

INFLUENCE OF INNOVATION ACTIVITIES ON CSR OF SMES IN SELECTED CEE COUNTRIES

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Abstract: This contribution deals with the concept of innovation and its influence on CSR. It attempts to prove by means of empirical research that SMEs that demonstrate high engagement in the area of innovations have a higher tendency to engage also in CSR. Research was conducted in SMEs in the CEE region, in Austria, Czech Republic and Slovakia (n=607). Empirical data were collected through questionnaire. Statistical evaluation of empirical data was done via Pearson's Chi-square test and Cramer's V coefficient. This article is an addition to literature at two major levels. First, it attempts to explain how innovation and CSR are interconnected and through statistical analysis proves innovation to be one of the main CSR drivers. Second, it provides empirical data about SMEs in less researched CEE region.

Keywords: CSR, innovation, sustainability, business strategy, SMEs.

1 Introduction

Innovations and CSR have become important topics for both researchers and managers and a crucial part of core competencies for successful businesses. Even though both topics are not new, foundations date back to 1950s (Barnard, 1958; Carroll, 1999; Elkington, 1994), they regained a significant attention of many authors (Baumgartner, Ebner, 2010; Nidumolu et al., 2009; Porter, Kramer, 2011; Visser, 2010) around a decade ago, mostly after the economic crisis of 2008. Innovations have been seen by scholars as one of the key drivers of economic growth (Grossman, Helpman, 1993; Romer, 1990) and CSR as a challenge that can be transferred to a business opportunity (Rexhepi et al. 2013). In the past decade, there have been numerous studies that have tried to prove the positive impact of CSR on company's financial performance and growth. Some of them show positive relationship (Lev, Petrovits, Radhakrishnan, 2010; Margolis, Walsh, 2003), however, some of them also negative (Gossling, 2011) or the researchers see influence of other intangible factors that might modify this relationship (McWilliams, Siegel 2001; Surroca et al. 2010). One of these elements that could have substantial impact on firm's performance could be innovation. Innovation is by certain scholars seen as an intermediary or a moderator between CSR and increased financial and economic performance of a firm (Anser, Zhang, Kanwal 2017; Marin, Martin, Rubio, 2016; Ruggiero, Cupertino, 2018).

Recently, a relationship between innovation and CSR has come into research focus (Bocquet et al. 2014; Guerrero-Villegas et al. 2018; Marin et al. 2016; Martinez-Conesa et al., 2017; Mithani, 2017; Wu et al. 2018). Innovation and CSR have not become considered as an important area for study only by researchers but also a significant topic for companies, governments, third sector and also customers. Innovation is a critical factor for economic growth, it is one of its main catalysts and it is inevitable for companies not only for their expansion but also for their mere survival on today's global and demanding markets. On the other hand, CSR is still not correctly perceived and understood by many businesses. There still exists that common fear that engaging in CSR might compromise the profitability (Baumgartner, Ebner, 2010; Hwang, Kandampully, 2015) or there are substantial differences in views of firms and their managers on this issue (Pedersen, 2010). It is not just company's philanthropy and mitigating the negative results of their business activities as it is still often seen by many companies and wide public but it is the way how the business activity itself is planned and executed (Rexhepi, et al. 2013). It is necessary for keeping the business sustainable also from the long-term perspective. CSR has to be part of the process since its very beginning and an integral part of business strategy. Incorporating CSR and business ethics into business strategy and having a strong internal desire and motivation to follow it, not only use it hypocritically as a PR tool, is the key to benefiting from this

concept (Graafland, van den Ben, Stoffele, 2003; Jauernig, Valentinov, 2019; Ramesh et al., 2019).

It is crucial for the companies to correctly understand CSR and its benefits for them, customers, society, all their stakeholders and include it into their business processes since the very beginning. CSR should be applied on all levels and with the prospect of continuous improvement (Gelbmann, 2010). Once integrated into business strategy, CSR can lead to increased innovation and produce competitive advantage (Baden et al. 2009; Bouquet et al. 2013; Gelbmann, 2010; Vishwanathan et al., 2019). In such a case, CSR can be fully exploited as a competitive advantage. Companies are nowadays under a much deeper scrutiny than ever before. Customers have easier access to information and are much more demanding and sensitive to CSR issues than in the past (Coombs, Holladay, 2015; Dawkins, Lewis, 2003; Kim, Krishna, Danesh, 2019). If an innovation is supposed to be successful, it has to offer a value added and a solution to a problem that is expected by customers, and what is an indispensable part of the story, in such a way that is expected. For this reason, already when innovating, CSR, and sustainable practices in general, should be taken into consideration. The findings of Rachel Boucquet's study (Boucquet et al., 2015) suggested, companies with strategic CSR (CSR incorporated into their business strategy) tend to achieve better results and higher growth especially via product and process innovation. Boucquet names it strategic and responsive CSR behavior. Term backward or forward CSR can also be used to name this phenomenon. This behavior, either incorporating CSR into business processes straight from the beginning via innovation with having minimum negative consequences to mitigate or just reacting „backwards“ and trying to diminish negative impacts of firm's operations on the customers, stakeholders, society and environment can influence company's growth and future prospects.

Some research show an indirect but significant effect of innovation on company's competitiveness via CSR – mediation effect (Marin, 2017; Ruggiero, Cupertino, 2018)) or a moderating - direct effect of innovation on company's CSR and its performance (Anser et al. 2017) versus the research that show direct relationship between innovation and CSR or vice versa – see table 1.

This scientific contribution is an addition to literature at two major levels. First, it looks at the issue of innovation and CSR from a different and less prevalent angle. It sees innovation as a major CSR driver and tries to prove the relationship in a less explored direction, from innovation to CSR. It attempts to explain how implementation of complex business strategy influences innovations and CSR of SMEs. Second, it provides statistical data about SMEs that represent a vast majority of existing enterprises - over 99% in all surveyed countries and create over 75% of jobs in private sector (Eurostat, Slovak Business Agency).

In addition, SMEs are less legally bound in terms of CSR in comparison with large companies, so their decisions and behavior are more driven by their own incentives than legislation (Halme, Korpela, 2014; Kirkwood, Walton, 2010; Masurel 2007; Rodgers, 2010). Moreover, surveyed CEE region still lacks empirical data on this topic.

The remainder of this article is organized in a following way: second section explains the theoretical framework. It summarizes qualitative research and shows the examples of literature on the studied topic. Research questions and hypotheses were stated, explained and analyzed. Third section describes methodology selection, sample selection and collection of data. In section four, results of empirical research and their statistical analysis were provided. The last, fifth section of this contribution, wraps up the major findings and conclusions.

2 Theoretical framework and hypotheses

2.1 Literature review

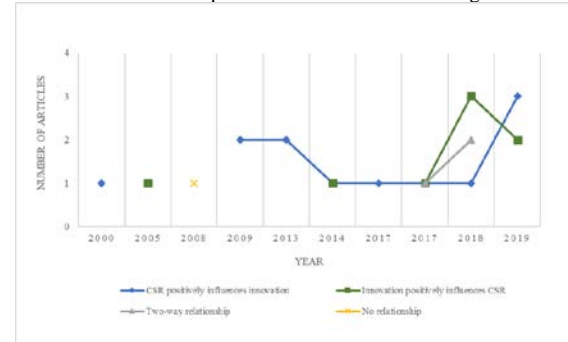
Studying the relationship between CSR and innovation is not easy. CSR especially, lacks a unified way of measuring. Most of the researchers study this relationship as a secondary topic, where the main focus of their research was the influence of CSR and innovation on company's growth and financial performance. However, there are already quite a few who attempted to scrutinize more deeply the relationship between these two discussed variables. The overview of these studies can be seen in table 1. Most of the authors concentrated on the influence of CSR on innovation (Bocquet, 2013, 2017; Garcia-Piqueres, Garcia-Ramos, 2019; Li et al. 2019; Kim et al., 2014; Kurapatskie, Darnall, 2013; McWilliams, Siegel, 2000; Martinez-Conesa et al., 2017; Miles et al., 2009; Nidumolu, Prahalad, Rangaswami, 2009; Ratnawati, et al., 2018; Poussing 2019), some of them identified two-way relationship (Guerrero-Vilegas et al., 2018; Mithani, 2017; Roszkowska-Menkes, 2018). However, less studies concentrated on the opposite direction of innovation on CSR (Bansal, 2005; Canh et al. 2019; Halme, Korpela, 2014; Mishra, 2017; Pedersen, Gwozdz, Hvass, 2018; Ruggiero, Cupertino, 2018; Wu et al., 2018; Zhu, Zou, Zhang, 2019). Table 1 shows an overview of selected sample of articles and their main conclusion of research. All reviewed articles were published in the last twenty years, in English and are registered in Web of Science database. Articles in other languages were excluded from this research.

