention to the analysis and preparation for the next crisis. In particular, due to the fact, that some alternative parties close to the extreme right – such as Alter

native for Germany, which is currently the second strongest party in the Federal Republic, according to opinion polls – are highly successful even at the time of the unprecedented economic boom. Another impulse – concerning the Czech government and its strategic documents either – may be some alarming signs of the new economic crisis may soon emerge in the Czech environment, such as zero unemployment, as well as the overall course of the economic cycle, which shows that the peak of the boom has already been reached. Logically, a downward trajectory will occur and it is almost certain that the current government of Andrej Babiš will have to cope with the incipient crisis, coincidentally supported by two left-wing parties – the Social Democrats and the Communist Party, or the remnants of the Czech left wing.

However, looking at a series of documents of the government and political parties (see, in particular, the pre-election programs from the end of 2017), we find out that they lack the concept of the economic crisis or just the possibility that the relatively good economic times would soon finish, does not appear at all. The migratory (refugee) crisis, which also brings political popularity, is considered to be far more serious – see SPD (Liberty and Direct Democracy) of Tomio Okamura and ANO. The governments manifesto only speaks of this crisis. (Programové prohlášení vlády, 2018)

The opposition ODS (Civic Democratic Party) uses the word “crisis” in its articles in various meanings – such as political crisis, in connection with the construction of the second Babiš government in the spring of 2018. (Fiala, 2018) The term uses as well the EP Evžen Tošovský in his article *The EU has not learned at all from the diesel crisis*, from August 2018. (Tošenovský, 2018) However, neither the program nor other references in the years 2017 and 2018 imply the term of the economic crisis (not even how to prepare for it). If we ignore the general warning of the Civic Democrats

emphasizing the need of all budgets of the Czech Republic being designed as balanced, if not surplus, so that Czech public finances have the necessary resources until the situation worsens. In the 2017 election program, the word crisis does not occur at all. (ODS – volební program, 2017)

Another opposition party, the Pirates, deals as well with the concept of crisis only in the sense of the migration crisis,<sup>1</sup> or more precisely, they have used the term just once in the election programme in 2017. (Piráti – volební program, 2017) The same applies for the election programme of KSČM (the Communist Party), where they use the term two times. (KSČM – volební program, 2017)

On the contrary, the term crisis in its economic meaning uses in its election program ČSSD (the Social Democrats), also twice. The election leader Lubomír Zaorálek reminds the voters that it was the ČSSD, which has already twice successfully brought the country out of the economic crisis – at the end of the 1990s, and in the course of 2013–2017. (ČSSD – volební program, 2017) In the wider context – looking at the party website – they speak about the migration crisis, the crisis of the EU, and, last but not least, the crisis of the party itself – especially after the 2017 electoral disaster or the crisis of the Social Democratic parties in Europe.<sup>2</sup> Future economic crisis and its even potential occurrence is not mentioned at all.

The same applies for the programme of Starostové a nezávislí (Mayors and The Independent) for 2017–2021. (Starostové a nezávislí – volební program, 2017) It uses the term of crisis the most, still the crisis in the meaning of economic crisis is missing. In addition to the “traditional” collocation of the migration crisis, the party uses the term of crisis for both defence and security (e.g. “*The population must be much better prepared for the crisis than at present.*” (Starostové a nezávislí – volební program 2017, p. 10) “*The gradual crisis in North Africa and the Middle East caused by a lack of re-*

<sup>1</sup> <https://duckduckgo.com/?q=site%3Apirati.cz+krize&ia=web>. Situation on 18, Sept 2018.

<sup>2</sup> <https://www.cssd.cz/vyhledavani?q=krize>. Situation on 29, Sept 2018.

sources and by power crises will evolve further migratory pressure on Europe.” (Starostové a nezávislí – volební program, 2017, p. 50) etc. and surprisingly in connection with sport. (“*The current crisis of the system of financing the sport has its roots in the long-term underestimation and elimination of the sports agenda.*” Starostové a nezávislí – volební program, 2017, p. 58). The programme also uses the word crisis in the context of the European integration process (“*The solution to the current crisis of the integration process is not a multi-speed Europe.*” (Starostové a nezávislí – volební program, 2017, p. 72)

