



ASSOCIAÇÃO DE POLITÉCNICOS DO NORTE (APNOR)
INSTITUTO POLITÉCNICO DE BRAGANÇA

Female Entrepreneurship in Belarus.

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Supervisors:

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Natalia Kurkovich

Bragança, June, 2016.



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Abstract

Nowadays entrepreneurship is one of the main key objects in internal policy of each country. More and more women start doing their own business and thus become integral participants of entrepreneurial activities. However, despite of the abundance of various scientific publications, female entrepreneurship is poorly understood phenomenon, which is needed to be carefully scrutinized. The general purpose of this work is to describe and analyse such phenomenon as female entrepreneurship generally in the world and separately and mainly in Belarus. Indeed, it intends to determine the factors that drive women's entrepreneurship in Belarus. The findings are supported by literature, gathered from different scientific researches and actual statistical data. The data used in the empirical part was collected from World Bank Enterprise Surveys and comprises the responses of representatives of 360 companies selected randomly from the population of the Belarus companies. With the help of descriptive statistics and the application of logistic regression simple models to determine which economic, social, fiscal and legal environmental factors impact on female entrepreneurial activity was possible to understand the female involvement in business activities and society of the country.

Keywords: Female entrepreneurship, gender, logistic regression analysis, World Bank Enterprise Surveys, Belarus

Resumo

Atualmente, o empreendedorismo é uma das principais ferramentas na política interna de cada país. Cada vez mais mulheres iniciam o seu próprio negócio e, assim, tornam-se participantes integrais das atividades empresariais. No entanto, apesar da abundância de várias publicações científicas, o empreendedorismo feminino é um fenómeno mal compreendido que é necessário que seja cuidadosamente analisado. O objetivo geral deste trabalho é descrever e analisar o empreendedorismo feminino no mundo, em geral, e, separadamente mas principalmente, na Bielorrússia. De facto, este trabalho de investigação pretende determinar os fatores que impulsionam o empreendedorismo feminino na Bielorrússia. As conclusões são apoiadas pela literatura, recolhidas a partir de diferentes fontes bibliográficas científicas e dados estatísticos reais. Os dados utilizados na componente empírica foram recolhidos pelo World Bank Enterprise Surveys e compreendem as respostas dos representantes de 360 empresas selecionadas aleatoriamente da população das empresas Bielorrussas. Com a ajuda da estatística descritiva e da aplicação de modelos simples de regressão logística, para determinar quais os fatores ambientais, económicos, sociais, fiscais e legais possuem impacto na atividade empresarial feminina, foi possível compreender a participação feminina em atividades empresariais (e da sociedade) no país.

Palavras-chave: Empreendedorismo feminino, género, regressão logística, *World Bank Enterprise Surveys*, Bielorrússia

Резюме

На сегодняшний день предпринимательство является одним из основных ключевых объектов внутренней политики каждой страны. Все больше и больше женщин начинают свой бизнес и таким образом становятся неотъемлемыми участниками предпринимательской деятельности. Однако, несмотря на обилие различных статей и научных публикаций, женское предпринимательство все ещё является плохо изученной сферой и поэтому данная развивающаяся тенденция требует внимания и тщательного исследования. Общей целью данной работы является описать и проанализировать такое явление, как женского предпринимательства в целом в мире, так и в Беларуси в частности. Так же работа нацелена на описание экономической и социальной бизнес среды и определение основных факторов, влияющих на предпринимательскую деятельность женщин в Беларуси. Проведенное исследование и сделанные выводы основываются на различной научной литературе, проведенных ранее исследованиях и статистических данных. Данные, используемые в практической части была взяты из исследований Всемирного банка и включает в себя ответы представителей 360 компаний, отобранных случайным образом. Так же для определения экономических, социальных, финансовых и правовых факторов окружающей среды, влияющих на предпринимательскую деятельность женщин была использована статистика, метод описания и применена логистическая регрессия простых моделей что помогло выявить степень вовлеченности женщин в предпринимательскую деятельность и общество страны в целом.

Ключевые слова: женское предпринимательство, пол, логистический регрессионный анализ, исследование Всемирного Банка, Республика Беларусь.

Resumen

Hoy el emprendimiento es uno de los objetos más importantes y principales en la política casera de cada país. Cada vez más mujeres comienzan a hacer su propio negocio y de este modo se convierten en participantes integrales de las actividades empresariales. Sin embargo, a pesar de la abundancia de diversas publicaciones científicas, el emprendimiento femenino está mal investigado y es necesario examinarlo escrupulosamente. El objetivo general de este trabajo es describir y analizar este fenómeno como el emprendimiento femenino en el mundo y en particular en Bielorrusia. De hecho, se tiene la intención de determinar los factores que impulsan la capacidad empresarial de la mujer en Bielorrusia. Los resultados están apoyados por la literatura científica y los datos estadísticos reales. Los datos utilizados en la parte empírica se recogió de Encuestas de Empresas del Banco Mundial y comprende las respuestas de los representantes de 360 empresas seleccionadas al azar de las empresas bielorrusas. Con la ayuda de la estadística descriptiva y la aplicación de modelos de regresión logística simple para determinar qué factores económicos, ambientales, sociales, fiscales y legales impacto en la actividad empresarial de las mujeres era posible entender la participación femenina en las actividades empresariales y la sociedad del país.

