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ARE MEN MORE INNOVATIVE AND AGGRESSIVE IN BUSINESS? CASE STUDY FROM THE CZECH REPUBLIC

Přemysl BARTOŠ,¹⁸ Aleksandr KLJUČNIKOV,¹⁹ Boris POPESKO,²⁰Jiří MACHÁČEK²¹

ABSTRACT

SMEs make a major contribution to the growth and employment in the EU. In today's fierce competition in the market economic activities the SMEs had gradually developed into a major force for national economic and social development in every country of world. The aim of this article is to examine the approach to innovativeness and competitive aggressiveness between males and females in the segment of small and medium-sized enterprises. Based on the results of the questionnaire which was conducted in May 2015 in the Czech Republic we tried to test four hypotheses on the relationship between the gender of entrepreneurs of SMEs and their attitude to innovativeness and competitive aggressiveness. The results of our research have pointed out some differences between genders. Men-entrepreneurs who do business in the segment of SMEs in the Czech Republic are slightly more innovative and are significantly more aggressive in regard to competitors than women, as they apply aggressive approach and their companies are perceived as aggressive.

KEY WORDS

Small and medium-sized enterprises, gender, innovativeness, competitive aggressiveness

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INTRODUCTION

The issue of business risks of the small and medium enterprises (SME) currently represents contemporary area of theoretical research and practical applications.

¹⁸Correspondence address: Ing. Přemysl Bartoš, PhD., Department of Enterprise Economics, Faculty of Management and Economics, Tomas Bata University in Zlin, Mostní 5139, 760 01 Zlin, Czech Republic; email: <u>p.bartos@fame.utb.cz</u>

¹⁹Correspondenceaddress: Ing. Aleksandr Ključnikov, PhD., Department of Managerial Economics, University of Business and Law, Michálkovická 1810/181, 710 00 Ostrava, Czech Republic, email: <u>kliuchnikov@gmail.com</u>

²⁰Correspondence address: assoc. prof. Ing. Boris Popesko, PhD., Department of Enterprise Economics, Faculty of Management and Economics, Tomas Bata University in Zlin, Mostní 5139, 760 01 Zlin, Czech Republic; email: popesko@fame.utb.cz
²¹Correspondence address: Ing. Liží Machážel, D. and and C. S. a

²¹ *Correspondence address*: Ing. Jiří Macháček, Department of Regional Development, Public Sector Administration and Law, Faculty of Management and Economics, Tomas Bata University in Zlin, Mostní 5139, 760 01 Zlin, Czech Republic; email: <u>machacek@fame.utb.cz</u>

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Small and medium-sized enterprises (SMEs) in general and the establishment of new enterprises in particular play an important role in creation and keeping of a functioning market economy, especially as a means of stimulating competition, creating jobs and promotion of the economic recovery (Kessler, 2007). SMEs are considered to be important generators of economic development, which contribute to addressing the economic, political and social problems of the state. They include the vast majority of private sector enterprises and ensure more than 50% of employment and manage economic growth. On the other hand, due to their size, they often face both internal (lack of management skills) and external (unfavorable market conditions and institutional settings) obstacles that may hinder their further growth. (Hessels, Parker, 2013)

Our article is devoted to the differences in approaches of men and women in the field of innovation activities and aggressiveness to competitors.

1. THEORETICAL BACKGROUND

Entrepreneurial orientation is a key element for the success of SMEs (Brockman, Jones, andBecherer, 2012; Boso, Story, and Cadogan, 2013). To behave entrepreneurially means the company should engage in these strategic activities– innovativeness, competitive aggressiveness, proactiveness, risk taking, autonomy. (Anderson and Eshima, 2013; Sidik, 2012)

According to Gudmundson and Lechner (2014) entrepreneurial orientation has a positive effect on the firm performance with both cost leadership and differentiation strategies. Their result shows that innovativeness and autonomy has a positive relationship with product differentiation strategy whereas risk taking and competitive aggressiveness has a negative relationship with innovativeness, but no significant relationship was found with proactiveness. The findings of Moreno and Casillas (2008) showed that higher entrepreneurial orientation favors the strategies through product and process innovation, thus entrepreneurial orientation will have impact on the firm innovations strategies that can support launching new products rather than entering to new market segments.

