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Explaining the ambiguous impact of overconfidence on corporate decision-making: a critique of the research methodology

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Abstract:
Prior entrepreneurship research shows that individuals often possess biased expectations regarding their chances of success in the market compared to objective reality, as well as to their success and profitability compared to their peers. This distorted, biased view on one's chances of success is referred to as *overconfidence*. The present study addresses the effect of overconfidence on corporate decision-making with regard to the methodology used in economic and psychological studies. Current research provides contradictory and inconclusive results about the effect of overconfidence on various Chief Executive Officers' decisions and profitability. In this study, I try to explain this inconclusiveness by outlining some of the most important methodological issues in the overconfidence research. In psychological literature, there is a wide consensus among researchers about the robustness of overconfidence in human reasoning. This cognitive bias has been demonstrated in many populations and work domains; like clinical psychologists, drivers, financial analysts, investors, stock market specialists, statisticians, basketball players, or managers. In the literature, overconfidence appears mainly in three different constructs – calibration of probabilities, overestimation, and overplacement. The calibration of probabilities is measured by comparing individuals' subjective probability judgments with the real objective probability. Overestimation is based on comparing individuals' performance in a particular task with their belief about how they will perform or how they performed. Finally, overplacement is measured by comparing individuals' belief about their own performance with the belief about the performance of other individuals. According to these three constructs, overconfidence can be defined as a systematic tendency to overestimate one's own ability to make accurate forecasts, or as an overestimation of one's own performance, or knowledge, compared to his/her actual performance, or others' knowledge. In recent decades, authors from economic disciplines started to omit the direct measurement of overconfidence and instead they have often searched for various indirect variables that could serve as proxies for overconfidence; like holding options beyond rational thresholds, purchasing stocks of one's own company despite the high exposure to risk, or chief executive officers' press portrayals. Additionally, the effect of overconfidence has started to be linked and sometimes confused with other similar concepts like optimism or illusion of control. Authors often use findings from multiple different constructs as a basis for their hypotheses about the effect of overconfidence in corporate decision-making. Moreover, they often use different measurement tools or other proxies for examining overconfidence compared to the previous studies they reported. This confusion of different forms of overconfidence together with different operationalizations causes difficulty in integrating knowledge about particular overconfidence constructs.
In this paper, I describe, firstly, the origins and differences in operationalization between economic and psychology studies. Several widely-used measures and proxies of overconfidence in economic research are described and the diversity of using these measures in previous studies is showed. Subsequently, I discuss how different forms of overconfidence impact the decision-making and performance of entrepreneurs. In this part, the study focuses on the three most frequent areas that are reflected in the current literature; namely the effect of overconfidence on financial decision-making, firm profitability, and entrepreneurs' innovativeness. It is showed that studies in these areas often bring contradictory findings; mainly in the context of risk-taking, debt usage, or dividend payment, and this contradiction seems to result mostly from using different operationalizations of overconfidence. The final part of the study outlines several possible ways how problems with methodology and inconclusiveness in the overconfidence research could be solved. Firstly, is the importance of finding and using a valid direct overconfidence measure in entrepreneurship research. The ability to make an accurate reasoning about one's own

performance or abilities depends on how the question/task format is designed, what information about testing an individual possesses, how their reasons will be evaluated by researcher, or what reference group will be used in the evaluation. Considering this, many overconfidence measures do not meet these conditions. Moreover, indirect measures of overconfidence not only miss these conditions, but they also miss the main principle of direct overconfidence measures, which is the comparison of one's reasoning about one's performance or abilities with one's real performance or abilities. Therefore, it is questionable whether indirect measures and proxies used in economic literature really measure overconfidence, i.e. they investigate the biased reasoning about one's performance, ability, or knowledge. Considering this validity issue, the direct measures for examining overconfidence should be preferred in future research. They could be focused on a direct examination of individuals' beliefs about their performance, knowledge, and abilities necessary for any entrepreneurial activity; like managerial or functional skills (finance, distribution, sales, marketing, leadership, etc.). The second way to address methodology issues in the overconfidence research is to test whether and to what extent some of the widely-used indirect overconfidence measures correlate with direct measures. Economic studies often use two or more overconfidence measures, but most of these measures are indirect. Combining indirect and direct measures could help to find out whether indirect measures are really associated with biased reasoning about one's performance or abilities. Finally, the third way to solve the knowledge integration problem is conducting meta-analyses regarding the effect of overconfidence on specific CEOs' corporate decision-making. In these analyses the type of overconfidence measurement should be examined as a moderator of the effect of overconfidence on corporate decision-making. This could identify how different overconfidence measures affect specific corporate decisions and hopefully explain some contradictory findings in current literature. Besides the three main proposals, there are also other more general crucial factors that need to be taken into account when designing measurement tools or improving validity and reproducibility of the overconfidence research methodology. This concerns mostly various questionable research practices; like selective reporting of variables or results, p-hacking, or harking, in order to support the widespread notion of robustness of overconfidence in human reasoning and decision-making. Considering the proposed ways of improving the methodology in overconfidence research, a joint and vital step is to properly distinguish overconfidence constructs and also other related constructs like optimism, or illusion of control.

Keywords:
Overconfidence. Entrepreneurship. Decision-making. Expectations.

Introduction

Empirical research, as well as practice, often shows that chances for success in entrepreneurship are rather low and many newly-established enterprises discontinue shortly after their formation (Baldwin, 1995; Dunne, Roberts, & Samuelson, 1988). Fifty years ago, Dun and Bradstreet (1967 in Cooper, Woo, & Dunkelberg, 1988) found that 67% of new businesses discontinue within four years. This proportion is comparable with Slovak (and also many other European countries) business survival rate statistics – the data from Eurostat shows that between 2008 and 2015, Slovak business survivability within three years ranged from approximately 43% to 58% and the survivability within five years ranged only from 35% to 44%[1]. Moreover, Hamilton (2000) showed that in general, entrepreneurs have not only lower initial financial returns, but also lower return growth compared to individuals with the same characteristics working in a waged job. Koellinger, Minniti, and Schade (2007) state that considering the low average earnings together with high business failure rates, too many people enter the market as entrepreneurs, suggesting irrational acting.

When examining what factors cause individuals to enter the market, it was showed that these tendencies are positively related with biased expectations. For instance, Cooper, Woo, & Dunkelberg (1988) found that entrepreneurs' expectations about their success significantly differ from their objective chances. Additionally, individuals have biased expectations not only about their chances of success compared to objective reality, but also about their success and profitability compared to their peers (Camerer & Lovallo, 1999). In the literature, this distorted

[1] Data available at http://ec.europa.eu/eurostat/web/structural-business-statistics/entrepreneurship/indicators

biased view on one's chances to succeed is referred to as *overconfidence* (Everett & Fairchild, 2015). The main body of overconfidence literature suggests that these biased expectations have a further negative impact on various corporate decisions. It was shown that it can lead to over-investing (Heaton, 2002; Wang, Zhang, & Yu, 2009; Wang, Chen, Chen, & Huang, 2016), more sensitivity to cash-flow (Malmendier & Tate, 2005a), higher financial risk-taking (Adam, Fernando, & Golubeva, 2011), or underestimating the probability of financial distress and choosing higher levels of firm debt (Rihab & Lotfi, 2016). However, despite the large evidence suggesting a negative impact, there are other studies reporting no impact, or even reporting a positive impact of overconfidence on corporate decision-making (Hirshleifer, Low, & Teoh, 2012; Gervais, Heaton, & Odean, 2011) or profitability (Hilary, Hsu, Segal, & Wang, 2016; Hackbarth, 2008).

Besides the ambiguous impact of overconfidence on corporate decision-making and profitability, there is another important issue in overconfidence literature and that is the operationalization and measurement of this construct. By discussing differences in research methodologies, I argue that the problem with ambiguous findings in literature could be caused by different methods used in measuring/operationalizing overconfidence.
In this article, firstly, I describe the origins and different forms of overconfidence and then discuss the impact of its different forms on corporate decision-making. I focus mainly on economic research which often implements findings from psychology although it uses different overconfidence measures and proxies. Finally, I highlight the most important issues in this research and propose some suggestions how these problems could be solved.

The origin and different forms of overconfidence in literature

In the literature there is a wide consensus among researchers about the robustness of overconfidence in human reasoning. For instance, Meloy, Russo, and Miller state (2006, p. 272): "The phenomenon of overconfidence is one of the most robust findings in the decision and judgment literature." Similar comments are available in many other works, for instance: "It has been consistently observed that people are generally overconfident when assessing their performance." (Schaefer, Williams, Goodie, & Campbel, 2004 p. 473); "Another common error is overconfidence. In general, people tend to overestimate the accuracy of their judgements." (Sternberg, 2008, p. 495). Despite the wide consensus about the robustness of overconfidence, there are also some theories and scholars who question its significance in human reasoning and explain its occurrence as a consequence of using non-ecological measurement tools, non-representative item sampling, or task format (e.g., Gigerenzer, Hoffrage, & Kleinbölting, 1991; Juslin, Wennerholm & Olsson, 1999; Juslin, Olsson, & Björkman, 1999; Winman, Hansson, & Juslin, 2004; Hansson, 2005; Erev, Wallsten, & Budescu, 1994).

The overconfidence effect firstly started to appear in psychological literature in the 1960s. After some decades, economists started to widely implement findings from psychology into economic models, and examine its impact mainly in the field of financial markets and corporate finance (Skala, 2008). An interdisciplinary aspect in the field of overconfidence brought a variability in definitions, operationalizations, and measurements of this construct. In the psychological literature, overconfidence appears mainly in three different constructs – overestimation, overplacement, and calibration of probabilities (Olsson, 2014). Overestimation is measured by comparing individuals' performance in a particular task with their beliefs about how they will perform or how they performed. Overplacement (often called *better-than-average effect*) is measured by comparing individuals' beliefs about their own performance compared to the performance of other individuals. Finally, calibration of probabilities is measured by comparing individuals' subjective probability judgments (often estimated in

confidence intervals) with the real objective probability. According to these three constructs, overconfidence can be defined as a systematic tendency to overestimate one's own ability to make accurate forecasts, or as an overestimation of one's own performance, or knowledge, compared to his/her actual performance, or others' knowledge (Koellinger, Minniti, & Schade, 2007).

The overconfidence effect was demonstrated in many populations and work domains, such as: clinical psychologists (Oskamp, 1965), drivers (Svenson, 1981), financial analysts, investors, or stock market specialists (Staël von Holstein, 1972; Hilary & Menzly, 2006; Menkhoff, Schmeling, & Schmidt, 2013; Grežo, 2017), statisticians (Wagenaar & Keren, 1985), basketball players (McGraw, Mellers, & Ritov, 2004), managers (Malmendier & Tate, 2005a).

Some troubles with overconfidence

As I stated before, overconfidence started to be implemented and widely used in economic disciplines, and this resulted in the increased variety of how overconfidence is defined and operationalized. Researchers from economic disciplines started to omit the direct measurement of overconfidence; i.e. assessing individuals' actual reasoning in the context of the three above mentioned overconfidence constructs; and instead they often searched for various indirect variables that could serve as proxies for overconfidence (e.g. examining CEOs' portfolio transactions – Malmendier & Tate, 2005a; examining CEOs' press portrayals – Malmendier & Tate, 2005b; examining whether securities bought by investor outperformed those they sold – Barber & Odean, 1999).

Additionally, the effect of overconfidence started to be linked (and sometimes confused) with other concepts; like optimism, positive illusions, illusion of control (Han, Lai, & Ho, 2015; Hilary, Hsu, Segal, & Wang 2016; Hackbarth, 2008; Puri & Robinson, 2007). There have been several studies reporting findings from multiple constructs (e.g. better-than-average effect, calibration of probabilities, and unrealistic optimism) and subsequently using these diverse findings to create hypotheses. Moreover, they often use different measurement tools or other proxies for examining overconfidence compared to the previous studies they reported (De Paola, Gioia, & Scoppa, 2014; Cesarini, Sandewall, & Johannesson, 2006). This confusion of different forms of overconfidence together with different operationalizations causes difficulty in integrating knowledge about particular overconfidence constructs. Moreover, many authors question the external validity of methods used in overconfidence measurement (see Grežo, 2015). As Olsson stated (2014), it is unknown whether all these measurement forms represent the same psychological construct. Only some studies tried to measure two or more overconfidence constructs at a time, and examine the difference of their effect on one's reasoning and decision-making (e.g. Grežo, 2017; Larrick, Burson, & Soll, 2007; Glaser, Langer, & Weber, 2005; Hilton et al., 2011; Menkhoff, Schmeling, & Schmidt, 2013; Fellner & Krügel, 2012). The findings in these studies highlight the importance of distinguishing different forms of overconfidence, because of their different effect in reasoning and decision-making and their weak, non-significant, or even negative relationship (see Moore & Swift, 2011; Moore & Schatz, 2017 for reviews).

In the next section, I describe the main and mostly used operationalizations of overconfidence in economic literature. More specifically, I focus mainly on economic studies which observe entrepreneurs' and chief executive officers' (CEOs) overconfidence indirectly. Subsequently, I report and discuss some main findings about the effect of overconfidence on corporate decision-making in regard to how the overconfidence was measured.

The most widely used proxies for measuring overconfidence

Holding options beyond rational thresholds

Some very influential studies on overconfidence in corporate decision-making are those of Malmendier and Tate (2005a; 2005b). In these studies, they used three different proxies for overconfidence which were widely used in many further studies. The first approach capturing CEO's beliefs on a firm's future performance was based on investigating a CEO's personal portfolio transactions. Specifically, they examined whether a CEO holds company stocks and options beyond rational thresholds (called *Holder 67*), thus excessively betting their wealth on future company stock performance.

Managerial acquisitiveness

The second Malmendier and Tate's (2005a) overconfidence measure, called *Net Buyer*, is defined as a tendency of a CEO to purchase additional stocks of his own company, adding to his personal property, despite his already high exposure to company risk.

Press portrayals

The third measure of overconfidence proposed by Malmendier and Tate (2005b) is based on the perception of outsiders. This approach is based on investigating *press portrayals* of the CEO during a certain time period using a quantitative content analysis. In this analysis, authors searched for articles in the media referring to CEOs and examined the number of articles containing words such as: "confident, confidence, optimistic, optimism, reliable, cautious, steady, conservative, practical, and frugal". They constructed an indicator which referred to 1 if a CEO was more often described as "confident or optimistic" compared to "reliable, cautious, conservative, practical, frugal, or steady"; and 0, if otherwise.

Biased earnings forecasts by managers and entrepreneurs

Besides the three Malmendier and Tate's (2005a; 2005b) overconfidence constructs, there is another widely used measurement of overconfidence, which is the comparison of forecasted and objective enterprise profit (e.g. Longjie & Anfeng, 2017). If the number of upward-biased earnings forecasts is greater than downward-biased forecasts, the manager is perceived as overconfident. This was used in several studies (e.g. Hribar & Yang, 2016; Lin, Hu, & Chen, 2005; Wang et al., 2016; Huang, Jiang, Liu, & Zhang, 2011).

Managers' relative pay

This measure was proposed by Hayward and Hambrick (1997) and is based on examining the difference between a CEO's compensation and the compensation of the second highest paid officer in a firm. Hayward and Hambrick (1997) argued that the higher CEO's relative pay to other managers is, the more important his position in a firm is, and so s/he would be prone to act overconfidently.

Besides the above mentioned operationalizations, there are many studies using their own different ways of measuring overconfidence, or just using variations of them. Often the overconfidence is investigated with more than one measure. Table 1 presents how the operationalization of overconfidence differs across economic studies. In the next section I report and discuss some of the main findings from the effect of overconfidence on corporate decision making. Since the operationalization of overconfidence in reported studies differs significantly, I discuss these findings in regards to how the overconfidence is measured.

Table 1: Different operationalizations of overconfidence in economic studies

Study	Study design	Overconfidence examination	Overconfidence operationalization
Simon & Shrader (2012)	Empirical	Direct	- Interviews - Level of confidence in general knowledge questions
Hayward & Hambrick (1997)	Empirical	Indirect	- Praise in media articles - Recent acquirer performance - CEO's relative pay
Malmendier & Tate (2005b)	Model	Indirect	- Investigating portfolio transactions - Praise in media articles
Malmendier & Tate (2008)	Model	Indirect	- Praise in media articles - CEO overinvestment
Malmendier, Tate, & Yan (2011)	Model	Indirect	- Praise in media articles - over-exposing firm to company-specific risk
Astebro, Jeffrey, & Adomdza (2007)	Empirical	Direct	- Level of confidence in knowledge questions
Daniel, Hirshleifer, & Subrahmanyam (1998)	Model	Indirect	- Overestimating own private information
De Long, Shleifer, Summers, & Waldmann (1991)	Model	Indirect	- Overestimating investment risk
Wang et al. (2016)	Empirical	Direct	- Comparing actual and forecasted net profit
Hirshleifer, Low, & Teoh (2012)	Empirical	Indirect	- The average moneyness of vested options held by the CEO - Praise in media articles
Wang, Zhang, & Yu (2008)	Empirical	Indirect	- Tendency of CEO to purchase company stock despite already high exposure to company risk
Adebambo & Yan (2016)	Empirical	Indirect	- Index of six components: gender, management structure, portfolio turnover, portfolio concentration, prior portfolio performance, portfolio idiosyncratic risk
Purhanudin & Zakaria (2015)	Empirical	Indirect	- Index of five components: CEO age, CEO tenure, CEO ownership, CEO education, CEO education background
Longjie & Anfeng, 2017	Empirical	Direct	- The deviation of forecasted and objective profit of enterprise
Lin, Hu, & Chen (2008)	Empirical	Direct	- The ratio between upward-biased and downward-biased manager's earnings forecasts
Rihab & Lotfi (2016)	Empirical	Indirect	- Holding more than 50% of firm's common shares
Park & Kim (2009)	Model	Indirect	- Business survey index – the ratio between positive and negative answers
Ben-David, Graham, & Harvey (2013)	Empirical	Direct	- Miscalibration of market value estimates

Note: Indirect overconfidence examination uses various proxies that indirectly indicate the level of overconfidence. Compared to direct methods, they do not directly ask individual about his expectations or believes about his own knowledge and performance.

The effect of overconfidence on corporate decision-making – different perspectives

Financial decision-making

Many previous studies investigate how overconfidence affects corporate financial policy and various financial decisions of CEOs, such as using cash-flow, firm merging, paying dividends, investing, limiting risk-taking, using external debts. In their seminal work, Malmendier and Tate (2005a) found that a CEO's overconfidence increased the sensitivity of corporate investment to internal cash flow availability. Since corporate investment policies are dependent on internal cash flow, the overconfidence can be associated with over-investment and under-investment problems. It was shown that over-confident CEOs intensively invest when cash flows are available (creating an over-investment problem) and they do not invest when cash flows are insufficient (thus under-investing). A similar effect of overconfidence in cash flow sensitivity was found in other studies (Mohamed, Fairchild, & Bouri, 2014; Iyer, Sankaran, & Nejadmalayeri, 2017).

The effect of overconfidence on investing was investigated in other studies. For instance, using a *Net Buyer* overconfidence measure, Eichholtz and Yönder (2015) found that over-confident CEOs were more likely to purchase and less likely to sell assets compared to their peers. Moreover, over-confident CEOs had worse operating and stock performance. They tended to purchase more and sell less and this effect was strengthened when the firm performed badly (Eichholtz & Yönder, 2015). The positive association between overconfidence and over-investing was found in some other studies (Heaton, 2002; Wang, Zhang, & Yu, 2009; Wang et al., 2016).