Table 1 Overview of research conclusions of relationship between CSR and innovation

Year	Author	CSR positively influences innovation	Innovation positively influences CSR	Two-way relationship	No relationship
2000	McWilliams, Siegel	✓			
2005	Bansal		✓		
2008	Gallego-Alvarez et al.				✓
2009	Miles et al.	✓			
2009	Nidumolu, Prahalad, Rangaswami	✓			
2013	Bocquet et al.	✓			
2013	Kurapatskie, Darnall	✓			
2014	Kim et al.	✓			
2014	Halme, Korpela		✓		
2017	Bocquet et al.	✓			
2017	Mishra		✓		
2017	Mithani			✓	
2017	Martinez-Conesa et al.	✓			
2018	Guerrero-Vilegas et al.			✓	
2018	Pedersen, Gwozdz, Hvass		✓		
2018	Ratnawati et al.	✓			
2018	Roszkowska-Menkes			✓	
2018	Ruggiero, Cupertino		✓		
2018	Wu et al.		✓		
2019	Garcia-Piqueres, Garcia-Ramos	✓			
2019	Li et al.	✓			
2019	Poussing	✓			
2019	Canh et al.		✓		
2019	Zhu, Zou, Zhang		✓		

Source: author's own

Figure 1 Development of research conclusions on innovation versus CSR relationships over last decade – chronological view



Source: author's own

Ratajczak and Szutkowski, after executing a major qualitative study in 2016, identified relationship of CSR and innovation as a significant subject of interest of researchers especially in last few years and a direction from innovation towards CSR as one of the interesting research gaps (Ratajczak, Szutkowski, 2016).

2.2 Hypotheses

Due to this identified research gap with which the author is fully identified and a lack of empirical data on this topic in CEE region, research presented in this article attempts to study the opposite relationship and see how innovation can affect CSR in a company. This study aims to answer the following research questions:

1. *Is innovation performance of SMEs associated with their CSR activity?*
2. *Does implementation of innovation into business strategy influence CSR performance of SMEs?*
3. *Is the relationship between SMEs innovation performance and CSR different based on the enterprise's age?*

Empirical research was carried out in three selected countries of CEE region – Austria, Czech Republic and Slovakia. These three CEE countries were selected because firstly, there is a lack of empirical data available on this topic from this region, secondly, they recently formed the latest loose cooperation cluster within this region called Slavkov Triangle or S3. This cluster of two Visegrad Four countries, Slovakia and Czech Republic joined together with Austria in January 2015 to build a new cooperation platform that might signal a certain level of the change of the distribution of forces within the CEE region (Jančoškova, 2017; Nič, 2016). These three countries are historically interconnected in all areas including business. Moreover, the objective was to see the comparison of results of two former communistic countries with lower environmental awareness Czech Republic and Slovakia with pro-environmentally oriented, mature democratic country – Austria.

In order to bring more light into the relationship of innovation and CSR three hypotheses have been formulated. Their validity has been further tested against the empirical data.

H1: Innovation performance of SMEs is associated with their CSR.

By confirming this hypothesis, the intention was to demonstrate that the more innovative the company is, all aspects of innovation included whether it is organizational, process, product or marketing innovation, the higher is the tendency to engage also in CSR. SMEs tend to be more active and flexible innovators (Rothwell, Dodgson, 1991; Rogers 2010). They are more agile in the creation process and have higher tendency to go their own way in the process of innovation and CSR unlike large firms who tend to adopt more formal policies in regards to CSR (Schalteger and Wagner, 2011). This contribution aims to show that even though the companies apply their own way of understanding CSR – applied via effective innovation process, it

can still be effective and cover all necessary areas as formal CSR frameworks that the large companies apply.

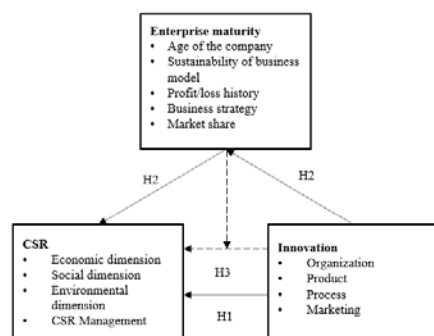
H2: Implementation of innovation into business strategy of SMEs is associated with their CSR.

Business world is rapidly changing. Keeping up with the pace is more and more difficult. Complex business strategy needs to be more flexible and the approach towards it more agile. Research showed in the past (Kirkwood, Walton, 2010; Masurel 2007; Rodgers, 2010) that SMEs are more motivated by sustainability of their business than just keeping up with the legislation. This study aims to prove that the stronger is the focus of an SME on creating and implementing complex business strategy, the more positive impact it has on its CSR performance.

H3: The association of innovation and CSR is stronger in younger companies.

This scientific contribution attempts to demonstrate that younger companies have a higher tendency to innovate with respect to CSR in comparison to older companies. These small and sustainably oriented SMEs might create new generation of green businesses as already suggested by researchers (Pink 2006; Rogers, 2010).

Figure 2 Relationship among hypotheses and variables



Source: author's own

3 Methodology of research

As getting official information regarding CSR, innovation or enterprise maturity level, what are the key variables of this research, is very problematic as SMEs are not obliged to disclose as much information about themselves as large companies do, getting data via survey was considered as the most appropriate approach. Performing a questionnaire survey was one of the most feasible ways how to obtain relevant data that are valid enough to be statistically evaluated. However, there are certain limitations of the questionnaire research such as non-response (in this case 72% response rate was reached), lack of knowledge of the respondents of the studied topic, understanding of the questions (minimized by the pilot study), truthfulness and relevance of answers or influence of cultural differences.

3.1 Sample selection

Research was executed in three Central European countries – Austria, Czech Republic, and Slovakia on the sample of 607 SMEs (n=607) – 202 Austrian, 202 Czech and 203 Slovak. Incomplete questionnaires were excluded from the final sample. The reason of the selection of countries within the region has been explained in chapter 2.

Table 2 Summary of the sample size per country

Country	Sample size small enterprises	Sample size medium enterprises	Total sample size per country
Austria	143	59	202
Czech Republic	140	62	202

Slovakia	145	58	203
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Source: author's own – based on survey results

Data were obtained via InnoCSR survey – questionnaire that was addressed to the management of randomly selected SMEs. Survey has been conducted during the period of 6 months, from January until June 2019. Validity and clarity of the questionnaire has been verified in a pre-research on 30 randomly selected companies (Austria 7, Czech Republic 11, Slovakia 12). Only slight modifications have been done before the questionnaire was further distributed. These 30 responses from pilot questionnaire testing were excluded from the final sample. Target population for this research were small to medium enterprises. Micro-enterprises, with 0-9 employees were excluded due to the lack of complexity. For the research purposes presented in this article, more complex business activity in the area of innovation and CSR was needed, so the survey was aimed at small enterprises with 10-49 employees and medium enterprises with 50-249 employees.

Table 3 Structure of respondents (n = 607)

Number of employees	n	Percentage
10-49	428	70.51%
50- 249	179	29.49 %

Source: author's own – based on obtained survey results

Majority of industries based on NACE coding was covered – the most respondents came from manufacturing, commerce and IT (see table 4). The rest was distributed among other categories.

Table 4 Structure of respondents – industry

Industry	Percentage of respondents AT	Percentage of respondents CZ	Percentage of respondents SK
Manufacturing	22.8%	22.3%	25.1%
Wholesale and retail trade; repair of motor vehicles and motorcycles	20.3%	20.8%	24.1%
Information and communication	12.9%	11.4%	13.3%

Source: author's own – based on obtained survey results

3.2 Measures

As the business activities in the field of innovation and CSR are rather complex, they are considerably difficult to measure. Holistic approach is more than necessary. In order to have complex, representative and objective measures of the objects of this research – innovation, CSR, enterprise maturity and their relationship, a comprehensive model was created. Three main variables – innovation, CSR and enterprise maturity were defined. Those were further broken down to sub-variables in order to increase preciseness of gathered data and to get deeper insight into the studied topic.