Kraus (2013) states that there is a significant relationship between firm performance and entrepreneurial orientation of the entrepreneur. More experienced entrepreneurs are more inclining to risks, more innovative and proactive within their organization. Similarly Blackburn, Hart, and Wainwright (2013) found out that small business performance is largely depended on the business strategies, age of the business, size of the business and entrepreneurial characteristics and entrepreneurs with high risk tolerance, innovativeness and willingness to use new technologies are more successful in generating profits for the firm.

Innovativeness reflects the tendency of companies to promote new ideas, innovations, experiments and creative processes that can result in new products, services or technological processes. According to Lasagni (2012) the innovation performance is higher in SMEs that are proactive in strengthening their relationships with innovative suppliers, users, and customers. Martínez-Roman and Romero (2013) have found out that SMEs that have introduced their substantial product innovations are led by the businessmen with a large internal motivation. Boyer and Blazy (2014) examined the determinants of survival of non-innovative and innovative enterprises; the survival of these companies is associated with personality characteristics, such as gender, age, association with a national minority, professional experience and financial resources.

Competitive aggressiveness perceived as a further element of business orientation is according to Lumpkin and Dess (1996) related to the companies' qualities and direct and intensive challenge of the competitors in order to enter the market or to improve the markets' position, i.e. to fulfill the role

of rivals in the market. It is typical, for the company to react in a way which may be considered as a direct confrontation, for example when the company enters the market dominated by another competitor or it behaves reactively for example when the company reduces the price in response to the competitor appeal.

Soininen, Puumalaiene, Sjogren, and Syrja (2012) analysed the role of entrepreneurial orientation in global economic crisis. By using a sample of 194 SMEs in the Finnish market they have found that entrepreneurial orientation namely innovativeness and pro-activeness indeed played a crisis mitigating role in the crisis period. They found a negative effect of risk taking and financial as well as operational performance. It means that those firms that are more risky have suffered more in the financial crisis period than the firms those are risk averse. The profitability and liquidity measures of risk taking also show that during the financial crisis their profitability and liquidity reduced a lot for the high risk taking firms. Nevertheless, innovativeness and pro-activeness positively affected the firm's assets and revenues, but they did not find any evidence for the liquidity and profitability. The results provide support for firms with entrepreneurial orientation, because innovative and proactive firms can launch new product and services for their customer to maintain the operational balance and the financial stability. More risk taking firms are uncertain and they are financing to utilize the leverage. On the other hand, innovative and pro-active firms are taking initiatives to utilize their own resources that can create a completive edge over their rivals in terms of resource utilization. Thus, firms with more EO can have more smoothed growth than firms with lower EO, due to balancing nature of risk taking and more innovativeness and pro-activeness.

Examining of identical and different features between the two genders belongs to the important areas addressed by several authors. According to Mueller and Dato-on (2010) women play an important role in the growth of businesses worldwide, but there is still a considerable difference in participation rates. Similarly International Finance Corporation (2013) states that female entrepreneurs greatly contribute to the formal economy. An estimated 31 to 38 percent of formal SMEs in developing economies are fully or partially owned by women.

Gender influences the extent of participation in business and an approach to risk assessment. Studies show that there are a lot of differences between male and female entrepreneurs. Understanding of success is one of the examples. Women understand success as the ability to take control of their destiny, build relationships with prospective clients and do things that fulfil them, while men define success as achieving the objectives. In this context Millian, Congregado, Roman, Van Praag, and Van Stel (2014) statethatmen entrepreneurs can have higher incomes than women entrepreneurs. Moreover, there is a chance that women can leave the venture due to family issues and or age.

According to Goktan and Gupta (2015) individual entrepreneurial orientation is higher among men rather than women. They find that men are much more innovative, risk taking incentives and proactive in entrepreneurship development. At the same time they enhance that people having masculine values are competitive, aggressive and they are motivated to gain wealth, through business development.

Langowitz and Minniti (2007) found out that women are more risk averse than men, and that higher riskiness does not prevent men from starting the business. This finding confirm Diaz-Garcia and Jimenez-Moreno (2010) and at the same time they state that females are more innovative and objective in achieving task and men are likely have a thought about the intention to create a firm rather than doing it in practically. Also Runyan, Huddleston, and Swinney (2006) found out that females are more innovative than their males counterpart, but on the other hand in risk taking females scored more than the males and there were no significant differences found in proactiveness. Compared to Ayub, Razzaq, Aslam, and Iftekhar (2013) their results show that

women have lower innovativeness and autonomy, but are more proactive and risk averse and less aggressive than men. The research by Kozubíková and Bartos (2015) and Kozubíková, Belas, Bilan, and Bartos (2015) provides interesting results in this context.