Palabras clave: Empreendedorismo femenino, género, regressão Logística, Encuestas de Empresas del Banco Mundial, Bielorrússia.

To my uncle, my family and my friends.

I would like to dedicate this work to my uncle, parents and grandparents that always support me and help in all my ideas and beginnings. And also to my active friends-entrepreneurs that inspired me to write the work about women's entrepreneurship by their own life example.

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Abbreviations and/or Acronyms

ECA = Europe and Central Asia.

LAC = Latin America and the Caribbean.

MNA = Middle East and North Africa.

EAP = East Asia.

SAS = South Asia.

SSA = Sub-Saharan Africa.

OECD = Organization for Economic Cooperation and Development.

UN = United Nations.

OECD = Organization for Economic Co-operation and Development.

FAO = Food and Agriculture Organization.

GEDI = Global Entrepreneurship and Development Institute.

GDP = Gross Domestic Product.

SMEs = Small and Medium size Enterprises.

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Introduction

Nowadays many women are breaking free from the traditional, gender-specific roles and going into the business world. Female entrepreneurship became a growing trend of business activities in many countries. The development of women's entrepreneurship is a key strategy and an effective tool to overcome the problems of unemployment and poverty. However, the development of female entrepreneurship needs to overcome a number of obstacles and challenges which formed the gap between women's attitudes to entrepreneurship and the actual situation. More and more women are becoming entrepreneurs, they often face a set of challenges that are not typical for their male counterparts: balancing business and family life, building a support network, coping with a fear of failure, limited access to funding, etc. These barriers are varies from country to country depending on economic situation, formed opinions and prejudices about women in entrepreneurship and historically formed gender roles.

At the same time today women took a proactive stance in society and more often are involved in all public spheres that leads to development of gender equality in many countries with high level of women-owners of enterprises. It is obvious that gender equality is important in itself, but also an issue of human rights and social justice in society that may contribute to the achievement of other social and economic objectives. As a result, women's entrepreneurship is becoming an important concept that requires attention.

The objectives of this work is to determine positions of female entrepreneurs in the structure of a modern society and to reveal specifics, especially the development of a social group "woman entrepreneur" in the Republic of Belarus. Also it is important to identify the motivation and reasons of women's entrepreneurship, to highlight significance of this concept in business in the country, to consider the relationship of women-entrepreneurs with the state, partners, competitors and subordinates and to reveal the problems that women face being an entrepreneur, perspectives in future and modern tendencies in this sphere.

In the empirical part, the thesis describes the data analysis regarding to how entrepreneurship is characterized in the country, what features are common and widely spread in business sphere, how women participate in it, what possibilities exist and what obstacles women may face while their business practice in Belarusian market. Necessary data was collected from the World Bank Enterprise Surveys websites and on other statistical websites, which includes information about level of women's participation in business, main common features, places of location, specific particular qualities of doing business, etc. The research of World Bank Group was implemented in Republic of Belarus and

connected with understanding of female participation in business, the level of entrepreneurship development and existed barriers for women in researched field.

Questionnaires of the given research cover such issues as innovations, researches and development of enterprises, acquisition of external knowledge and use of new technologies, protection of innovation, management and organizational practices, management methods and interaction within the state and public-private partnerships. 360 companies were taken into account from all regions of Belarus, what gives the opportunity to determine prevalent features that are specific to Belarusian market. 13 variables were selected in order to be investigated, make a logistic regression model, analysis and to reveal the level of significance for each of them.

This work is divided into 3 main chapters. The first theoretical part included two subgroups. The first subgroup contains the information about status and the level of development of female entrepreneurship in different countries and regions of the world. The second subgroup concerns the features of women's participation in entrepreneurship of the Republic of Belarus. The 2nd chapter is a methodology's explanation, where the method of how the database was formed is shown in three subgroups. And finally the last part of the study illustrates the analysis and empirical results of the given study. All the results are summarized in the conclusion part of master thesis, which presents the most important findings of this work.

