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# A STUDY OF SUCCESS FACTORS OF WOMEN'S LEADERSHIP IN E-COMMERCE

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Women make up almost 50 percent of all workforce in the European Union countries, but their average hourly rate is 16,3 percent lower than men's (respectively, in Lithuania it is 14,2 percent). In 2016, only in 21 companies out of 500, which is 4,2 percent, women held executive positions. In entrepreneurship statistics based on the founder's gender, women make up only 34,4 percent of independently working employees and 30 percent of business founders. More women possess higher education than men, but only a small part of women hold executive positions or decide to establish their own business. Academic sources often analyze the success factors of women's leadership in the context of managing large international companies, politics, medicine, war industry and education, whereas the factors of successful women's leadership in small and medium-sized enterprises while establishing and developing e-commerce are rarely considered. That is why this study seeks to complexly evaluate the success factors of women's leadership and to create a structure of success factors of women's leadership in Lithuanian e-commerce. To achieve the objective of this study, such research methods as analysis of scientific literature, multiple criteria and expert assessment (structured survey and interview) were applied. While analyzing the success factors of women's leadership in e-commerce in the scientific literature, 95 primary assessment factors, specified

with 21 female experts who have established businesses in Lithuania, were identified through the multiple criteria and expert assessment method.

**Keywords:** women leadership; e-commerce; success factors; multiple criteria assessment

JEL classifications: M1, M12, D83

# ИССЛЕДОВАНИЕ ФАКТОРОВ УСПЕХА ЖЕНСКОГО ЛИДЕРСТВА В ЭЛЕКТРОННОЙ КОММЕРЦИИ

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Женщины составляют почти 50 процентов всей рабочей силы в странах Европейского союза, но их средняя почасовая ставка на 16,3% ниже, чем у мужчин (соответственно, в Литве – 14,2%). В 2016 г. только в 21 компании из 500, что составляет 4,2%, женщины занимают руководящие должности. В статистике предпринимательства, основанной на гендере основателя, женщины составляют лишь 34,4% независимо работающих сотрудников и 30% основателей бизнеса. Больше женщин имеют высшее образование, чем мужчины, но лишь небольшая часть женщин занимает руководящие должности или решает создать свой собственный бизнес. В академических источниках часто анализируются факторы успеха лидерства женщин в контексте управления крупными международными компаниями, политикой, медициной, военной промышленностью и образованием, тогда как факторы успешного лидерства женщин на малых и средних предприятиях при создании и развитии электронной торговли редко рассматривается. Именно поэтому это исследование стремится к сложной оценке факторов успеха лидерства женщин и созданию структуры факторов успеха лидерства женщин в электронной коммерции Литвы. Для достижения цели этого исследования были применены такие исследовательские методы, как анализ научной литературы, оценка критериев и экспертная оценка (структурированное обследование и интервью). Анализируя факторы успеха лидерства женщин в области электронной коммерции в научной литературе, 95 первичных факторов оценки были идентифицированы.

**Ключевые слова:** лидерство женщин; электронная коммерция; факторы успеха

#### Introduction

Almost 50% of labor market are women based on the average of the European Union statistics, however their gross hourly earnings are 16,6% lower than men's (Eurostart, 2017). Based on Fortune 500 annual ratings, women held CEO positions just in 21 companies out of 500 in 2016, 4,2% (Fortune, 2016). The situation is very similar in Lithuanian companies, because women held CEO positions in just 58 companies from 724 in 2015, 8% (Verslo žinios, 2016). Although, the number of women and men who enter the labor market is almost the same but only 30% of women reach middle-manager and 14% - functional manager positions (Verslo žinios, 2016). In addition, about 44% of women have a third level degree comparing to men and it is 10% more (Eurostart, 2017). The situation is paradoxical because more women get a higher education degree than men and usually they demonstrate better learning results but just a small number of women reach C-suite positions and the potential of women knowledge climbing career ladders is not completely adapted. Scientists and practitioners analyze many aspects of women's leadership in the context of corporations, politics, medicine, military and education meanwhile the topic of successful women's leadership in small and medium enterprises operating in e-commerce is not widely analyzed. Information technologies and the Internet is the new way for creating business and wealth in the global market in XXI century (Sharif, 2015). The concept of ecommerce is based on selling goods and services using online platforms, blogs or social networks and secure issues. Regardless of the fact this field of business is relatively new, but it is expanding very rapidly in the context of 4.0 industrial revolution. Based on Eurostat data, e-commerce sales in the European Union in 2015 comprised 16% of all sales of companies having more than 10 employees, which is 4% more comparing to the data of 2008 (Eurostart, 2017). According to the research, 66% of all internet users in the European Union bought products or services via the Internet during the 12 months' period, it is 16% more than in 2007 (Eurostart, 2017). Statistical data represents that more consumers buy goods and services via the Internet, although not full potential has already been reached.