Women-owned SMEs face the same challenges as every other SME. However, these challenges are usually amplified, and/or harder to overcome. And these seem to reflect the size of women-owned enterprises: they are mostly very small and small firms. Is this by their choice, or are women entrepreneurs specifically constrained? In terms of access to finance there is evidence that women entrepreneurs have a disadvantage compared to their male counterparts. Access to finance by women-owned enterprises is constrained by legal and regulatory environment, firm specific/owner-specific characteristics (e.g. education, training, size of firm, etc.), and cultural barriers, which may impact women entrepreneurs disproportionately, in addition to other barriers to access faced by SMEs in general. (International Finance Corporation, 2013)

Global Markets Institute (2014) submits similar conclusions. Women-owned SMEs face barriers to entry and the growth of business that include access to education and training, legal and cultural barriers and infrastructure-related challenges. Access to finance is typically identified as a critical constraint. While financing is almost always a challenge for SMEs, the difficulties are often intensified by gender-related factors, including women's lack of collateral, weak property rights and discriminatory regulations, laws and customs.

In this context we emphasize that access to external financing significantly determines the success of innovation policy of the company.

Inspirational conclusions can be found in the studies by Envick and Lim (2011). Authors state that there is a significant difference in risk taking among the male and female respondents. The potential male entrepreneurs are ready to accept more risk than the female entrepreneurs, it is suggested that females are more risk adverse than their male counterparts. It is also found that, in the USA and Korea males are more independent decision makers than females, however, the result is less significant for Malaysia and Fiji. Males are more confident in their decision making than females in all the four countries surveyed. It is also noticeable that females are less aggressive in the competitive opportunity to enter the market. Females are not interested in the growth of their firms, they are happy with their stable condition. However, females are found to be more innovative than males, which is one of their advantages in the formation of new enterprise in comparison to males.

2. OBJECTIVES, METHODOLOGY AND DATA

The aim of this article is to examine the approach to innovativeness and competitive aggressiveness between males and females in the segment of small and medium-sized enterprises (SMEs).

The research of the business environment was prepared in 2014 and was conducted in the Czech Republic in 2015. The companies were chosen from Albertina database. The total number of 1,650 randomly selected firms was addressed by e-mail of telephone to fill in the questionnaire placed at website

https://docs.google.com/forms/d/1U9coaC5JRL0N2QOOO6Xb8j3mnaZXdSM47Kugt4EDGFo/vie wform?usp=send_form. The data was provided by 1,141 owners of SMEs in 14 regions of the Czech Republic. The questionnaire consisted of 52 questions. In this context, in the first nine questions we devoted to the analysis of the structure of the respondents in relation to their education, gender, age, the residency and size of a firm, the length and area of conducting business, motives for starting a business and the most important characteristics of entrepreneur. The rest of

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questions were scale questions of the scale of 1 to 5 (1 - fully agree, 2 - agree, 3 - no position, 4 - disagree, 5 - completely disagree) focused on the five elements of entrepreneurial orientation.

The structure of the sample according to the business area was as follows: trade companies (33%), manufacturing companies (23%), construction companies (14%), transport companies (6%) and agricultural firms (3%). The largest portion of companies operated in other sectors (39%).In accordance to the length of doing business from the total number of 1,141 companies 62% of them were doing business for more than 10 years, 21% of them between 1 and 5 years, and 17% of them between 5 and 10 years. It can be said that the owners of the companies were quite experienced entrepreneurs. 65% of firms were micro-enterprises, 27% were small enterprises and 8% were medium-sized enterprises. Most of the entrepreneurs in the sample, concretely 48%had secondary education with graduation, 34% of them had a college education and 18% had secondary education without graduation. In relation to the gender of the entrepreneur from total number of firms 75% of them were men and 25% of them were women.

In line with previous findings and taking in account the gender we have stated the following hypotheses:

H1: More than 60% of entrepreneurs said they regularly develop new products. There are statistically significant differences between men and women.

H2: The innovative activities of the companies are severely limited due to the influence of the crisis. A maximum of 40% of entrepreneurs they have invested a lot of money into the development of new methods and technologies. There are statistically significant differences between men and women.

H3: A maximum of 20% of entrepreneurs agree with the statement that their firm has a reputation of aggressive company. There are statistically significant differences between men and women.