1. Female Entrepreneurship research

1.1. Development of Female Entrepreneurship in the world

Nowadays entrepreneurship which is headed by active and successful entrepreneurs occupies central position in a market economy of each country. The economic success of worldwide economics is the result of encouraging, stimulating and rewarding the entrepreneurial ambitions and behaviour. Generally speaking “entrepreneurship is the phenomena associated with entrepreneurial activity, which is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets” (Ahmad & Seymour, 2008, p.14).

Modern entrepreneurship is a key element of the market economy, it determines greatly the rate of economic growth, structure and quality of the gross national product, contributes to the maintenance of intense competitiveness what creates a new social stratum of society (Aidis, Weeks, Anacker & Moyer, 2015). The high level of entrepreneurship development is a necessary condition for a prosperous model of a modern economy. As a result entrepreneur is one of the main characters in business activities that gradually influence economic development and create healthy competitiveness in different spheres of present social and financial life. According to Ahmad and Seymour (2008) entrepreneurs could be defined as persons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets. Moreover entrepreneurship has a broader economic impact and is an important issue in sphere of job creation, private sector development, and wealth creation. Women’s participation in entrepreneurship may

increase the expansion of listed economic goods and simultaneously lead to higher and stable equality between men and women (Sattar, 2012a).

The influence of women is increased more and more in the modern world and can't be underestimated in business and growing sphere of entrepreneurship all over the world. In other words as it was determined by European Commission (2008, p.24) that "female entrepreneur is a woman who has created a business in which she has a majority shareholding and who takes an active interest in the decision-making, risk-taking and day-today management".

In today's constantly changing and competitive landscape, female entrepreneurship is relatively new and growing concept that occurs not only because of significant economic changes, but also due to the gradual modification of the socioeconomic female status in the world. In general, women are estimated to "contribute 52 percent of global work, while men make up 48 percent" (Jahan, 2015, p.11). In addition women contribute 40 percent of the global labour force, 43 percent of the world's agricultural labour and more than half the world's university students are women (GEDI & Dell, 2014). Some women have motivation to start a new business because of appeared opportunities, while decision of others to go into entrepreneurship are supported by necessity. These two groups of entrepreneurs may have different business behaviour, attachments to their start-ups and diverse risk profiles. According to Singer, S., Amorós, J., & Moska, D. (2014, p.13) "the most gender-balanced rates of starting the business out of necessity are found in Australia, the Netherlands, Luxembourg, Denmark, Austria, Kazakhstan, South Africa, Singapore and Thailand". Nevertheless sometimes people are motivated to start their business by many challenges and factors of discrimination that exist in the labour market. Among these factors are female discrimination in salaries, conditions and employment possibilities. On average, in European and Central Asian countries about 50% of women entrepreneurs pursued entrepreneurship because of opportunity. However, in Croatia, Serbia, and Turkey, only 25–45% of women-owned businesses were established because of this matter (Sattar, 2012a). If self-employment among women declines, as a result the proportion of women employers increases. This can be a reflection of the difficulties that self-employed women may face during the growth of their own businesses, because women encounter greater barriers than men, or their decision may represent a market necessity, aspiration of expanding their wealth. Women are often forced to work in less skilled labour and prestigious sphere of business. Also female entrepreneurship is prevalent in the public sector, where salaries as a rule are lower (Klugman, 2014).

All over the world, women face specific barriers on their way to start business, both formal and informal. For example, there is a clear understanding what career is suitable for woman, and which is not in many countries and belief that to be an individual entrepreneur is not a woman's business (European commission, 2004). In this environment it became difficult for ambitious beginners to overcome existed stereotypes, prejudices and already formed opinion about the women's abilities and opportunities in

business sphere. Business barriers for women form part of broader gender-related barriers related to social stereotypes and positions of women in society (McAdam, 2013).

There are many influenced social and gender barriers on the way to blooming female entrepreneurship. According to Cutura (2008) the obstacles in modern society are cultural prejudices related to gender roles in society, property ownership and judgment about inherent female skills and lower tolerance to risk that exist in many countries of the world with different degree of significance.

Next obstacle is the difficulty of obtaining high career positions. Women hold top management positions in 19% of firms in Europe and Central Asia, 27% in East Asia, 22% in North America as in Asia-Pacific region, Latin America have index of 18% and Australia (22%) has not moved from a decade ago. Nevertheless Lagerberg's (2015) research reveals that 40% of senior business roles in Russia are occupied by women, what is one of the highest indexes in the world, and almost double the global average (22%). Also such countries as Georgia (38%), Poland (37%), Latvia (36%), Estonia (35%) and Lithuania (33%) have high values in this index. Women more often achieve top management positions in small firms than in large and medium enterprises (Elmer, 2016). Moreover, there are more women top managers in such female prevalent sectors as garment industry, hotels and restaurants, and textiles, what is 30-40%. Thereby the share of top managers who are women is only 6% in the basic metals, machinery, and equipment industries (Sattar, 2012b).