Similarly, TOP 09 uses the word crisis exclusively in the context of security in its program for 2017–2021, when the economic crisis is more than likely. On the economic crisis, however – quite exceptionally, speaks Miroslav Kalousek, the former Chairman of TOP 09, in the transcript of his interview for Český Rozhlas. It is characteristic that the interview in the radio database is called: “*Episode Interview Plus – Populists are squandering money, the next crisis will hit the poorest the most,*” Kalousek warns the podcast Interview Plus. TOP 09 has published the article transcription just under the heading of Kalousek: *The next crisis will hit the poorest*. This is a significant shift in content – the larger part of the conversation, on the contrary, concerned Kalousek’s controversial measures taken in the position of Minister of Finance in the previous economic crisis. A smaller part covered topical issues such as church restitution. TOP 09 still pays the greatest attention to the possible future economic crisis, which can be attributed to the relatively strong representation of economists in the party – e.g. the statement of the deputy of the European Parliament and former ČNB (Czech National Bank) Deputy Governor Luděk Nierdmayer: *The*

*world should be better prepared for the financial crisis.* Even in the case of TOP 09, however, the main focus is put again on the migration crisis, or the crisis of the European migration process.

We find the collocation of the migration crisis again in the programme of ANO for the 2017 election and, of course, it is the dominant topic of the SPD (Liberty and Direct Democracy) Apart from the term “migration” or “refugee” crisis, it also talks about the Ukrainian and demographic crisis. It does not mention the term of the economic crisis at all.

## 2. Conclusion

As we have seen, the last economic crisis, which has acquired a truly terrifying global dimension, has fatal political and social consequences. From a deep crisis of confidence in the current model of capitalism and democracy, to the drastic impoverishment of tens of millions of people around the world, the crisis of the European integration process, and the rise of radical political groups from right to left into the highest levels of world politics. We would expect that the Czech politics and public administration to learn from the crisis for the future as many indicators show the possibility of a quick onset of another (this time hopefully just an “ordinary”) crisis. This reflects, for example, the labour shortage, the slowdown in economic growth, and the international trade crisis triggered by US protectionist measures. The economic cycle has reached its peak, from which the only way leads – downwards. More than ever, a saying applies – who is ready, is not surprised. Maybe even more precise is the witticism of a Canadian writer Steven Erikson: “The lesson from history is that no one ever learns of it.” →

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## Are We Ready For The Crisis? Un/Readiness of the Czech Politics and Public Administration for the Crisis Development of the Czech Economy

### ABSTRACT

*The study addresses both the causes of the last economic crisis and shows that its causes – among others, above all, moral hazard and high indebtedness – have not been eliminated over time. On the contrary, creating prerequisites for repeating crisis behaviour in the future. The study also shows that a number of economic and political factors suggest an impending coming of a new economic crisis. The article analyses the readiness of the current Czech government on its inception and also analyses the pre-election programs of the Czech political parties. This analysis clearly showed the unpreparedness of both government and individual parties to the onset of the crisis. Neither the Czech government nor the Czech political parties have prepared scenarios that would successfully address the economic and social consequences of the economic crisis.*

### KEYWORDS

*Crisis, The Czech Republic, Political Parties, Government*

### JEL CLASSIFICATION

*G01, G 18, H7, L 88*

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# The impact of new technologies on the labour market

► **Jarmila Vidová** » University of Economics in Bratislava, Faculty of National Economy — Department of Economic Policy; e-mail: vidova@euba.sk

## \* 1. Introduction

The history of humanity is the history of discoveries, inventions or technological leaps. They are chain of innovations whose main goal is to achieve certain results in the most efficient use of resources. Innovation is one of the decisive factors for achieving business excellence. However, innovation has wider scope and is more than just a result of scientific and technological development. Innovations are, in essence, the preparation and implementation of phenomena more social than technical or economic. The main task of today's management is to provide the necessary level of competitiveness, which in a dynamic environment requires the transfer of attention from productivity and cost to quality and innovation issues.

According to J. A. Schumpeter innovation is the introduction of new products, original products with new features, use of new production techniques, production processes or new commercial production assurance, opening of new markets, changes in production organization and its security, use of new raw materials or semi-finished products. In addition to defining innovation by Schumpeter, innovation is defined as a set of technological, organizational, financial and commercial processes that have or should result in the implementation of new or improved technology products or tools

(Oslo Manual, 2005). According to the OECD, innovation is the introduction / implementation of a new or significantly improved product (product or service) or process, a new marketing method, or a new organizational method in business practice, organization of work or external relations. We consider innovation as a key stimulus for the development of the world system development phase (Freeman, 2005, Solow, 1957, Valenta, 2001). In the mid-1990s, Paul Romer and W. Brian Arthur defined innovation as a decisive factor in economic growth. Lasuen (Lasuen, 1969) criticized the abandonment of Schumpeter's concept of innovation as a driving engine of growth. He considered innovation as a major factor in economic progress.