The main goal of this research is to complexly evaluate the success factors of women's leadership and to create a structure of success factors of women's leadership in Lithuanian e-commerce. Research methods as analysis of scientific literature, multiple criteria and expert assessment (structured survey and interview) were applied to achieve this goal.

The main results obtained in this study are 95 primary factors that influence the success of e-commerce identified through the analysis of scientific literature: personal competences (35 factors), professional competences (24 factors), social competences (18 factors), management competences (11 factors) and external factors (7 factors). During the expert evaluation and multiple criteria assessment, success factors of women's leadership in Lithuanian e-commerce were determined. The most significant factors for successful women's leadership in e-commerce of the personal competences are: personality, passion for work, self-confidence, personal responsibility and discipline. The analysis of professional competences discloses that the most important elements are competence (knowledge, skills),

business-savvy, continual learning and performance-oriented leadership (Moskalenko & Yevsieieva, 2015; Čajková et al., 2018; Popova et al., 2018). Based on expert evaluation results, interpersonal and interactional skills, effective communication, networking and collaboration are the crucial elements in social competences group. The most significant management factors are the ability to motivate and inspire, being able to create visions and inspire people to follow it, empowering others to make decisions and team building (Jankelová et al., 2017). The support from family members, friends and colleagues plays the vital role for successful women's leadership, as well as other external elements such as a mobile workplace and flexible working time.

#### Literature review

Phrases glass ceiling, glass cliff or glass wall have become very popular during the last 20 years while discussing about the obstacles faced by women climbing career ladders. Definition glass ceiling started to be used by journalists in 1980–1990, it symbolizes invisible unconquerable barrier which is the obstacle for women to reach the positions of managers (Zeng, 2011). Hurdles such as a lack of mentorship, challenges of keeping the balance between work and family and gender discrimination create an invisible barrier preventing women from reaching the management level in companies (Acar, 2015). Glass cliff expression is used analyzing hopeless situations in companies where women leaders manage entities operating in complicated conditions and take C-suite positions in which men leaders have already failed (Glass & Cook, 2016; Ryan et al., 2016). It is more difficult to demonstrate successful leadership in this kind of tough situations also because of double standards applied to women and men leaders (Evans, 2014; Strielkowski et al., 2015; Strielkowski et al., 2016; Strielkowski & Shishkin, 2017; Bordea et al., 2017; Strielkowski & Chigisheva, 2018).

Scientists discuss about the definition of leadership and factors determining a leader's position. Showunmi (2016) conducted a research and asked women to define the meaning of the leadership. All definitions made by women had common attributes such as: strong orientation towards other people, comprehension and sensitivity, networking, being a visionary, following their values (Showunmi et al., 2016). Analysis of the leadership traits were based only on examples of men leadership at the early stage of leadership theory, while women were eliminated from these studies in order to avoid data inaccuracy (Powell, 2011). Despite the fact that nowadays scientific researches are performed without eliminating women, the majority of leadership theories are based on analysis of men leadership attributes. Researchers distinguish two types of leadership: result or relationship orientated. In cases when a leader is orientated to results the main goal of a leader is to ensure that all tasks will be performed in time, when a leader is orientated towards the establishment of a relationship he or she seeks to involve all team members and to make them feel motivated to perform assigned tasks (Powell, 2011). In addition, different approaches of decision making also depend on the leadership style: democratic leaders involve their employees to the decision-making process when the autocratic leaders do not.

Also, there are other leadership theories which analyze adjusting different leadership styles in different situations. The theory of situational leadership created by Hersey, Blanc (Thompson & Vecchio, 2009) recommends to apply management methods of: high tasks performance – low interpersonal relationship, high tasks performance – high interpersonal relationship, low tasks performance – high interpersonal relationship, low tasks performance – low interpersonal relationship depending on the maturity level and self-sufficiency of the employees. The more mature and independent the employee is, the more responsibilities the employee could be given (Powell, 2011).

Nowadays transactional and transformational leadership theories are the most popular. Transformational leaders support and motivate their employees to reach common goals of a team or organization instead of attaining their personal goals. Such leaders

are charismatic, inspirational and motivating, they have mentoring capabilities and encourage their colleagues to think and to become more self-sufficient (Powell, 2011). The essence of transactional leadership is a two-sided exchange which is beneficial to the leader as well as to the subordinate (Humphreys, 2001; Stojanov et al., 2011; Strielkowski & Rausser, 2013). They depend from each other and their contribution is clearly defined, and an award is explicit too. Transactional leaders are more concentrated on the subordinates' responsibilities and the task performance quality. Transactional leaders stand out with twofold behavior: contingent reward when an employee is evaluated based on the results achieved and management by exception when a leader helps solving problems in case of emergency. Laissez-faire leadership style is completely different compared to transactional and transformational leadership styles. The key of laissez-faire leadership is that leaders avoid any responsibilities, decision making, mentoring and influencing their followers (Humphreys, 2001; Powell, 2011).