Next factor on the way to successful operating in the market is lower wages in comparison with men's salaries and limited involvement in entrepreneurship. According to UN statistics, on average women's salaries are less in 24% with comparison to men's salaries around the world, however this index varies depending on the country (Jahan, 2015). For example, in Eastern Europe and Central Asia, women are paid 22% less than men, while in France and Sweden this number is higher (31%). In Germany, the difference in earnings between men and women is 49% and in Turkey the index is 75% (World Economic Forum, 2014).

The fourth barrier is gender gap in critical skills needed to run enterprise, in human capital endowments and in access to economic opportunities and productive inputs. For instance "female farmers and entrepreneurs have less access to land than men" (FAO, 2011, p.46). Thus, possibility to obtain credit is lower among women entrepreneurs than among their male colleagues. In developing countries, there are 8 to 10 million female-owned of small and medium companies, that constitute 31-38 % of the total amount, but these firms as a rule is smaller and operate in less profitable sectors (World Bank, 2012, p. 22).

Moreover lack of education, vocational and technical skills and work experience is huge difficulty in female entrepreneurship (Howard & Wellins, 2009). More educated women have traditionally exhibited higher participation rates than their less educated colleagues. However, it turns out that "the large amount of well-educated women, especially those whose sphere is the social sciences, law and business are underutilized in Europe and Central Asia" (Sattar, 2012a, p.68). Hereby, access to higher levels of

education forms the foundation for high potential female entrepreneurship. As a result, lack of education and poor professional skills slow down the possibilities to start ups and growth of women entrepreneurship in general (OECD, 2012).

One of the urgent problems is limited legal rights and restrictions to a woman's activities outside the home. According to World Bank studies (2016, p.3) "women's prospects limited by law in 155 countries". 90% of countries had at least one law that inhibits women's economic opportunities. Country with highest percentage of female justices in constitutional courts are Slovenia, Latvia, Canada, Belarus, Ecuador and Venezuela. The lowest indexes have India, Ukraine, Sudan and Indonesia. There is at least one female justice in 122 states from 153 economies and women are chief justices in 26 economies. However, there is not even one female chief justice in the Middle East, North Africa or in South Asia (Nadereh, 2007). In 35 countries, women do not have the same inheritance rights as men. In countries that restrict a woman's ability to make economic decisions, girls finish secondary school rarer and their prospects of running or managing a business are reduced because of this reason. As well in this situation if a woman get a job, she is likely to earn less than a man (Usor, 2016).

Insufficient business training and poor access to financial and market information are important obstacles in the field of female entrepreneurship. According to International Finance Corporation (2011) women are less likely than men to obtain bank financing and credits, have worth access to business development services, as a result "links with supply chains and more often they pay higher interest rates in case of receiving financing for their business" (Sattar, 2012a, p.71).

Women and men tend to work in very different areas without big changes over time, even in countries with high income female entrepreneurs dominate in the informal sector or in traditional female sectors of economy. At least 30% of women in the non-agricultural labour force are self-employed in the informal sector (Elborgh-Woytek et al., 2013). In almost all countries, women in manufacturing earn less than men. In urban areas in Eastern Europe and Central Asia, Latin America, and Sub-Saharan Africa, the value added per worker is lower in firms managed by women than in those managed by men. Women participate in the ownership of over half (55 %) of the firms with 10 employees or more in the textile and garment industry, compared with only a quarter of the firms in basic metals, transport, and electronics. In some higher-productivity sectors, women have a strong presence. For example, among sole proprietorships in information technology and electronics, respectively, 33 and 40 % are owned by women (Sattar, 2012b).

Female strategy in entrepreneurship differ from mail style of doing business. Women are likely to be more attentive to the details, gentle and are oriented to the proses more than on the result. They give big importance to relationships with employees and try to build a business by the "family" type. Thus female entrepreneurs tend to act in informal sphere and concentrate in the areas of small-scale entrepreneurship and traditional sectors, which primarily includes retail and service (Naymova, 2004).

They operate in traditional sector that demand less experience and lower start-up capital, as a result sectors offer lower returns and smaller revenue (World Bank, 2012).

International experience and good practices have shown that gender issues are becoming increasingly incorporated into government policies. Governments have been facilitating women entrepreneurship through organizing special programmes for raising awareness of its potential and benefits, designing financing schemes targeting women entrepreneurs, initiating business training courses and mentoring programmes for would-be entrepreneurs. Governments of different countries try to identify and overcome the cultural prejudices and societal stereotypes that constrain entrepreneurial motivation in women and prevent them from accessing entrepreneurial positions (United Nations, 2008).