H4: A maximum of 20% of entrepreneurs agreed with the statement that often apply aggressive practices to the competition. There are statistically significant differences between men and women.

The associations in contingency tables were analyzed by Pearson statistics for data counting. P-value has been compared to standard 5% confidence level. P-value that is lower than the confidence level leads to the adoption of our hypothesis. The calculations have been performed using software available at http://www.socscistatistics.com/tests. Statistically significant differences in the affirmative replies were analyzed through Z-score. Calculations were made by the free software available at http://www.socscistatistics.com/tests. Statistically significant differences in the affirmative replies were analyzed through Z-score. Calculations were made by the free software available at http://www.socscistatistics.com/tests/ztest/Default2.aspx. Part of the quantitative analysis is the use of indicators and descriptive statistics such as the percentage figures.

3. RESULTS AND SHORT DISCUSSION

Table 1 presents the results of our research among entrepreneurs in the segment of SMEs. The following table sets out the views of male and female entrepreneurs.

We regularly develop new products	men	women	p-value	
and services in my company.	in %	in %	Z-score	
1. Fully agree	9.99	13.57	0.0949	
2. Agree	50.75	51.07	0.9283	
Share in % (1+2)	60.74	64.64	0.2420*	
Total share in % $(1+2) = 61.70$				
3. No position	20.09	17.50	0.3421	
4. Disagree	15.56	15.71	0.9522	
5. Completely disagree	3.61	2.14	0.2301	
$\chi^2 = 4.6177/$ p-value = 0.3288				

Table 1. The opinion of SMEs entrepreneurs in relation to regular development of new products and services in their firms

(*Source:* own calculation). Note: * means p-value of the Z-score calculated from the positive answers (1 + 2)

In our research we found that 61.70% of entrepreneurs regularly develop new products, which means that the first part of H1 was confirmed. The second part H1 was not confirmed. We found that there weren't statistically significant differences between men and women in the development of new products. *So H1 was partially confirmed*.

Table 2 presents the results of the research in the field of investing money into new methods and technologies, and comparison between men and women.

Table 2. The opinion of SMEs entrepreneurs in relation to the investment into new methods and technologies

We invest a lot of money into the development of new methods and technologies	men in %	women in %	p-value		
1. Fully agree	4.76	6.43	0.2757		
2. Agree	33.22	31.43	0.5823		
Share in % (1+2)	37.96	37.86	0.9203		
Total share in % $(1+2) = 37.60$					
3. No position	25.55	27.86	0.4473		
4. Disagree	30.89	29.64	0.6965		
5. Completely disagree	5.58	4.64	0.5485		
$\chi^2 = 2.2228$ / p-value = 0.6949					

(Source: own calculation).

Our assumption that the innovative activities of the companies are severely limited due to the influence of the crisis was confirmed, because only 37.60% of entrepreneurs reported that they have invested a lot of money into the development of new methods and technologies. We found that there weren't statistically significant differences between men and women in this area. *H2 was partially confirmed*.

The most important business risks which were perceived by entrepreneurs in the Czech Republic in our previous research were as follows: market, financial and personnel risks. Market risk was

identified as a key risk by the largest number of entrepreneurs - 79.44% of them in the Czech Republic (Belás et al., 2014). The situation is similar in Slovakia, where it was found out that the most important business risk was market risk (average value of perceived market risk was higher than 50%). (Belás, Bilan, Ključnikov, Vincúrová, and Macháček, 2015)

The research results showed that men are slightly more innovative in developing new products and that both genders have the reserved attitude to the financial investment in the development of new methods and technologies.

Our results in terms of innovativeness of men and women did not confirm the conclusions of Diaz-Garcia and Jimenez-Moreno (2010), Runyan et al. (2006), Ayub et al. (2013). Our research confirmed the findings byLim and Envick (2011).

In Table 3 sets out the views of entrepreneurs on whether their company is perceived as aggressive company.

Table 3. The opinion of SMEs entrepreneurs in relation to the perception of their firms as an aggressive firm

Our company has a reputation as an aggressive company.	men in %	women in %	p-value	
1. Fully agree	1.86	0.71	0.1835	
2. Agree	9.87	6.43	0.0801	
Share in % (1+2)	11.73	7.14	0.0300	
Total share in % $(1+2) = 10.60$				
3.No position	25.44	19.29	0.0357	
4.Disagree	49.59	56.43	0.0466	
5.Completely disagree	13.24	17.14	0.1031	
Share in % (4+5)	62.83	73.57	0.0010**	
$\chi^2 = 12.0600$ / p-value = 0.0169				

(Source: own calculation). Note: ** means p-value for the answers 4+5.