With regard to innovation, it is necessary to mention substitution investments linked to innovation, because the main impetus for substitution is scientific and technological progress, that is, it is possible to substitute work articles and labour. In the contribution to the science and technology progress, we will focus on the substitution of work. Most technologies incorporated into the work environment over the last 200 years have been designed to save human capital and increase performance per employee. Nevertheless, the number of jobs in developed countries, owing to short-term fluctuations caused by the economic cycle, has



more or less kept pace with a significant increase in population.

With the decline in the number of employees in a particular sector, due to the automation of some operations and the reorganization of workflows, productivity gains led to a combination of wage growth for remaining employees, a decline in consumer goods prices, and a growth in profits by companies applying new technologies. These additional revenues and savings from more efficient production are ultimately short, which supports the growth of the economy and the creation of new jobs. We are currently in the fourth Industrial Revolution, Industry 4.0. Its typical feature is the development of information technology, which has accelerated extremely rapidly in the last decade, resulting in significant breakthroughs in robotics and artificial intelligence (AI). New achievements are beginning to be used in manufacturing (cybernetics, robotics, and wireless connectivity). New technologies are wiping out the differences be-

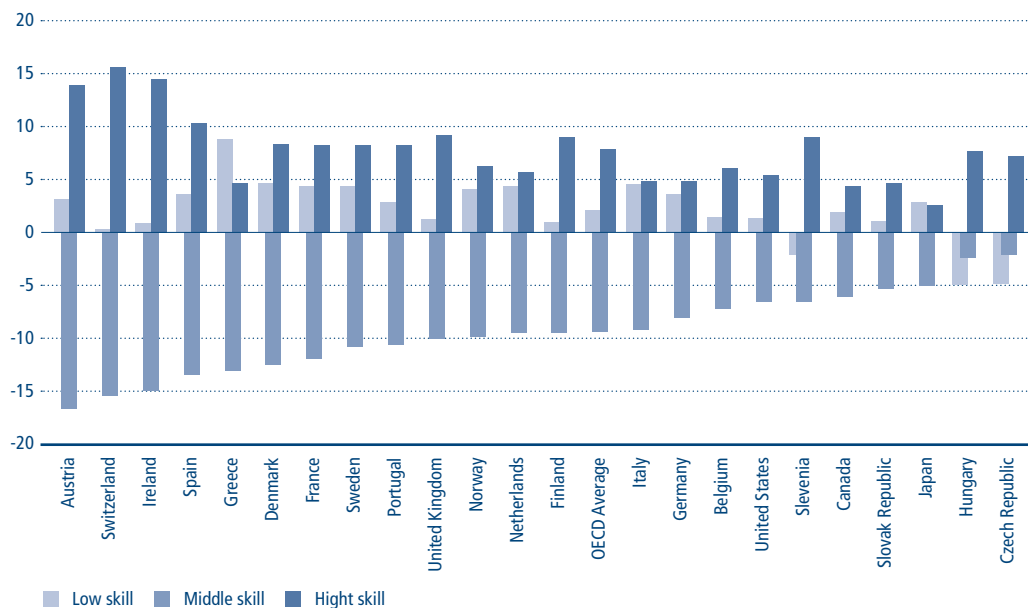
tween physical, virtual or even biological spheres, and there are fears with negative impacts on employment.

## 2. The impact of new technologies on the labour market

Unlike the unemployment caused by automation, new technologies replaced people in routine tasks that once formed the basis of many middle class jobs such as administrative or manufacturing work. Routine tasks have been relatively simple to program and automate, but automation is much more complicated in the case of silent knowledge, such as intuition, creativity, complex communication, and sensory-motor skills.