Creation of this measures was partially inspired and derived from the fundamentals of excellence models - EFQM, principles and standards used for implementation and monitoring of CSR - GRI standards, AA 1000 Accountability/Assurance Standard, ISO26000 and Oslo Manual (see appendix A). The goal was to approach the creation of measures systematically and have the substantial areas of business innovation and CSR activities covered. Innovation variable includes all innovation types as defined by Oslo Manual – product, process, organization and marketing, CSR includes all three standard dimensions – economic, social and environmental and CSR management as an addition. The third variable, enterprise maturity provides data on the sustainability of business model, profit/loss history and business strategy.

Based on the pre-defined measures, a questionnaire for online anonymous survey was created. Questionnaire consisted of 47 questions and was divided into four sections each consisting of required number of questions so that all measures are covered. Section A general - 5 questions, section B innovation - 16

questions, section C CSR - 23 questions and section D enterprise maturity - 3 questions. Majority of survey questions, excluding subject identification questions, in the survey were measured via five-point Likert scale: 1 strongly disagree, 2 disagree, 3 neutral, 4 agree, 5 strongly agree.

3.3 Data Analysis

Obtained nominal data gathered via InnoCSR survey (n=607) were further statistically evaluated. To test the validity of stated hypotheses, contingency tables, Pearson's Chi-square test, Cramer's V coefficient and mosaic plots were used. As a tool for statistical analysis, R software environment was selected.

The answers to the questions in the questionnaire are the realizations of the nominal random variables. We tested the independence of nominal random variables using the Pearson's Chi-square test. The Pearson test statistic χ^2 is

$$\sum_{i=1}^r \sum_{j=1}^s \frac{(n_{ij} - e_{ij})^2}{e_{ij}}$$

where

$$e_{ij} = \frac{n_{.j} n_{i.}}{n};$$

$i = 1, 2, \dots, r; j = 1, 2, \dots, s$ is used to make such comparisons. For large sample, the Pearson test statistic has a chi-squared distribution with $(r-1)(s-1)$ degree of freedom (Fagerland, Lydersen & Laake, 2017). Because several expected counts are less than 5, we use Chi-square test with simulated p-value based on 9999 replicates.

Mosaic plot (Marimekki plot) is used for illustration of the contingency tables and standardized residuals

$$\frac{n_{ij} - e_{ij}}{\sqrt{e_{ij} \left(1 - \frac{n_{i.}}{n}\right) \left(1 - \frac{n_{.j}}{n}\right)}};$$

($i = 1, 2, \dots, r; j = 1, 2, \dots, s$). One way to determine whether there is a statistical relationship between two nominal variables is to use the Chi-square test for independence. Cramer's V coefficient is a statistic used to measure the strength of association between two nominal variables

$$V = \frac{\chi^2}{\min\{(r-1), (s-1)\}n}$$

where χ^2 is a value of the Pearson test statistic, r is the number of rows, and s is the number of columns. Cramer's V coefficient varies between 0 and 1. Tables which have a larger value for Cramer's V can be considered to have a strong relationship between the variables, with a smaller value for V indicating a weaker relationship (Akoglu, 2018).

4 Results and discussion

The results of this research are in line with those of several authors (Bansal, 2005; Canh et al. 2019; Halme, Korpela, 2014; Mishra, 2017; Pedersen, Gwozdz, Hvass, 2018; Ruggiero, Cupertino, 2018; Wu et al., 2018; Zhu, Zou, Zhang, 2019) that confirmed the positive relationship of innovation on CSR.

Relationships of all innovation measures OI1-MI1 (see appendix A for more detail) were tested against all CSR measures ED1-CM7. Pearson's Chi-square test was used to test all relationships. Asymptotic significance (p-value) shows a significant relationship ($p < 0.05$) of majority of relations (at 5% level of significance).

Based on the results of empirical research (InnoCSR survey) there are certain exceptions. Three measures do not show significant relationship. It is measure SD8, EN4 and CM5 (survey question measuring level of performing activities to mitigate negative impacts of business pursuits on local community question 33 of InnoCSR survey, activities regarding environment question 37 and level of implementation of pre-

defined CSR metrics question 42). It implies that SMEs can have very strong CSR awareness, including proactive approach towards its implementation into its regular business activities while still not concentrating on performing CSR activities. These relationships are currently subject of the author's further research.

However, vast majority of tested relationships show significant dependence. As it can be seen from tables 5, 6 and 7 (see appendix B), the results are considerably homogenous for all three researched countries. Results of Czech Republic and Slovakia show very high level of similarity. As for Austria, empirical data demonstrate even higher level of dependence among tested variables. As in the case of Czech Republic, certain level of independence can also be seen on measures SD8, EN4 and CM5.

This difference in statistical results has been expected. It can be explained by the historical context of the region. Austria has a longer history of pro-green oriented policy, more mature market mostly caused by the fact that the development of SMEs and of private business in general has not been interrupted by the era of communism, in comparison with Czech Republic and Slovakia. Austrian SMEs also have more experience with CSR application than Czech or Slovak businesses as this concept is still relatively new in the region.

In order to test the strength of the association between two nominal variables Cramer's V coefficient was calculated for all relationships between innovation (measures OI1 – MI1) and CSR measures (ED1 – CM7). Values of Cramer's V coefficient are from 0 to 1, those close to 1 indicate strong association, while those close to 0 indicate weak association between the tested variables. Cohen (Cohen, 1988) divided Cramer's V into three groups based on the effect size. For df 4 ($df = \min(r-1, c-1)$ and r is number of rows and c number of columns) values greater than 0.05 are considered small effect, greater than 0.15 medium and greater than 0.25 large effect.

Considering the needs of this research where Cramer's V coefficient was mostly used to verify the already found pattern via Chi-square test, the reference value for our purposes was moved from 0.5 to 0.35. As it can be seen from tables 9, 10 and 11 (see appendix B) the pattern has been proved. The lowest strength of association between tested variables was found on the measures SD8, EN4 and CM5. As expected, the strongest association was found in Austria. Results of Czech Republic do not significantly differ from those of Austria, however, Slovakia shows a bit lower strength of association between tested variables.

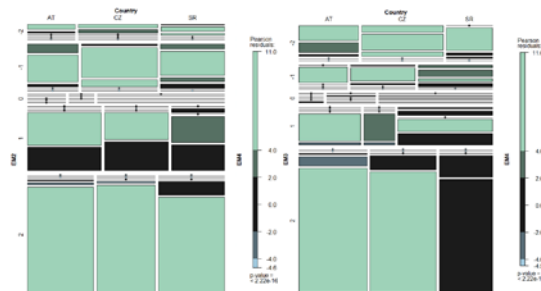
After statistical evaluation of empirical data obtained via InnoCSR survey, H1 can be considered as supported.

Second hypothesis, H2 - *Implementation of innovation into business strategy of SMEs is associated with their CSR* - was tested in the same way as H1. Chi-square test was calculated separately for each country. Measure EM4 – Comprehensive business strategy was tested against all variables measuring innovation (OI1 – MI1) and all variables measuring CSR (ED1 – CM7). As illustrated by tables 5, 6 and 7 (see appendix B) all tested relationships have $p < 0.05$ which indicates that all tested variables are dependent on each other at a significance level of 0.05.

In order to visualize data from four key categorical variables, relationships of EM4 vs. EM2, EM4 vs. EM3 and EM4 vs. CM4, mosaic plots were used. As it can be seen from figures 3 and 4, dependent relationship between each tested variable can be observed. Thus, it can be stated that those SMEs that follow comprehensive business strategy with focus on innovation have a more sustainable business model and their profits increased over the last five years (EM4 vs. EM2 and EM3). In addition, for those SMEs with strong focus on comprehensive business strategy, CSR tends to be integral part of their business processes and relationships. Consequently, H2 can also be considered as supported by the empirical research. However, as

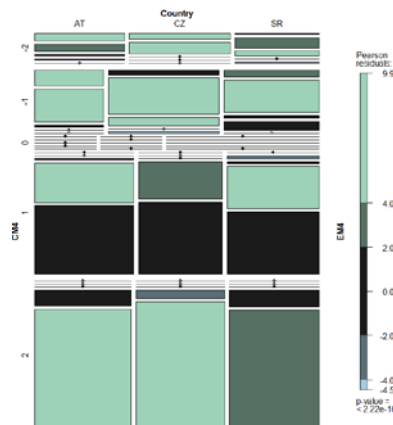
it can be seen from the breakout per country, there is slightly lower dependence of tested variables in Slovakia in comparison with other two researched countries. Which follows the same pattern as when tested via Chi-square test and measured via Cramer's V coefficient. In general, significant dependence can be observed in all countries, however, in Slovakia, the relationship is slightly weaker. This can be explained by the CSR concept being relatively new in Slovakia and this observation would be an interesting theme for additional research.