H3 was confirmed. We found that only 10.60% of all entrepreneurs agreed with the statement that their company has a reputation for aggressive company.

Values of the test criteria (chi square = 12.0600 / p-value = 0.0169) confirmed that there are statistically significant differences in the overall responses of men compared to women. At the same time we found that there were statistically significant differences between men and women in the affirmative replies (p-value (1 + 2) = 0.0300). Significantly more men-businessmen presented the view that the company has a reputation as an aggressive company. Women compared with men reported significantly more that their company does not have a reputation for aggressive firms (p-value = 0.0010)

In Table 4 presents the results of the research on aggressive activities that are directed against competitors.

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<i>Our activities in relation to competition are often aggressive.</i>	men in %	women in %	p-value		
1. Fully agree	1.97	0.71	0.1527		
2. Agree	11.50	9.64	0.3898		
Share in % (1+2)	13.47	10.36	0.1738		
Total share in % $(1+2) = 12.71$					
3. No position	20.67	15.71	0.0688		
4. Disagree	55.52	59.29	0.2713		
5. Completely disagree	10.34	14.65	0.0489		
Share in % (4+5)	65.86	73.94	0.0121**		
$\chi^2 = 9.3148$ / p-value = 0.0537					

Table 4. The opinion of SMEs entrepreneurs in relation to realizing aggressive activities against the competition

(Source:own calculation).

We found in our research that only 12.71% of all entrepreneurs reported that they used some aggressive practices against competition.

The values of the test criteria (chi square = 9.3148 / p-value = 0.0537), which are on the borderline of acceptability confirmed that there are statistically significant differences in the overall responses of men compared to women. At the same time, we found that there were statistically significant differences in negative responses between males and females (p-value = 0.0121). Significantly more female entrepreneurs presented the view that their company does not use aggressive practices against competition. *H4 was confirmed*.

Our results in the aggressiveness of men and women confirmed the findings by Goktan and Gupta (2015), Lim and Envick (2011), and Ayub et al. (2013).

According Blackburn, Hart, and Wainwright (2013) entrepreneurs with high risk tolerance, innovativeness and willingness to use new technologies are more successful in generating profits for the company (Laforet, 2013 presents similar conclusions presented in his study). They have also shown that, larger firms' growth rate is lower than the small firms' in terms of employee turnover and employment growth. The reason is that small firms are more flexible and when they find any new opportunity they hire new employees to penetrate the market. While controlling for sector differences, the results show that manufacturing firm's growth rate is lower than the service firms'. However, they find that when taking into consideration the size of the firm the innovative entrepreneurial firms outperform the other firms. More precisely, innovative entrepreneur perform 1.6 times better than other entrepreneurs. Finally, they find that, older firms, smaller in size, perform better than large firms in terms of profitability. It suggests that small firms are very careful about the growth and expansion of the business. They will expand the business, when they are much more certain that, they will have steady earnings from the expansion.

CONCLUSION

The results of our research have pointed out some differences between the genders. We could present our conclusions that men entrepreneurs doing business in the segment of SMEs in the Czech Republic are slightly more innovative and are significantly more aggressive in relation to competitors, because they apply more aggressive approach and their companies are perceived as aggressive.

The results confirmed that both male and female entrepreneurs in the Czech Republic are trying to implement innovation policy in their companies. 60.74% of male respondents and 64.64% of women respondents are regularly developing new products and services in their companies, which is an important element of business orientation.

The research results have shown differences between men and women in the field of the aggressive business. Significantly more male entrepreneurs presented the view that their company has a reputation as an aggressive company. Women compared with men reported significantly more that their company does not have a reputation of aggressive company, and reported the opinion that their company did not use aggressive practices against competition more often.

Although it is clear that there are certain limits in our research (e. g. uneven representation of respondents by region and gender), we expect that our article has brought interesting findings and new incentives for further research, not only gender but also other socio-demographic factors influencing individual constructs of the entrepreneurial orientation.

In the future our research will concentrate on examination of other socio-demographic factors influencing the entrepreneurial orientation of SMEs in the Czech Republic.

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