The concept of leadership is emphasizing leader's qualities such as an ability of bringing people together, motivating them to reach the common goals, establishing and communicating the vision and values of the company, inspiring followers to improve themselves and create interpersonal relations. Scientists analyze a wide variety of leadership theories from democratic or laissez-faire leadership to autocratic leadership, although changing forms of business, external and internal environment in companies, developing information technologies lead to understanding that one universal theory of leadership which would be effective in all possible situations and organizations does not exist, therefore it is significant to identify factors which are the success determinants of effective leadership.

Scientists discuss a lot about the features of women and men leadership. Their opinions are controversial, a lot of studies were conducted in order to find out the reasons why women do not take manager positions in business and if this situation is related to the style of leadership (Vecchio, 2003). Hernandez Bark et al. (2016) found out that women more often use transformational leadership while men's leadership style is based on power motivation (Hernandez Bark et al., 2016). These results emphasize two different forms of leadership: usually men have a stronger demand to reach a standing position and to influence other people therefore they use power motivation to become a leader, meanwhile women more often use the principles of transformational leadership because of their inborn qualities.

Women and men usually apply different types of leadership based on different role and behavior models traditionally assigned to the certain gender in the society. Generally particular behavior defined as suitable for a man or a woman differs depending on the gender (Bosak & Sczesny, 2011). This kind of differentiation of behavior suitable for a man or a woman usually leads to prejudice against women leaders because the role model and personal qualities attributed as suitable for a woman differ from features assigned as desirable for a good leader (Eagly & Karau, 2002).

The results of the research of Hernandez Bark et al. (2016) emphasize that transformational leadership is going to be more popular in the future and in order to successfully implement this type of leadership leaders will have to become more androgynous – to have qualities inherited from both of the genders (Hernandez Bark et al., 2016; Štreimikienė et al., 2016; Powell, 2011). Due to these changes the meaning of leadership which was more related to men's qualities (Koenig, Eagly, Mitchell, & Ristikari, 2011) is transforming to the meaning more related to the qualities assigned to women. The incompatibility aspect of a woman and leader definitions is changing in leadership meaning (Hoyt & Murphy, 2016). Deeper understanding of the leadership concept can influence women to apply the principles of power motivation (Eagly, 2007; Hernandez Bark et al., 2016).

Usually, the society thinks that women leaders are keener to use the principles of democratic leadership and men – autocratic. The research results of Cuadrado et al. (2012) based on the opinion of subordinates underline that women leaders more often apply principles of autocratic leadership and men – democratic (Cuadrado, Navas, Molero, Ferrer,

& Morales, 2012). These results differ completely from the traditional understanding of gender stereotypes and the prejudice that women are less categorical than men (Powell, 2011). Women who become leaders more frequently have to prove their power and authority compared to men leaders, therefore women use the attributes of autocratic leadership in order to adapt and take root (Cuadrado et al., 2012). These results are opposite to the results of other studies, which state that women more often follow the values of democratic leadership rather than the autocratic ones, the opposite of what men do (Eagly & Johnson, 1990; Powell, 2011). In addition, women avoid using the same traditional leadership style which is used by men leaders based on the results of scientific studies made in the field of role congruity in the theory of prejudice (Eagly & Karau, 2002).

Ambiguous research results were received by analyzing the frequency of implementation of transactional and transformational leadership principles between women and men leaders. Women leaders are considered to be using transformational leadership traits more often than men who are usually considered as transactional leadership supporters. Nevertheless, the frequency of applying the principles of transactional or transformational leadership does not depend on the gender of a leader (Cuadrado et al., 2012). However, women are considered to be using negotiating leadership principles more often than men.

According to the data of European Commission, there were 29% of women doing business in the European Union (2012) and it has increased in around 3% since 2008 (European Commission, 2014). Scientists analyze the relation between financial results and the number of women taking manager positions in a company. Non-profit organization Catalyst had analyzed revenue statistics from 1996 to 2000 of the biggest American companies included in the ratings of Fortune 500. The research results show that financial results of the corporations which are in the top quartile by the number of women in management positions are better than of the companies which are in the bottom quartile (Eagly, 2007). The results were obtained through making comprehensive studies by considering the size of the company and results of the sector in the corporations included in Fortune 1000 ratings. The outcomes indicate that financial results are higher in those companies which represent women among their executives (Krishnan & Park, 2005). Scientists usually analyze and conduct studies in huge corporations although the usage and development of information technologies have changed the way of management and existing leadership models do not meet the needs of current organizations anymore, therefore the successful leadership strongly depends on an external and internal environment (Humphreys, 2001).