Ben-David, Graham, and Harvey (2013) also showed that over-confident CEOs invested more. Additionally, they found that over-confident CEOs were more likely to re-purchase shares, used more long-term debt, and they were less likely to pay dividends. The effect of overconfidence on dividend payouts was investigated by other studies, but they brought different results. For instance, Desmukh, Goel, and Howe (2013) found that the level of dividend payout is about one-sixth lower in firms with over-confident CEOs. Contrary to this, Banerjee, Humphery-Jenner, and Nanda (2014) reported a positive association between overconfidence and dividend payments.

Some studies investigated the effect of overconfidence on limiting a firm's risk-taking. In their study, Han, Lai, and Ho (2015) found that over-confident CEOs tended to increase the usage of re-insurance in order to limit their risk and they also adapt their risk-taking behavior according to different regulatory and economic environments. Another study reporting a positive effect of overconfidence on reducing risk-taking was proposed by Banerjee, Humphery-Jenner, and Nanda (2014). They found that over-confident CEOs measured by *Holder 67* reduced investment and risk exposure. Besides studies reporting the positive effect of overconfidence on limiting a firm's risk-taking, there are a few studies reporting the opposite findings. The effect of overconfidence on risk-taking was also examined by Hirshleifer, Low, and Teoh (2012), using *Holder 67* and press portrayals as measures of overconfidence. Although both of these measures lead to higher stock return volatility, i.e. higher risk-taking, the effect of overconfidence measured by press portrayals was much greater (approximately three times higher). Another study showed that overconfidence lead CEOs to increasing speculative investing activities and thus increasing financial risk-taking (Adam, Fernando, & Golubeva, 2011).

Finally, a study investigating demographic and national patterns of managerial overconfidence and its association with a firm's merging tendencies was proposed by Ferris, Jayaraman, and Sabherwal (2013). They used the press portrayals measure of overconfidence and found that

this cognitive bias is an international phenomenon. Moreover, the overconfidence was shown to be higher in younger CEOs heading firms headquartered in Christian countries, and this could be described as individualistic and short-term oriented. Additionally, it was found that overconfident CEOs make, on average, more firm merger offers than their non-confident peers. Especially in Christian countries with a low uncertainty avoidance, high individualism and low long-term orientation, overconfident CEOs make riskier diversifying merger offers (i.e. trying to buy firms out of their core business/specialization). Finally, Ferris, Jayaraman, and Sabherwal (2013) found that over-confident CEOs make a greater use of cash to finance mergers.

Profitability

A few studies investigated the effect of overconfidence on firm profitability. Using the press portrayals measure, Hayward & Hambrick (1997) found that overconfidence was negatively related to 1-year returns of a CEO's firm. Moreover, this relationship was strongest among all observed overconfidence measures (CEO relative pay and Recent acquirer performance were not significantly correlated to a firm's performance). Contrary to these findings, Lai, Lin, and Chen (2017) found that overconfidence measured by press portrayals was not significantly correlated with a firm's performance, but the overconfidence measured as *Holder 67* was positively correlated. Similar positive effects of overconfidence (measured as *Holder 67*) on firm performance was also found in studies of Ruissen (2012), Banerjee, Humphery-Jenner, and Nanda (2014), and Han, Lai, and Ho (2015).

Innovativeness

Some of the above-discussed studies showed that overconfidence is positively associated with investing (Ben-David, Graham, & Harvey, 2013; Eichholtz & Yönder, 2011). Investigating this association more specifically, Hirshleifer, Low, and Teoh (2012) found that firms with over-confident CEOs invest more in innovation, they obtain more patents and patent citations. Moreover, they also achieve greater innovative success for given research and development expenditures. However, this was observed only in innovative industries. Similar findings on overconfidence (measured as *Holder 67*) and innovativeness were also reported by Galasso and Simcoe (2011). They found that overconfidence was positively associated with the tendency to pursue new innovations in a firm. Moreover, the effect of overconfidence on innovativeness was stronger in more competitive industries.

Conclusion

The above-discussed studies indicate that overconfidence affects various corporate decisions. However, these studies often brought contradictory findings, mainly in the context of risk-taking, debt usage, dividend payment, or firm profitability. As I stated before, the main problem with integrating knowledge about the impact of overconfidence in entrepreneurship could lie in the current research methodology, mainly in using indirect proxies for measuring overconfidence. In general, the direct overconfidence measure is based on examining the accuracy of one's reasoning about their abilities, performance, or chances of success. According to Gigerenzer, Hoffrage, and Kleinbölting (1991) we use external clues for reasoning and decision-making. Each of these clues has certain validity and serves as a basis for creating an accurate reason. However, many measures of overconfidence in laboratory conditions eliminate the ecological structure of real-life conditions – they insufficiently simulate the natural environment in which individual reason and makes decisions (e.g. asking for percentage probability estimation for success despite the fact that people do not use to reason about their probability of success in percentages). This causes individuals in laboratory conditions to often

show overconfidence, but this bias can be caused by an inappropriate overconfidence measure. Taking this into account, the direct measure of overconfidence is very sensitive to whether it simulates the real-life natural reasoning environment. Moreover, whether individuals make an accurate reason about their performance or abilities, depends on what information they possess, how their reasons will be evaluated by a researcher, what reference group will be used in evaluation, etc. In order to make an accurate reason in laboratory conditions, an individual should at least possess such information. Considering this, many overconfidence measures do not meet these conditions. Moreover, we could argue that indirect measures of overconfidence not only miss these conditions, but they also miss the main principle of direct overconfidence measures – comparing one's beliefs about his/her performance or abilities with his/her actual performance or abilities. This raises the question whether various indirect proxies for overconfidence represent the overconfidence construct and whether they are really associated with the biased reasoning about one's performance or abilities (Fellner & Krügel, 2012). For instance, it is questionable whether/to what extent a CEO's higher relative pay, or a CEO's optimistic press portrayals correlates with the accuracy of their reasoning. The importance to find a valid direct overconfidence measure in the economic research has recently been highlighted (Fellner & Krügel, 2012; Bayat, Salehnejad, & Kawalek, 2016).

I see three possible ways how the above mentioned problems with the methodology and knowledge integration could be solved. First, is the importance of finding and using valid direct overconfidence measures in entrepreneurship research. These measures could be focused on a direct examination of an individuals' beliefs about their performance, knowledge, and abilities necessary for any entrepreneurial activity, such as managerial or functional skills (finance, distribution, sales, marketing, leadership, etc.). Individuals can be asked to reason about their knowledge or performance compared to the knowledge or performance of their peers (over-placement), or their reasons and beliefs can be evaluated according to their actual objective knowledge or performance in these domains (over-estimation). Moreover, they can be asked to indicate confidence intervals about the future values of a variety of firm's performance indicators and their accuracy can be evaluated after a given predicted period (calibration of probabilities).

The second way is to test whether and to what extent some of the widely-used indirect overconfidence measures correlate with direct measures. Economic studies often use two or more overconfidence measures, but most of these measures are indirect. Combining indirect and direct measures could help to find out whether indirect measures are really associated with biased reasoning about one's performance or abilities.

Finally, the third way to solve the knowledge integration problem is conducting meta-analyses about the effect of overconfidence on specific CEOs' corporate decision-making. In these analyses the type of overconfidence measurement should be the moderator. This could identify how different overconfidence measures affect specific corporate decisions and hopefully explain some contradictory findings in current literature.

Besides the above-mentioned three proposals, there are also other more general crucial factors that need to be taken into account when designing measurement tools or improving the validity and reproducibility of the overconfidence research methodology. This concerns mostly various questionable research practices, like selective reporting of variables or results, p-hacking, or harking (see John, Loewenstein & Prelec, 2012; Nelson, Simmons, & Simonsohn, 2018; Munafò et al., 2017) in order to support the notion of robustness of overconfidence in human reasoning and decision-making. Considering the proposed ways of improving the methodology in overconfidence research, a joint and most a vital step is to properly distinguish overconfidence constructs and also other related constructs like optimism, or illusion of control.

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Who doesn't take a risk, never gets to drink champagne: women, risk and economics

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Abstract:
Because differences in risk attitudes are often quoted as one of the causes of lower earnings of women and their absence in senior positions, understanding whether risk aversion is an intrinsic, biological feature or is linked with some socio-cultural and contextual factors is of great importance for policy and education. This paper provides an overview of studies, mainly experimental, on risk aversion of women and men. First, it discusses results indicating greater risk aversion among women and linking it with biological characteristics. Then it lists studies refuting these differences or pointing to sources other than biological. The entire discussion will be framed in the context of Identity Economics (IE) suggesting that women's risk preferences may be linked with identity and thus also with normative requirements placed on them. The main aim of the study is to examine whether commonly accepted claims are not persistent stereotypes and whether differences arise out of social, cultural or contextual rather biological causes. It presents arguments supporting the hypothesis that women are a varied group and their risk attitudes are sensitive to even slight contextual alterations.

According to the OECD, women on average earn less (e.g. in Slovakia 13.9%, 2017), are under-represented in boards (OECD average 20%, Slovakia 14%), spend twice as much time as men on unpaid household work (OECD average 271:137 min.), and in most countries there is less than 30% representation of women in parliaments (Slovakia 19%, 2014), although according to the World Bank they account for 49.5% of the global population. These are only a few selected examples of imbalances important from the perspective of both social and economic life. The answer to the question about the sources of these inequalities is a starting point for action that should provide both genders with equal chances. The main subject of the paper is risk aversion – one of the most important factors believed to differentiate women from men and affecting their incomes, social status and generally professional success. The main aim of the study is to demonstrate that risk aversion is not absolute and immune to manipulations. According to lexical definitions, risk is "a situation involving exposure to danger, a possibility that something unpleasant will happen" (Oxford Dictionaries) or "a possibility of loss or injury" (Merriam Webster). Economics defines risk aversion in narrower terms, as a feature of a person who presented with two options with the same expected utility chooses the certain or more probable one. Although economic men should be indifferent to risk, actual people of both sexes, are rather risk averse. The definition of risk, however, affects choices of measures. Most commonly used are hypothetical or real-stake lotteries (Holt, Laury 2002), less frequently questionnaires covering issues such as smoking, extreme sports, driving (Weber et al. 2002) and only occasionally field studies analysing actual risky behaviour (such as behaviour in bridge tournaments – Dreber, von Essen, Ranehill 2011; betting in dog and horse racing – Johnson, Powell 1994).

The paper shows that women are a much more diverse group than many papers claim and risk attitudes are sensitive to slight modifications, including used measures, and is strongly affected by social and cultural factors. Causes of gender differences range from biological (testosterone level, finger ratio), through socialisation, motivation and preferences, to situational factors such as the context of the study or used tools. The background of this overview is provided by Identity Economics (Akerlof, Kranton 2000; 2010) according to which identity as well as social roles and stereotypes are crucial for choices, because violating social prescriptions lead to anxiety, discomfort and ostracism, particularly when an activity (in this case risk taking) is stereotyped as a male domain. Their theory suggests that utility of a given behaviour increases when it is consistent with social

prescriptions applicable to a person and decreases when behaviour violates social norms and runs counter to social stereotypes and expectations.
The history of economic studies on risk-aversion dates back to the 1950s and covers many issues including lotteries (e.g. Allais' paradox or an older Petersburg paradox), investment experiments (e.g. Charness, Gneezy 2012) or even analysis of the "capitalistic structure of economy" (Arrow 1951: 404). Because risk is present in nearly every decision, not only economic, a possible greater risk aversion of women would adversely affect many important areas, such as investing in stocks, education, health, possession of real estate and finally choices related to employment or starting a business (Dohmen et al. 2012; Barsky et al. 1997; Guiso, Paiella 2008; Bonin et al. 2007; Dohmen et al. 2011; Schlaegel, Koenig 2014). Additionally, because it is assumed that lower risk aversion is a desirable feature, particularly among managers, women can fall victim to negative selection or even statistical discrimination.
Of course women and men are not identical, but because many of the differences important from the perspective of economics or labour market gradually disappear – particularly in countries with greater equality – we can safely assume that their sources should not be (or at least not completely) sought in biology. And since we have observed many significant changes in areas such as mathematic, intelligence or education, it seems likely that these trends will continue. Furthermore, following Hyde (2005) or Nelson (2012; 2013; 2018) examining differences between both groups, we will likely find similarities rather than unbridgeable gaps. Additionally, unobservable characteristics such as masculinity score or testosterone level prove to be better predictors of risky behaviour than sex. Finally, as we have seen there is even no universal measure of risk aversion providing consistent results across all contexts. Therefore, using biological sex as a forecast of competence in dealing with risk, as well as in many other cases, is, at best, inefficient. Believing that risk is a guarantee of success, that women are conservative when it comes to taking risk and that taking risk is a male domain, places women in an unfair situation, where whatever they do, they will lose – they will face either statistical discrimination or ostracism. Therefore, if the evidence is mixed, it is always better to judge people of both sexes based on their actual competences not on assumptions, prejudices, or stereotypes we have about them because of their affiliation to a certain group. And above all, not to demand more because we expect a woman to behave according to prescriptions that are irrelevant when hiring a man.

Keywords:
Gender differences. Risk aversion. Stereotypes. Identity economics.

1. Introduction

According to the OECD, women on average earn less (e.g. in Slovakia 13.9%, 2017), are underrepresented in boards (OECD average 20%, Slovakia 14%), spend twice as much time as men on unpaid household work (OECD average 271:137 min.) and in most countries hold less than 30% of seats in parliaments (Slovakia 19%, 2014), although according to the World Bank they account for 49.5% of the global population. These are only a few selected examples important from the perspective of both social and economic life. The answer to the question about sources of these inequalities is a starting point for actions that should provide both genders with equal chances. The main subject of the paper is risk aversion – one of the most important factors believed to differentiate women from men and affecting their incomes, social status and generally professional success. The main aim of the study is to demonstrate that risk aversion is not absolute and immune to manipulations. However, before we proceed with the detailed analysis, we should clarify meaning of the concept. According to lexical definitions it is "a situation involving exposure to danger, a possibility that something unpleasant will happen" (Oxford Dictionaries) or "a possibility of loss or injury" (Merriam Webster). Economics defines risk aversion in narrower terms, as a feature of a person, who presented with two options with the same expected utility chooses the certain or more probable one. Although economic men should be indifferent to risk, actual people of both sexes are rather risk-averse. The definition affects the choice of measure: most commonly used are hypothetical or real-stake lotteries (Holt, Laury 2002), less frequent are questionnaires covering behaviour such as smoking, extreme sports, driving (Weber et al. 2002) and only occasionally studies analysing actual risky behaviour (such as behaviour in bridge tournaments – Dreber, von Essen, Ranehill 2011; betting in dog and horse racing –

Johnson, Powell 1994). Another consequence of the complex nature of risk is the interdisciplinary character of studies dedicated to it. The research on risk combines insights mainly from economics and psychology, but incorporates also contributions from sociology, evolutionary theory, biology, neurosciences and anthropology. The present analysis implies that it is difficult to separate these traditions of scientific inquiries; although a pivot of the studies is formed by economic considerations, behavioural economists are willing to absorb the best practices from other disciplines and thus enrich their own results.

In further sections the paper shows that women form a much more diverse group than many papers claim and risk attitudes are sensitive to slight modifications, including used measures, and is strongly affected by social and cultural factors. Although usually studies concerning gender differences in risk-aversion come from Western countries, there is growing evidence from culturally diverse countries, including also the Czech and Slovak milieu. Previous studies in Slovakia showed that female students were more risk-averse than their male peers particularly when they felt less competent (Balaz et al. 2009). Furthermore, Varcholova and Rimarcik (2004) found that not only were Slovak men more willing to take risks than women, but they also identified two significant factors correlating with the willingness to take risk – namely being overweight and entrepreneurial intentions. Although intentions to start a company are believed to be directly linked with attitudes toward risk (cf. Kolvereid, Isaksen 2006; Zhao et al. 2005), it would require further analysis to identify sources of the correlation with obesity. Kolouchova and Machek (2016) observed that Czech female managers working at family firms were less risk-prone than men, their decisions being generally more prudent and careful. The causes of gender differences range from biological (testosterone level, finger ratio), through socialisation, motivation and preferences, to situational factors such as context of the study or used risk elicitation methods. The background of this overview is provided by Identity Economics (Akerlof, Kranton 2000; 2010). According to this theory, identity, as well as social roles and stereotypes, are crucial for choices, because violating social prescriptions leads to anxiety, discomfort and ostracism, particularly when an activity (in this case risk-taking) is stereotyped as a male domain. Their theory suggests that the utility of a given behaviour increases when it is consistent with social prescriptions applicable to a person and decreases when behaviour violates social norms and runs counter to social stereotypes and expectations.

The rest of the paper is organised as follows: section two provides a review of the studies on gender differences, then refers to studies pointing to biological factors and finally, it discusses a turn caused by a meta-analysis performed by Nelson (2012). The third section describes social and cultural factors affecting attitudes toward risk and refers to anthropology, studies on contextual factors (risk elicitation methods and stereotype threat) and specific sub-samples (other than university students). The fourth section summarises the results and sets them in the context of Identity Economics.

2. Gendered attitudes toward risk

The history of economic studies regarding risk-aversion dates back to the 1950s and covers many issues, including lotteries (e.g. Allais' paradox or an older Petersburg paradox), investment experiments (e.g. Charness, Gneezy 2012) or even analysis of the "capitalistic structure of economy" (Arrow 1951: 404). Because risk is present in nearly every decision, and not only economic ones, the possible greater risk aversion of women would adversely affect many important areas; such as investing in stocks, education, health, possession of real estate and choices related to employment or starting a business (Dohmen et al. 2012; Barsky et al. 1997; Guiso, Paiella 2008; Bonin et al. 2007; Dohmen et al. 2011; Schlaegel, Koenig 2014). Additionally, because it is assumed that lower risk aversion is a desirable feature,

particularly among managers, women can fall victims to negative selection or even statistical discrimination.

2.1. Plain differences

The wave of studies stressing economic differences between men and women started together with behavioural economics and reached its peak at the turn of 21st century. From this period, there have been many papers claiming that women are more risk averse in investment, financial or insurance decisions or even that women and men fundamentally differ in these matters. This does not mean that this question had not aroused interest among researchers earlier. One of the first meta-analyses of studies on risk aversion (Byrnes et al. 1999) covers 150 papers, the earliest of which comes from the 1960s and as much as 60% of them support the hypothesis about the greater risk aversion of women. At the same time in 40% of cases, effects were either insignificant or women proved to be more risk-prone. The authors noticed that differences fluctuate depending on the measure used and the context of the study. Croson and Gneezy (2009) using experimental lotteries concluded that there are "fundamental differences between men and women" in risk attitudes. In their study, they relied on a series of earlier economic and psychological papers supporting their hypothesis, although they noticed that there are also studies reporting no differences or whose results were mixed. They refrained from indicating clear causes of the differences (nature or nurture) and noticed that one of the reasons could be the so-called publication bias. A similar overview of previous studies was provided by Charness and Gneezy (2012) who focused mainly on investment games (both real-stake and hypothetical). All of the studies they mentioned (including two by the authors themselves) concluded that women are systematically and consistently less risk taking. Eckel and Grossman (2002; 2008) examined risk aversion in real stake lotteries and stated that in all variants women on average were "consistently more risk-averse than men", although when they asked participants to evaluate expected risk aversion of other participants, they significantly over-estimated women's risk aversion; that is they believed that women are even more risk averse than they actually were. It is noteworthy, however, that although the authors referred to evolutionary theories, they did not claim that biological factors are the sole or even main cause of the differences. They recognise that women are often treated differently by banks or investment advisors who offer them less risky options, which is consistent with the finding that (particularly male) participants of the study had biased assumptions about women's risk attitudes. This, in turn, may lead to statistical discrimination and negative self-selection when they make investment and professional choices.