Also, there are world famous enterprises and organizations as Millennium challenge corporation (MCC), Hindustan Unilever, Nike, Ernst & Young and Coca-Cola Company that promote gender equity in their performance. These projects help rural women start businesses and earn a livelihood, expand opportunities for adolescent girls, enlarge work positions for women and widen mentoring, flexible work policies and strengthened engagement on gender (MCC, 2016). Moreover, the United Nations established Women's Empowerment Principles (WEPs) which are a concrete guidance for firms and corporations to empower women in their workforce, communities and the marketplace (UN, 2010). The purposes of the UN principles are listed below:

1. Establish high-level corporate leadership for gender equality;
2. Treat all women and men fairly at work - respect and support human rights and non-discrimination;
3. Ensure the health, safety and well-being of all women and men workers;
4. Promote education, training and professional development for women;
5. Implement enterprise development, supply chain and marketing practices that empower women;
6. Promote equality through community initiatives and advocacy;
7. Measure and publicly report on progress to achieve gender equality (UN, 2010).

1.1.1 Female entrepreneurship in different regions of the world.

Furthermore, periodically researches are carried out by some institutes and companies in the sphere of female entrepreneurship in order to study changes and trends of starting and doing business in different countries, continents and regions, to determine reasons and factors that can impact women's ability to start and grow business and to distinguish more deeply into the problems that women entrepreneurs may face every day. For instance GEDI Research Institute together with Dell Company examined 30 countries in terms of how women are doing business, what possibilities and obstacles are the most significant in different regions and as a result released gender global entrepreneurship and development

index (GEDI). Gender GEDI Index takes into account not only the general financial climate and living conditions in different countries, but also the specific problems and features that somehow may block the development of female entrepreneurship (GEDI & Dell, 2014).

The rankings take into account the different business indicators and results of interviews. Estimates countries exhibited by the scale ranging from 0 to 100. The results of described research is given in Table 1.

Table 1. Gender-GEDI 2014 Ranks and Scores

Rank	Country	Score			
1	United States	83	16	Panama	39
2	Australia	80	17	Thailand	38
3	Sweden	73	18-19	Turkey	36
4-5	France	67	18-19	Russia	36
4-5	Germany	67	20	Brazil	35
6	Chile	55	21	Malaysia	32
7	United Kingdom	54	22	Jamaica	30
8	Poland	51	23	Nigeria	29
9	Spain	49	24-25	Morocco	27
10	Mexico	43	24-25	Ghana	27
11-13	South Africa	42	26	India	26
11-13	South Korea	42	27-28	Uganda	19
11-13	China	42	27-28	Egypt	19
14-15	Peru	40	29	Bangladesh	17
14-15	Japan	40	30	Pakistan	11

Source: (GEDI & Dell 2014, p.9).

The United States (with a score of 83), Australia (80) and Sweden (73) are the top ranking countries in the 2014 Gender-GEDI that can be called 1st Tier Performers. Top performers who rank in 1st through 8th place tend to have good overall business environments and strong governmental support that gives growing possibilities of successful business. These countries are followed by France and Germany (67), Chile (55), the United Kingdom (54) and Poland (51) which all received an overall score of 50 or more. Twenty-two countries from the list received less than 50 points, indicating that many of the fundamental conditions for high potential female entrepreneurship development are generally lacking in the majority of countries (GEDI & Dell, 2014).

The countries in the middle of the category (2nd Tier Performers) include both emerging economies particularly in Latin America and East Asia but also in Eurasia and Africa. Mostly, there is a reasonably good business environment and good access to resources. These countries also are doing their best in terms of women's willingness to take the risk of starting a business and are not deterred by failure.

Entrepreneurs have access to finance and female start up activity rates. Here we can list such noticeable weaknesses as is the lower level of female leadership, low levels of tech start-ups as well as countries with high index and low levels of growth-oriented female entrepreneurs. The lowest positions (3rd Tier Performers) were occupied by such countries as Nigeria (29), Morocco and Ghana (both 27), India (26), Uganda and Egypt (both 19), Bangladesh (17), and Pakistan (11). It tend to be areas with culturally conservative emerging economies that adhere to traditional women's roles in society. Women's access to education is a critical issue on this territory, both in terms of low rates of secondary education and low education levels among female business owners (Goldman & Andrew, 2007). These countries can be called areas that need improvement for the lowest-performing economies include basic legal rights and education for women and acceptance of women's social and economic empowerment. As a result mainly none of listed countries in Table 1 have ideal conditions of doing prosperous business for women. Despite the fact that rich countries have received higher indexes, it is obvious that economic development is not the only determining factor. A good example is Japan (40 points), which occupied only 14th place but has very strong and financially developed economy.