The topics of e-commerce and leadership are not widely analyzed by scientists (White & Smith, 2010). Exceptional attention is paid to the analysis of qualities assigned to women and men, analysis of their differences and similarities (Artz, 2017; Cuadrado et al., 2012; Eagly & Johnson, 1990; Evans, 2014). A number of researches were published analyzing the case of women executives in the biggest corporations included in Forbes 500 or Fortune 1000 ratings, also analyzing the issues of gender in companies' boards and its influence to corporations' financial indicators (Stainback & Kleiner, 2016). In addition, women's leadership is extensively examined in various market sectors: medicine, information technologies, accounting, audit and military as well as women's leadership in the context of cultural differences (Abelson, Chartrand, Moo, Moore, & Yeo, 2016; Broadbent & Kirkham, 2008; Dambrin & Lamber, 2008; Njaramba, Chiqeza, & Whitehouse, 2018; Showunmi et al., 2016). Scientists also discuss the phenomenon of glass ceiling (Acker, 2009; Akpinar-Sposito, 2013; Sharif, 2015), however women's leadership in the context of e-commerce is not analyzed extensively, just a few researches were made in different countries. Zhou and Chang (2015) made a qualitative research in e-commerce companies in China and analyzed the phenomenon of glass ceiling. The results confirmed that women leaders faced difficulties climbing career ladders, also the main traits of women executives were described – they are well educated and at average 40 years old (Zhou & Chang, 2015). Chan et al. (2015) made the research of success factors of women's leadership in e-commerce in Malaysia, where during in-depth interviews, women identified innovativeness, creativity, determination and social competences as key factors for successful leadership in e-commerce (Koudelková and Svobodová, 2014; Chan et al., 2015).

Based on the analysis of scientific literature and classifications used by scientists (Raudeliūnienė, 2017), factors which were identified as the most significant for successful women's leadership in e-commerce were grouped to several categories based on its content: personal, professional, management and social competences as well as external factors.

Personal competency is related to self-evaluation, attitude to work, motivation, ambition and other aspects (Raudeliūnienė and Neimontas, 2012). Furthermore, Cimirotić et al. (2017) emphasize the importance of ambition and the ability to defend personal opinion (Cimirotić, Duller, Feldbauer-Durstmüller, Gärtner, & Hiebl, 2017). Ambitious women leaders are able to identify possibilities even in risky situations and use it to prove their abilities (Hurley & Choudhary, 2016), although capabilities of identifying and assuming risks are assigned as masculine traits of leadership (Acar, 2015; Dambrin & Lamber, 2008; Evans, 2014). Opposite to the personal traits or professional competences which can be acquired, the type of personality is an inherited competence which directly and indirectly influences the success of women's leadership (Lisin et al., 2015; Bocken, 2015; Baker et al., 2016; Lisin et al., 2016). Charisma is defined as a set of behavior norms and traits of character that encourage other people to respect and follow a leader (Powell, 2011). Capabilities of being a good team member, attracting the best talents for common goal achievement, managing a team effectively and being able to collaborate (Bullough, Moore, & Kalafatoglu, 2017) are extremely important in e-commerce where teams are virtual, of different cultures and geographical locations. 35 factors of personal competences were distinguished based on scientific literature results (Table 1).

Professional competency is identified as the ability to work effectively in several practices, which is directly related to education, qualification and experience (Raudeliūnienė & Neimontas, 2012). Education is one of the key factors helping women to climb the career ladder (Zhou & Chang, 2015). Establishment and development of e-business requires not only business management knowledge but also specific knowledge related to the internet website, blogging and social media management (Chan et al., 2015). Education and working experience in marketing, information technologies, accounting and finance fields are especially useful when launching and managing ebusinesses. Mentorship is another factor of success analyzed by scientists. Informal communication between a mentor, a professional from a particular field who has more experience and knowledge, and a mentee, a young expert seeking for support and advice for personal and professional growth, is another important element of the social capital (Bierema, 2016; McGowan, Cooper, Durkin, & O'Kane, 2015). The mentor is important because of the experience gained through developing business, so he is able to share successful examples, his network and influence the mentee to reach the established goals (Abelson et al., 2016; Stainback & Kleiner, 2016). Business is becoming more and more global, therefore a mentor from a different cultural environment provides a greater merit - the possibility to get leadership and business management experience as well as evaluate cultural differences, possibilities, advantages and disadvantages (Stefanco, 2017). 24 success factors of professional competences were identified (Table 1).

Management competency involves certain professional, personal and methodological competencies (Raudeliūnienė & Neimontas, 2012; Kubeš et al. 2018). Scientists underline that successful women leaders distinguish themselves as effective managers because of the ability to influence and motivate their subordinates to reach organization's goals, to be charismatic visionaries changing their organizations (Bullough et al., 2017; Evans, 2014). Social competency reflects on the individual's social behavior and expresses adaptive and effective functioning in certain situations (Raudeliūnienė & Neimontas, 2012). Women are more keen on collaboration, participation and working in teams, they also have