2.2. Biological determinants

A separate category of studies on gender differences are those correlating results with biological factors such as genes or hormones. Dreber and Hoffman (2007) studied the relationship between risk propensity (measured with investment game) and digit ratio (index to ring finger) which is believed to reflect exposure to prenatal testosterone and oestrogen, and determined that the influence of biological sex decreases when controlling for this ratio. Unfortunately, although in the Swedish sample the effect was prominent, it disappeared in a more culturally diverse sample of American students. Coates and Herbert (2008) who studied risk attitudes among male traders in the City of London go a step further and claim that testosterone level is responsible not only for risk propensity but also for the profitability of managed funds; on days when their testosterone levels were higher than the 8-day average, they obtained higher returns. On the other hand, they notice that elevated levels of testosterone and cortisol could interfere with the rationality of decisions. We should also note that their definition of risk is as a *threat*, and that they did not measure propensity to risk directly but only as a variance of a trader's return, making it difficult to compare their results

with those known from behavioural economics. A similar attempt was made by Apicella et al. (2008) who correlated risk aversion not only with digit ratio but also with salivary testosterone and facial masculinity. Their study covered only male participants (98) and thus it would be difficult to draw any conclusions about women. However, both their definition of risk and the measure (investment game) were consistent with those adopted in standard economic studies. They used a convenience sample of American students (Harvard University) and similarly as Dreber and Hoffman (2007) found no correlation between digit ratio and risk aversion; although men with higher actual levels of salivary testosterone and more male faces proved to be more risk-prone. Again, Schipper (2011) found no link between digit ratio and risk aversion measured with standard lotteries (Holt, Laury 2002). Sapienza et al. (2009) examined over 500 MBA students (169 females) and found that higher levels of salivary testosterone positively affect women's propensity to risk (measured with lotteries). The effect is stronger for relatively low concentrations of testosterone proving that the influence of this hormone is non-linear. Interestingly, at low levels, sex differences disappear indicating that biological sex is a worse predictor of risky behaviour than an actual testosterone concentration. It would seem that linking risk aversion with the testosterone level solves the issue, but according to the results, it seems to become even more complex. We should also remember that as Eckel and Grossman (2008) observed in studies on risk attitudes there is a low correlation between tasks, measures and contexts, and this provides a good starting point for further research on the actual extent of the differences.

2.3. An unexpected twist

Nelson (2012; 2013; 2018), who published results of her meta-analysis first of 28 and later of 35 studies, showed that in only 14 cases differences between men and women were statistically significant (in 5 cases they were larger than half standard deviation and in 2 more than one standard deviation). In 3 cases statistically significant differences spoke in favour of greater male risk aversion. Using an Index of Similarity (IS) she developed, she claimed that distribution of this feature among women and men overlap in 60 and even 80%. This means that over 60% of women (usually about 80%) can be paired with a man with an identical attitude towards risk. Particularly, in the study by Eckel and Grossman (2008) IS ranged between 0.6 and 0.8 depending on the condition and thus similarities are greater than differences. This undermines the widespread interpretation of differences as very large and shows that understanding the results as suggesting that each woman is less risk-prone than any man is a too hasty assumption.

After 2012 the tendency to overstate differences gradually reverse and more and more publications conclude that women and men are similar in terms of risk attitudes or that in a given sample no statistically significant differences were recorded. There are also first studies analysing risk aversion in a more systematic way, indicating possible sources of some observed variations. For example in comparing the stability of various risk elicitation methods, Csermely and Rabas (2016) found no statistically significant differences between women and men, while Filippin, Crosetto and Heider (2014; and also Filippin, Crosetto 2016) concluded that although there are some differences, their scope and size depend on used measures – the greatest being in investment games (e.g. Gneezy, Potters 1997) and lotteries (e.g. Eckel, Grossman 2002, 2008), while in the Bomb Risk Elicitation Task in which participants decide how many boxes out of 100 to collect, while remembering that one of them contains a bomb which would destroy all previous earnings (Crosetto, Filipin 2013) and in the most popular method – multiple price list (Holt, Laury 2002) differences are rather an exception than a rule. This is not surprising since the authors of the method themselves stated that sex (similarly as age or income) does not explain a significant proportion of variance in high-stake lotteries.

3. Socio-cultural and contextual predictors of risk taking

Despite all these, we cannot deny that in many areas there are differences between women and men and that it is much easier to publish a study highlighting than denying them. Some explanation of this fact may be *confirmation* and *publication biases*: a tendency to look for confirmation of one's hypotheses and to publish papers consistent with currently accepted theories. These tendencies are additionally strengthened by such popular, easily accessible but far from reliable publications such as *Men are from Mars, Women are from Venus* (Grey 1992). Authors of such books often present arguments selectively and attribute differences to biological or evolutionary mechanisms, even if evidence is weak. For example, Baron-Cohen (2004:12) claims that "The female brain is predominantly hard-wired for empathy. The male brain is predominantly hard-wired for understanding and building systems". Pinker (2002:342; 353) argues that "neuroscience, genetics, psychology and ethnography are documenting sex differences that almost certainly originate in human biology" and that women do not pursue their careers, "because they don't want to". Finally, Ridley (2003:248) believes that "Men and women have different minds: The differences are the direct result of evolution" and that women "sought to serve society above all". Other authors claim that there are also differences in personality, cognitive skills, intelligence and mathematic skills, making women either insufficiently competent or uninterested in pursuing a career in stereotypically male professions and attribute these differences to causes such as investments in rearing offspring, testosterone level or genetic differences. More recent studies show that there are no statistically significant differences in average intelligence (Flynn 2012). Tests of mathematic competence show that differences disappear and the greater gender equality in a given country, the better girls' results are with girls even starting to dominate (Guiso et al. 2008; Nosek et al. 2002; 2009). Personality differences are so small that they have no diagnostic meaning for potential employers (Hyde 2005). A final argument against the nature argumentation comes from studies performed in several non-western cultures showing that western behavioural patterns (risk attitudes, competitiveness, altruism) believed to be universal, might be the most unusual in the world (Henrich, Heine, Norenzayan 2010).

3.1. Anthropological studies

Although the series of abovementioned studies concerned mainly altruistic behaviour, in some cases it covered also risk aversion measured with real-stake lotteries with a certain, safe option (Henrich, McElrath 2002). In two cases, Mapuche (Chile) and Sangu (Tanzania) participants preferred risky options more often than American students (University of California). No gender differences were observed in any of the samples. Gneezy, Leonard, List (2009; see also Gong; Yang 2012) compared two cultures, one patriarchal (Maasai, Tanzania) and one matrilineal (Khasi, India). Using a simple real-stake lottery (that could either triple endowed money or lose everything), they found that there were no differences between women and men in either of the cultures, although generally, Khasi were more risk-prone than Maasai (they invested 85% and 60% of the endowment respectively). The authors explain these results by co-evolution; namely a theory according to which genetic traits in a favourable environment could mutually enforce one another. We cannot forget that socialisation starts already during childhood including influences of parents, family, school, teachers and peers. Social learning (implicit) and thus oblique transmission are important elements in the process of imitation of when an individual is perceived as successful. Similar findings are provided by the already mentioned study by Finucane et al. (2000) who claimed that there are no universal gender differences, there is only a "white male effect". Furthermore, Dohmen et al. (2012), using data from 2003 and 2004 SOEP data, studied the impact of socialisation on attitudes towards risk (hypothetical investment game). According to the authors, this propensity is moderated not only directly by the parents' willingness to take

risk, but also by the so-called regional level of risk aversion. Therefore, we deal here with two lines of socialisation and learning: a direct (parents) and an indirect (observation of others) one.

3.2. Contextual factors

The results of "anthropological" studies are consistent with a study by Booth and Nolen (2009) who examined (with a real-stake gamble) risk attitudes of students in coeducational and single-sex schools. Although in co-ed-schools, girls were more risk-averse than boys from the same school, in single-sex environments their risk attitudes did not differ from those of boys (both single-sex and co-ed). Interestingly, the propensity to take risk increased in all-girls groups. Similar results were provided by a controlled experiment (Booth, Cardona-Sosa, Nolen 2014) in which first-year university students were randomly assigned to either co-ed or single-sex groups. Their risk attitudes were measured twice at the beginning and after 8 weeks with multiple-choice list method (Holt, Laury 2002). Although generally women were less risk-prone, after 8 weeks in a single-sex group they were willing to risk more than their counterparts from mixed groups suggesting that risk attitudes are effects of "social learning rather than inherent gender traits" (Booth, Cardona-Sosa, Nolen 2014:126). Of course, it is impossible to claim that the effects of school or experimental manipulation will continue throughout the adult life, but similar results were obtained by Lindquist and Save-Soderbergh (2011), who found out that strategies chosen by women in *Jeopardy* are less risky when they play against men.

Another type of contextual factor is stereotype threat. Carr and Steele (2010) determined that triggering stereotype threat (by presenting the task as measuring mathematical, logical or rational ability) affects attitudes towards risk in a coin-toss lottery. Although in a condition without stereotype, differences between women and men were insignificant, after activating the stereotype, women were significantly less willing to risk than men in the same condition and both men and women in the stereotype-irrelevant condition. Similar conclusions were drawn by Meier-Pesti and Penz (2008), who examined how stereotypes affect financial decisions of the general population and university students. Additionally, they correlated their results with a measure of masculinity (BSRI-M). Similarly as in the case of testosterone studies discussed above, they concluded that masculinity is a better predictor of risk attitude than sex in all four measures of risk aversion. Surprisingly, activation of stereotype (through describing pictures presenting male businessman, women holding a baby) affected only men; after watching a "mother" picture they assigned themselves lower masculinity scores and were more risk-averse than men primed with male roles and those in the control group (neutral picture). In their second study (with students) women described themselves as equally masculine as men and consequently the authors detected no differences in risk aversion. We should also remember that in real life situations women usually earn less and thus have lower investment budgets, which, in additional to all the already discussed factors, may explain their more conservative investment choices.

3.3. Specific subsamples

One of the main objections against studies analysed here (both those indicating and denying differences) is the fact that they often use convenience samples consisting of students. Because with experience risk aversion decreases, it is important to study not only the general population but its specific sub-sample, namely managers. Beckmann and Menkhoff (2008) studied the behaviour of over 600 fund managers (125 women) in four countries: the United States, Germany, Italy and Thailand, asking them whether "in respect of professional investment decision they mostly act" risk-averse or not. Controlling for such factors as a post, size and type of managed fund and also age, marital status and number of hours worked per

week, they determined that women reported higher levels of self-stated risk aversion in investment decisions. However, statistically significant differences in average risk propensity were present only in the Italian sample (in Germany average values were equal and in the USA women were more risk-loving). A slightly older study by Johnson and Powell (1994) on a sample of management students, whose task was to assess a potential investment and either recommend it or not. Because the same percentage of women rejected the investment (assumed as a measure of risk aversion), the authors concluded that in the group of future managers there are no gender differences both in quality of taken decisions and in risk attitudes. They indicated that this may be caused by education and experience (students get used to dealing with risks) or by self-selection (more risk-prone women are also more inclined to study management). Similar conclusions were drawn by Atkinson, Baird, Frye (2003) who asked whether mutual fund managers manage differently. They found no significant differences in terms of performance, risk or other important features. Despite this, funds managed by women obtained fewer funds, particularly during the first year of their work, which may reflect the stereotype that women are less competent and efficient. Adams and Funk (2012) examined a large sample of Swedish managers using the method introduced by Dohmen et al. (2012) and stated that women and men in this sub-population differ systematically. Surprisingly, female managers proved to be more risk-prone. They noticed also that in Sweden costs of choosing professional career are for women lower than in other, less equality-oriented countries and thus, as a consequence of self-selection by women determined to pursue their careers, in other countries female managers could prove to be even more risk-oriented (compared to the general population) than in Sweden.

4. Persistent stereotypes and identity

As we have seen from this brief review, the greater risk aversion of women, although not a myth, is some kind of a stereotype. The evidence is mixed; women can be more risk-averse than men in some situations and less (or equally) risk-averse in others. It depends on culture, used measure, studied sample or even subtle situational cues such as a description of the task. Usually, women are more similar to men than different (cf. Index of Similarity, Nelson 2012). As Wojciszke and Szlendak (2010) observed, differences between women and men can be present at 4 different levels: objective or subjective differences and differences of descriptive or prescriptive stereotypes. And although the most important, objective differences are so small that Hyde (2005) put forward the "gender similarity hypothesis", we cannot forget that descriptive stereotypes easily mutate into prescriptive ones. While descriptive stereotypes are responsible for statistical discrimination (e.g. associating femininity with incompetence in stereotypically male domains), prescriptive ones lead to prejudice against those individuals, who seem to be "non-standard". If such stereotypes additionally link with norms indicating desirable features and behaviour, they can prove to be a significant obstacle on the way to equality of chances. The adverse impact of stereotypes on behaviour is not one-dimensional; they distort perception and preferences of both potential employers (statistical discrimination) and social groups affected by them (stereotype threat, negative self-selection). In the sections below, we shall see how stereotypes affect choices of stereotyped groups and answer the question whether all stereotypes have already disappeared.

4.1. Impact of identity on preferences

Those who claim that women and men differ drastically in terms of characteristics important from the perspective of the labour market, often refer to differences not in competences, but in motivations and preferences. But both motivations and particularly preferences, as understood in economics, are shaped in a broader, social context of family, school, peers, media and perhaps above all by stereotypes penetrating all spheres of social life. If it is widely accepted

that a group (in this case women) is less competent (e.g. in dealing with risk), then, as we have seen, the mere activation of such stereotype can affect their performance. According to Akerlof and Kranton (2000; 2010), the role of identity starts with differentiating two groups, which are linked with different norms, prescriptions and ideals. They noticed also that violating norms "evokes anxiety and discomfort in oneself and in others" (Akerlof, Kranton 2000:716). As a consequence, this anxiety (actual or anticipated) reduces expected utility of a given action and thus distorts preferences. Since a rational individual should be a maximiser, she will not choose an action that brings zero or low utility that is an action that is inconsistent with internalised norms. Identity Economics (IE) predicts thus that women will dominate in professions with feminine descriptions and the more they internalised social norms, the more they will manifest behaviour that is prescribed to their group (e.g. preferring non-pecuniary outcomes over higher earnings). Interestingly, in this theory, identity is treated as a specific type of externality that is an action whose consequences "spill over" into a broader context and reduces the wellbeing of other individuals seemingly unaffected by the choice, but actually threatened in their own identity by an out-grouper. Does IE provide a reliable explanation of differences in risk aversion? A good theory of risky behaviour should explain why women and men differ and why these differences are not consistent across various contexts. It seems that IE is well-suited for this purpose. It starts with norms and stereotypes; if a society is stereotype-free or if norms accepted there are different than those known from western societies, then it seems obvious that observed behavioural patterns also differ (Henrich, McElrath 2002; Gneezy, Leonard, List 2009). Additionally, women who identify themselves with masculine traits (Meier-Pesti and Penz 2008) or who actually have "masculine" traits (Apicella et al. 2008; Sapienza et al. 2009) will behave more like men. Finally, even a subtle activation of a stereotype can remind them of being women and therefore distort their performance (Meier-Pesti and Penz 2008; Carr, Steele 2010).

4.2. Between Scylla (of stereotypes) and Charybdis (of prejudice)

The above argument is correct only if stereotypes are still valid and if women are actually punished for choosing non-standard behaviour. There are some that claim they are not; years of gender mainstreaming and implementation of anti-discrimination laws should have secured a level playing field for everyone. If therefore, equality is not yet obtained the reason is in the women themselves. As we have seen, stereotypes can affect women's performance either by inclining them to choose occupations consistent with prescribed norms (appropriate for women) or by seeing them as incompetent (the more, the more feminine they seem). Of course, the situation changes – possibly at an uneven pace and certainly not fast enough. No country has yet reached the value "1" meaning perfect equality in the Global Gender Gap Index. In a study designed to measure persistence of stereotypes, Haines et al. (2016) asked participants (workers at Amazon Mechanical Turk) about the likelihood that a set of certain gendered characteristics (such as being a politician, postal worker, head of a household, being well-built, etc.) describes a typical man or a typical woman and then compared their data with those from 1983 (Deaux, Lewis 1984). They found out that women were still perceived as more communal, while men as more agentic with no significant change across time. Stereotypes in other areas (occupation and physical characteristics) also did not change. But that is not all. In a study by Rudman and Glick (1999, 2001; Rudman et al. 2012) participants rated candidates (either male or female) for a post of a computer lab. manager (described as either feminised (helpful, sensitive to others' needs) or masculinised (technically skilled, ambitious)) in terms of their competence (e.g. competent, independent, analytical) and personal traits (e.g. kind, supportive, friendly). They established that women displaying masculine traits are seen as violating norms of being nice and friendly. Job descriptions often contain stereotypically male traits associated with being seen as competent. Women, who

want to be seen as competent must, therefore, present themselves as agentic, risking at the same time that they will be seen as less socially skilled and less likeable (although equally competent as men). The results suggest that the "backlash effect" activates when women violate norms of being sensitive or supportive, not because they are competent, but it is extremely difficult to present oneself as both "nice and able" (Rudman and Glick 2001:746). To this set of male characteristics, we can easily add another one: risk-taking. Therefore, as some in this context have already observed (e.g. Rudman Glick 2001; Akerlof, Kranton 2010) women are put in a situation resembling Catch 22; punished for being incompetent when seen as feminine and punished for being unfriendly or aggressive when seen as insufficiently feminine and excessively agentic (cf. Akerlof, Kranton 2010: Price Waterhouse vs. Ann Hopkins). In both cases, however, they are seen as unfit for higher posts.

5. Conclusion

Are women and men identical? Of course, they are not. But because many of the differences important from the perspective of economics or labour market gradually disappear – particularly in countries with greater equality – we can safely assume that their sources should not be (or at least not completely) sought in biology. And since we have observed many significant changes in areas such as mathematics, intelligence or education, it seems that these trends will continue and following Hyde (2005) or Nelson (2012; 2013; 2018) examining differences between both groups, we will likely find similarities rather than unbridgeable gaps. Furthermore, unobservable characteristics such as masculinity scores or a salivary testosterone level prove to be better predictors of risky behaviour than sex. Finally, as we have seen there is even no universal measure of risk aversion providing consistent results across all contexts. Therefore, using biological sex as a forecast of competence in dealing with risk, as well as in many other cases, is, at best, inefficient. Believing that risk is a guarantee of success, that women are conservative when it comes to taking the risk and that taking risk is a male domain, places women in an unfair situation where whatever they do, they will lose – they will face either statistical discrimination or ostracism. Therefore, if the evidence is mixed, it is always better to judge people of both sexes based on their actual competences not on assumptions, prejudices, or stereotypes we have about them because of their affiliation to a certain group. And above all, not to demand more because we expect a woman to behave according to prescriptions that are irrelevant when hiring a man.