Female entrepreneurs make significant contributions to economic growth and to poverty reduction. In the United States, for example, "women-owned firms are growing at more than double the rate of all other firms, contribute nearly \$3 trillion to the U.S. economy and are directly responsible for 23 million jobs" (World Bank, 2012, p.3). Less than a third of women in the US and Europe say that they had the opportunity to run their own business. In contrary, there are lots of ideas for business in developing countries. Female start-ups in countries of 2nd Tier Performers tend to be active in new markets, which indicates a level of innovativeness. For example 69% of African women have their own business idea, but there are other obstacles concerning education and financing, low development of capital markets, business freedom and business risk that became a reason for weak development of female entrepreneurship (GEDI & Dell, 2014).

Six regions can be distinguished in order to characterize main features of female entrepreneurship in the world: Africa, East Asia, South Asia, Europe, Latin America and the Caribbean (LAC) and Middle East and North Africa (MENA). Such countries of African region as Ghana, Nigeria, South Africa and Uganda can be characterized by following features: high level of female entrepreneurial drive (69% of the female population had opportunities to start a business; there are 8.6 female start-ups for every 10 male ones); good female representation in leadership (39% of managers and senior officials are female) (GEDI & Dell, 2014).; low educational attainment among women (only 46% of the adult female population has completed secondary education; 13% of female business owners have a college education); low equity in financing (International Finance Corporation, 2011).

The East Asia is represented by China, Japan, South Korea, Malaysia and Thailand has following features: good business environment with low business risk, wide availability of equity capital, poor skills for start-up and business opportunities, low level of female leadership (only 17% managers and senior

officials are female) (Wirth-Dominicé, 2015). In Japan, women held only 8% of all board seats at major companies. Moreover, as Hinds (2015, p. 3) write “66 per cent of Japanese businesses have no women in their senior leadership teams”.

In Bangladesh, India and Pakistan that are part of South Asia region 65% of the female population is willing to start a business, but only 25% of adult females have secondary education, as a result this region shows the lowest female start-up activity rates - 2.8 female start-ups for every 10 male ones (Hinds, 2015). The region’s weaknesses are related to the lack of women’s equal rights, higher levels of female labour crowding and low general educational attainment amongst women.

The European region includes such highly indexed countries as Sweden, France, Germany, Poland, Spain and the United Kingdom. In accordance with the data Sweden has the best environment for development and growth of female entrepreneurship. This region is distinguished by equal rights and favourable attitude towards women in executive positions, low levels of female labour crowding, good level of access to childcare, 49% of female business owners have college degrees, favourable business environment and large amount of programs geared towards women and high possibilities of access to financing (bank accounts and financial training programs). In this region about 1 from 3 owners of business is a woman, woman is a top manager in about 1 in 5 firms. In addition countries in Europe and Central Asia stand out with the highest rate of female participation in ownership. These countries are: Belarus, the Kyrgyz Republic, and Moldova (50–60%), while the countries with the lowest female participation rates in ownership are Albania, Azerbaijan, and Kosovo (11%) (Sattar, 2012a).

The Latin American and Caribbean region includes Brazil, Chile, Jamaica, Mexico, Panama and Peru. It is characterized by high female start-up activity rate (8.4 female start-ups for every 10 male start-ups) and high level of female start-ups in markets with little competition which indicates that market expanding and often innovative activities are occurring in this region. However it shows low level of high-growth female start-ups (only 7%) and little access to high quality, affordable childcare. In this region women are more likely to operate in consumer sectors and are less likely to be found in the male-dominated sectors such as extraction (forestry, fishing, and mining), transforming (manufacturing and construction) and business services (World Bank, 2011).

Finally Middle East and North Africa region is represented by Egypt, Morocco and Turkey. A relative regional strength is the percentage of female start-ups using new technology (39%). Moreover on average only 11% of the managers and senior officials in these countries are women. The main weaknesses in the MENA region are: low levels of women’s equal rights, less favourable attitudes towards women in executive positions, fewer women in leadership positions and low possibilities of access to high quality childcare (Sattar, 2012b).

The level of female participation in top management in listed below regions is shown in Figure 1.

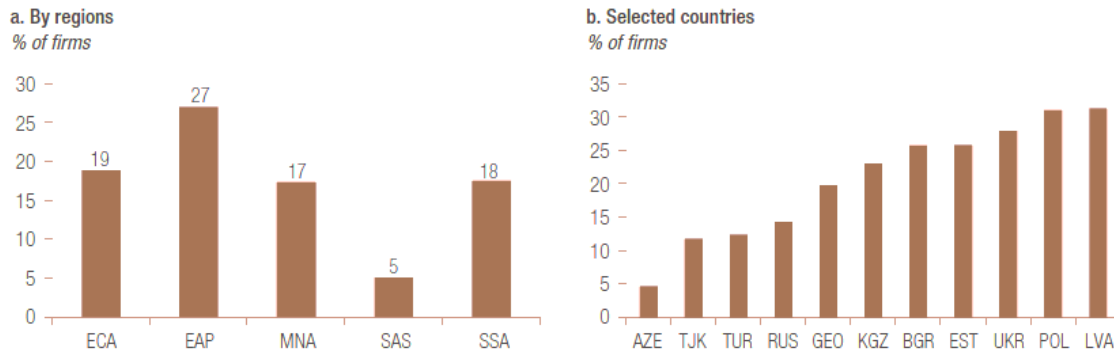


Figure 1. Women's Participation in Top Management.