Figure 3 Mosaic plot illustrating the relationship of measures EM4 vs. EM2 & EM3



Source: author's own – based on empirical research

Figure 4 Mosaic plot illustrating the relationship of measures EM4 vs. CM4



Source: author's own – based on empirical research

The last hypothesis formed in this scientific contribution, H3 - *The association of innovation and CSR is stronger in younger companies* was examined via Cramer's V coefficient. The purpose was to test whether the age of the company has a significant influence on the relationship of innovation and CSR. As illustrated by table 11 (see appendix B), this hypothesis cannot be considered as supported as majority of tested variables show value of Cramer's V coefficient below our pre-set value of 0.35. Same pattern can be observed in all three researched countries. Differences in values are only minor.

Results of empirical research imply that even though the company is older, it doesn't necessarily mean that they are not able to follow modern business patterns and adapt to the turbulently changing environment. On the contrary, if the SMEs is older and still successful it had to undergo several transformations in the past, otherwise it wouldn't survive. So it can be assumed, it is well capable to engage in successful innovation activities.

Table 12 Summarized results of hypothesis testing

HYPOTHESIS	RESULT	
H1	Supported	Tested variables demonstrate significant levels of dependence as proved by empirical data. H1 is supported by statistical result of Chi-square test and Cramer's V coefficient.
H2	Supported	Tested variables demonstrate significant levels of dependence as proved by empirical data. H2 is supported by statistical result of Chi-square test and Cramer's V coefficient.
H3	Supported	Tested variables do not show sufficient strength of association as proved via Cramer's V coefficient.

Source: authors own – based on empirical research

5 Conclusion

Innovations are one of the main catalysts of economic growth and a base of current and future market economy. They provide society a tool for moving forward - for economic, technological and also social progress. Successful innovations could be a solution to majority of problems of today's world and a way to maintain current lifestyle and a level of comfort in a sustainable way. This could create an ideal situation with no tradeoff. The research presented in this contribution attempted to prove that being innovative actually leads to increased CSR engagement which means no tradeoff for the companies, customers and thus the whole society. More innovative the company is, the better and more effectively it exploits its innovation potential, including open innovation, the higher is the tendency of an SME to engage more in CSR. CSR comes out of this process naturally. Progress is realized by means of gradual improvement of situation via innovations.

The persistent issue is that CSR itself is often perceived by modern companies only as a philanthropy what is only mitigating consequences of its business activities and that is not a cure. Change has to come from within. Backwards or responsive CSR is not a solution. What can finally bring long-term results is the forward or strategic CSR (Bocquet et al. 2017). CSR needs to be an integral part of innovation. Innovating in a sustainable way has to come out of the business strategy itself. Innovations are driven by market needs – especially by customers who more and more value the sustainable lifestyle, products and technologies (Rahim, et al. 2011). They realize the impact of their consumers' behavior on the society as a whole and on the possible way of living for the future generations.

Combination of dependent variables, CSR and innovation, have a potential to bring benefits to all parties involved. As the statistical results indicate, innovations indeed have an influence on CSR. The more innovative the SMEs, the higher is their concern for CSR. The mindset of businesses slowly changes and it can be stated that the researched part of the CEE region is already developing in the right direction.

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Primary Paper Section: A

Secondary Paper Section: AE, AH

Appendix A – Measures

Appendix A – Measures			Social dimension	
Innovation	Variable	Description		
Organization	OI1	Recency of SME`s business model	SD1	Monitoring impacts of business activities on local community
	OI2	Regular innovation of business model	SD2	Monitoring employee satisfaction and loyalty
	OI3	Open innovation usage - implementation of latest accessible technology	SD3	Monitoring customer satisfaction and loyalty
	OI4	Business collaboration - strategic alliances, joint ventures	SD4	Adhering and exceeding health and safety regulations
	OI5	Implementation of idea management	SD5	Responsible and open communications towards employees, stakeholders and customers
	OI6	Level of involvement of top management in innovation activities	SD6	Sustainable talent development
	OI7	Implementation of innovation culture tolerating failure	SD7	Employee diversity
Product	PI1	Number of new products introduced during last 5 years	SD8	Regular conducting of CSR activities to mitigate negative impacts of business pursuits on local community
	PI2	Number of new products introduced during last 5 years is higher than the industry average	EN1	Monitoring environmental impact of provided products/services
	PI3	Increased sales from introduction of new product lines are visible	EN2	Adhering to and exceeding environmental regulations
	PI4	Increase/decrease in R&D expenditure	EN3	Company considers environmental impact of their innovation activity
	PI5	Ability of R&D investments to generate new revenue (increase over 5year period)	EN4	Regular conducting of CSR activities to mitigate negative impacts of business pursuits on environment
	PI6	New innovative products are designed with respect to environment and society needs	CM1	Sustainable business practices are fully integrated into business strategy
Process	RI1	Number of process innovation introduced during 5year period	CM2	CSR is part of organizational culture
	RI2	Ability of implemented process innovation to generate value (decrease costs, increase revenue, increase customer or stakeholder satisfaction)	CM3	Mission, vision and core values are setup with respect to sustainable business
Marketing	MI1	Introduction of marketing innovation with measurable increase in sales	CM4	CSR is integral part of organization strategy (integrated into all business areas and all business relationships)
			CM5	CSR is thoroughly planned and monitored (via valid and pre-defined metrics)
CSR	ED1	Ability of SME to generate profit while doing business in a sustainable way	CM6	Existence of internal code of conduct
	ED2	Transparent supply chain	CM7	SMEs implements anti-corruption policies
	ED3	Transparent procurement process	EM1	Age of the company
	ED4	Implementation of risk management	EM2	Sustainability of the business model
			EM3	Profit/loss history
			EM4	Comprehensive business strategy that is followed (with focus on innovation)
			EM5	Market share of SME
Source: authors own				

Source: authors own

Appendix B – Results of Chi-square test and Cramer's coefficient

Table 5 p-values of the Chi-square test – Innovation vs. CSR vs. Enterprise maturity – Austria

Question/ Measure	Q6 OI1	Q7 OI2	Q8 OI3	Q9 OI4	Q10 OI5	Q11 OI6	Q12 OI7	Q13 PI1	Q14 PI2	Q15 PI3	Q16 PI4	Q17 PI5	Q18 PI6	Q19 RI1	Q20 RI2	Q21 MI1	Q47 EM4	Significant at p<0.05	H0 is confirmed/ rejected
Q22 ED1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q23 ED2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q24 ED3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	yes	rejected
Q25 ED4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q26 SD1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q27 SD2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q28 SD3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q29 SD4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q30 SD5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q31 SD6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q32 SD7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	yes	rejected
Q33 SD8	0.0043	0.0012	0.0035	0.0006	0.019	0.029	0.1098	0.0364	0.0011	0.0296	0.0052	0.0057	0.0024	0.0047	0.0014	0.1519	0.0015	yes	rejected
Q34 EN1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q35 EN2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q36 EN3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q37 EN4	0.0033	0.0025	0.0183	0.0003	0.0532	0.1145	0.272	0.033	0.0105	0.0028	0.0496	0.0741	0.0334	0.0325	0.0052	0.1506	0.0008	no	confirmed
Q38 CM1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q39 CM2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	yes	rejected
Q40 CM3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q41 CM4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	yes	rejected
Q42 CM5	0.0112	0.009	0.0757	0.0009	0.1491	0.1674	0.1373	0.0828	0.0227	0.0459	0.0393	0.115	0.0615	0.0184	0.0322	0.2381	0.014	no	confirmed
Q43 CM6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q44 CM7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q45 EM2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q46 EM3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q47 EM4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	n/a	yes	rejected

Source: author's own – based on empirical research

Table 6 p-values of the Chi-square test – Innovation vs. CSR vs. Enterprise maturity – Czech Republic