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Entrepreneurial risk perception and entrepreneurial intention of employed and unemployed in the context of entrepreneurial individual resources

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Abstract:
Aim: The changes in the nature of economic and social issues has renewed the attention on the role of entrepreneurship, and point to a multifaceted way of how entrepreneurship activities can mediate and foster sustainable development and social welfare. Recent research on entrepreneurship has redirected attention away from the entrepreneur as an individual with inborn personality dispositions and more towards entrepreneurship competence as a composition of skills and attitudes interacting with a range of factors affecting individual and his/her work and life circumstances. In this paper we point to the way risk perception and entrepreneurial intentions are associated with the entrepreneurial individual resources of the employed and unemployed.
Method: The online questionnaire was completed by 413 individuals, 23 respondents were excluded from analysis because of their work status (entrepreneurs). Data was collected using the survey agency panel of respondents across Slovakia. The period of data collection was November 2017. The final sample consisted of 390 respondents, 182 males (46.7 %), 208 females (53.3 %) with an age range between 18 – 50 (M=32,37).193 respondents were currently unemployed (49.5%) and 197 employed (50.5%). The majority of the sample had high school diplomas (56.2 %), followed by a master´s degree (33.8 %), a bachelor´s degree (7.9 %), and a doctorate (1.8 %). To secure the comparability of employed and unemployed respondents the composition of these two groups was controlled. The current paper aims to contribute to the studies of entrepreneurship through evidence of the interaction between entrepreneurial intentions, risk perception and entrepreneurial resources. Additionally, the context of employment and unemployment status is considered. The following research questions were formulated: 1. Do employed and unemployed people differ in their entrepreneurial intentions? 2. Do they differ in the entrepreneurial risk perception? 3. Do employed and unemployed people see their entrepreneurial resources differently? 4. Is there a correlation between risk perception and entrepreneurial intention and is it significant for both groups of respondents (employed and unemployed)? 5. Is there a difference between the employed and unemployed in terms of the associations between the entrepreneurial resources and the intention to enterprise? 6. Is there a difference between the employed and unemployed in terms of the associations between the entrepreneurial resources and the entrepreneurial risk perception? 7. Do internal and external resources and the employment status stand as predictors of entrepreneurial risk perception and entrepreneurial intention?

Results: This paper contributes to the field of entrepreneurship studies by proposing that perceived individual resources for enterprising activity are relevant in the research of entrepreneurial intention and risk perception. When comparing the subjective perception of the entrepreneurial resources, sufficiency employed and unemployed "created" the same ranking starting with the internal resources at the top: education, skills, relevant personality characteristics and experience; ending with two external resources: sufficient social capital and needed financial capital. The results show that employed and unemployed people in our sample did not significantly differ either in intention or in risk perception. However, they do differ in the perception of external entrepreneurial resources when employed respondents reported a significantly higher level of them in comparison to unemployed. We found that perceived risk which was often sought to function as a barrier for being open to entrepreneurial opportunities correlated negatively with the external entrepreneurial resources of both the employed and unemployed. The differences between the employed and unemployed in risk perception were present in association with internal individual resources; where the risk perception of employed correlated significantly negatively while in the sample of unemployed there was no significant correlation present. Interestingly, the outcomes were different for the association between entrepreneurial intention and perceived individual resources for enterprising. In both samples of the employed and unemployed the correlations between intention for enterprising and individual´s internal and external resources were all positively significant.
When identifying predictors of entrepreneurial risk perception, two out of three predictors in the regression model were significant: external resources and employment status. Results confirmed that lower level of external entrepreneurial resources and being employed are both predictors of higher level of entrepreneurial risk perception. Further, when identifying predictors of entrepreneurial intention two predictors in the regression model were significant: internal and external resources. Results indicated that higher level of internal and external entrepreneurial resources were predicting a higher level of entrepreneurial intention. The employment status turned out not to be a significant predictor of entrepreneurial intention in the analysed sample.
Conclusion: The main findings of the current paper were summarized separately in the context of employment and unemployment. Employed respondents in our sample did not indicate serious intentions to undertake entrepreneurial activities within the following 3 years, and they stated quite a high perception of risk related to entrepreneurship. Surprisingly, the association between entrepreneurial intention and risk perception was not significant, which indicates that the lower level of entrepreneurial intention is not related to the more intense perception of the risk. This finding could be explained by the employed being content with their work situation and feeling secure to such extent that they do not consider changing it. Regarding the entrepreneurial resources, employed respondents reported a higher level of internal entrepreneurial resources than external. The entrepreneurial intention of the employed was associated with both internal and external entrepreneurial resources. Moreover, both internal and external entrepreneurial resources were confirmed as significant predictors of entrepreneurial intention. The entrepreneurial risk perception of employed respondents was associated with both internal and external entrepreneurial resources, but negatively. When identifying predictors of entrepreneurial risk perception, external resources and employment status turned out predicting risk perception both significantly and negatively. Interestingly, being employed acted as a significant predictor of higher entrepreneurial risk perception.
Similarly, unemployed respondents in our sample did not indicate a serious intention to undertake entrepreneurial activities within the following 3 years and they also perceived quite a high level of risk related to entrepreneurship. The association between entrepreneurial intention and risk perception was significant and negative, which indicates that the lower level of entrepreneurial intention could be affected by quite intense perception of the risk. This is in line with other studies where fear of failure and financial instability acted as barriers to entrepreneurship (Shinnar et al., 2012; Thurik et al., 2008). Regarding entrepreneurial resources, similarly to the sample of employed, unemployed respondents reported a higher level of internal entrepreneurial resources than external. The entrepreneurial intention of the unemployed was associated with both internal and external entrepreneurial resources. The entrepreneurial risk perception of unemployed respondents was associated with the external entrepreneurial resources only, and the relationship was negative. When identifying predictors of entrepreneurial risk perception, external resources and employment status turned out predicting risk perception significantly and negatively. Interestingly, being unemployed acted as a significant predictor of lower entrepreneurial risk perception.
Our evidence provides an initial indication for understanding the preconditions of entrepreneurial intentions and how these can be altered by interventions seeking to support individuals in the uptake of entrepreneurial activities. However, based on our findings it is not possible to conclude whether the perceived entrepreneurial resources would be used in an efficient way.

Keywords:
Entrepreneurship. Risk perception. Entrepreneurial intention. Individual resources. Employed. Unemployed.

Introduction

Entrepreneurship activity is important and in the long-term a positive factor for economic growth via innovations and employment and consequently also the created wealth (e.g. Schumpeter 1997, Acs & Audretsch, 1988). The policy makers involved in education and employment policies also understand the entrepreneurial activities of individuals as an important alternative to economic and social survival for individuals, especially in times of economic downturns and labour-demand contractions. The intensity of entrepreneurship activities at national and regional levels is related to the intentions of individuals to react to entrepreneurship opportunities and to their willingness to face risk related to entrepreneurial activities. The research on factors and determinants relevant to the entrepreneurship activities of individuals is hence experiencing continued and increased attention especially at the level of national and local policy makers.

At the European and national level, the policy discourse reflects increasing an understanding of the universal value of individual entrepreneurship initiatives and the view of entrepreneurship as a viable opportunity for gainful work for a more diverse range of individuals. There exists a great uncertainty about the shape of future labour markets, with further changes expected in connection with automation and robotization. The changes now or in the future redefine the need for active individuals and their entrepreneurial activities as a career and work option at any stage of life.

The European Commission is strongly promoting the importance of dealing with new skills requirements and focusing on adult skills competencies and what it takes to support them by participation in training and learning. Within the structure of competences for the 21st century, entrepreneurship competence is regarded as one of the key adult competencies in communication at the European policy level. The European reference framework on key competencies (European Parliament, 2006) includes entrepreneurship competence in 8 key competence areas[1].

The notion of entrepreneurship competence gives full voice to i) relevance of entrepreneurial intentions to any individual ii) importance of being attentive to entrepreneurial opportunities all throughout one's life and develop competencies to have real choice to exploit such opportunities.

In this paper we refer to the need to view potential entrepreneurs as any adults in different stages of life as opposed to the prevailing focus of studies on the entrepreneurship intentions of students, especially in higher education level studies. Studies are showing that new generations of entrepreneurs are coming up with entrepreneurial ideas, as they wish to continue their working life beyond the age of 50 as entrepreneurs (Growing the European Silver Economy, 2015).

What drives the entrepreneurial process?

The researchers in the field of entrepreneurship have in the past focused a lot on the personality of an entrepreneur and the factors leading to the success of entrepreneurial activities; referring mostly to concepts based on economic and management sciences. More

[1] Entrepreneurship competence is referred to as involving i) skills to identify viable opportunities, assess and take risks and ii) entrepreneurial attitudes such as initiative, pro-activity and motivation.

recent approaches have redirected the attention away from the personality of an entrepreneur and his or her business success to the key phases of entrepreneurial activities. This has led to a considerable shift away from the focus on an entrepreneur as an individual with inborn personality dispositions to entrepreneurship competence as a composition of skills, attitudes and self-beliefs interacting with a range of factors affecting an individual and his or her work and life circumstances.

Probably the most notable change came in with the integration of approaches based on social and cognitive psychology. To mention briefly some major streams of conceptualisation, the bulk of recent research is based on adapting Ajzen's (Ajzen, 1991) Theory of planned behaviour e.g. (Krueger & Carsrud, 1993). An alternative approach proposed referring to the key role of opportunities (Shane & Venkataraman, 2000) (Eckhardt & Shane, 2003). Opportunity work has been extended by empirical research into opportunity identification competence, including employee level and connection to the innovation capacity of companies and their skills development (Baggen, et al., 2015; Baggen, Lans, Biemans Harm, Kampen, & Mulder, 2016).

The intentions are acknowledged as key antecedents of entrepreneurial actions and in some works regarded as the core of entrepreneurial process. Individual perceptions interact with intentions, beliefs, knowledge structures and learning (Krueger, 2003). Individuals intentionally choose to engage in entrepreneurship (Krueger, 2007).

Individual responses to entrepreneurial intention can be also seen as depending on the perception of available options and alternatives which include i) perceived desirability (the degree to which a person feels an attraction towards a given behaviour i.e. to become an entrepreneur) and ii) perceived feasibility defined as the degree to which people consider themselves personally able to carry out that behaviour. The desirability to start a new business is determined by the individual's beliefs and perceptions about the positive and negative consequences of that behaviour (Shapero & Sokol, 1982; Singh, Prasad, & Raut, 2012). That means desirability is related to certain results or outcomes of entrepreneurship, in terms of the costs and benefits for the entrepreneur (Zellweger, Sieger, & Halter 2011).

Entrepreneurial individual resources

The widening base of conceptual frameworks available for empirical assessments of selected aspects of entrepreneurship will hopefully lead to strengthened empirical evidence. So far, empirical studies examining the association between entrepreneurial intention and individual resources and/or characteristics are still scarce. The operationalization of the entrepreneurial resources varies across studies and is associated with the context (e.g. organizational, workplace, individual etc.) Some studies use the term of entrepreneurial potential when referring to preparedness for enterprising instead of resources (Santos et al., 2013, Kreuger & Brazeal, 1994). The existing research describes many factors affecting decisions about establishing a new venture. A more integrated approach has been proposed with respect to social capital (De Carolis, & Saparito, 2006; Adler & Kwon, 2002; Lesser, 2000) and individual capacities (van Gelderen, 2000; Kreuger & Brazeal, 1994).

Aldrich and Zimmer (1986) reviewed research findings that showed that stronger social ties to resource providers facilitate the acquisition of resources and enhance the probability of opportunity exploitation. Not all potential entrepreneurs will exploit opportunities with the same expected value. The decision to exploit an opportunity involves weighing the value of the opportunity against the costs to generate that value and the costs to generate value in other

ways. Thus, individuals who consider the opportunity cost of pursuing alternative activities in making the decision, whether or not to exploit opportunities and pursue opportunities when their opportunity cost, is lower (Amit, Mueller & Cockburn, 1995). Cooper, Woo and Dunkelberg (1989) found that people are more likely to exploit opportunities if they have developed useful information for entrepreneurship from their previous employment; presumably because such information reduces the cost of opportunity exploitation.

The model of entrepreneurship based on the decisive role of social capital was proposed by De Carolis and Saparito (2006). The authors point to the limited discussions in research on how the social capital and personal factors interact and influence entrepreneurial behavior. In their approach the entrepreneurial behaviour is centred around opportunity exploitation building on the opportunity nexus concept (Shane & Venkataraman, 2000) and modelled as a result of the interplay of environments, such as social networks, and some cognitive biases in entrepreneurs. The authors adopt the view that the core entrepreneurial actions are associated with the presence of opportunities and enterprising individuals who decide to exploit the opportunities. The decision-making is influenced by external factors, social capital, and internal factors, individual cognitive biases.

The concept of social capital is appealing also in the context of developmental (life-course) approaches. Schmitt-Rodermund´s (2004) developmental model assumes that adolescents' early entrepreneurial competencies are, along with the influence of early stimulating environments, affected by their personality profile. They found early entrepreneurial competencies (defined by leadership and inventive behaviour in adolescence) to have an indirect positive effect on engagement in entrepreneurship in adulthood via early entrepreneurial interests in adolescence and entrepreneurial career goals. As expected, personality and early competence appeared to be associated. Individuals with an entrepreneurial personality profile reported higher levels of early entrepreneurial competence (Obschonka, Silbereisen, & Schmitt-Rodermund, 2010).

From the conceptual approaches reviewed above we find particularly well-suited the interaction of external factors with individual resource and a resulting effect on risk perception. Risk is a mediator of the decisions to act on opportunities, and more about risk is elaborated in the following section.

Therefore, further on we have opted to refer to the conceptual framework based on an individual resources structured as external (social and financial capital) and internal resources (education, skills, experience and personality). We stay with the simple factors that are more relevant for the open type of the sample we have, i.e. a panel of respondents from the population including individuals with a wide spectrum of socio-economic characteristics. Our key variable linked to an actual entrepreneurial action is with the intention to engage in entrepreneurial activity. Entrepreneurial intentions predict actual intensity relatively well. Literature sources show that entrepreneurship intention is a significant predictor of entrepreneurial opportunity identification (Karimi, Biemans, Lans, Aazami, & Mulder, 2014). Perceived opportunities on the other hand vary, and for countries with similar risk aversion and entrepreneurial intensity we can observe significant differences in perceived opportunities when inspecting cross-country evidence based on the GEM framework below[2]. Despite the focus of the study on the one country (Slovakia) sample only Table 1 shows the context in which Slovak respondents act in comparison to other country data.

[2] e.g. compare Slovakia and Poland for relatively similar values in all measure except large difference in perceived opportunities

Table 1: GEM 2017 results on entrepreneurial resources, intentions and outcomes (Total early-stage entrepreneurial activity), measure as % share in 18-64 population[3]

Economy	Perceived opport.	Perceived capabilities	Fear of failure rate	Entrepreneur. intentions	TEA early stage EA
Bosnia and Herzegovina	13,4	35,5	27,2	4,6	4,0
Bulgaria	19,5	38,4	20,9	5,0	3,7
Croatia	33,6	50,8	26,6	17,5	8,9
Cyprus	51,0	46,4	55,9	16,7	7,3
Estonia	61,0	49,7	31,8	18,1	19,4
France	34,1	36,3	39,1	17,6	3,9
Germany	42,0	37,5	36,3	7,2	5,3
Greece	13,7	43,4	55,5	7,1	4,8
Ireland	44,5	42,2	39,2	11,9	8,9
Italy	28,8	30,4	49,4	10,3	4,3
Latvia	36,3	49,0	42,3	17,3	14,2
Luxembourg	54,8	40,9	47,0	11,0	9,1
Netherlands	64,1	44,6	29,7	8,1	9,9
Poland	68,8	52,4	34,4	9,7	8,9
Slovakia	25,8	48,5	32,8	9,0	11,8
Slovenia	34,6	53,3	31,8	14,2	6,9
Spain	31,9	44,8	39,2	5,6	6,2
Sweden	79,5	34,5	36,7	8,1	7,3
Switzerland	47,2	42,1	29,5	10,5	8,5
United Kingdom	43,0	48,2	35,9	7,3	8,4

Source: GEM 2017 edition, adapted by authors from the data available online at: http://www.gemconsortium.org/data/key-aps

To support our rationale for the approach adopted in this paper, we suggest that the concept of social capital is reflected well in countries like Slovakia, i.e. post transition EU member states where developing entrepreneurial activities at smaller individual scale have a relatively short history, while individuals are being confronted with dramatic changes in welfare and social structures as well as individual and societal values. In relatively young countries, with possibly unstable external conditions, which are quickly trying to catch up with "old" European democracies, the value of social networks and support should logically increase for an individual.

From a different perspective, the individual resources or perceived feasibility are also connected with the competency development of individuals. In all stages of life there are increased requirements on adults in what they need to learn and what new skills they need to master for daily life. One of the best illustrations for such requirements is the financialization of all people's daily lives and the importance for all of a required competence for dealing well with personal finances (Bačová & Baláž, 2017; Hershey, Jacobs-Lawson, & Austin, 2013). Such competence is particularly relevant in connection with entrepreneurial competence as well. Theperception of financial resources for entrepreneurship is one of our external resources, as is shown further, and clearly depends on an individual's competence to solve

[3] The variables are defined as follows, Perceived opportunities: Percentage of 18-64 population who see good opportunities to start a firm in the area where they live, perceived capabilities: Percentage of 18-64 population who believe they have the required skills and knowledge to start a business etc. TEA refers to Percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business. Source: GEM custom data available online at: http://www.gemconsortium.org/data/key-aps

different financial problems. Some aspects of entrepreneurial environment might be country-specific, and it is very useful if some individual attributes can be compared internationally. For this the data from GEM (Global Entrepreneurship Monitor) is quite appropriate. There also exists a solid base of evidence on entrepreneurial behaviour for Slovakia, with the recent focus on inclusivity based on the GEM methodology (e.g. Pilková, Holienka, Kovačičová, & Rehák, 2015).

Entrepreneurship as a risk?

We have explained above our rational in this paper regarding individual resources, social capital and interaction with perceived risk associated with entrepreneurship. To comment further on cultural differences of entrepreneurial pre-conditions mentioned in connection with social capital, risk is a dimension that has been looked at in a limited way; especially in regards to decision-making about work and a career in the times of socially planned economies. The current generations of above forty are likely to be systematically affected by this history. However, exploring the effect of risk perception and how it affects entrepreneurial intentions remains of interest in entrepreneurship in general.

Risk is a key element in the general theory of entrepreneurship (Carland et al., 1984; Johnson, 1990; Goldsmith & Kerr, 1991; Stewart, Watson, Carland, & Carland, 1998; Elston & Audretsch, 2011). Kuechle (2013) postulates that risk is implicit in entrepreneurship, related to creating a new market, identifying an opportunity or starting up a business. Different stages and elements of entrepreneurial behaviour involve a series of expected results, and these can be unattained, which implies the possibility of failure.

Risk has been traditionally considered to hinder entrepreneurship activity, as the perceptions over potential losses derived from business activity would negatively affect entrepreneurial intentions (Venkataraman, 2002). Other authors (Dickson & Giglierano 1986; Barbosa, Gerhardt, & Kickul 2007) show that risk can be perceived by entrepreneurs not only as a threat but also as an opportunity (associated with the potential earning of the new business); however, the empirical support for this perception is still limited. As a consequence, this research takes on a traditional approach and considers that the perception of risk has a negative influence on entrepreneurial behaviour.

Risk can also be conceptualised as a more complex structured factor. Schaper and Volery (2004) identify four types of risk that new business owners must face: financial, career/time, social and health risks. Along the same research lines, Barbosa, Kickul and Liao-Troth (2007) distinguish between personal, social and financial risk dimensions. Vasumathi et al. (2003) state that entrepreneurship generates high levels of stress for individuals who face different risk dimensions such as financial, professional, and time (psychological) and health-related (physical) risks.

Giordano Martínez et al. (2017) found that the economic risk associated with entrepreneurship has a negative effect on the feasibility to start a business but does not significantly influence the desirability of that behaviour. On the other hand, a significant effect from the risk related to health is not seen as a desirability and feasibility, but the negative influence of personal risk is empirically supported for both variables.

In what follows we work with a simple measure of risk as perception of risk related with entrepreneurship. This is relevant for our sample of individuals including different age groups, including the unemployed who do not have entrepreneurial experience.