These human skills are the result of the evolution but not human research, we can apply them, but it is much harder to explain and it is difficult to program them. These skills are especially important in better-paid jobs, such as analytical work or

**Figure 1 » Polarization of occupations by country**



Source: OECD. Employment Outlook 2017

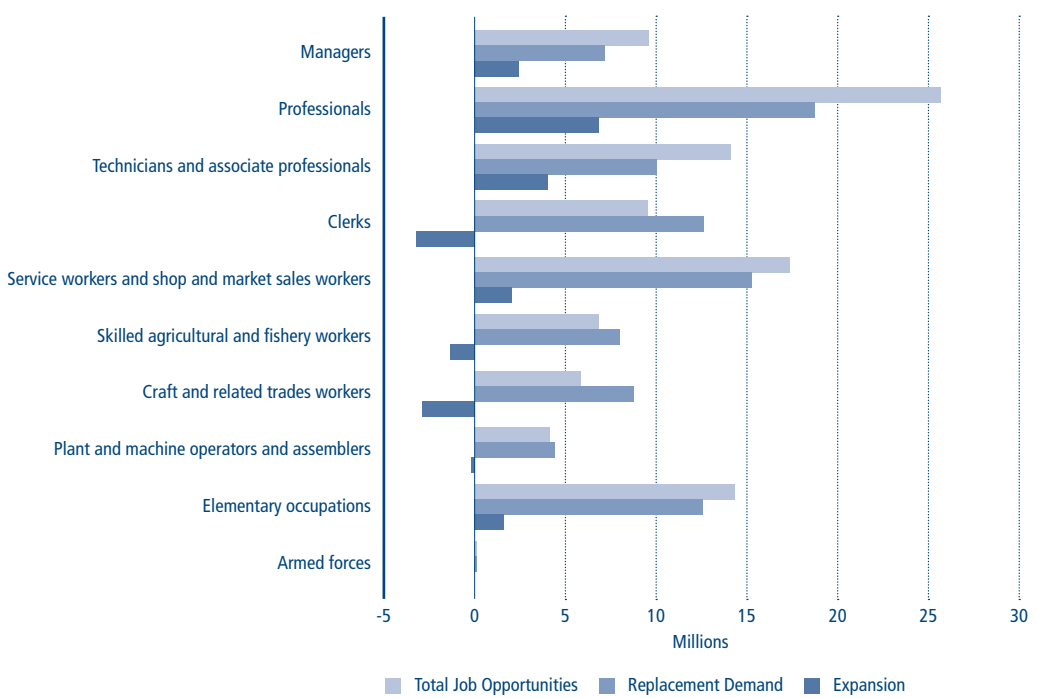
management, where new technologies act as a powerful complement to human labour. This leads to rapid job growth, wage productivity in these professions. Automation is also problematic in many worse paid professions such as preparing and serving meals, social care, cleaning or gardening. These professions are only minimally directly affected by technological change, but the demand for their work positively responds to growth in overall productivity and living standards. As a result, new job opportunities with the need for high skills and low skill cessation are seen in Figure 1, which documents the percentage change in the share of three skill groups in total employment between 1995 and 2015.

Predicting the types of jobs and skills that will be in demand in the future is challenging and often uncertain, but various detailed data sets are help-

ing us observe such evolving trends. The European Centre for the Development of Vocational Training (Cedefop) estimates that in the EU there will be job openings in all sectors with additional jobs estimated at over 9.5 million and replacement jobs estimated at 98 million from 2013 to 2025. However their results indicate some risk of job polarisation as the new jobs (replacement and expansion) will be created on the top or the bottom of the job sector. At all skill levels, most jobs in demand will be characterised by non-routine tasks which are not easily replaced by technology or organisational change. As figure 2 shows many traditional routine jobs such as clerical jobs and craft-related trade will decline.

Technological changes can be very disturbing in the future and will probably bring about a certain dislocation in the labour market. The most im-

**Figure 2 » Total replacement demand and expansion in job opportunities in the EU in 2025**



Source: Cedefop

**Figure 3 » Highest total job openings (absolute numbers) by occupation in Slovakia**



Source: based on data Cedefop

portant challenge is to provide a sufficient supply of human skills that new technologies do not compete with, but add to and increase their productivity, thereby increasing wage valuation. It is primarily about cognitive skills (creativity, flexibility, complex communication, teamwork, initiative, ability to generate new ideas and ask interesting questions and combine and evaluate ideas from multiple areas). To this end, it is necessary to adapt the education system with an emphasis on the development of skills, especially ICT skills.