Question/ Measure	Q6 OI1	Q7 OI2	Q8 OI3	Q9 OI4	Q10 OI5	Q11 OI6	Q12 OI7	Q13 PI1	Q14 PI2	Q15 PI3	Q16 PI4	Q17 PI5	Q18 PI6	Q19 RI1	Q20 RI2	Q21 MI1	Q47 EM4	Significant at p<0.05	H0 is confirmed/ rejected
Q22 ED1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0008	0.0001	yes	rejected
Q23 ED2	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0026	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.016	0.0002	yes	rejected
Q24 ED3	0.0001	0.0001	0.0001	0.0011	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0021	0.0001	yes	rejected
Q25 ED4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	yes	rejected
Q26 SD1	0.0001	0.0001	0.0001	0.0174	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007	0.0001	yes	rejected
Q27 SD2	0.0001	0.0001	0.0001	0.0039	0.0001	0.0001	0.0001	0.0002	0.0165	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0297	0.0001	yes	rejected
Q28 SD3	0.0001	0.0001	0.0001	0.0016	0.0001	0.0002	0.0001	0.0002	0.0021	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0181	0.0001	yes	rejected
Q29 SD4	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	yes	rejected
Q30 SD5	0.0001	0.0001	0.0001	0.0011	0.0001	0.0001	0.0001	0.0002	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0029	0.0001	yes	rejected
Q31 SD6	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	yes	rejected
Q32 SD7	0.0001	0.0001	0.0002	0.0596	0.0001	0.0002	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0039	0.0001	yes	rejected
Q33 SD8	0.2015	0.0045	0.1494	0.021	0.2082	0.1047	0.221	0.0026	0.0016	0.0267	0.1181	0.2484	0.007	0.014	0.0003	0.0059	0.0001	no	confirmed
Q34 EN1	0.0001	0.0001	0.0001	0.004	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0015	0.0001	yes	rejected
Q35 EN2	0.0001	0.0001	0.0001	0.0007	0.0001	0.0001	0.0004	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	yes	rejected
Q36 EN3	0.0001	0.0001	0.0001	0.0014	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0024	0.0001	yes	rejected
Q37 EN4	0.143	0.6318	0.4535	0.1146	0.7895	0.5647	0.0583	0.1543	0.0787	0.1807	0.3584	0.9149	0.0701	0.0256	0.0013	0.2186	0.0412	no	confirmed
Q38 CM1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0041	0.0001	yes	rejected
Q39 CM2	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0016	0.0001	yes	rejected
Q40 CM3	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006	0.0001	yes	rejected
Q41 CM4	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0035	0.0001	yes	rejected
Q42 CM5	0.3126	0.1978	0.0866	0.0407	0.0667	0.6095	0.3243	0.0817	0.1735	0.1635	0.0121	0.0732	0.0234	0.217	0.0653	0.0691	0.0293	no	confirmed
Q43 CM6	0.0582	0.08	0.0001	0.0292	0.0001	0.0006	0.0005	0.0001	0.0024	0.0051	0.0001	0.0022	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q44 CM7	0.0001	0.0003	0.0001	0.0002	0.0001	0.0001	0.0002	0.0003	0.0004	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	yes	rejected
Q45 EM2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q46 EM3	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
Q47 EM4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0015	n/a	yes	rejected

Source: author's own – based on empirical research

Table 7 p-values of the Chi-square test – Innovation vs. CSR vs. Enterprise maturity – Slovakia

Question/ Measure	Q6 OI1	Q7 OI2	Q8 OI3	Q9 OI4	Q10 OI5	Q11 OI6	Q12 OI7	Q13 PI1	Q14 PI2	Q15 PI3	Q16 PI4	Q17 PI5	Q18 PI6	Q19 RI1	Q20 RI2	Q21 MI1	Q47 EM4	Significant at p<0.05	H0 is confirmed/ rejected
Q22 ED1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0008	0.0001	yes	rejected
Q23 ED2	0.0001	0.0001	0.0001	0.0007	0.0001	0.0001	0.0001	0.0001	0.0029	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.02	0.0001	yes	rejected
Q24 ED3	0.0001	0.0001	0.0001	0.0004	0.0001	0.0001	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0019	0.0001	yes	rejected
Q25 ED4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	yes	rejected
Q26 SD1	0.0001	0.0001	0.0001	0.0169	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007	0.0001	yes	rejected
Q27 SD2	0.0001	0.0001	0.0001	0.0024	0.0001	0.0001	0.0001	0.0001	0.0173	0.0001	0.0001	0.0001	0.0001	0.0007	0.0001	0.0275	0.0001	yes	rejected
Q28 SD3	0.0001	0.0001	0.0002	0.0021	0.0001	0.0002	0.0001	0.0003	0.0018	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0189	0.0001	yes	rejected
Q29 SD4	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	yes	rejected
Q30 SD5	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0034	0.0001	yes	rejected
Q31 SD6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	yes	rejected
Q32 SD7	0.0001	0.0001	0.0003	0.0601	0.0001	0.0003	0.0002	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0032	0.0001	yes	rejected
Q33 SD8	0.1979	0.0043	0.1429	0.0203	0.1953	0.1107	0.2227	0.0025	0.002	0.025	0.1258	0.2509	0.0054	0.0122	0.0002	0.006	0.0086	no	confirmed
EN1	0.0001	0.0001	0.0001	0.0038	0.0001	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0015	0.0001	yes	rejected
EN2	0.0001	0.0001	0.0001	0.0003	0.0001	0.0003	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006	0.0001	yes	rejected
EN3	0.0001	0.0001	0.0001	0.0012	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0031	0.0001	yes	rejected
EN4	0.137	0.6343	0.4483	0.1231	0.7945	0.5669	0.0551	0.1643	0.0783	0.1771	0.3609	0.9092	0.0672	0.0269	0.0007	0.2152	0.0408	no	confirmed
CM1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0042	0.0001	yes	rejected
CM2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0018	0.0001	yes	rejected
CM3	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0008	0.0001	yes	rejected
CM4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0029	0.0001	yes	rejected
CM5	0.2979	0.1983	0.0933	0.042	0.0657	0.604	0.3173	0.084	0.1731	0.1743	0.0111	0.0743	0.0218	0.2268	0.0692	0.0692	0.0267	no	confirmed
CM6	0.0564	0.0816	0.0001	0.0275	0.0003	0.0006	0.0001	0.0001	0.0034	0.0044	0.0001	0.0022	0.0001	0.0001	0.0001	0.0003	0.0001	yes	rejected
CM7	0.0001	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0006	0.0007	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
EM2	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006	0.0001	yes	rejected
EM3	0.0001	0.0001	0.0001	0.0009	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	yes	rejected
EM4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0021	n/a	yes	rejected