better developed social skills (Dambrin & Lamber, 2008; Eagly & Johnson, 1990), in addition, women have better skills to bring employees together for a teamwork reaching commonly agreed goals and stimulate democratic decision making process (Bullough et al., 2017). Due to those reasons women are considered more diplomatic, it is easier for them to start a conversation, to listen and they are ready to collaborate (Javidan & Bowen, 2013), inherited negotiation skills are also significant for the rise of female leaders (Evans, 2014). In scientists' opinion, the natural capabilities of women are closer to the features of transformational leadership. Yammarino and Dubinsky (1994) emphasize that female leaders have such traits of transformational leadership as idealized power, influencing motivation, personal engagement and intellectual stimulation (Girdauskiene & Eyvazzade, 2015). Humphreys (2001) confirmed the hypothesis that transformational leadership has a bigger impact on successful development of e-commerce in organizations (Humphreys, 2001). Based on the research results performed by Girdauskiene & Eyvazzade (2015), successful women leaders have a higher level of engagement, they are professional and caring as well as they have a strong result-oriented attitude and an ability to take defensive position (Girdauskiene & Eyvazzade, 2015). Also women have a higher level of emotional intelligence than men based on surveys' results (Mandell & Pherwani, 2003). Scientists underline that women always wanted to lead, however they did not have the possibilities because of political, economic and social reasons. Women leaders also score higher in the fields of communication, active listening, motivating and influencing subordinates and recognizing their achievements, in addition, they are more emphatic and sensitive to their colleagues than men leaders (Evans, 2014; Sidani, Konrad, & Karam, 2015). The high cultural intelligence and the ability to use cultural differences to reach the company's goals is another advantage of women leaders mentioned in the literature (Evans, 2014; Javidan, Bullough, & Dibble, 2016). The intercultural empathy leads to effective communication and integration of individuals from different cultural environments, the ability to understand non-verbal expressions, to create an emotional bond and involve individuals with different cultural background to work together (Bullough et al., 2017; Javidan et al., 2016). The passion for diversity is described as a desire to travel and live in a different cultural environment, to be interested in various people, in different ways of work performance and the joy to get acquainted with representatives of other cultures (Javidan & Bowen, 2013). Carrasco et al. (2015) made a survey in 32 countries based on cultural dimensions. The proportion of women in company boards is lower in the societies which are defined as more masculine rather than feminine (Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo, 2015). Evans (2010) making the analysis of effective leadership factors confirmed that the development of social - cultural environment creates more positive possibilities for women to climb the career ladder (Evans, 2014). Informal social communities of school friends, university friends, ex-colleagues, customers, suppliers, social media followers (Bullough et al., 2017; Henry, 2011; Sidani et al., 2015; Zhou & Chang, 2015) also play a significant role in the development of effective social competencies, however some authors distinguish the importance of formal communities – formal business networks such as associations, chambers of commerce, federations. A membership in these formal organizations helps making connections with more experienced entrepreneurs, learning from their experience as well as extending the network of potential partners, suppliers and customers (McGowan et al., 2015; Showunmi et al., 2016; Todorov et al. 2018). In addition, 18 social competences and 11 management competences factors were distinguished (Table 1).

The leadership is also related with external environment factors (Bierema, 2016). Hurley and Choudhary (2016) analyzes which external factors increase the probability for women to reach an executive position. The results show that longer work experience in a management position and a higher number of employees in the company increase the probability that a woman will lead it (Hurley & Choudhary, 2016). It was noticed that organizations led by women have less problems related to the gender inequality – lower pay

gap in all levels of a company's hierarchy (Acker, 2009). Women can easier climb the career ladder in companies led by women.

On the other hand, the longer years of studies and the number of children in the family have a significant impact on women leaders career (Hurley & Choudhary, 2016). The results of the study show that the number of children has the strongest impact, women who do not have children have the highest probability to reach an executive suit and for women who have more than 4 children such probability is almost equal to 0. 41% of women, who have the same responsibilities at work as men do, agree that they accomplish more tasks related to children at home than men (Bernstein, 2015). Smith et al. (2010) carried out the study in the countries of North Europe and found out that the time spent bringing up children had a direct impact to the pay gap and decrease women's possibilities to reach executive positions in companies (White & Smith, 2010). Therefore, the mobility of a workplace (Subramaniam et al., 2013) and flexible working hours (Cimirotić et al., 2017; Hurley & Choudhary, 2016) give possibilities to women leaders to balance their work and private life. Due to the fact that women usually face more obstacles than men in leader positions, the support of external environment is identified as an extremely significant factor of successful women's leadership. The support of family members and friends could be comprehensive and could be provided in different ways, such as helping to do housework, to take care of children or moral support by giving advice and sharing experiences (Cimirotić et al., 2017; Kemp & Zhao, 2016; McGowan et al., 2015; Zhou & Chang, 2015). In addition, the support of colleagues is also very significant (Barnes, 2017; Cimirotić et al., 2017; Hurley & Choudhary, 2016) because the establishment and development of business inevitably depend on formal and informal communities.