### 3. Technological progress and new job opportunities in the Slovak Republic

Technological change is a key driver of the demand for skills, both in terms of level and type. In the developed world in the 20th century, innovations in both products and processes raised, on average, the skill requirements of the workforce. It also lead to a different mix of skills being required as tech-

nology drives down the need for labour engaged in certain tasks and their associated occupations: process operatives in manufacturing or clerical administration, for example. On the other hand, as well as there being an increase in demand for high skill non-routine tasks such as creativity or problem-solving, we have also observed increased importance of various lower skill service occupations like in retail or care sectors. Investment into education has been highlighted by a survey of Citi's clients as being one of the most effective policies to offset the risk of automation impacting labour and wealth distribution. The challenge for the education and training sector has been producing skills at the right level and in the relevant areas for the needs of the labour market and the economy more broadly. Many countries have long-standing problems along both dimensions.

The manufacturing remains the strongest employment sector in Slovakia, representing one quarter of all jobs in the economy. The automotive



industry is the backbone of country's manufacturing, contributing to the economy and export more than in any other European country. Despite the fact that Slovakia is currently protected from massive automation by lower labor costs, its scope will increase in the future. Employment growth is expected by 2030. It will be necessary to create new jobs for arts and recreation professionals, professional and administrative services, legal services, social and personnel staff. (Figure 3)

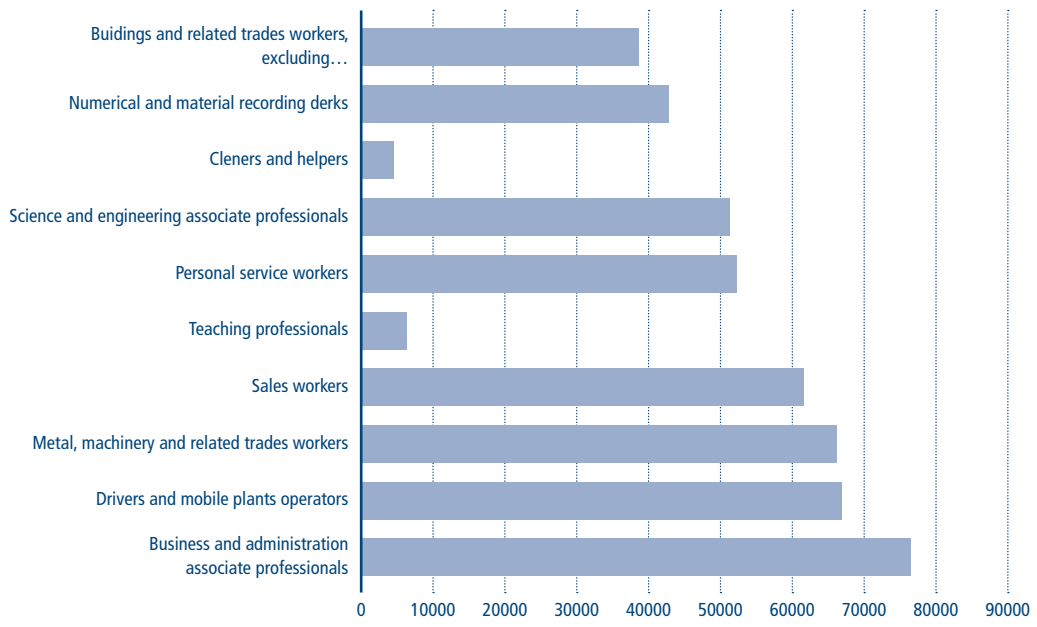
More than half of jobs by 2030 will need a middle level of qualification. However, the share of highly qualified jobs will increase; the number of job opportunities for low-skilled people will continue to decline. The most important challenge for the labor market is to provide a sufficient supply of those human skills that do not compete with new technologies, but complement them and increase their productivity, value and, therefore, wage valuation. This is primarily about cognitive skills, crea-

tivity, flexibility, teamwork, initiative, ability to generate new ideas. The education system in Slovakia is necessary to adapt training to the development of new skills, particularly in the area of information and communication technologies (ICT).

Technological progress in terms of employment and income does not affect all groups of employees and jobs as well. Technology replaces human work, especially in jobs with medium skill requirements and routine tasks. There is a demand for highly qualified employees who do not perform routine work (substitution effect). They are primarily managers, specialists and professionals in various fields, health or IT.