Source: author's own – based on empirical research

Table 8 Cramer's V coefficient – Austria

Question/ Measure	Q6 OI1	Q7 OI2	Q8 OI3	Q9 OI4	Q10 OI5	Q11 OI6	Q12 OI7	Q13 PI1	Q14 PI2	Q15 PI3	Q16 PI4	Q17 PI5	Q18 PI6	Q19 RI1	Q20 RI2	Q21 MI1	Q47 EM4
Q22 ED1	0.4943108	0.481872	0.449228	0.5682378	0.4724606	0.4765033	0.3510044	0.5005461	0.4916913	0.5512459	0.4953875	0.4836333	0.5612428	0.5204249	0.5659571	0.5406547	0.5705466
Q23 ED2	0.4013737	0.3925796	0.3779755	0.4515628	0.3835765	0.4569675	0.2750284	0.447846	0.4041988	0.446853	0.4223552	0.4204175	0.4505406	0.4730895	0.4458029	0.414989	0.4517827
Q24 ED3	0.4051665	0.4016898	0.3813496	0.4583888	0.3845098	0.4558563	0.2794357	0.4516281	0.4086875	0.4489075	0.4091781	0.4079378	0.4524853	0.4687794	0.4399218	0.4240575	0.4536039
Q25 ED4	0.3704431	0.3535532	0.3722997	0.4160029	0.3391833	0.3464943	0.2709365	0.3555201	0.3813612	0.4344683	0.3575762	0.3395559	0.4341446	0.3774145	0.3903524	0.3275699	0.3938779
Q26 SD1	0.4838177	0.4761466	0.4462154	0.5559391	0.4347871	0.4634887	0.3638933	0.4739608	0.4829242	0.5280017	0.4481202	0.4409842	0.5513848	0.5428368	0.5626017	0.4708738	0.5424878
Q27 SD2	0.4368789	0.4149401	0.4110068	0.5166318	0.4088774	0.4824471	0.2880168	0.4616751	0.4290755	0.476417	0.4374061	0.4273164	0.4978241	0.483967	0.4652975	0.49438	0.4759665
Q28 SD3	0.4139486	0.3980081	0.4030422	0.461678	0.3722281	0.446493	0.2753873	0.4527006	0.4054476	0.4374623	0.4102971	0.4019466	0.4640778	0.469605	0.4447742	0.4490673	0.454581
Q29 SD4	0.4147227	0.4202797	0.4282278	0.4587849	0.4025835	0.4701928	0.2895443	0.5051016	0.4281542	0.4566312	0.3933103	0.393537	0.4993252	0.5165323	0.478163	0.422447	0.4940411
Q30 SD5	0.41117378	0.420905	0.4078288	0.5169938	0.4055136	0.4470364	0.3054455	0.4605477	0.4337403	0.4686808	0.428459	0.4242556	0.5347542	0.4999973	0.4768127	0.4927108	0.4804241
Q31 SD6	0.443302	0.452647	0.4408835	0.5442602	0.4117108	0.4083554	0.3756655	0.4715773	0.4738833	0.4928615	0.4344892	0.4392368	0.5156377	0.4660862	0.4975245	0.4511512	0.4915424
Q32 SD7	0.4515592	0.4517978	0.4230655	0.548902	0.4101993	0.4357442	0.3487172	0.4675625	0.4690389	0.5157844	0.4148382	0.4141576	0.5046882	0.4701715	0.5096615	0.4504493	0.4897773
Q33 SD8	0.2183829	0.2358858	0.2307188	0.2376812	0.2010496	0.2023688	0.1721912	0.2278416	0.2537846	0.2320379	0.2208779	0.2190409	0.2432048	0.235391	0.2542964	0.1714329	0.2743174
Q34 EN1	0.4874078	0.470259	0.4455357	0.5490113	0.4438879	0.4541006	0.3621084	0.4979999	0.4666336	0.5058968	0.4962836	0.4913495	0.5061936	0.4964298	0.5223218	0.4674181	0.5622905
Q35 EN2	0.380273	0.3875288	0.3948351	0.4705425	0.370892	0.4753501	0.2992664	0.4168377	0.3876733	0.4090003	0.3647934	0.36141	0.4313375	0.4158213	0.4240482	0.3491934	0.4727913
Q36 EN3	0.4176722	0.4174827	0.393143	0.5113486	0.4140925	0.4623659	0.3249696	0.4353887	0.4056158	0.469129	0.3997498	0.3915721	0.4929101	0.4560504	0.462618	0.4591456	0.4911307
Q37 EN4	0.2253502	0.229567	0.2048582	0.231785	0.1861063	0.1730704	0.1541981	0.2064969	0.2133238	0.240914	0.1866546	0.1790416	0.1952811	0.19821	0.2253694	0.1755183	0.2677847
Q38 CM1	0.5299609	0.5209596	0.4740639	0.5380929	0.4654993	0.504501	0.4090739	0.5130968	0.5247751	0.5616775	0.4711568	0.4605948	0.5698614	0.5188766	0.5729333	0.4915792	0.5853777
Q39 CM2	0.4540262	0.483708	0.429571	0.5216852	0.4155813	0.4392553	0.3559911	0.4571073	0.4631687	0.4818421	0.4335041	0.4198732	0.5154886	0.4510059	0.4910009	0.4338818	0.5195673
Q40 CM3	0.4629723	0.4908557	0.4363314	0.5323359	0.4100074	0.4587492	0.3516095	0.4851007	0.4771266	0.5041403	0.436899	0.4293444	0.5066376	0.4724163	0.4962694	0.4491814	0.5254705
Q41 CM4	0.4587206	0.4623834	0.4338313	0.5311522	0.4222309	0.4623708	0.3449397	0.4616316	0.4769106	0.4971825	0.4345244	0.4304608	0.508276	0.4729681	0.5092105	0.4453826	0.5161598
Q42 CM5	0.1972832	0.2060386	0.1827167	0.2333081	0.1659452	0.1714744	0.1638078	0.1806794	0.2111857	0.1917375	0.1879357	0.1725254	0.1888543	0.2112692	0.2150322	0.1561238	0.245171
Q43 CM6	0.438187	0.4353894	0.4257862	0.5174594	0.391344	0.4125483	0.3327392	0.4285015	0.4525522	0.4614035	0.3960957	0.3875457	0.4663271	0.4490146	0.4806994	0.3908746	0.4993094
Q44 CM7	0.4458002	0.44634	0.4453893	0.532507	0.404265	0.4232016	0.3449315	0.4408687	0.4641025	0.4705946	0.4030257	0.3936803	0.4739017	0.4569195	0.4855595	0.4007308	0.5141945
Q45 EM2	0.4801295	0.4982146	0.4602529	0.5489048	0.4195982	0.444809	0.3550407	0.4802642	0.4703862	0.5101247	0.4365914	0.4266649	0.5123289	0.4499376	0.4978764	0.4669112	0.6345191
Q46 EM3	0.4983096	0.4771503	0.4608779	0.5786332	0.4243825	0.4463487	0.3738365	0.4849163	0.4863066	0.5206781	0.4470539	0.4338271	0.5131428	0.4542581	0.5031921	0.4405437	0.7050606
Q47 EM4	0.4844206	0.4691685	0.4482858	0.5786496	0.4293754	0.4895939	0.3659781	0.4918102	0.4679697	0.5125992	0.4505689	0.4385224	0.509321	0.4688546	0.500602	0.4391461	n/a