Method

Sample

The online questionnaire was completed by 413 employed and unemployed respondents, 23 respondents were excluded from analysis because of their work status (entrepreneurs). Data was collected online using a panel of respondents in Slovakia. The period of data collection was November 2017.

The final sample consisted of 390 respondents, 182 males (46.7 %), 208 females (53.3 %) with an age range of 18 – 50 (M=32,37). 193 respondents were currently unemployed (49.5%) and 197 employed (50.5%). The majority of the sample had a high school diploma (56,2 %), followed by with a master´s degree (33.8 %), bachelor´s degree (7.9 %), and doctorate (1.8 %). To secure the comparability of employed and unemployed respondents the composition of the group was controlled (see table 2).

Table 2: Descriptive table of sociodemographic variables

	Employed		**Unemployed**	
	N	**%**	**N**	**%**
Gender				
Male	97	49,2	85	44,0
Female	100	50,8	108	56,0
Age				
18-30	86	43,7	87	45,1
31-50	100	50,8	106	54,9
Education				
high school diploma	105	53,3	114	59,1
bachelor´s degree	15	7,6	16	8,3
master´s degree	70	35,5	62	32,1
PhD.	7	3,6	0	0
Other	0	0	1	0,5
Family status				
Single	89	45,2	98	50,8
Married	70	35,5	58	30,6
Divorced	12	6,1	11	5,7
Separated	0	0	1	0,5
In a relationship	26	13,2	24	12,4
Children				
Yes	88	44,7	71	36,8
No	109	55,3	122	63,2
Sum	**197**	**100**	**193**	**100**

Measures

Entrepreneurial intention was measured by one item: I plan to start my own business within the next 3 years. 5-points Likert response scale (1 strongly disagree, 5 strongly agree).

Entrepreneurial risk perception was measured by one item: To what extent you agree or disagree with the statement that Entrepreneurship means a big/considerable risk" 5-points Likert response scale (1 strongly disagree, 5 strongly agree).

Entrepreneurial individual resources were measured by 6 items. **Internal entrepreneurial resources** were measured by 4 items on: personality, skills, education and experience (Personality: I have sufficient personal qualities to become a successful entrepreneur; Skills: I have sufficient skills to become a successful entrepreneur; Education: I have sufficient education to become a successful entrepreneur; Experience: I have sufficient experience to become a successful entrepreneur). **External entrepreneurial resources** were measured by 2 items on: financial and social capital (Financial Capital: I have sufficient financial capital to start a business; Social Capital: I have sufficient social contacts to start a business). Respondents were asked to express their agreement or disagreement with the following statements using the 5-points Likert response scale (1 strongly disagree, 5 strongly agree).

Research questions

The current paper aims to contribute to the studies of entrepreneurship by evidence on the interaction between entrepreneurial intentions, risk perception and entrepreneurial resources. Furthermore, the context of employment and unemployment status is considered. The following research questions were formulated:

1. Do employed and unemployed people differ in their entrepreneurial intentions?

2. Do they differ in the entrepreneurial risk perception?

3. Do employed and unemployed people see their entrepreneurial resources differently?

4. Is there a correlation between risk perception and entrepreneurial intention and is it significant for both groups of respondents (employed and unemployed)?

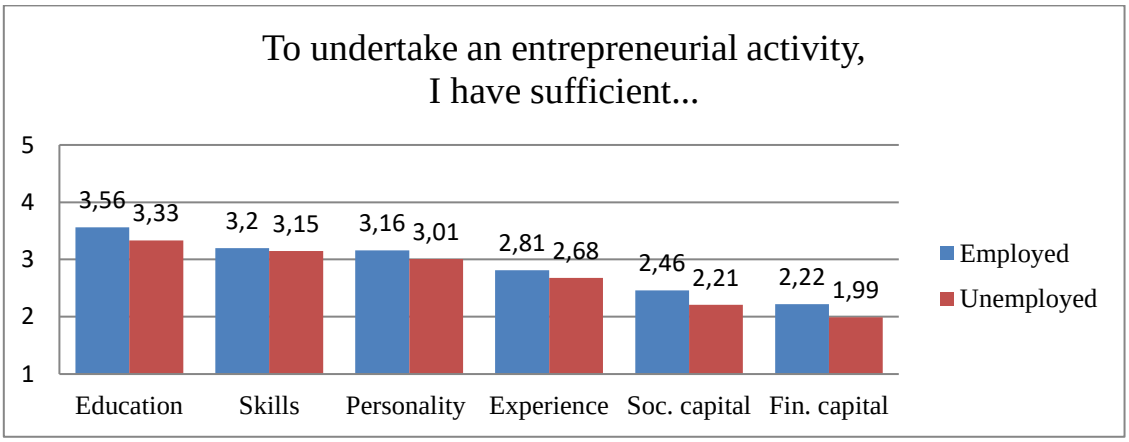
5. Is there a difference between the employed and unemployed in terms of the associations between the entrepreneurial resources and the intention to enterprise?

6. Is there a difference between the employed and unemployed in terms of the associations between the entrepreneurial resources and the entrepreneurial risk perception?

7. Do internal and external resources and the employment status stand as predictors of entrepreneurial risk perception and entrepreneurial intention?

Results

The first and second research question inquired about differences between the employed and unemployed in entrepreneurial intention and in the perception of entrepreneurship as a risk. The results show that the employed and unemployed people in our sample did not differ significantly either in intention or in risk perception. The value of mean score for the entrepreneurial intention was M=2,38 (SD=1,29) for unemployed and M=2,46 (SD=1,22) for employed, which was below the middle point of 5-point response scale indicating that they were not planning about starting a new business much. The value of the mean score for the entrepreneurial risk perception was M=3,85 (SD=0,96) for the unemployed and M=3,97 (SD=1,02) for the employed, which was above the middle point of 5-point response scale; indicating that there is a shift in risk perception towards a higher risk aversion, i.e. the sample is not risk neutral on average but more risk averse when considering entrepreneurship.



Graph 1: Mean values of the responses about individual entrepreneurial resource and comparison of them between employed and unemployed.

The third research question was addressed by comparing the subjective perception of the entrepreneurial resources sufficiency where employed and unemployed "created" the same ranking starting with their internal resources: education, skills, relevant personality characteristics and experience ending with two external resources: sufficient social capital and needed financial capital. Independent samples t-test revealed significant differences between employed and unemployed respondents in the availability of their own resources in education, social capital and financial capital. In all cases employed respondents reported a higher level of the entrepreneurial resources. Graph 1 shows that both employed and unemployed respondents reported sufficient education, skills and personality characteristics all above the middle point of 5-point scale. On the other hand, experience, social capital and financial capital evaluated by respondents under the middle point of the scale indicated insufficiencies in these resources. When comparing employed and unemployed in internal and external entrepreneurial resources, significant differences were found in the case of external resources. See table 3.

Table 3: T-test results of comparison employed and unemployed respondents in internal and external resources for enterprising

Resource	Status	N	Mean	SD	t	sig
internal_resources	employed	197	3.182	.816	1,658	0,098
	unemployed	193	3.041	.864		
external_resources	employed	197	2.340	1.041	2,367	0,018
	unemployed	193	2.103	.926		

The research question number four was answered with an interesting outcome. The results of Pearson´s correlation analyses confirmed a significant negative correlation between entrepreneurial intention and perceived risk for unemployed respondents (r=-0,219**), while for employed respondents that relationship was not significant (r=-0,087; see row 1 in table 3).

The fifth research question was formulated to find out whether there was a difference between employed and unemployed in interplay between the entrepreneurial resources and the intention to start up a new business? In the sample of unemployed, the correlations between intention for enterprising and individual´s resources were significant in both types of

resources- internal and external. The same was true for the sample of employed respondents. The correlations coefficients were higher in the case of the sample of unemployed (see table 4).

Table 4: Correlation coefficients for entrepreneurial intention and entrepreneurial resources

	Entrepreneurial intention	
	Unemployed	**Employed**
Perceived entrepreneurial risk	-0,219**	n.s.
Perceived internal entrepreneurial resources	0,550**	0,452**
Perceived external entrepreneurial resources	0,502**	0,215**

**p<0,01 level

The sixth research question was formulated to find the answer on whether there was a difference between the employed and unemployed in interplay between the entrepreneurial resources and the perceived risk? The entrepreneurial risk perception of unemployed correlated significantly negatively with external resources (financial and social capital). The risk perception of the employed correlated significantly negatively with both external resources and internal resources (see table 5).

Table 5: Correlation coefficients for perceived risk and entrepreneurial resources

	Perceived entrepreneurial risk	
	Unemployed	**Employed**
Perceived internal entrepreneurial resources	n.s.	-0,222**
Perceived external entrepreneurial resources	-0,284**	-0,310**

**p<0,01 level

The seventh research question was answer by applying liner regression analysis. The regression model for predictors of entrepreneurial risk perception (Table 6) was significant and explained 8.5% of variance. External resources and employment status represented significant predictors of entrepreneurial risk perception.

Table 6: Results of linear regression for entrepreneurial risk perception as dependent variable

	B	**S.E.**	**Beta**	**t**	**Sig.**
(constant)	4.935	.248		19.931	.000
internal resources	-.033	.066	-.028	-.501	.616
external resources	-.286	.056	-.285	-5.119	.000
Status (dummy)	-.192	.097	-.097	-1.975	.049

Dependent Variable: entrepreneurship as a risk; Status (dummy): employed 0, unemployed 1
Model sig: 0,000; Adjusted R Square=0,085; F=13,002

Regression model for entrepreneurial intention (Table 7) was significant and explained 25.9 % of variance. Internal and external resources both stood as significant predictors of entrepreneurial intention.

Table 7: Results of linear regression for entrepreneurial intention as dependent variable

	B	S.E.	Beta	t	Sig.
(constant)	-.076	.281		-.270	.787
internal resources	.649	.074	.435	8.731	.000
external resources	.175	.063	.138	2.759	.006
Status (dummy)	.060	.110	.024	.540	.590

Dependent variable: entrepreneurial intention; Status (dummy): employed 0, unemployed 1
Model sig: 0,000; Adjusted R Square=0,259; F=46,320

Discussion

This paper contributes to the field of entrepreneurship studies by proposing that individual resources are relevant in the research of entrepreneurial intention and risk perception. We summarize the main findings in the context of the employment status.

Employed respondents in our sample did not indicate serious intentions to undertake entrepreneurial activities within the following 3 years and they stated quite a high perception of risk related to entrepreneurship. Surprisingly, the association between entrepreneurial intention and risk perception was not significant. This is an indication that the lower level of entrepreneurial intention is not related to the more intense perception of the risk. This finding could be explained as the employed being content with their work situation and feeling secure to such extent that they do not consider changing it. It also mirrors the GEM 2017 results for Slovakia (Table 1) with a relatively low percentage of entrepreneurial intentions. Regarding the entrepreneurial resources, employed respondents reported a higher level of internal entrepreneurial resources than external. The entrepreneurial intention of employed was associated with both internal and external entrepreneurial resources. Moreover, both internal and external entrepreneurial resources were confirmed as significant predictors of entrepreneurial intention and they contribute to entrepreneurial potential (Santos et al., 2013). The entrepreneurial risk perception of employed respondents was associated with both internal and external entrepreneurial resources but negatively. When identifying predictors of entrepreneurial risk perception, external resources and employment status turned out predicting risk perception significantly and negatively. Interestingly, being employed acted as a significant predictor of higher entrepreneurial risk perception.

Similarly, unemployed respondents in our sample did not indicate serious intention to undertake entrepreneurial activities within the next 3 years and they also perceived quite a high level of risk related to entrepreneurship. The association between entrepreneurial intention and risk perception was significant and negative, which indicates that the lower level of entrepreneurial intention could be affected by a quite intense perception of the risk. This is in line with other studies where fear of failure and financial instability acted as barriers to entrepreneurship (Shinnar et al., 2012; Thurik et al., 2008). Regarding entrepreneurial resources, similarly to the sample of employed, unemployed respondents reported a higher level of internal entrepreneurial resources than external. The entrepreneurial intention of the unemployed was associated with both internal and external entrepreneurial resources. The entrepreneurial risk perception of unemployed respondents was associated with the external entrepreneurial resources only and the relationship was negative. When identifying predictors of entrepreneurial risk perception, external resources and employment status turned out predicting risk perception significantly and negatively. Interestingly, being unemployed acted as a significant predictor of lower entrepreneurial risk perception.

Our evidence provides an initial indication for understanding the preconditions of entrepreneurial intentions and how these can be altered by interventions seeking to support individuals in the uptake of entrepreneurial activities. Our findings indicate that internal and external resources for enterprising act as an important factor in strengthening entrepreneurial intentions. Moreover, external resources could be useful as a significant agent in lowering entrepreneurial risk perception. However, based on our findings it is not possible to conclude whether the perceived resources would be used in an efficient way.

Despite the mentioned contributions, the current paper suffers from several limitations that need to be addressed. The simple design of the paper in the sense of the applied measures restricts the finding to a narrow scope. For a deeper understanding more variables should be applied in a future study. Inspecting selected variables by correlation analysis was an intentional choice to understand and discuss the interplay of the factors in a national (country) context. This is an important stage for adapting a model of entrepreneurship behaviour that would explain patterns observed in Slovakia.

Following up on this initial analysis we would like to extend the research by a focus on barriers. Shinnar et al. (2012) examined the perception of three types of barriers to entrepreneurship: lack of support, fear of failure, lack of competency. We have shown indications for such barriers in the current sample and it would be of interest to structure and add measures accordingly. We believe that perceived risk is a significant and meaningful measure relevant in explaining entrepreneurial intentions not only in countries like Slovakia but it might be interesting to study cross-cultural differences in the field. An additional dimension would be of interest based on a sample of entrepreneurs including the self-employed. Another research intention we plan to develop is to work with the concept of Opportunity identification competence (Baggen, Lans, Biemans Harm, Kampen, & Mulder, 2016; Studená & Fedáková, 2016). This requires experimental data collection with individuals. The opportunity identification competence is a potentially interesting link referring to the reported importance of an individual competences and skills. While the measure of perceived opportunities varies across countries in an interesting way, it does not seem to be linked with the intentions or actual entrepreneurial intensity. Opportunity identification competence is a way forward to measure the connections with intentions and address the possibilities of actually support learning for opportunity identification competence.

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Fear of crime, security perception and preventive behavior

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Abstract:
The presented study analyses the social and personal predictors of the perception of safety, as a cognitive-emotional image of safety conditions in a defined living space of an individual. There is no consensus on the definition and measurement of security as a dependent variable. Particular tools are used to monitor the risk of victimization, fear of crime and preventive behavior. The aim of the study is to analyse the effect of vulnerability, victimization and contextual variables (ethnic threat, neighborhood issues) on the security perception, fear of crime, and preventive behavior in Slovakia. The second goal was to verify the impact of other psychological constructs – the need for structure, self-control, and conservatism – on these dependent variables. The sample consists of 1,447 respondents from Slovakia.
The research design of the study consists of the 6 regression models. For each dependent variable (3) 2 models were created – with and without the presence of psychological factors. In all the models, the same variables were used to compare the predictor power.
The presented results show that the variables of Vulnerability and previous Direct Victimization had a significant impact on the security perception. Ethnic Threats was also significant. From the psychological predictors, the Self-Control and Conservatism were significant. However, in relation to security perception, Age, Neighborhood Problems and Need for Structure have been demonstrated as not significant. The regression analysis results of the Fear of crime brought a different structure of significant predictors compared to the security perception. In relation to Fear of crime, the predictors of Age, Victimization, and Ethnic Threats were not significant. However, Neighborhood Problems were highly significant. All the psychological predictors monitored contributed to the explanation of the Fear of crime. Preventive behavior was most predicted by previous victimization as well as Age and Gender. Predictors of preventive behavior are more personality characteristics of respondents than contextual ones. Despite the low explanatory value of both models, there is a completely different structure of predictors of preventive behavior compared to safety perceptions and fear of crime. While gender is a universal predictor of all models, age was only relevant for preventive behavior. The predominant predictor of preventive behavior as well as perceived safety is the previous victimization of the respondent, which does not apply to fear of crime. The results of the study confirmed a different structure of the predictors of security perception, fear of crime, as well as preventive behavior. Almost all the traditionally studied predictors were significant for the security perception. It has been confirmed that vulnerable groups, particularly women, the elderly, respondents from larger cities, and the victimized are more likely to have a lower level of security perception; which corresponds to a number of findings that repeatedly confirm the significant impact of the vulnerability factors on the security perception. Also, problems in the neighborhood, such as vandalism, graffiti and rubbish, were a significant predictor on an individual level. For the respondents, areas with an increased concentration of neighborhood issues are an indicator of the absence of social control. Similarly, the negative perception of immigrants may be caused by a tendency to associate the members of immigrant groups with the specific forms of violent crimes, but also with economic threats, such as competition in the labor market, housing, or burden on social security systems. Although the impact of the psychological variables on the security perception was significant, their total contribution to the amount of the variance explained was negligible (2.4%). However, using the same predictors for the fear of crime, their value reached 10.2%. Fear of crime was explained more by the individual's characteristics than the contextual variables. Exceptions were Age and Victimization. While age is known to have no linear relation to the perception of security,

the experience with crime produces contradictory findings. It is therefore clear that the security perception and the fear of crime are closely related and are saturated with similar predictors, but they are not identical constructs. In the case of preventive behavior, we have noticed a very small proportion of the explained variance, indicating the causality of non-traditional predictors. Preventive behavior in this context appears to be a significantly different construct as compared to the security perception and fear of crime. The question of the impact of other psychological constructs on the preventive behavior remains open.

Keywords:
Fear of crime. Security perception. Preventive behavior.

Introduction

Individual security assessments are most often conceptualized as a fear of crime, the risk of victimization, or as perception or feeling of (in) security. So far there is no consensus on the definition and measurement of security as a dependent variable. Particular tools are used to monitor the risk of victimization, fear of crime and preventive behavior. Research on the risk of victimization is dominated by the cognitive approach; emotional research is more typical for fear of crime. However, in the two cases, both constructs are interdependent and the difference between them has been empirically impossible to verify (Kentoš, 2014). The behavioral approach should overcome the limitations of the previous practices as it focuses on the real behavior rather than the hypothetical alternatives of responses (Warr, 2000). On the mentioned assumption, empirical evidence is still missing, and it is completely absent in Slovak conditions. Mainstream research is aimed at identifying independent variables that explain these concerns. The previous research on security perception predictors has focused on individual factors. Research on security most often contains vulnerability variables as the most common predictors. They are based on the assumption that certain groups are more vulnerable to threats and do not have as much control over the situation as other groups (Hale, 1996). Specifically, women, seniors, minority members and people with a lower social status tend to worry more in terms of their social or physical vulnerability, although their victimization is less likely (Nieuwbeerta, 2002, Pantazis 2000). Victimization includes victims who were directly at risk of attack by the perpetrator or experienced some loss related to victimization (Clark, 2003; Mesch, 2000). According to the above findings, following a direct victimization incident, the risk sensitivity increases, and therefore the victims become accustomed to defining situations as dangerous (Mesch, 2000).

In addition to the personal experience of crime, generated representations can also be a source of concern. These are the concerns produced by the media and individuals about the causes, connections and consequences of security incidents. Overall, however, the impact of previous victimization has not been clearly confirmed by research. Part of the studies confirmed the given assumption; other studies documented the relationship of victimization and fear of threats only partially, or they did not confirm the assumed relationship at all (Hale, 1996). In addition to the above, contextual factors such as crime rate, economic problems, settlement size, and ethnic heterogeneity that stimulate the fear of crime (Rountree, Land, 1996) also contribute to the security perception.