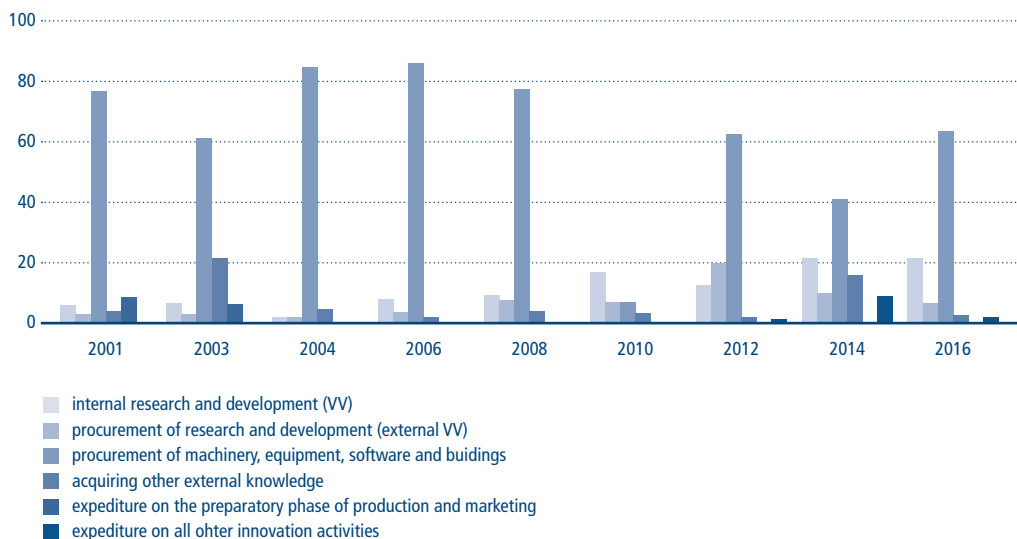
Computers and machines are currently unable to perform social work activities because they are not yet able to simulate human interaction, empathy and unconscious processes such as, for example, "Reading" of other people, therefore, places requiring a high degree of human interaction in the

**Figure 4 » Highest replacement needs (absolute numbers) by occupation**



Source: based on data Cedefop

**Figure 5 » Structure of expenditures in innovating enterprises in industry and services in the SR (in %)**



Source: based on data [www.datacube.statistics](http://www.datacube.statistics)

near future will not be replaced. Also, some cognitive skills have not been able to acquire current technologies at a level comparable to humans. These are analytical skills such as logical thinking, problem solving as well as skills such as creativity and coordination with other subjects. On the contrary, today technology is capable of gathering information, recognizing patterns, optimizing and planning high-level activities. The robot also does not have the problem of applying crude motor skills and orienting in different environments, and significant progress through “mobile robotics” is also experienced in a gentle motorcycle.

Slovakia is the country with the potentially greatest impact of the substitution effect on the labor market within the OECD (Arntz et al., 2016; OECD, 2016a). Almost 11 % of jobs are endangered by automation and about 35 % of jobs will have to undergo significant changes. The high potential of automation in Slovakia is due to the structure of the economy, which is significantly dependent on the manufacturing sector.

Production remains the strongest employment sector in Slovakia, representing one quarter of all jobs in the economy. It is the manufacture of transport equipment, machinery and computers, electronics and electrical equipment. These industries account for over 70 % of the world’s industrial robot installations (BCG, 2015). The potential impacts of automation differ from real employment changes because the risk of automation depends on technological options and does not include economic barriers that are an important limiting factor for automation implementation. Although the large number of jobs in the SR (or activities) are potentially replaceable by machines, wage costs are in many cases still lower than the cost of their automation. Especially for small and medium-sized enterprises, the cost of procurement of technology solutions is still high. The structure of expenditures in innovative enterprises in industry and services in the Slovak Republic (Figure 5) has changed from 2001 to 2016, but despite this, the high share of expenditure on procurement of ma-

chinery, equipment, software and buildings is limited, which limits their innovative activities.

#### *4. Education and new skills driven by technological change*

Economic development in the Slovak Republic has contributed to a steady growth in employment and a reduction in unemployment rates. Education is primarily a means of ensuring income. More than 2,200 graduates are unemployed in Slovakia. According to Eurostat, 20% of young people are unemployed in the European Union in 2017, half of whom are 20 or 34 years old are not willing to move to work. Within their country, 21% of young Europeans are willing to move to work, 12% would move to another EU country and 17% are willing to leave for work outside the EU. This is most striking in Bulgaria, where 12% are willing to move within the country and 23% to another EU Member State. Similarly, in Slovakia, 14% of young unemployed are willing to move to work within their own country, but 23% would prefer to go to another EU country. The youngsters in Romania and Germany are the most willing to move to work (37% in the same way) and in the Czech Republic and Ireland (35% respectively). The youngest unemployed in Estonia and Croatia (26%) and Slovenia (25%) are most willing to leave for work in another EU country. Exit outside of the EU due to employment, young people are particularly willing in Sweden (34%), Spain and Finland (28%) and France (27%).