Source: World Bank, 2016.

In particular there are different indexes and degrees of Women's Participation in Top Management that are illustrated in Figure 2. East Asia region (EAP) which includes Indonesia, Malaysia, Mongolia, the Philippines, and Vietnam has the highest index (27%) and far exceeds other regions. Besides, Europe and Central Asia (ECA), Middle East and North Africa (MNA) and Sub-Saharan Africa (SSA) almost have similar values. It could be suggested that conditions for female participation are similar in these 3 regions and attitude to women in business may have alike peculiarity and features.

1.1.2. Factors that influence the entrepreneurial activity of women.

Also there are some key issues that can help to determine and estimate level of development in women's entrepreneurship in the country or region. GDP levels can be determined as the first factor, as this index influence the whole economy and plays a huge role in creating auspicious conditions for development of female entrepreneurship. The higher GDP level is, the lower the proportion of involuntary entrepreneurship and the higher the efficiency of business is. Women more often are potential entrepreneurs than men in majority of countries, therefore, entrepreneurial activity of women often determines the level of activity of potential entrepreneurs in developing countries, what is stimulated by raw materials and the growth of industrial production (Gudkov, 2014).

Other issues also are important and have an impact in different regions of the world. There are 5 main areas which are likely to impact diversification of situation in sphere of entrepreneurship extension: female labour crowding, equal legal rights and access to capital, acceptance of women in leadership positions and last but not the least access to public spaces or bank accounts (GEDI & Dell, 2014).

However, in GEDI & Dell (2014) report it is noticed that there are hampered obstacles to the favourable development of high potential female entrepreneurship: 73% countries exhibit female labour crowding,

73% countries limit legal rights for married women, 27% countries limit women's access to property, 23% countries restrict women's access to public spaces and 23% of countries at least half of the female population is unbanked.

Furthermore, women are accepted on leadership positions less than men in many countries regardless of economic level and financial positions in the market. GEDI & Dell (2014) report shows that in 83% of sample countries female managers form less than 40% of total amount. Successful high potential female entrepreneurs are similar to female executives in terms of their visible leadership roles in the private sector. Moreover, Boatman and Wellins (2011) wrote organizations with a higher percentage of women in leadership positions report more frequently their financial and corporate performances as better than the competitors, what proves that women, especially at the senior level, help organizations to perform better. According to a report of Werner, Devillard and Sancier-Sultan (2010), at least 30 % of women in higher-level leadership positions significantly improves financial performance of companies.

At the same time women remain underrepresented in board rooms of companies around the world. In general women holding positions as 60% of junior managers, 40% of middle managers, 20% at senior levels and single digits at chief executive. The highest index have such countries of Europe as Norway (35.5%), Finland (29.9%), France (29.7%), UK (22.8%), Canada (20.8%) and USA (19.2%). On the other hand India Japan and Portugal have low level of woman participations in the board of directors (Catalyst, 2016).

Improvement of female status in entrepreneurship is critical to sustainable development. Companies with the highest percentages of female member of board directors outperform those with the least on return on invested capital by 26% and on return on sales by 16%. Moreover, higher diversification leads to more innovation, independence and good governance that in its turn leads to improvement in profit (Catalyst, 2016). Particularly equity between male and female business executives exist on the high level in such countries of Europe and Asia as Sweden (94%), South Korea (60%), Russia (59%), Thailand (59%), Malaysia (57%) and Turkey (52%). Nonetheless there is still low index in India (45%), Ghana (42%) and Egypt (18%), that shows the differences in social and economic female status in different regions and cultures. Gender equality can lead to significant economic growth, as female labor force participation and educational attainment may create higher productivity and GDP growth (Lawson, 2008).

Another factor is equal legal rights and access to resources. On the whole, in 70% of countries women do not enjoy the same access to employment and married women do not get the same legal rights as married men (World Bank Group, 2015). In many countries of the world, women have less influence in decision making than men in their households, communities, and generally in their societies. Fifth of married women in India are not involved in spending decisions and their own incomes. In Egypt, Nigeria and Pakistan there are legal restrictions to female access to public places. Even in an upper-middle-income country like Turkey, more than a quarter of married women in the lowest income quantile lack control over their earned income (Jones & Gates, 2007).