The research of psychological constructs in relation to security perception was limited to a few predictors. In the area of coping, the dominance of the avoidance strategy (Fyhri, Backer-Grondahl, 2012), an increased level of anxiety (Vitteli, Endler, 1993) and neuroticism (Sjöberg, 2003) were identified. Overall, however, these psychological predictors did not reach the explanatory power of individual factors.

Objective

The aim of the study was to identify the impact of vulnerability, victimization and contextual variables (ethnic threat, neighborhood issues) on the security perception, fear of crime, and preventive behavior in Slovakia. Our objective was not to compare the constructs with each other but to identify the variables they are saturated with through the same process. A particular goal was to verify the impact of other psychological constructs, which brought the Eurojustis data – the need for structure, self-control, and conservatism – on these dependent variables.

Research sample

The research sample consisted of 1,447 respondents from Slovakia, aged between 15 and 91. It was a stratified random sampling and, in parallel, the basic population parameters – gender, age and education – were monitored. The mean age of respondents was 49.28 years (SD = 16.53). Of the total number of respondents, 46.4% were men and 53.6% were women.

Research method

Research design

For the analysis purpose, we created 6 models where we verified the explanatory power of each predictor by means of regression analysis. For each dependent variable (3) we created 2 models – with and without the presence of psychological factors. In all the models, we used the same variables to compare the predictor power.

Dependent variables

The Security Perception variable was represented by the item: How safe do you feel walking alone in this area after dark? (calculated from the scale of 1 to 4, where 1 means “very safe” and 4 “not safe at all”). The variable of Fear of crime was made up of 4 items: To what extent are you afraid that 1. Someone would shout at you or harass you on the street?, 2. You would be assaulted or robbed on the street?, 3. You would be physically attacked on the street?, 4. Someone would break into your home and steal something? (calculated from the scale of 1 to 4, where 1 means “I'm really not afraid”, and 4 means “I'm very afraid”; Cronbach's alpha = 0.892). Preventive Behavior was examined by means of 4 items: 1. Avoid using public transport; 2. Avoid certain streets or areas; 3. Avoid certain people in certain streets or areas; 4. Adopt a „streetwise“ and confident persona (calculated from the scale of 1 to 4, where 1 represents “never” and 4 represents “most of the time”; Cronbach's alpha = 0.821)

Independent variables

The first group was made up of variables of individual level: gender, age, size of residence, ethnic threats, neighborhood problems, and victimization. The scale of Ethnic Threats included the following items: To what extent do you think Slovakia should allow people of the same race or ethnic group as most Slovaks to come and live here? Would you say that it is generally bad or good for the Slovak economy that people come to live here from other countries Is Slovakia made a worse or a better place to live by people coming to live here from other countries? (Cronbach's alpha = 0.858). The scale of Neighborhood Problems: Vandalism rate and the amount of graffiti in the immediate vicinity. The amount of rubbish and mess in the immediate vicinity. Cronbach's alpha = 0.738. Victimization: Have you or someone in your household

been the victim of burglary or physical assault in the last 5 years? The second group consisted of the selected psychological constructs that replicated the scales used in the Eurojustis research. The Self-Control Scale – consists of 8 items: 1. When I am really angry, other people better stay away from me. 2. I often act on the spur of the moment without stopping to think. 3. I sometimes find it exciting to do things that may be dangerous. 4. Don't devote much thought and effort preparing for the future. 5. Sometimes I will take a risk just for the fun of it. 6. I often try to avoid things that I know will be difficult. 7. I never think about what will happen to me in the future. 8. I lose my temper pretty easily. (Cronbach's alpha = 0.746). The scale of Conservatism – consists of 10 items: 1. We live in a dangerous society in which good, decent, and moral people's values and way of life are threatened by bad people. 2. We live in a society that is unsafe, unstable, and insecure where good and decent people are the exception rather than the rule. 3. People don't know the difference between right and wrong anymore. 4. I'm worried about where morality is headed in society. 5. Obedience and respect for authority are the most important values children should learn. 6. The authorities should be obeyed because they are in the best position to know what is good for our country. 7. Traditions are the foundation of a healthy society and should be respected. 8. It is important that we preserve our traditional values and moral standards. 9. It is necessary to use force against people who are a threat to authority. 10. Our society needs tougher government and stricter laws. (Cronbach's alpha = 0.896). The Need for Structure scale consists of 5 items: 1. I enjoy having a clear and structured mode of life. 2. I don't like to go into a situation without knowing what I can expect from it. 3. I usually make important decisions quickly and confidently. 4. I don't like situations that are uncertain. 5. I dislike questions which could be answered in many different ways. (Cronbach's alpha = 0.866).

Results

Security perception

Model 1. presents the impact of the predictors of vulnerability, victimization, contextual variables, and psychological constructs on the security perception. Model 2. includes the same predictors without psychological constructs.

Table 1: Regression analysis of predictors of security perception

	Model 1			Model 2		
Variables	B	SE B	Sig.	B	SE B	Sig.
Constant	1.405	.189	.000***	1.258	.145	.000***
Gender (M=0, F=1)	.193	.034	.000***	.236	.033	.000***
Age	.002	.001	.086	.005	.001	.000***
Size of Residence	-.153	.015	.000***	-.147	.014	.000***
Satisfaction with Income	.221	.021	.000***	.221	.020	.000***
Direct Victimization	.551	.064	.000***	.538	.062	.000***
Ethnic Threats	-.011	.003	.000***	-.010	.003	.000***
Neighborhood Problems	.017	.017	.303	.034	.016	.032*

Need for Structure	.006	.006	.257
Self-Control	-.015	.004	.000***
Conservatism	.013	.003	.000***

The presented results show that the variables of Vulnerability and previous Direct Victimization had a significant impact on the security perception. Ethnic Threats was also significant. From the psychological predictors, Self-Control and Conservatism were significant. However, in relation to the security perception, Age, Neighborhood Problems and Need for Structure have been demonstrated as not significant. Overall, the model explained 25.2% of the variance, which is the usual value in this area. Consequently, we focused on explaining the differences in security perception among individuals without the influence of the psychological predictors. The resulting model showed similar relationships, explaining 22.8% of the scattering, and all the predictors had a significant relationship to security perception.

Fear of crime

Model 3. presents the impact of the predictors of vulnerability, victimization, contextual variables as well as psychological constructs on fear of crime.

Table 2: Regression analysis of predictors of fear of crime

	Model 3			Model 4		
Variables	B	SE B	Sig.	B	SE B	Sig.
Constant	-1.092	.862	.205	-2.950	.705	.000***
Gender (M=0, F=1)	2.095	.155	.000***	2.704	.159	.000***
Age	-.003	.005	.567	.030	.005	.000***
Size of Residence	-.649	.068	.000***	-.613	.071	.000***
Satisfaction with Income	.805	.097	.000***	.961	.100	.000***
Direct Victimization	-.107	.290	.712	-.077	.302	.799
Ethnic Threats	-.003	.012	.784	-.010	.013	.432***
Neighborhood Problems	.615	.076	.000***	.807	.078	.000***
Need for Structure	.190	.026	.000***			
Self-Control	-.165	.016	.000***			
Conservatism	-.177	.016	.000***			

The regression analysis results brought a different structure of significant predictors compared to the security perception. In relation to Fear of crime, the predictors of Age, Victimization, and Ethnic Threats were not significant. However, Neighborhood Problems were highly significant. All the psychological predictors monitored contributed to the explanation of the Fear of crime. The model explained 40% of the variance. As illustrated in Table 2, the model replicated the same structure as the previous model, with its explanatory value reaching 29.8%.

Preventive behavior

Table 3: Regression analysis of predictors of preventive behavior

	Model 5			Model 6		
Variables	B	SE B	Sig.	B	SE B	Sig.
Constant	7.127	.954	.000***	4.143	.733	.000***
Gender (M=0, F=1)	.619	.171	.000***	.515	.165	.002**
Age	.021	.006	.000***	.025	.005	.000**
Size of Residence	-.056	.075	.456	-.093	.074	.204
Satisfaction with Income	.187	.106	.079	.420	.104	.000***
Direct Victimization	1.267	.321	.000***	1.224	.315	.000***
Ethnic Threats	.001	.013	.944	-.005	.013	.710
Neighborhood Problems	.152	.084	.070	.191	.081	.018*
Need for Structure	.167	.028	.000***			
Self-Control	-.084	.018	.000***			
Conservatism	-.073	.018	.000***			

Using identical predictors for the construct of preventive behavior, the value of the explained variance dropped to the level of 9% (Model 5) and 5% (Model 6). Preventive behavior was most predicted by previous victimization as well as Age and Gender. Predictors of preventive behavior are more personality characteristics of respondents than contextual ones. Despite the low explanatory value of both models, there is a completely different structure of predictors of preventive behavior compared to safety perceptions and fear of crime. While the gender is a universal predictor of all models, age was only relevant for preventive behavior. The predominant predictor of preventive behavior as well as perceived safety is the previous victimization of the respondent, which does not apply to fear of crime.

Discussion

The results of the study confirmed a different structure of the predictors of security perception, fear of crime, as well as preventive behavior. Almost all the traditionally studied predictors were significant for the security perception. It has been confirmed that vulnerable groups, particularly women, elderly, respondents from larger cities, and the victimized are more likely to have a lower level of security perception, which corresponds to a number of findings that repeatedly confirm the significant impact of the vulnerability factors on the security perception (Will, McGrath, 1995). Also, problems in the neighborhood, such as vandalism, graffiti and rubbish were a significant predictor on an individual level. For the respondents, areas with an increased concentration of neighborhood issues are an indicator of the absence of social control. Similarly, the negative perception of immigrants may be caused by a tendency to associate the members of immigrant groups with the specific forms of violent crimes, but also with economic threats such as competition in the labor market, housing, or the burden on social security systems (Schlueter, Scheepers, 2010). Although, the impact of the psychological variables on

the security perception was significant, their total contribution to the amount of the variance explained was negligible (2.4%). However, using the same predictors for the fear of crime, their value reached 10.2%. Fear of crime was explained more by the individual's characteristics than the contextual variables. Exceptions were Age and Victimization. While age is known to have no linear relation to the perception of security, the experience with crime produces contradictory findings.

It is therefore clear that the security perception and the fear of crime are closely related and are saturated with similar predictors, but they are not identical constructs. Visser, Scholte and Scheepers (2013), who analyzed both constructs in an international context separately, using the same predictors, also found partial differences. Many of the predictors were either not significant, e.g. education and income, or they had the same effect. Chiricos, McEntire and Gertz, M. (2001), in their study of fear of crime and security perception, also identified several differences in the saturation of both constructs; with the most important factor being the perceived proximity of ethnic minorities to the place of residence which predicted the fear of crime but not the security . Other studies have focused on the relationship between the two constructs in terms of their mutual conditionality. In this context, LaGrange, Ferraro and Supancic (1992) found that security perception is one of the predictors of fear of crime. However, this assumption can also be reversed, i.e. that the fear of crime precedes the security perception (Gabriel, Greve, 2003). From this viewpoint it is clear that there is still no consensus among the authors about the definition of both constructs, and these inconsistencies are also projected into their measurement. In the case of preventive behavior, we have noticed a very small proportion of the explained variance, indicating the causality of non-traditional predictors. Preventive behavior in this context appears to be a significantly different construct as compared to the security perception and fear of crime. The question of the impact of other psychological constructs on the preventive behavior remains open. A benefit of the study is simultaneous comparison of all three dependent variables, which is currently absent in Slovak conditions. The limitation of the study was in particular the selection of psychological predictors that were determined by available dataset.

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Personality traits in relation to the turnover intentions of the qualified employees in the manufacturing industry

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Abstract:
Background: Turnover has a significant negative impact on an organization. This phenomenon can have an impact within an organization; when employees leave there may be a reduction in the productivity of employees who remain because of reduced employee morale. Turnover can affect the organization's overall performance and results (Abbasi, & Hollman, 2008; Tnay, Othman, Siong, & Lim, 2013). The Slovak Republic is one of the countries where the manufacturing industry has expanded, with large manufacturing companies such as Volkswagen Slovakia, a.s., Kia Motors Slovakia, a.s., PCA Slovakia s.r.o., Samsung Electronics Slovakia s.r.o., Schaeffler Skalica s.r.o., and U.S. Steel Košice. Therefore research about turnover and turnover intentions in this area is more than necessary. Turnover is generally described as a voluntary act of leaving a current job, or organization (Milovanovic, 2017). In our study we will deal with personality traits in relation to the turnover intentions of qualified employees in the manufacturing industry. In his meta-analytic study, Zimmerman (2008) notes that in the past, researchers have focused in the context of reducing turnover intentions, on the working environment and its changes, and on how to increase the level of job satisfaction, which is an effective turnover predictor (Griffeth, Hom, & Gaertner, 2000; Zimmerman, 2008), while neglecting the personality aspect. Staw, Bell and Clausen (1986; in Zimmerman, 2008) further underline this gap, pointing out that previous research has focused mainly on situational factors, the characteristics of work as the primary determinant of job satisfaction, with little regard for the dispositional causes of working attitudes.
Maertz and his colleagues (Maertz, & Campion, 2004; Maertz, & Griffeth, 2004) stated that conscientiousness is likely to influence the moral and ethical motivation forces that influence the turnover intentions of individuals. Employees with a higher level of extraversion are more likely to search for social relationships, and thus tend to have more contacts with others within the organization. As a result, extroverts can socialize faster in an organization and adapt to organizational culture (McCrae, & Costa, 1997), and socially integrate and thus have a lower probability of fluctuating tendencies (Maertz, & Campion, 2004, Zimmerman, 2008). Cote (2005) theorizes that those employees who are experiencing negative emotions (such as sadness and anger) are less likely to receive social support from their colleagues, but instead will experience an interpersonal conflict that will increase their level of stress and thus increase the likelihood of turnover. According to the literature, there are several reasons why some staff members are expected to be less likely to fluctuate. The first reason is adaptability and compliance (Maertz, & Griffeth, 2004). The second reason is interpersonal aspects (Zimmerman, 2008) and thirdly, their willingness to obey the rules and aspects of dependency cause employees to perceive a strong commitment to remain in the organization (Maertz, & Griffeth, 2004). Employees with a higher level of openness to experience are more likely to leave the organization to explore other options, no matter how they feel about their work (Zimmerman, 2008). The relationship between aspiration level and turnover tendencies has been explored very little. Bigliardi, Petroni, and Dormio (2005) found that design engineers reported a lower level of turnover intentions when there were adequate opportunities within the organization to satisfy work aspirations. Factors such as the position of an "experienced" employee in the

organization, loss of personal relationships, loss of income, health insurance or costs can all influence the decision to leave the job accepting the choices of uncertainty and risk. Vardmann with colleagues found that the relationship between turnover intentions and turnover is stronger in those with lower risk perceptions than those with a higher level of risk taking (Vardaman, Allen, Renn, & Moffitt, 2008).
Objective: The aim of the paper is to find out what the relationships are between the personality traits and the turnover intentions of qualified employees in the manufacturing industry.
Method: The participants in the research were respondents who were offered a job by our employment headhunting company. These respondents were not looking for jobs at the time of research, but were already employed. They were contacted via the LinkedIn service (on-line anonymous data collection), and offered a specific job position at a place of work in the Slovak Republic. The research sample consists of 229 respondents, of which 63.3% (145) were men and 36.7% (84) were women, aged between 21 and 60 (M = 35.39, SD = 9.50). The respondents were *qualified* employees in the sense of having the requisite special education, experience or qualifications for the jobs offered to them. The employees work in the manufacturing companies which are focused on plastics, automotive parts, and are subcontractors for automotive companies. 53.3% (122) of the respondents at the time of data collection were in a position without management duties, while 46.7% (107) were in a management position. The average length of work experience (overall, not just in their current work) ranged from 6 months to 42 years (M = 13.59, SD = 10.44). In their current jobs our respondents length of employment ranged from newly employed to 30 years (M = 6.83; SD = 6.37). The research tools used in the research was the Scale of Turnover Intentions (Colarelli, Dean, & Konstans, 1987, Kuvaasa, 2006, Chen, Ployhart, Thomas, Anderson, & Bliese, 2011), NEO-FFI (Ruisel, & Halama, 2007) and subscales from GET2 questionnaire (Caird, 2006).
Results: Using Pearson's correlation coefficient and linear regression, we found that within the personality traits there is a positive significant relationship between neuroticism and turnover intentions (r = ,277; p < ,01) ; the higher the level of neuroticism the employee has, the higher the level of turnover intentions. We also found a weak positive relationship between the willingness to risk (r =, 338; p < ,01) and the aspiration level (r = ,206; p < ,01) and the turnover intentions level; the higher the level of willingness to risk and aspiration level, the higher the level of turnover intentions. The personality traits of qualified employees in the manufacturing industry explain approximately one-fifth of turnover intentions variation. We found that neuroticism (β = ,367; p < ,01) and willingness to risk (β = ,309; p < ,01) were significant predictors of turnover intentions among workers. Other personality variables (extraversion, conscientiousness, openness to experience, agreeableness, and aspiration level) did not contribute significantly to explaining the turnover intentions variance.
Conclusion: Neuroticism, level of aspiration and willingness to risk are related to the turnover intentions of qualified employees in the manufacturing industry. Neuroticism and willingness to risk are significant predictors of turnover intentions and, together with other personality traits, explain one-fifth of turnover intentions variation. Cross-sectional data collection can be considered as one of the study's limitations. Due to the nature of the variable (turnover intentions) it would be better to observe this construct for longer periods of time and also observe those employees who have actually experienced turnover. Due to the number of employees in the manufacturing industry within the Slovak Republic, we can not consider our sample as representative. In future research, it would be interesting to observe the turnover intentions of qualified employees in the manufacturing industry within the job positions, since they differ in the nature of the work. The results of such research could be considered more valid. The main benefit of our research is the examination of the turnover intentions of a specific sample - qualified employees in the manufacturing industry - which is very current due to the boom in the manufacturing industry in the Slovak Republic, as staff turnover has far-reaching consequences for the economy and performance of an organization.

Keywords:
Turnover intentions. Personality. Employees. Aspiration level. Willingness to risk. Neuroticism.

Background

Turnover has a significant negative impact on an organization. This phenomenon can have an impact within an organization when employees are leaving; there may be a reduction in the productivity of employees who remain because of reduced employee morale. Fluctuation can affect an organization's overall performance (Abbasi, & Hollman, 2008; Tnay, Othman, Siong, & Lim, 2013). The Slovak Republic is one of the countries where the manufacturing industry has expanded, with large manufacturing companies such as Volkswagen Slovakia, a.s., Kia Motors Slovakia, a.s., PCA Slovakia s.r.o., Samsung Electronics Slovakia s.r.o., Schaeffler Skalica s.r.o., and U.S. Steel Košice. Therefore, research of turnover intentions in

this area is more than necessary. Turnover is generally described as a voluntary act of leaving a current job, job position or organization (Milovanovic, 2017). Price and Mueller (1981 in Milovanovic, 2017) consider turnover as the product of the (non) satisfaction and commitment towards an organization, influenced by intra-organizational factors as well as factors outside the organization (demographic, environmental) (Milovanovic, 2017).