Table 1
The primary assessment factors that influence the success of e-commerce
(created by the authors according Raudeliūnienė et al. 2018
(Raudeliūnienė, Tvaronavičienė, & Radeckytė, 2018)

(madacioniche, Ivaronavierene, a nadeckyte, 2010)		
Group of factors	Factor (scientific literature source)	
Personal competence	Passion for the job (Cimirotić et al., 2017), ambition (Cimirotić et al., 2017), age (Subramaniam, Tan, Maniam, & Ali, 2013), personality (Cimirotić et al., 2017), personal responsibility (Cimirotić et al., 2017), charisma (Cimirotić et al., 2017), attentiveness (Bullough et al., 2017), diplomacy (Javidan et al., 2016), discipline (Cimirotić et al., 2017), innovativeness (Ceicyte & Petraite, 2018; Leitch, Mcmullan, & Harrison, 2013; Orlova et al. 2018; Ragulina et al. 2018; Shumakova et al. 2018; Žižka et al. 2018), cosmopolitan outlook (Javidan et al., 2016), independency (Setyaningsih, Rucita, Hani, & Rachmania, 2012), willingness to take on new projects (Coffman & Neuenfeldt, 2014), self-development (Evans, 2014), honesty (Cimirotić et al., 2017), optimism (Rogers, Chamberlin, Ellison, & Crean, 1997), organizational skills (McGowan et al., 2015), opportunity focus (Leitch et al., 2013), team player (Dambrin & Lamber, 2008; Leitch et al., 2013), celebrating achievements (Evans, 2014), readiness to assume risk (Dambrin & Lamber, 2008), self-awareness (Kinsaul, Curtin, Bazzini, & Martz, 2014), reliability (Cimirotić et al., 2017), proactivity (Leitch et al., 2013; McGowan et al., 2015), productivity (Subramaniam et al., 2013), psychological sense (Henry, 2011), self-direction (Eagly, 2007), self-marketing (Cimirotić et al., 2017), self-efficacy (Asgari, Dasgupta, & Stout, 2012), decision making (Mahmud, Shah, & Becker, 2012), strong ethical values (Leitch et al., 2013), ability to adapt to not being liked by everyone (Cimirotić et al., 2017), ability to assert oneself (Cimirotić et al., 2017), straightforwardness (Cimirotić et al., 2017), exactitude (Cimirotić et al., 2017).	

End of table 1

Group of factors	Factor (scientific literature source)
Professional competence	Visible and present at meetings (Kelly, Ammons, Chermack, & Moen, 2010), international working experience (Evans, 2014; Javidan et al., 2016; Stefanco, 2017), working experience (Cimirotić et al., 2017; Eagly, 2007), power (personal choice) (Kinsaul et al., 2014), living abroad (Stefanco, 2017), skills (Mahmud et al., 2012), long working hours (Coffman & Neuenfeldt, 2014), education (Setyaningsih et al., 2012; Subramaniam et al., 2013), competence (Evans, 2014; Raudeliūnienė, 2017), having a mentor (Bierema, 2016; McGowan et al., 2015), trainings (Setyaningsih et al., 2012), continual learning (Kemp & Zhao, 2016), orientation to results (Bullough et al., 2017), 24/7 availability (Coffman & Neuenfeldt, 2014), recognition of achievements (Setyaningsih et al., 2012), professional knowledge (Cimirotić et al., 2017; Javidan et al., 2016), specific knowledge (Cimirotić et al., 2017), freedom of decision-making (Subramaniam et al., 2013), hard work (Cimirotić et al., 2017), international internship (Stefanco, 2017), international business studies (Stefanco, 2017), technology-savvy (Stefanco, 2017), foreign languages (Stefanco, 2017), business savvy (Javidan et al., 2016).
Social competence	Active participation in community activities (Rogers et al., 1997), collaboration (Bullough et al., 2017), interaction skills (Zimmerman & Rappaport, 1988), influence to the community (Henry, 2011; Naushad et al. 2018), effective communication (Leitch et al., 2013), building networking (Leitch et al., 2013), formal and informal behavior (Zimmerman & Rappaport, 1988), positive recognition (Bullough et al., 2017), role model (Setyaningsih et al., 2012), social-cultural environment (Carrasco et al., 2015; Evans, 2014), passion for diversity (Javidan et al., 2016), supportive (Bullough et al., 2017), compassionate (Bullough et al., 2017), interpersonal impact (Javidan et al., 2016), interpersonal relationship (Zimmerman & Rappaport, 1988), intercultural empathy (Javidan et al., 2016), formal business networks (McGowan et al., 2015).
Management competence	Proactive in changing top leadership levels (from exclusive to inclusive) (Barnes, 2017; Evans, 2014), including others in democratic decision making and implementation (Bullough et al., 2017), team building for mutually agreed goals (Bullough et al., 2017), leadership in communities (Newberry, 2012), leadership style (Setyaningsih et al., 2012), empowering others to make decisions (Evans, 2014; Kimpah, Ibrahim, & Raudeliuniene, 2017), inspiring others (Bullough et al., 2017), listening to and energizing employees (Evans, 2014), ability to motivate (Bullough et al., 2017), recognizing achievements of other people (Evans, 2014), articulating vision and inspiring others to follow it (Evans, 2014).
External factors	Workplace mobility (Subramaniam et al., 2013), support of colleagues (Barnes, 2017; Cimirotić et al., 2017; Hurley & Choudhary, 2016), flexible working hours (Cimirotić et al., 2017; Hurley & Choudhary, 2016), gender inequality (Acker, 2009), luck (Cimirotić et al., 2017), family and friends support (Cimirotić et al., 2017; Kemp & Zhao, 2016; McGowan et al., 2015; Zhou & Chang, 2015), number of children (Hurley & Choudhary, 2016).