Table 9 Cramer's V coefficient – Czech Republic

Question/ Measure	Q6 OI1	Q7 OI2	Q8 OI3	Q9 OI4	Q10 OI5	Q11 OI6	Q12 OI7	Q13 P11	Q14 P12	Q15 P13	Q16 P14	Q17 P15	Q18 P16	Q19 R11	Q20 R12	Q21 M11	Q47 EM4
Q22 ED1	0.4644624	0.460467	0.4421771	0.4111902	0.4580139	0.49251	0.4106584	0.4780847	0.5147722	0.5003102	0.4179334	0.4209065	0.5099237	0.5066317	0.5132542	0.437579	0.5416561
Q23 ED2	0.3362092	0.3246544	0.3517186	0.2976777	0.3386121	0.370018	0.2839682	0.3680056	0.3618237	0.3555449	0.2961324	0.2920143	0.3466108	0.3469962	0.3631101	0.3214493	0.4125353
Q24 ED3	0.3602411	0.346038	0.3701662	0.3241194	0.3457311	0.3865074	0.2866371	0.3894941	0.3803226	0.3808946	0.309262	0.2992852	0.3649329	0.3456288	0.3906869	0.3158869	0.4152554
Q25 ED4	0.4199866	0.411723	0.4300881	0.4154612	0.4428689	0.3989705	0.3636267	0.4303053	0.4332208	0.4415273	0.4061257	0.4012748	0.4558716	0.476333	0.4679729	0.4520778	0.4637574
Q26 SD1	0.4131148	0.3961438	0.4188489	0.376438	0.4186013	0.3953357	0.3689995	0.4488708	0.4436703	0.4566645	0.3904578	0.3782596	0.5004239	0.4655979	0.481757	0.3985508	0.4697644
Q27 SD2	0.4362891	0.4341882	0.403051	0.4048896	0.4246995	0.4359107	0.3809811	0.4589622	0.4486299	0.4547704	0.391155	0.3637675	0.481024	0.4570752	0.4754187	0.3979872	0.4769157
Q28 SD3	0.4340099	0.4232357	0.419966	0.4013652	0.3976958	0.4264882	0.3757056	0.4633196	0.4605401	0.4525873	0.3851483	0.3705974	0.4683445	0.4765799	0.4617394	0.3854363	0.471984
Q29 SD4	0.4401655	0.440016	0.435971	0.3951073	0.4243456	0.479608	0.3522294	0.4451806	0.4405132	0.4474462	0.3900171	0.3945934	0.4748568	0.4459296	0.4939645	0.3942474	0.4590884
Q30 SD5	0.4107686	0.4127658	0.4459258	0.3814007	0.418993	0.4625642	0.356095	0.4352144	0.4397512	0.4347682	0.3648218	0.3520823	0.4582546	0.4801395	0.4908823	0.420887	0.4682373
Q31 SD6	0.4293041	0.431424	0.4695131	0.4159479	0.4678577	0.4234353	0.3851453	0.4787369	0.482665	0.4705691	0.429445	0.4121373	0.50863	0.4941898	0.5038672	0.3985179	0.5118307
Q32 SD7	0.4066604	0.4054699	0.4448389	0.3910854	0.4276492	0.4089639	0.3660907	0.4444924	0.4624522	0.4506604	0.4088108	0.4068292	0.4702624	0.4363866	0.4647595	0.3970277	0.5004645
Q33 SD8	0.1900213	0.1968222	0.1808411	0.1660922	0.2188164	0.2324885	0.1946923	0.2167211	0.2317264	0.202255	0.1693938	0.1741868	0.1927102	0.2082047	0.1858984	0.2010822	0.2004195
Q34 EN1	0.4322373	0.4233187	0.4323881	0.4148675	0.4522318	0.4364344	0.476495	0.5167047	0.4863362	0.4164332	0.4267464	0.485941	0.4560021	0.4756722	0.3859345	0.5053515	
Q35 EN2	0.418844	0.4137375	0.4286116	0.3914179	0.4371262	0.4459118	0.3535285	0.4646461	0.4605043	0.4492164	0.3967136	0.3820658	0.445626	0.4315112	0.448694	0.3784951	0.4772935
Q36 EN3	0.458568	0.442558	0.4329933	0.436025	0.4475587	0.4423139	0.3898939	0.5402834	0.5061508	0.4791945	0.4314	0.4166266	0.4842384	0.4738397	0.4866642	0.4109948	0.5150358
Q37 EN4	0.2009164	0.2013585	0.1638857	0.1864943	0.1853647	0.165034	0.2245945	0.2034146	0.2091548	0.1970826	0.1686622	0.1692219	0.1813876	0.2075185	0.2029237	0.1891848	0.1951588
Q38 CM1	0.4444847	0.4586121	0.4672289	0.4165948	0.4460104	0.4403398	0.3860564	0.4968393	0.4893245	0.4951744	0.4184626	0.4211543	0.5131392	0.4834393	0.5253489	0.3971162	0.5158434
Q39 CM2	0.4439971	0.4291894	0.4353884	0.3995401	0.4253652	0.482906	0.4069559	0.4863435	0.5063117	0.4939099	0.4110968	0.4118098	0.494818	0.466922	0.4801906	0.4150578	0.5108361
Q40 CM3	0.4345787	0.4372003	0.459634	0.4155791	0.4370561	0.4726657	0.3919803	0.5161599	0.5045023	0.5108204	0.4324333	0.4105215	0.4971298	0.4572034	0.473033	0.40741	0.5202607
Q41 CM4	0.4342922	0.4371702	0.4366192	0.3972564	0.4487537	0.4874241	0.3904008	0.4829062	0.4972191	0.4887537	0.4273572	0.4308626	0.4980413	0.462386	0.4836753	0.4036891	0.5648338
Q42 CM5	0.2107155	0.2440533	0.2005015	0.2352959	0.1973681	0.18115	0.1880825	0.2105613	0.2210242	0.2099034	0.2138011	0.2084883	0.2095104	0.2190361	0.2081218	0.2324871	0.2058207
Q43 CM6	0.4201055	0.4253187	0.4716165	0.4151668	0.4158998	0.4270135	0.3892468	0.4664328	0.4801435	0.4774789	0.4402469	0.4194691	0.4817014	0.4347794	0.4814609	0.3876803	0.5350406
Q44 CM7	0.4327189	0.4337526	0.4685235	0.4250071	0.4257904	0.4203005	0.3854203	0.4705965	0.4704245	0.4713973	0.4480652	0.4125928	0.4747987	0.4416893	0.4775677	0.3854403	0.5567785
Q45 EM2	0.4544239	0.4490855	0.4376184	0.4139532	0.4510458	0.450562	0.3938227	0.4878721	0.4988687	0.5116668	0.4178119	0.4017133	0.4881941	0.4727666	0.4968604	0.3922526	0.6475983
Q46 EM3	0.4510185	0.4469411	0.4366238	0.4141059	0.4553157	0.4416362	0.3712049	0.503385	0.4924977	0.500513	0.4180412	0.4030763	0.4892399	0.467425	0.4833318	0.4123244	0.6070078
Q47 EM4	0.4428612	0.4505404	0.4431994	0.406785	0.4465354	0.458757	0.3980146	0.4814759	0.4940533	0.5170772	0.4107839	0.4022444	0.4963091	0.4882986	0.4912177	0.4215649	n/a

Source: authors own – based on empirical research

Table 10 Cramer's V coefficient – Slovakia

Question/ Measure	Q6 OI1	Q7 OI2	Q8 OI3	Q9 OI4	Q10 OI5	Q11 OI6	Q12 OI7	Q13 P11	Q14 P12	Q15 P13	Q16 P14	Q17 P15	Q18 P16	Q19 R11	Q20 R12	Q21 M11	Q47 EM4
Q22 ED1	0.3645338	0.4186372	0.4866749	0.3212409	0.3820845	0.4013465	0.3152327	0.4017274	0.4609653	0.4264921	0.412448	0.3677558	0.548124	0.3964055	0.4073545	0.2991834	0.4493134
Q23 ED2	0.3495067	0.3609471	0.3594226	0.244728	0.3232881	0.3848276	0.2563551	0.4140523	0.3719235	0.3383044	0.3101908	0.2964676	0.3943959	0.3621807	0.3668327	0.2418164	0.3530406
Q24 ED3	0.3928146	0.412689	0.4109825	0.2675095	0.3635241	0.4437108	0.2846148	0.481067	0.4265679	0.4002327	0.3612402	0.3370733	0.4544753	0.3966493	0.4062209	0.267562	0.4066916
Q25 ED4	0.2569294	0.2738119	0.3280889	0.2765738	0.28185	0.2912394	0.2665707	0.298541	0.2865748	0.273654	0.2919577	0.2568097	0.3381639	0.3171557	0.3194903	0.2615553	0.345082
Q26 SD1	0.2706547	0.2921957	0.3481989	0.1930697	0.298108	0.2952878	0.2575021	0.3396378	0.3152028	0.3433574	0.3205522	0.277773	0.3560041	0.2997682	0.3432631	0.2462562	0.3675806
Q27 SD2	0.2925748	0.3593601	0.3656744	0.2239004	0.3036313	0.3525814	0.2625461	0.4780388	0.3621757	0.3595642	0.3137834	0.3132613	0.4443269	0.3555412	0.3936864	0.2784126	0.405578
Q28 SD3	0.2762459	0.3453381	0.3457331	0.2404487	0.2811141	0.3639528	0.2604305	0.4171413	0.3759991	0.3779366	0.3154806	0.2829722	0.4021782	0.3934131	0.4171365	0.27081	0.4285595
Q29 SD4	0.3058834	0.3377296	0.3954464	0.2575881	0.3355413	0.3761914	0.2770987	0.3622481	0.392542	0.3819187	0.3220317	0.3139471	0.4008669	0.4052035	0.3953937	0.2726648	0.4468013
Q30 SD5	0.3278208	0.3727629	0.4308593	0.2501811	0.2883121	0.3823695	0.2552377	0.3894785	0.3992351	0.3947401	0.3325727	0.3216882	0.4150948	0.3773095	0.3989661	0.2641737	0.4064242
Q31 SD6	0.2783042	0.3240243	0.3738876	0.2601765	0.3690968	0.3076097	0.341974	0.3307773	0.3632129	0.3502032	0.3573463	0.3272286	0.4046664	0.3292875	0.3572348	0.235866	0.3861466
Q32 SD7	0.277599	0.2546536	0.2626599	0.1771867	0.3120346	0.2632933	0.2368202	0.2915217	0.3163192	0.3012425	0.2893491	0.2916342	0.3311869	0.3309663	0.2933633	0.2298013	0.3005864
Q33 SD8	0.1588284	0.2066394	0.1641937	0.1910522	0.1583535	0.1700593	0.1567888	0.2346608	0.2284471	0.1902828	0.1666166	0.1542497	0.2074418	0.2019232	0.2456924	0.211673	0.2101432
Q34 EN1	0.3119242	0.3331491	0.3842063	0.211985	0.2990911	0.3255025	0.2317923	0.358606	0.370149	0.3571014	0.3151218	0.2890202	0.4419005	0.5284471	0.4870105	0.274568	0.4061923
Q35 EN2	0.3062182	0.3651769	0.3989675	0.2355673	0.3008603	0.3415914	0.2334694	0.3674504	0.3815769	0.41505	0.3820497	0.3468861	0.4592487	0.3882692	0.418293	0.2543057	0.4060022
Q36 EN3	0.3514438	0.4187635	0.4376654	0.2212242	0.3052386	0.3314809	0.2641377	0.4031954	0.3994414	0.3989926	0.3679494	0.3575224	0.467987	0.4254651	0.4059147	0.2352978	0.4357352
Q37 EN4	0.1638014	0.1297534	0.1394085	0.1667529	0.1193499	0.1313249	0.1773187	0.1611789	0.1741543	0.1603403	0.146076	0.1066632	0.1761164	0.1975547	0.2384278	0.1562838	0.185499
Q38 CM1	0.3396661	0.3865856	0.3957675	0.2517329	0.3106523	0.3534072	0.2550021	0.4417185	0.3987317	0.4360465	0.3745695	0.3439976	0.4331993	0.3652744	0.3659541	0.2322449	0.4106255
Q39 CM2	0.3305309	0.3965844	0.4093063	0.2620048	0.3407546	0.3814931	0.2826831	0.4131341	0.4381741	0.432052	0.3790404	0.3548517	0.4562141	0.3866707	0.432081	0.2500464	0.4710178
Q40 CM3	0.3401226	0.4082287	0.4115506	0.2562058	0.3215905	0.341993	0.2851984	0.4478356	0.3955832	0.3769504	0.3509319	0.3327704	0.4393335	0.3764408	0.4106024	0.2775536	0.4421546
Q41 CM4	0.3674425	0.4048853	0.4151764	0.2742198	0.3359862	0.467987	0.281932	0.4720329	0.4665769	0.4469246	0.4039389	0.3545267	0.4420274	0.3672522	0.410909	0.2292493	0.4863583
Q42 CM5	0.1498696	0.1583597	0.1718662	0.1822485	0.1756356	0.130417	0.1493741	0.1745415	0.161836	0.1614296	0.1969838	0.1745539	0.1901501	0.1563546	0.1758195	0.1762581	0.1877691
Q43 CM6	0.1775014	0.1732206	0.3077268	0.1867324	0.2378191	0.2359866	0.232336	0.3093991	0.2302571	0.2078019	0.2632786	0.215817	0.2801353	0.2853821	0.3281857	0.2862675	0.3133949
Q44 CM7	0.2660173	0.247872	0.3347296	0.2682287	0.2800287	0.3357012	0.2513482	0.3131353	0.2889087	0.2982853	0.301337	0.2703428	0.3712561	0.3141958	0.3359974	0.3178372	0.3743754
Q45 EM2	0.3445463	0.3866346	0.4174364	0.2437073	0.3293232	0.3515565	0.2887333	0.4226447	0.4435066	0.409016	0.3633016	0.3758801	0.4325105	0.4094196	0.3935526	0.2499025	0.4995661
Q46 EM3	0.3571624	0.345566	0.3629675	0.2319762	0.3086167	0.365667	0.2402915	0.3753353	0.4429962	0.4057945	0.3334112	0.3287506	0.3902876	0.3812822	0.4087151	0.2707981	0.4659826
Q47 EM4	0.3327838	0.3987141	0.4177953	0.273704	0.3238662	0.4001222	0.3141819	0.4138041	0.4494961	0.4431932	0.3901373	0.3589261	0.4942813	0.3880879	0.3811296	0.2529726	n/a