In the context of turnover intentions, constructs such as burnout (eg Huei-Ling, & Venhwei, 2017), work engagement (eg Alfes, Shatz, Truss, Soane, 2012, Gupta, & Shaheen, 2017) commitment to an organization (Jaros, 1997) and work locus of control (e.g., McGee, & McGee, 2016) are connected to our construct. These variables are often studied among the turnover intentions, and are often also investigated in different contexts; including Herda, Lavalle's (2012) burnout syndrome, organizational commitment and turnover intentions (Cannon, & Herd, 2016 - replication of research), and Bakker and Demerouti (2014) in their Job Demand - Resources Model (JD-R) which exhaustively describes a number of variables as the model has changed and evolved since its first versions - including constructs such as burnout syndrome, work engagement and commitment and other variables that we can include in resources or demands of a job. According to some authors (Milovanovic, 2017), job satisfaction is a significant factor in turnover and turnover intentions, pointing to a negative relationship between them (McKnight, Phillips, & Hardgrave, 2009; Huei-Ling, & Ven-hwei, 2017). The last of the variables we consider to be important in the research of the turnover intentions is the conflict between work and family. Carr, Boyar and Gregory (2008) point out that the relationship between work-family conflict and turnover intentions is weakened if work is considered to be of central importance in an employee's life. In general, however, we can expect that the larger the work-family conflict is, the more likely turnover intentions of the employees are (O'Neill, Harrison, Cleveland, Almeida, Stawski, & Crouter, 2009).

In our study, we will deal only with personality traits in relation to the turnover intentions of qualified employees in the manufacturing industry. In his review study, Zimmerman (2008) notes that in the past, researchers have focused in the context of reducing turnover intentions, on the working environment and its changes, on how to increase the level of job satisfaction, which is seen as an effective turnover predictor (Griffeth, Hom, & Gaertner, 2000; Zimmernan, 2008) and neglected the personality. Staw, Bell and Clausen (1986; in Zimmerman, 2008) further emphasise this gap, pointing out that the previous research has focused mainly on situational factors, the characteristics of work as the primary determinant of job satisfaction, with little regard for the dispositional causes of job attitudes.

Maintaining high-performing employees is very important after their recruitment, and scientists should explore if some individuals tend to leave their job regardless of whether they have a working environment tailored to job satisfaction, and whether other employees may be more likely to remain in the job despite not entirely ideal circumstances; precisely here is the possibility for an explanation based on personality traits. In addition to the theoretical importance of understanding the relationship between dispositional features and turnover, it is also important to validate this relationship and use it in practice. While understanding how personality traits affect turnover can lead to a reduction in turnover intentions, organizations also can identify personality traits through personality questionnaires to avoid potential turnover. We briefly describe individual personality factors in the context of turnover tendencies.

Conscientiousness

Maertz and his colleagues (Maertz, & Campion, 2004; Maertz, & Griffeth, 2004) stated that conscientiousness is likely to influence the moral and ethical motivation forces that influence the turnover intentions of individuals. A person who is considering leaving their employer can ask themselves whether they owe anything or have commitments to an organization which

would be violated by their departure. Within the strength of commitment, those who score higher in conscientiousness are more likely to believe that these commitments and obligations exist and are more likely to respect them (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001; Zimmerman, 2008). Conscientious employees are less likely to act impulsively or spontaneously, and instead consider the longer-term consequences of their decisions. A negative relationship of conscientiousness and agreeableness with impulsiveness was found (Eysenck, 1997; Clark, & Watson, 1999), with the impulsive termination of employment as key components in the context of turnover intentions.

Extraversion

Employees with a higher level of extraversion are more likely to search for social relationships; thus tend to have more contacts with others within the organization. Therefore, the extroverts can quickly socialize in the organization and adapt to the organizational culture (McCraae, & Costa, 1997). They are also socially integrated and therefore less likely to have a high level of turnover intentions (Maertz, & Campion, 2004; Zimmerman. 2008). When starting a new job, extraversion has a strong effect on turnover. Despite this assumption, however, there are also contradictory claims, especially due to aspects of sociability; those who have this feature stronger will probably be able to establish and maintain a network of contacts in other organizations as well. Kanfer and Banas (2000, in Zimmerman, 2008) have stated that extraverted individuals are creating and maintaining a wider network of contacts more easily and more intensely, and hence perceive a greater number of alternative employment opportunities.

Emotional stability

Low emotional stability can negatively affect job satisfaction. Employees with low emotional stability are more likely to encode and provide negative information and tend to negatively perceive themselves and the environment (Weiss, & Cropanzano, 1996; Zimmerman, 2008). Maertz and Griffeth (2004) report that those employees who have negative views about the work environment will tend to have higher level of turnover intentions. The low level of emotional stability is associated with a tendency to abandon the goals that cause stress and indecision in a career (Tokar, Fischer, & Subich, 1998; Zimmernann, 2008). Cote (2005) theorizes that those employees who are experiencing negative emotions (such as sadness and anger) are less likely to receive social support from their colleagues, instead they will experience an interpersonal conflict that will increase their level of stress and thus increase the likelihood of turnover.

Agreeableness

According to the literature, there are several reasons why it is believed that agreeable employees will be less likely to leave the job. The first reason is their adaptability and adherence to the rules. Positive relationships reinforce the affective commitment and motivate employees to remain in their employment (Maertz, & Griffeth, 2004). The second reason is the interpersonal aspects of agreeable employees (warmth, care) that make them more successful relationships with others (Zimmerman, 2008). Thirdly, their willingness to abide by rules and aspects of dependence make employees feel a strong commitment to remain in the organization (Maertz, & Griffeth, 2004).

Openness to experience

When discussing the moral/ethical motivation forces influencing the voluntary decision to leave the job, Maertz and Griffeth (2004) claim that those who score high in openness to experience would appreciate changing jobs and thus would be more willing to leave the

organization. Employees with a higher level of openness to experience are more likely to leave the organization to explore other options, no matter how they feel about their work (Zimmerman, 2008).

We have added additional constructs to traditional personality traits to our research that can be related to turnover intentions: the aspiration level of employees and the willingness to take risks.

Aspiration level

According to F. Chorvát (1990 in Popelková, Šišková, & Zaťková, 2010) satisfaction depends on whether one achieves goals corresponding to one's aspirations. This means that if an individual has too high a level of aspirations, with high and demanding ambitions which they cannot achieve, they can feel dissatisfied. Conversely, satisfaction occurs when what has been accomplished is more or less consistent with what was expected. The highest level of satisfaction comes when the individual has reached more than they expected (Popelková, Šišková, & Zaťková, 2010). The relationship between aspirational level and turnover intentions has been explored very little. Bigliardi, Petroni, and Dormio (2005) found that design engineers reported a lower level of turnover intentions when there were adequate opportunities within the organization to satisfy work aspirations.

Willingness to take risks

There is little literature on the role of willingness to take risks in regards to turnover intentions. Vardaman, Allen, Renn, & Moffitt, (2008) point to the negative impact on an organization, such as the reduction in the performance of other employees, the absence of experienced mentors for newly recruited staff, and the financial costs involved in selecting a new employee. Just a little focus is given to the losses that may occur to an employee who decides to leave their job. Factors such as the position of an "experienced" employee in the organization, loss of personal relationships, loss of income, and health insurance costs, can all influence the decision to leave the job along with the choices of uncertainty and risk. It was found that the relationship between turnover intentions and turnover is stronger for those with lower risk perceptions as well as for those who are more prone to risk (Vardaman, Allen, Renn, &Moffitt, 2008).

Goal

The aim of the paper is to find out what the relationships between the personality traits and the turnover intentions of qualified employees in the manufacturing industry are. Based on the theoretical backgrounds, we assume that conscientiousness, extraversion, agreeableness, openness to experience, aspiration level and willingness to take risks will have a positive relationship on turnover intentions, while neuroticism will have a negative relationship on turnover intentions.

Research sample

The participants in the research were respondents who were offered a job by our employment headhunting company. These respondents were not looking for jobs at the time of research, but were already employed. They were contacted via the LinkedIn service (on-line anonymous data collection), and offered a specific job position at a place of work in the Slovak Republic. The research sample consists of 229 respondents, of which 63.3% (145) were men and 36.7% (84) were women, aged between 21 and 60 (M = 35.39, SD = 9.50). The respondents were *qualified* employees in the sense of having the requisite special education, experience or qualifications for the jobs offered to them. The employees work in

the manufacturing companies which are focused on plastics, automotive parts, and are subcontractors for automotive companies**.** 8.9% (89) of the respondents reported a permanent residence in a towns of over 50,000 inhabitants, 22.7% (52) in towns between 10,000 and 49,999 inhabitants, 13.1% (30) in towns between 2,000 and 9,999 inhabitants and 26.3% (58) in places up to 1,999 inhabitants. 53.3% (122) of respondents were in a position without management responsibilities while 46.7% (107) were in management positions. The average length of work experience (overall, not just current employment) ranged from 6 months to 42 years (M = 13.59, SD = 10.44). In current employment, our respondents employment tenure ranged from newly employed to 30 years (M = 6.83; SD = 6.37).

Methods

The Turnover Intentions Scale was created based on existing literature. Items of the scale were choosen from already used methods – see for example, Colarelli, Dean, & Konstans, 1987; Kuvaasa, 2006, Chen, Ployhart, Thomas, Anderson, & Bliese, 2011.

Together, it contains six items: "I'm asking people about job opportunities", "My current work does not meet my important personal needs", "Sometimes I think about leaving this organization", "Opportunities for achieving my most important goals are very often threatened in my work", "I used to look for a job position with another employer", "I think very often I will become an entrepreneur" along with a five-point scale response option with numerical and verbal anchors from 1 (completely disagree) to 5 (totally agree). The items of the scale were translated to Slovak and then translated to English by two independent English-speaking translators.

NEO-FFI - The questionnaire consists of five subscales; each scale is saturated with twelve items. This questionnaire consists of 60 statements, where the respondents choose their answers from the scale of 1 (strongly disagree) up to 5 (strongly agree). The authors of the Slovak version of NEO Five-factor Personality Inventory are Imrich Ruisel and Peter Halama (2007). The questionnaire measures five personality dimensions: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness).

GET2 - General Measurement of Enterprising Tendency 2 - In this questionnaire, respondents answer yes or no to 54 items that are divided into five subscales: need for success (aspirations), need for autonomy, creative tendencies, willingness to take risks and locus of control. For the purposes of our research, we used a subscale of the aspiration level (11 items) and willingness to take risks (13 items) (Caird, 2006). This questionnaire was also used in Slovak conditions (e.g. Mesárošová, & Mesároš, 2013; Holienka, Holienková, & Gál, 2015)

The inner consistencies (Cronbach's alpha) are shown in Table 1.

Statistical analyzes

We used G * Power (Faul, Erdfelder, Lang, Buchner, 2007, 2009) to calculate the effect strength and the appropriate size of the research sample for the correct use of statistical methods. IBM SPSS Statistics 21 and JASP were used for statistical analysis. Pearson's correlation coefficient was used to determine the related personality traits and turnover intentions. Linear regression (the Enter method) was used to determine the predictive power of personality traits in relation to the examined variable. The conditions for the use of methods have been met (normality, extreme cases, linear relation between turnover intentions and personality characteristics - scatterplot, homoscedasticity, size of the research sample: number of predictors) (Pallant, 2013; Field, 2017).

The results

First, we present in Table 1 the descriptive characteristics of the variables we will work with: mean, standard deviation, minimum, maximum, skewness and kurtosis, scale reliability.

Table 1: Descriptive Statistics of Constructs

	M	SD	Skewness	Kurtosis	Min	Max	Number of Items	Reliability
Turnover Intentions	19,54	4,75	-,533	-,336	6	28	6	,701
Conscientiousness	37,11	7,38	-,585	-,349	16	48	12	,886
Neuroticism	17,96	7,01	,134	-,468	2	34	12	,761
Extraversion	31,15	5,95	-,151	,288	14	48	12	,721
Openness to Experience	26,73	5,14	-,195	,312	9	39	12	,716
Agreeableness	27,06	5,10	-,502	,667	9	38	12	,688
Aspiration Level	7,07	1,55	,436	,051	4	11	11	,633
Willingness to Take Risks	6,75	1,73	,356	,422	3	12	13	,858

N = 229; Missing Values = 0

Then we examined the relationship between the turnover intentions of qualified employees in the manufacturing industry and their personality traits. The results are shown in Table 2.

Table 2: Correlation between Turnover Intentions and Personality Traits

	1.	2.	3.	4.	5.	6.	7.
1. Turnover Intentions	1						
2. Conscientiousness	-,025	1					
3. Neuroticism	,277**	-,446**	1				
4. Extraversion	-,055	,443**	-,349**	1			
5. Openness to Experience	-,007	,033	-,168*	,163*	1		
6. Agreeableness	-,031	,293**	-,400**	,234**	,040	1	
7. Aspiration Level	,206**	-,098	,137*	-,083	-,079	,153*	1
8. Willingness to Take Risks	,338**	-,066	,092	-,132*	,148*	-,083	,352**

**p < ,01; *p < ,05

Within the personality traits, there is a positive significant relationship between neuroticism and turnover intentions (r = ,277; p < ,01) ; the higher the level of neuroticism, the higher the level of turnover intentions. We also found a weak positive relationship between the willingness to take risks (r = ,338; p < ,01) and the aspiration level (r = ,206; p < ,01) and the level of turnover intentions; the higher level of aspiration and willingness to risk, the higher level of fluctuation tendencies.

Subsequently, we analyzed the data using linear regression (the Enter method). The regression model was significant - F(7,221) = 7,922; p < ,01. The Durbin-Watson test for the model with seven predictors was 1,687 (critical value 1,613; p < ,01) (Savin, & White, 1977). Tolerance values varied from ,670 - ,904 and VIF from 1,106 to 1,492. Table 3 lists the resulting regression model coefficients for qualified employees in the manufacturing industry.

Table 3: Regression analysis: Personality Traits as Predictors of Turnover intentions

	Qualified Workers			
	Beta	**b**	**SEb**	**t**
Constant		3,126	3,606	,867
Conscientiousness	,108	,070	,047	1,492
Neuroticism	,335	,227	,050	4,561**
Extraversion	,042	,033	,056	,600
Openness to Experience	-,006	-,005	,058	-,091
Agreeableness	,079	,074	,064	1,150
Aspiration Level	,053	,161	,208	,776
Willingness to Take Risks	,309	,847	,183	4,624**
R^2 (Adj.)	,201			

*p < ,05; **p < ,01

The regression model gave a 20.1% variance of turnover intentions of qualified employees in the manufacturing industry. The personality traits account for approximately one-fifth of turnover intentions variance. We found that neuroticism (β = ,367; p < ,01) and willingness to take risks (β = ,309; p <,01) were significant predictors of turnover intentions of employees; the higher the level of neuroticism and the willingness to risk, the higher the level of turnover tendencies among employees.

Discussion

At times when job vacancies exceed demand, qualified workers have the option of alternative jobs. The employer should therefore be aware of the mechanisms by which a high-quality employee will remain in their job. The aim of the paper was to find out what the relationships between the personality traits and turnover intentions of qualified employees in the manufacturing industry are. Zimmerman (2008) in his review study pointed out that as part of turnover intentions, researchers focused on situational factors and neglected personality traits. We assumed that neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness would be related to employees' turnover intentions. This has only been shown in neuroticism (r = ,277; p < ,01); the higher the level of neuroticism, the higher the level of turnover intentions. Low emotional stability adversely affects job satisfaction (Weiss, & Cropanzano, 1996, Zimmerman, 2008), which ultimately has an impact on employees' turnover intentions. According to Judge and Iliesa (2002), employees with a higher level of neuroticism are more likely to leave a job especially at the beginning of their employment due

to higher demands on them, such as learning new tasks, new work teams, and various responsibilities.

In addition to traditionally investigated personality traits, we also found out what relationship turnover intentions have regarding willingness to risk and the employees' aspiration level. We found a weak positive significant relationship; the more willing the employee is to take risks and has higher aspirations, the higher the level of turnover intentions is. If the employee in the manufacturing industry has a high level of aspirations, and ambitions and demands that they cannot achieve, they are dissatisfied (Popelková, Šišková, & Zaťková, 2010), which may result in thinking about changing jobs. If the employee has such an opportunity within an organization, as Bigliardi, Petroni and Dromio (2005) found, there is a lower level of turnover intentions. In the context of willingness to take risks, we can assume (based on the theoretical origins) that employees who are more willing to take risks (such as being without income, health insurance costs, loss of personal relationships) will also have a stronger relationship between turnover intentions and turnover (Vardaman, Allen, Renn, & Moffitt, 2008). These personality traits are not very well researched regarding turnover intentions. The personality traits of qualified employees in the manufacturing industry account for approximately one-fifth of turnover intentions variance. We found that neuroticism and willingness to take risks were significant predictors of turnover intentions; the higher the level of neuroticism and the willingness to risk, the higher the level of turnover intentions among employees.

One of the study limitations is the cross-sectional data collection. Due to the nature of the variable (turnover intention) it would be advisable to observe this construct for longer periods of time and observe those employees who have actually experienced turnover. Furthermore, due to the number of employees in the manufacturing industry within the Slovak Republic, we cannot consider our sample as representative (despite the medium effect shown in the results). In future research, it would be interesting to observe the turnover intentions of qualified employees in the manufacturing industry and within the job because they differ in the nature of the work. The results of such research could be considered more valid.

Even though there is a relationship between turnover intentions and turnover, these tendencies do not have to be visible in behavior. Our recommendation is to replicate research with these improvements and to verify the functionality as a tool for predicting the turnover intentions of qualified employees in the manufacturing industry, using also variables measuring job satisfaction and conflict of work and family.

The main benefit of our research is the examination of the turnover intentions of a specific sample - qualified employees in the manufacturing industry - which is very current due to the boom in the manufacturing industry in the Slovak Republic, as staff turnover has far-reaching consequences on the economy and performance of the organization.

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Kniha predstavuje *„praktickú príručku pre ľudí, ktorí sa chcú sami vzdelávať“* a obsahovo je postavená na princípoch heutagogiky a konektivistického prístupu k vzdelávaniu. Rozdelená je do siedmich kapitol: 1. hľadanie vlastnej vzdelávacej cesty, 2. metódy učenia, 3. písanie, 4. čítanie, 5. kreatívne techniky, 6. vizualizácie informácii a ich analýza, 7. riadenie času.

Autor publikácie veľmi pútavo a zrozumiteľne ozrejmuje súčasné trendy vo vzdelávaní, len pomaly prichádzajúce aj do našich krajín a upozorňuje, že okrem klasického vzdelávania prostredníctvom čítania tlačených kníh a tvorby poznámok, sa vzdelávanie čoraz viac presúva do online priestoru. Ten vzdelávanému ponúka priam nekonečné možnosti. Či už ide o samotný obsah, formu vzdelávania – online kurzy, sociálne siete, prednášky, ale aj metódy vzdelávania. V úvodnej kapitole sa môže čitateľ dozvedieť ako začať so samovzdelávaním, a to zohľadnením vlastných záujmov a preferencií v učení. Bližšie je popisovaný princíp autonómneho učenia, kde pedagóg (ak nejaký je) ovplyvňuje proces len minimálne. V rámci tohto modelu vzdelávania autor odporúča vytvorenie osobného vzdelávacieho prostredia, a rovnako tak kompetenčného portfólia, na základe ktorého si vzdelávaný vytvára plán vzdelávania.

V druhej kapitole autor postupne prechádza k samotným metódam učenia, pričom rozlišuje *a) klasické metódy*, a to notoricky známe priebežné učenie sa, dril (memorovanie) a jazykový denník, *b) kreatívne metódy* – R/A/F/T, „Viem, chcem vedieť, dozvedel/a som sa a E-U-R a *c) skupinové učenie* prostredníctvom hrania rolí, učenia druhých či párového učenia. Na ďalších stranách sa detailnejšie venuje technikám písania a čítania, ktoré sú v procese vzdelávania kľúčové, ale ich dôležitosť býva podceňovaná či prehliadaná. Úroveň schopnosti čítať (s porozumením) je v procese štúdia individuálneho alebo prebiehajúceho vo väčšom sociálnom priestore rozhodujúca. Písanie zas predstavuje nástroj reflexívneho učenia. V oboch kapitolách opäť možno nájsť viacero techník na efektívne písanie a čítanie textov.