Zhong et al. (2011) claim that the "luck" factor does not play a vital role in climbing career ladders (Zhong, Couch, & Blum, 2011). However, Cimirotić et al. (2017) made the empirical research and found out that the "luck" factor – being at the right place at the right moment – is one of the external factors for successful women's leadership (Cimirotić et al., 2017). The success factor could be interpreted differently depending on the gender, women are usually more modest while estimating their achievements at work, therefore

the aspect of luck could be the result of women's modesty, meanwhile men call it "taking the chance" (Cimirotić et al., 2017). 7 external success factors based on the analysis of the scientific literature were distinguished (Table 1).

#### Research results

The multiple criteria assessment method was chosen to evaluate the complexity of the factors influencing success of women's leadership in e-commerce and to obtain more objective and higher quality evaluation results. This creates preconditions to seek for integrated and structured assessment approaches. Using the multiple criteria method allows to quantitatively evaluate any complicated phenomenon expressed by most factors and indicators. These assessment methods integrate qualitative (expert assessment, a survey, an interview) and quantitative approach combinations (Raudeliūnienė, 2017; Zavadskas, Mardani, Turskis, Jusoh, & Nor MD, 2016).

The primary list of factors influencing success of women's leadership in e-commerce was made (95 primary assessment factors identified) after a comprehensive analysis of scientists and practitioners' researches and it was divided into 5 categories based on the factor's content: personal competences (35), professional competences (24), social competences (18), management competences (11) and external factors (7). Multiple criteria assessment and expert evaluation method were applied in order to examine 95 success factors. The study was conducted in September 2017 (structured survey, 21 experts participated) and in January 2018 (interview, 3 experts participated) and took place in two stages. Experts were selected based on two attributes: the competence – women who have competence in e-commerce and leaders (established their successfully profitable e-business in Lithuania); work experience in e-commerce longer than 5 years. The results of the survey show that almost a half of all experts (48%) have a master's degree, 38% – bachelor's degree, PhD – 9% and 5% have other education. Almost half of the experts are under the age of 30 years (48%), 38% – 31 to 40 years old, 41 to 50 – 9% and 5% older than 50 years.

In the first stage, the aim was to evaluate the factors identified in the scientific literature that influence women's leadership success in Lithuanian e-commerce by applying a structured survey method. The experts were asked to evaluate success factors of women's leadership in e-commerce in Likert Scale 1, 4, where "1" means unimportant, "2" – more important than unimportant, "3" – important, "4" – very important.

In the second stage, the interview method was chosen to implement expert evaluation in order to clarify the framework of factors, their significance and to create a structure of the success factors of women's leadership in Lithuanian e-commerce (3 experts took part in this stage). Experts were selected based on competence (scientific research experience in e-commerce) and work experience (longer than a 10-year) in e-commerce area. In this stage experts evaluated the significance of each factor in the scale 0, 1.

The analysis of the personal competences shows that the most significant factors for successful women's leadership in e-commerce are the passion for work (3.62), personality (3.52), self-efficacy (3.43), personal responsibility (3.38), self-worth (3.33) and discipline (3.33).

Experts evaluated that the most significant management factors effecting the women leader's success are ability to inspire (3.76), motivate (3.67) and listen to colleagues (3,57), to be able to create visions and to inspire people to follow it (3.52), empowering others to make decisions (3.52).

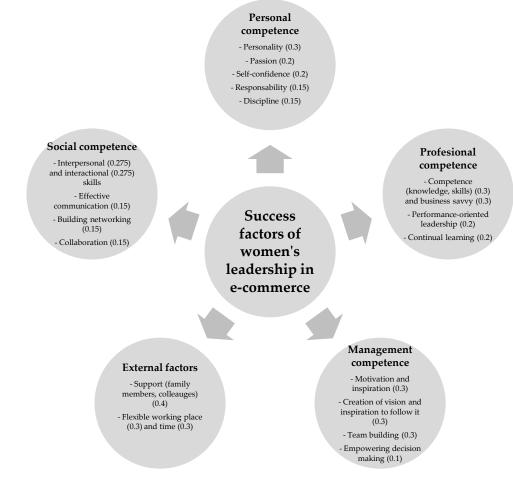
The analysis of professional competences discloses that the most important elements for successful women's leadership are continual learning (3.71), knowledge (3.48), competences (3.48), skills (3.43), freedom of decision-making (3.43), training and learning (3.29), performance-oriented leadership (3.24) and business savvy (3.24).