Table 11 Cramer's V coefficient – age of the company vs. innovation and CSR

Austria			Czech Republic			Slovakia		
Innovation	Q2 EM1	Strength of association	Innovation	Q2 EM1	Strength of association	Innovation	Q2 EM1	Strength of association
Q6 OI1	0.4467955	strong	Q6 OI1	0.3713668	strong	Q6 OI1	0.4173975	strong
Q7 OI2	0.4274438	strong	Q7 OI2	0.3081762	strong	Q7 OI2	0.3512367	strong
Q8 OI3	0.2251373	weak	Q8 OI3	0.1720826	weak	Q8 OI3	0.1597490	weak
Q9 OI4	0.1376524	weak	Q9 OI4	0.1297138	weak	Q9 OI4	0.1438700	weak
Q10 OI5	0.1738277	weak	Q10 OI5	0.1485108	weak	Q10 OI5	0.1634164	weak
Q11 OI6	0.1540581	weak	Q11 OI6	0.1676379	weak	Q11 OI6	0.1787529	weak
Q12 OI7	0.2169474	weak	Q12 OI7	0.1666076	weak	Q12 OI7	0.2428156	weak
Q13 PI1	0.1221261	weak	Q13 PI1	0.2967682	weak	Q13 PI1	0.1644358	weak
Q14 PI2	0.1701600	weak	Q14 PI2	0.1836436	weak	Q14 PI2	0.2521133	weak
Q15 PI3	0.2052721	weak	Q15 PI3	0.1416284	weak	Q15 PI3	0.1465294	weak
Q16 PI4	0.1712247	weak	Q16 PI4	0.1529385	weak	Q16 PI4	0.2163374	weak
Q17 PI5	0.1705527	weak	Q17 PI5	0.1535916	weak	Q17 PI5	0.1542492	weak
Q18 PI6	0.1488947	weak	Q18 PI6	0.1334225	weak	Q18 PI6	0.1576228	weak
Q19 RI1	0.1879075	weak	Q19 RI1	0.1338424	weak	Q19 RI1	0.1717204	weak
Q20 RI2	0.2387024	weak	Q20 RI2	0.1260799	weak	Q20 RI2	0.1827954	weak
Q21 MI1	0.127136	weak	Q21 MI1	0.1524920	weak	Q21 MI1	0.1819272	weak
CSR	Q2 EM1	Strength of association	CSR	Q2 EM1	Strength of association	CSR	Q2 EM1	Strength of association
Q22 ED1	0.1291958	weak	Q22 ED1	0.1647346	weak	Q22 ED1	0.1755493	weak
Q23 ED2	0.1175238	weak	Q23 ED2	0.1087421	weak	Q23 ED2	0.1447905	weak
Q24 ED3	0.1233152	weak	Q24 ED3	0.0973484	weak	Q24 ED3	0.155284	weak
Q25 ED4	0.1791118	weak	Q25 ED4	0.1368191	weak	Q25 ED4	0.1458036	weak
Q26 SD1	0.1441279	weak	Q26 SD1	0.1396615	weak	Q26 SD1	0.1702163	weak
Q27 SD2	0.1235244	weak	Q27 SD2	0.1060167	weak	Q27 SD2	0.1636717	weak
Q28 SD3	0.1249386	weak	Q28 SD3	0.1335471	weak	Q28 SD3	0.1622072	weak
Q29 SD4	0.147647	weak	Q29 SD4	0.1481852	weak	Q29 SD4	0.1597697	weak
Q30 SD5	0.1320468	weak	Q30 SD5	0.1517465	weak	Q30 SD5	0.1405432	weak
Q31 SD6	0.1140852	weak	Q31 SD6	0.1413474	weak	Q31 SD6	0.1643972	weak
Q32 SD7	0.1282699	weak	Q32 SD7	0.1460079	weak	Q32 SD7	0.1487212	weak
Q33 SD8	0.1516955	weak	Q33 SD8	0.1451119	weak	Q33 SD8	0.1750632	weak
Q34 EN1	0.1083294	weak	Q34 EN1	0.1355958	weak	Q34 EN1	0.1630116	weak
Q35 EN2	0.1193523	weak	Q35 EN2	0.1597744	weak	Q35 EN2	0.1995187	weak
Q36 EN3	0.1392185	weak	Q36 EN3	0.1846869	weak	Q36 EN3	0.1668299	weak
Q37 EN4	0.1499954	weak	Q37 EN4	0.1719440	weak	Q37 EN4	0.216647	weak
Q38 CM1	0.1240064	weak	Q38 CM1	0.1398690	weak	Q38 CM1	0.1588456	weak
Q39 CM2	0.1275948	weak	Q39 CM2	0.1652457	weak	Q39 CM2	0.1931234	weak
Q40 CM3	0.1420354	weak	Q40 CM3	0.1781809	weak	Q40 CM3	0.1362915	weak
Q41 CM4	0.1240822	weak	Q41 CM4	0.1692926	weak	Q41 CM4	0.1602922	weak
Q42 CM5	0.1859432	weak	Q42 CM5	0.1247952	weak	Q42 CM5	0.1729513	weak
Q43 CM6	0.1756511	weak	Q43 CM6	0.1511426	weak	Q43 CM6	0.1511092	weak
Q44 CM7	0.1822313	weak	Q44 CM7	0.1382783	weak	Q44 CM7	0.1510268	weak

Source: authors own – based on empirical research