Pozornosť je venovaná taktiež kreativite a kreatívnym technikám, pričom autor chce v čitateľovi podnietiť inovatívny prístup k učeniu, napríklad v nahliadaní na učebný text či zapamätanie naučeného. Spomína sa už pomerne známy a často využívaný brainstorming, či brainwriting fungujúci na podobnom princípe, ale v písomnej forme. Inšpiratívne môžu byť o čosi menej známe techniky Diamant, kolážové metódy, T-graf či 6 farebných klobúkov. Vizuálne typy ocenia predposlednú kapitolu, ktorá sa venuje technikám vizualizácie informácii, ktoré môžu byť vhodnou alternatívou ku klasickému poznámkovaniu.

Vzhľadom na to, že samovzdelávanie vyžaduje značnú mieru vnútornej motivácie, pevnej vôle a sebariadenia, je do knihy vhodne zaradená kapitola o riadení času (v angl. time-management). To sa pri myšlienke efektívnej organizácie svojich činností stáva nutnosťou, nielen v procese samovzdelávania, ale taktiež v práci. Väčšina technik je založených na princípe striedania intervalov, kedy sa jednotlivec intenzívne venuje danej činnosti (napr. 25 minút) a kedy oddychuje (5 minút).

Veľkým prínosom publikácie je, že reflektuje dôležitosť celoživotného vzdelávania. Fokus je kladený predovšetkým na samovzdelávanie v dospelosti a autor stavia na téze, že vzdelávaný sám rozhoduje kedy a čo sa chce učiť, aké má záujmy a potreby. Nato čitateľ, vzhľadom na spôsob, akým sa realizuje formálne vzdelávanie (potlačenie potrieb konkrétneho študenta na úkor dosiahnutia požadovanej normy u všetkých študentov s pomerne direktívnym prístupom pedagóga), nemusí byť zvyknutý. V knihe je uvedených množstvo praktických rád ako zobrať samovzdelávanie do vlastných rúk, počnúc vytvorením plánu vzdelávania, cez zmanažovanie času na učenie až po výber metódy učenia. Ponúkaná je pritom vždy možnosť výberu z viacerých techník. Od klasických až po inovatívne. Vzhľadom nato, že vzdelávanie čoraz intenzívnejšie prebieha v online svete, v prehľadnej tabuľke v závere knihy je možné nájsť množstvo odkazov na veľmi nápomocné aplikácie, weby či online nástroje, ktoré môžu uľahčiť a zefektívniť učebný proces. A navyše mať z učenia a sebarozvoja radosť. Kniha preto môže byť veľmi užitočnou pomôckou obzvlášť pre samoukov, ktorí sa neboja nových efektívnych a tiež inovatívnych spôsobov učenia sa v modernej ére technológií. Či už ide o študentov rôznych stupňov škôl (predovšetkým však vysokých), zamestnancov firmy alebo podnikateľov.

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Conference Report „European Social Survey: 2nd ESS Visegrad Regional Network Conference", Budapest, Hungary, 7th – 8th June 2018

The conference „Central-East European societies on the map of Europe" was organized by the Centre for Social Sciences and Institute of Political Sciences of Hungarian Academy of Sciences, in Budapest. The aim of this regional meeting was to present papers that analyse the state of societies in Central and East Europe from a comparative and/or longitudinal perspective. The talks addressed topics covered by the ESS across Europe and demonstrated how the different countries of the region are approaching or diverging from those of the old EU member states. The project has received funding from the European Union´s Horizon 2020 research and innovation programme.

The conference was opened with a welcome speech by Zsolt Boda, the director of Institute of Political Sciences. A keynote speaker, the director of ESS ERIC, prof. Rory Fitzgerald, summed up all the past achievements of the European Social Survey, and outlined some new challenges for the future.

The conference programme was divided into 6 sessions covering ESS topics. After each session, a roundtable discussion was chaired by an invited expert in the field. The first session, chaired by Dániel Oross (CSS HAS), covered the topic of Evaluation of democracy. Theresa Gessler (the European University Institute) presented evidence for converging expectations of liberal democracy between Eastern and Western Europe; although Eastern Europeans remain more critical on social justice and direct democracy dimensions. Klára Plecitá (Insitute of Sociology CAS) delivered a paper on satisfaction with democracy in Central Europe before and after the recent economic crisis. The third presenter, Jaroslava Pospíšilová (Charles University, Prague) spoke about the sharing of democratic attitudes between the political elites and their voters.

In the second session, chaired by Endré Sík (CSS HAS), the theme of attitudes towards migration was discussed. Piotr Cichocki (University of Poznan) introduced the impact of the 2015 migration crisis in the Visegrad group countries, and outlined the potential of the ESS to look at the relationship between attitudes towards immigrants and refugees. Vera Messing and Bence Ságvári (CSS HAS) sought to integrate various macro and individual level features to explain attitudes towards migration. The final presenter, Ildikó Barna (Elte, Budapest) discussed changes of attitudes towards immigrants in the years of the anti-immigrant campaign in Hungary.

The third session, chaired by Márton Gerő (CSS HAS), covered the issue of political participation and movements. Endre Borbáth (European University Institute) presented the results of an investigation into the relationship between ideology and protest based on individual level data from all waves of the European Social Survey (2002-2016). The question "Which aspect of political sophistry is responsible for bias?" was answered by Veronika Patkós (CSS HAS). The social and psychological profile of higher and lower politically participative ESS respondents in Round 1-7 data was described by Miroslava Bozogáňová (CSPS SAS). The first conference day ended with a walk through Budapest's streets and dinner.

The next day opened with a session on welfare attitudes, chaired by Dorottya Szikra (CSS HAS). Mariusz Baranowski (CSS HAS) talked about possible differences in welfare state attitudes. Kristyna Basna (Institute of Sociology, CAS) focused on attitudes towards social benefits, opinions on taxation and future dependency on social benefits. She presented the results of a multilevel regression analysis of 4th and 8th Round data and World Bank data. The last 20 minutes in the session belonged to Ivana Piterová (CSPS SAS) who analysed 4th and 8th Round data and informed about the rising trend in social solidarity between 2008 and 2016, and about the differences in Northern and Western European countries and V4 countries. She stressed that the level of social differentiation changed in 3 groups of countries over time and outlined the possibility of dividing people into 4 distinct welfare attitude types.

The fifth session explored the determinants of economic competitiveness, and was chaired by Ákos Huszár (HAS CSS). Firstly, Denisa Fedáková (CSPS SAS) compared southern, northern and central European countries in regards to job security. Then, Bence Ságvári (CSS HAS) informed about changes in the patterns of trust, and also challenges in measuring trust across time and different areas. Lastly, Zoltán Ferencz (CSS HAS) delivered a contribution titled "Attitudes about climate change and energy use in Hungary and in East-Central Europe".

The last session, chaired by Vera Messing (CSS HAS), dealt with attitudes towards intersecting inequalities. Ivan Petrušek (Institute of Sociology, CAS) gave a presentation on Support for income redistribution in the Czech Republic. Ridvan Peshkopia (University for Business and technology, Kosovo) discussed the attitudes toward refugees in a larger Europe. The last presentation was given by Ivett Szalma (CSS HAS) who examined social attitudes towards homosexuality in two countries, Romania and Hungary, highlighting many common points but differentiated through religious traditions.

The closing session belonged again to the organizational team from the Hungarian Academy of Sciences and members of ESS ERIC HQ, Rory Fitzgerald and Stefan Swift. They informed about the possibility of publishing a paper in Intersections: East European Journal of Society and Politics, and also about the next conference for ESS data users that will be held in Manheim in April 2019.

To sum up, the conference brought together researchers, mostly from V4 countries, who examine the same topics and are dealing with the same problems. The feedback and suggestions of colleagues led to inspiring discussions and possible future cooperation.

For more information about the conference and programme: https://essv4.weebly.com/

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Conference Report "Czech, Slovak and Czechoslovak 20th Century History XIII: Century of the Republic", Hradec Králové, Czech Republic, 4th – 5th of April 2018

On the 4th and 5th of April 2018, the 13th annual international scientific conference of the younger generation of historians *"Czech, Slovak and Czechoslovak history of the 20th century XIII"* was held. The subheading of the conference *"Century of the Republic"* commemorated the 100th anniversary of the Czechoslovak Republic. The conference took place at the Historical Institute of the Faculty of Arts of the University of Hradec Králové which traditionally has also been the organizer.

The conference was opened by Monika Kabešová, a member of the organizational team of the conference, who is a Ph.D. student at the Historical Institute of the Faculty of Arts of the University of Hradec Králové. Then Jiří Hutečka, the director of the Historical Institute, followed, and welcomed the participants of the conference at the Faculty of Arts of the University of Hradec Králové. During the ceremonial opening of the conference, Veronika Středová, who also works at the Historical Institute, also spoke to the participants. The opening was followed by the presentations of the conference speakers.

The two-day conference program was divided into four blocks. Each conference block was further thematically divided into two rooms. On the first day, papers were presented in the sections: Population, Political Parties (block 1); Gender, Culture (block 2), Thinking and Transport (block 3). On the second day, papers were presented in the sections: the Economy and the Army (block 4). The conference papers were presented in Czech, Slovak and English. Altogether 34 Ph.D. students and young historians from the Czech Republic, Slovakia and the USA took part in the conference.

The Institute of Social Sciences of the Centre of Social and Psychological Sciences of the Slovak Academy of Sciences was represented by two Ph.D. students – Marianna Tkáčová with *"Pull factors of migration – urbanization of the city of Košice in the second half of the 20th century"* and Miroslava Gallová with *"Women of the second half of the 19th and the first half of the 20th century in the light of Slovak historiography".*

The presented papers represented a wide range of the interesting topics. Jana Kasíková from the Charles University presented *"Renewal of the associations after the Second World War and their viable operation on the example of the repatriation action"*. Another interesting topic was *"To a mine for backbreaking work – Rock music in Ostrava in the period of the normalization"* by Tomáš Herman from the University of Ostrava. Peter Tkáč from the Catholic University in Ruzomberok presented *"Supplying the civilian population in eastern Slovakia in the years 1945 – 1946 in the example of the Snina district"*. *"The Czechoslovak Republic and the Near East in the Cold War: the Six-day war 1976"* by Eva Taterová from the Masaryk University was also amongst the presentations.

Each conference block was followed by the commentator's critical evaluation of the presented papers, which was an inspiration for the following discussion.

The commentators were scientists/ historians who are experts in these areas. Their comments were not just a critique of the presented papers but they also brought up new suggestions and valuable commentary. The conference was attended by 10 commentators from several Czech and Slovak universities and other scientific institutions: Richard Pavlovič, Dalibor Státnik, Veronika Středová, Kateřina Portmann, Denisa Nečasová, Zdeněk Doskočil, Stanislav Holubec, Jan Mervart, Jiří Janac and Miloslav Čaplovič.

The whole conference was conducted in a friendly spirit. Most of the presentations were of high quality and were positively evaluated. During the debates, valuable discussions developed among the Ph.D. students, commentators and moderators of the individual blocks. As a result, there has much insight and many recommendations that can help students to improve their dissertation thesis. On the organizational side, the conference met the standard criteria. Only the parallel block sessions could be viewed as problematic, as the participants could not hear all the presented papers. However, the papers will be published in a collective monograph.

More information about the conference can be found at:

https://portal.ff.uhk.cz/historie/ceske-slovenske-a-ceskoslovenske-dejiny-dvacateho-stoleti-94.html

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Conference Report "IOHA 2018 Memory and Narration. The XX. International Oral History Association conference", Jyväskylä, Finland, 18th – 21st June 2018.

The XX. International conference Memory and Narration was organized by International Oral History Association, Finish Oral History Association and Finnish Literature Society SKS in cooperation with the University of Jyväskylä in Finland. The conference took place in the modern building complex called Paviljonki Congress Center. The conference was held during the summer equinox, which is one of the most important holidays in Finland. The days are long in Finland and it never gets completely dark during the night. It is also the time when the nature is at its greenest. Midsummer is regarded as a magical time. The IOHA conference is organized every two years (the last one was in India). The topic of the conference was Memory and Narration, and it was focused on the complex and multi-dimensional nature of oral history, as well as methodological issues concerning the production and analysis of oral histories and life stories. The conference also coincides with the anniversary of two important events in Finnish history: the centennial of the 1918 Finish Civil War and the end of World War One.

The opening ceremony was commenced by Outi Fingerroos, the leader of Finnish oral history association of University in Jyväskylä, followed by Marc Cave, the president of International oral history association and other people from conference organizing committee. 327 participants from all over the world presented their contributions and projects. The most attended representatives were the Finnish participants. The researches came from all over the world – Argentina, Australia, Austria, Barbados, Brazil, Brunei, Bulgaria, Bulgaria, Canada, Cuba, Czech Republic, Egypt, Estonia, France, Germany, Greece, Hungary, Chile, China, India, Iran, Ireland, Japan, Jordan, Kazakhstan, Kosovo, Lithuania, Mexico, Namibia, Nepal, Netherlands, New Zealand, Nigeria, Norway, Philippines, Poland, Portugal, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, Uganda, UK, Ukraine, Uruguay, and the USA.

The extensive programme was divided into 59 sessions according to theme over four days. Keynote lectures of the most prominent participants of the conference dealing with their latest findings were also part of the event. Four keynote speakers spoke at the beginning of each day – Professor Paula Hamilton (Sydney, Australia), Associate Professor Ene Kőresaar (Tartu, Estonia), Professor Alessandro Portelli (Rome, Italy), Dr. Shelley Trower (Roehampton, UK).

Among the main topics of the conference were: oral history and mass digitalization of archives for online access issues; power relations; museums and archives; feminism; women, gender and memory; teaching and educational institutions; reading experience; ethics and methods; histories of childhood and family; new waves of oral history (OH); theatre and OH; art and music; autobiography; literature and design; political changes and memories; transgenerational perspectives of migration; memories of war and of labour and industries; heritage and politics; revolutions; difficult childhood; emotions, testimony and memory; urban planning and urban environment; trauma and genocides; and clothes. During the conference, it was also possible to look at the poster section, which was presented by nine researchers.

The Slovak Republic was represented by two institutes at the conference – Institute of ethnology Slovak Academy of Sciences represented by Ľubica Volanská (contribution's title *Between love and weariness...intimacy related to care in autobiographical narratives*) and Institute of Social Sciences Slovak Academy of Sciences, represented by Lucia Heldáková and Klara Kohoutová (title of their contribution was *My grandpa wasn't a Hungarian! The Stigma of homecomers to Czechoslovakia from a second and third generation viewpoint*).

The conference was accompanied by an interesting social program which included an evening reception hosted by the City of Jyväskylä, a guided tour of the famous Alvar Aalto Museum, a walking tour of the University of Jyväskylä main campus and a Finnish Evening lake cruise on the second largest lake in Finland – Lake Päijänne - followed by a Midsummer party. The traditional Midsummer party included sauna and swimming in the lake after bathing, dancing under the midnight sun and fireworks. The Midsummer fireworks (called kokko) has become a central element of Midsummer festivities, along with music and dance.

It is usual that the council of IOHA meets at the conference and at the end the IOHA members elected a new president, vice presidents and a nine-member council (with representatives for each world region) for the next two years. To conclude, the conference was successful and the participants' positive feedback led organising committee to discuss plans for another interdisciplinary conference in Singapore, which has applied to organize the IOHA conference for two years.

For more information about the conference: https://www.jyu.fi/en/congress/ioha2018

Programme of the conference: https://www.jyu.fi/en/congress/ioha2018/program-1

Book of abstracts: https://www.jyu.fi/en/congress/ioha2018/program-1/ioha2018_abstracts.pdf

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Conference Report "Work and Organizational Psychology", Košice, Slovakia, 23rd – 24th May 2018

Between May 23rd and 24th 2018 an international scientific conference "Work and Organizational Psychology" took place at the University of Pavol Jozef Šafarik in Košice. This year, this long-held conference, was organized by the Department of psychology (Faculty of Arts) in Košice, providing a unique and highly valuable platform connecting scientists and practitioners interested in the psychology of work, organizations and related areas of scientific inquiry. The conference programme featured many speakers from the Czech and Slovak republics. The participants had the opportunity to present their papers orally or informally using posters. During the three conference days, the programme included seven oral sessions, one student session and a poster session.

On Wednesday, May 23rd, the dean of the Faculty of arts of Pavol Jozef Šafárik University in Košice, prof. Olga Orosová officially opened the conference. In the morning session, after a short welcome speech given by the head of Department of psychology Ladislav Lovaš, the first oral session consisting of four oral presentations began. Aleš Gregar spoke about the process of the making of European scientific environment standards for employees of CPS UTB. Viera Bačová and Jozef Výrost from the Centre of psychological and social sciences SAV talked about seniors and retirement and workers over sixty-five.

This was followed by an oral session „Employees" by Miroslava Bozogáňová who discussed the insecurity of employees and differences in perception of insecurity in EU countries. Ivana Toman Čergeťová and Slavomír Šamin talked about the working environment of the armed forces of the SR and mobbing. They also presented their paper about *„The role of the psychologist in penal proceedings"* and stressed the cooperation of psychologists with public policy and public prosecution. A major problem for practice was identified as a lack of psychologists in some regions of Slovakia. Zuzana Lazišťanová closed the session with a paper about *„Use of competence modeling in defining the non-technical skills of rescue service providers".*

In the afternoon two parallel sessions followed: *„Diagnostics"* and a *„Student session".* In the „Diagnostics" session several reports were presented about the process of development and adaptation of new diagnostic methods in psychology, consisting of LMX-7 (Jakub Procházka), the Zulliger test (Martin Seitl), the test of emotions recognition (Ivana Fabianová) or the Mindset for change test (Pavla Tefelnerová). Tomáš Sollár reported about the validation of the multi-method approach to the diagnosis of interests.

Seven Czech and Slovak students of psychology competed in the student section for the best paper. Among the Slovak students, Jana Nezkusilová talked about the helping professions in relation to work satisfaction while Zuzana Kožárová presented differences in the perception of entrepreneurship between students and entrepreneurs. The Czech students chose to talk about military research, and spoke about the temperament and performance of soldiers (Dominik Břeň, Ondřej Heřman), and about the psychological workload of soldiers (Eva Kozáková).

This was followed by a *„School and family"* session with three speakers. Radomír Masaryk discussed the importance of soft skills and science literacy development among Slovak high school students through training programs. A paper on parents' employment status and family processes was presented by Mária Báčiková.

The day ended with a poster session with 10 posters. After the poster session all participants were invited to a less formal discussion.

The second day of the conference started with a session called "Self-care in the work context" given by researchers of the Department of psychology in Košice – Monika Hricová, Martina Chylová, Beáta Ráczová, Miroslava Köverová, Simona Weissová and Margita Mesárošová.

The last part of the conference consisted of an oral session called "*the broader context of work psychology"*. One of the best presentations of the conference was prepared by Kačmár from the Department of psychology in Kosice who talked about the previous and current priming research. A paper on the differences in perceptions of the private and public sector within the context of employees' expectations was presented by Juraj Martonyik from CSPV SAV. The connection between psychology and public administration and research in the area of behavioral public administration was discussed by Iveta Jeleňová.

The closing speech was given by the head of Department of psychology Ladislav Lovaš who express gratitude to the organizers and all the participants of the conference and Jakub Procházka from Department of psychology in Brno invited participants to attend conference also next year in Brno.

As with previous years, it was an excellent opportunity to meet and make valuable contacts, to exchange knowledge, findings and ideas during conference sessions and less formal gatherings. The book of proceedings with all papers presented at the conference will be published at the end of 2018.

For more information about the conference: https://ppao2018.weebly.com/

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