Based on expert evaluation results effective communication (3.76), building networking (3.76), interpersonal relations (3.57), collaboration (3.52) and interactional skills

(3.48) are the crucial elements for successful women's leadership in social competencies category.

In experts' opinion, the support of family members (3.57), friends and colleagues (3.24) plays the vital role for a successful women leadership, as well as other external elements such as a mobile workplace (3.19) and flexible working hours (3.00), which influence women to put more effort reaching the established goals.

The structure of success factors of women's leadership in e-commerce in Lithuania was made based on the scientific literature review, multiple criteria assessment and expert evaluation (structured survey and interview) results (Figure 1). After the second stage of expert evaluation (interview with 3 experts) the revised list was identified from 21 success factors divided into personal (5 factors), professional (4 factors), social (5 factors), management (4 factors) competences and external issues (3 factors) (Figure 6).



**Figure 1.** The structure of success factors of women's leadership in e-commerce (Lithuanian case study) (created by the authors)

Successful leaders stand out because of their personality (0.3), their passion for work (0.2), self-confidence (0.2), responsibility (0.15) and discipline (0.15) in personal competences category. Experts underlined the importance of professional competences in ecommerce field such as competence (professional knowledge, skills) (0.3) and being business savvy (0.3), performance-oriented leadership (0.2) and continual learning (0.2). The leadership takes a meaningful part of the management therefore experts stated that the ability to motivate and inspire colleagues (0.3), to become a visionary and to inspire subordinates to believe and follow it (0.3), as well as team building (0.3) and empowering peo-

ple to make decisions (0.1) are the most significant factors in management competences category. It was found out that interpersonal (0.275) and interactional (0.275) skills helping communicate effectively (0.15), build networking (0.15) and collaboration (0.15). The most significant external factors influencing success in e-commerce are support of close environment (family members and colleagues) (0.4), mobility of the workplace (0.3) and flexible working hours (0.3).

#### Discussion and conclusions

The phenomenon of glass ceiling, glass cliff or glass wall are often used in scientific research and practice analyzing the topic of women's leadership in business in order to describe unseen but existing obstacles faced by women climbing career ladders. Despite the fact that nowadays the topic of gender inequality is frequently discussed, the problems of pay gap between men and women and a lack of women leaders in executive positions are still relevant problems in XXI century. The concept of leadership is defined as the ability to unite and motivate people to work together for a common goal, to create interpersonal relations, to establish a vision and influence the subordinates to follow it. Scientists have created different theories of leadership by emphasizing different traits: democratic, autocratic, transformational, transactional, laissez-faire, situation leadership. Each style of leadership has its own advantages and disadvantages, one universal leadership style suitable for all situations and organizations does not exist. The only way to become an effective leader is to be able to identify different situations and to manage by adapting different styles of leadership.

Scientists analyze the features of women and men leadership, however their opinions and results are controversial. Usually women's leadership is assigned to the transformational leadership style, women are more empathetic and not as categorical as men are, although some researchers discuss that women are usually inclined to use the autocratic leadership style in order to be accepted and respected in the world ruled by men. In addition, in the studies analyzing the role congruity theory of prejudice it is underlined that women avoid adapting leadership style which is used by men leaders. Different results of scientists' theories and surveys lead to the conclusion that the successful leadership is a result of complex behavior which is adapted to particular situations and has different features assigned to typical masculine and feminine behavior.

Analysis of the successful women's leadership include a wide variety of different factors (95 factors) described in scientists' studies; based on the content of these factors, they can be attributed to personal (35 factors), professional (24 factors), social (18 factors), management (11 factors) competences and external factors (7 factors) categories.

The structure of success factors of women's leadership in Lithuanian e-commerce was made based on a scientific literature review, multiple criteria assessment and expert evaluation (structured survey and interview) results. The most significant factors for successful women's leadership in e-commerce of the personal competences are personality, passion for work, self-confidence, personal responsibility and discipline. The most important elements of professional competences are competence (knowledge, skills) and being business savvy, performance-oriented leadership and continual learning. Interpersonal and interactional skills, effective communication, networking and collaboration are the crucial elements in the social competences group. The most significant management factors are motivation, creation of a vision and inspiration to follow it, team building and empowering decision making. The support of family, relatives and colleagues plays the vital role for the successful women's leadership, as well as other external elements such as a flexible working place and time.

The results obtained during the study have some limitations. More complex research is needed to confirm results obtained because the expert evaluation was made in one country. Seeking to eliminate limitations expert evaluation (structured survey and interview)

should be performed by expanding the geography and analyzing success factors of women's leadership in e-commerce of markets which are culturally similar.

Further scientific research could be developed in the following areas: to carry out an experiment to examine the success factors of the e-commerce and their applicability to various European Union countries, considering the specifics of the regions. Also, evaluate the interconnectivity of the assessment variables of success in e-commerce and their impact on the performance of an organization.

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