Therefore is necessary to focus on acquiring skills outside the formal education system by developing opportunities for learning in practice and lifelong learning. Employers play an important role here, and they should be motivated and pushing to expand the range of quality training programs for all age and education groups of employees. Education as a key theme is also a key issue for the United Nations to achieve the Sustainable Development Goal no. 4 Agenda 2030 – Ensure inclusive, fair and quality education and promote lifelong learning opportunities for all.

The training of employees according to Vodák and Kucharčíková (2011) is beneficial to the company as well as to the employee himself. It enables him / her to form work skills, improves his or her qualifications, level of education, acquires new skills and increases the expectation of higher job evaluation. The company thus increases its attractiveness, improves quality and market price. It helps to improve working relationships. Education must be implemented systemically as Czikk and Čepelová (2006). The main goal of enterprise education is to achieve competitive advantage by strategically deploying capable and dedicated employees. In determining employee learning objectives, the level of knowledge of individual employees in the field of knowledge, skills and skills is based.

In terms of the implications for the education system, early childhood interventions to raise non-cognitive skills appear to lead to higher returns from educational investments made later on (Heckman, 2007), although remedial investment in non-cognitive skills in young adults does seem to be more effective than remedial investment in cognitive skills like numeracy. However, malleability of non-cognitive skills is a key issue and it should not be assumed that education can significantly and causally improve all personality traits. For example, while there is evidence that something like coping or the ability to socially interact can be taught, there is rather less evidence at present for such a conclusion when it comes to a trait like creativity or leadership skills. As well as more general skills and competences, there will still be a need for job specific vocational skills, from high skilled professions down to lower-skill service sector occupations, however, such investments will necessarily become riskier given the potential for unforeseeable automation of many labour processes. Moving this risk away from individuals towards employers and the state would be more efficient, but there are two potential problems.

## Conclusion

Several studies confirm the merits of technological unemployment concerns. In 2013, the Oxford University Institute of Science and Technology also released a prognosis that, in the next 10–20 years, only 47% of jobs in the United States are at risk. According to the latest forecast, this trend is most affected by developing and emerging economies, 85% of exits in Ethiopia, 77% in China and 69% in India. The International Labour Organization (ILO) estimates that automation will be particularly affected by economies with a dominant position in the electronics industry, countries grouped in ASEAN. This expected job loss is related to the phenomenon of so-reshoring (or relocation): While the neoliberal era characterized offshoring, moving productive assets from wealthy countries to less labour intensive countries, today the reverse runs. Multinational economies are now more reluctant to invest in robotics and to move production closer to consumption points.

In conclusion, we can say that it is therefore necessary for the economy to focus on addressing demographic change as demand for skills changes. The diminishing number of workers and the aging of the population require constantly the acquisition of new skills and knowledge to be able to apply to the labour market. The aging population will be dependent on care, which requires raising the number of health nurses in health care, geneticists. At the same time, it is essential to concentrate on entrepreneurial education and to acquire entrepreneurial skills. Investment into education is one of the most effective policies to offset the risk of automation impacting labour and wealth distribution. The challenge for the education and training sector has been producing skills at the right level and in the relevant areas for the needs of the labour market and the economy more broadly. Many countries have long-standing problems along both dimensions.

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## The impact of new technologies on the labour market

### ABSTRACT

*Today, IT innovation and digital technologies are characterized by the expansion of mental work. In the past, new technologies have been designed to save wage costs and increase performance per employee, yet the number of jobs in developed countries has evolved in the context of population growth. Growth in productivity is, in the long run, the most important driver of growth in living standards. The most important challenge will be to provide a sufficient supply of those human skills that do not compete with new technologies but complement them and increase their productivity and payroll. The paper focuses on technological change and its impact on dislocations in the labour market.*

### KEYWORDS

*Digital Technology; Innovation; Labour Market; Labour Productivity; Population Growth*

### JEL CLASSIFICATION

*J24; J53; L15*





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