Access to capital or formal bank accounts can be pointed as next index. As World Bank (2012) statistics said 50% or more of the female population is unbanked, what limits the possibility of opening new start-ups and proceed economically confident operations in the market. Clearly the shortage of formal financing limits the ability of female entrepreneurs to start and develop successfully their businesses. Such countries as Turkey, Chile, Russia, Morocco, India, Peru and others have inequality between men and women with bank accounts. At the same time some countries have the highest level of possibility for women to have bank accounts. These countries are Sweden (99%), Germany (99%), United Kingdom (98%), Japan (97%) and South Korea (93%). In Tunisia, for example, 76 % of women business-owners requested bank credit, but only 47 % received it (Chamlou et.al. 2007). Consequently many female-owned businesses are based on own savings, loans from friends and family and micro loans to satisfy their business needs. Otherwise the small size and short-term micro-loans don't allow women borrowers to make long-term investments in their businesses (Narain, 2009).

In some countries, there is no foundation for formation of business facilities. In 14 countries such as Russia, Mexico, Peru, Uganda and Pakistan, more than half of women do not have a bank account. In other countries, the main problem is lack of women managers. In Japan, for instance, only 9% of managers are women. Some economic sectors, such as high-tech areas, continues to be dominated by men that discourages women's participation in this sector (Kelley et al., 2015). The low level of female start-ups in the tech sector is not limited to top performing countries but characterizes the majority of countries at all performance levels. It points to a broader underlying issue: the educational and labour force crowding of women is further reflected in the sectors where women start businesses (GEDI & Dell, 2014).

Due to GEDI& Dell (2014) research female entrepreneurs used to be concentrated in service sector and in businesses such as beauty sphere, food vending and sewing that is connecting with common female roles in society. Additionally, women tend to work in areas, industries, positions and jobs with lower average productivity, which explains a big distinction of the gender gap between productivity and earnings. Inequality between female and male-owned businesses are often explained by differences in access and use of productive resources. In contrary, Sweden and the United Kingdom are two top indexed countries for labour force parity. There are many women that compete for jobs in a few sectors, driving wages down, while other sectors lack female competition, resulting in higher wages for a smaller pool of primarily male competitors (Wirth-Dominicé, 2015).

Nowadays professional social media platforms became the criterion that impact the growth of female entrepreneurship development. Access to internet and social networks play a big role in possibilities to develop, maintain and promote business (Wolf, 2013). Hereby professional social networking platforms support entrepreneurs in several ways:

- Increase the transparency and of entrepreneur's profile to a broader audience;
- Improve market positions;

- Give the possibility to seek new clients and suppliers;
- Help entrepreneurs to gain advice, form partnerships, secure financing, and access qualified management and employees;
- Enlarge access to existing and potential customers;
- Stage to advertise and promote new business businesses (GEDI & Dell, 2014).

Generally speaking female entrepreneurship in the world develops heterogeneous depending on the region. Such factors as level of education and professional skills, access to financial and market information, possibility of obtaining bank credits and loans, appropriate interest rates, ability to get higher carrier positions, business environment and working conditions influence changes and growth of women-owned enterprises. Many countries and worldwide organizations represent their own variants of solutions to the problem in the area of female entrepreneurship development and positive growth.

1.2 Female Entrepreneurship in Belarus

Legislation of the Republic of Belarus is built on the principles of gender equality and doesn't contain any norms of discrimination against citizens by sex. According to the Constitution of the Republic of Belarus (1994) that contains general principles of equality between men and women, all citizens regardless of gender are equal before the law. It should be noted that Belarus has signed and ratified a number of UN basic documents aimed to protect the interests of women and achieving gender equality. Nevertheless, there is lack of legislative and institutional mechanisms for gender equality and women's rights in the country. As a result, there are areas in which equality between men and women is protected by law, but in practice there are gender problems (Shishkin, 2008). This, in particular, such areas as occupation of key government positions, recruitment, equal payments for equal work and participation in entrepreneurship.

According to Jahan (2015) Belarus occupies 50th place in the rating of the Human Development Index, which takes into consideration level of healthcare, education and income per capita. As a result Belarus belongs to the countries with high human development level.

Generally, women make up 54% of the total number of employees in the country, but even at the global level contribution to GDP is estimated at only 37%. Also only 25% of companies are headed by women. According to the International Finance Corporation (2011) 44% of Belarusian companies includes women in the ownership structure and 33% of women are managers there. Moreover level of education in Belarus is one of the highest indexes and more than 55% of working women have higher and secondary special education, with comparing to 38% of educated men (Zinovsky, 2013).

Besides, 30% of women in the Republic of Belarus are individual entrepreneurs and there are 63% of women among people who have individual business in this sphere. The biggest amount (59%) of women

who started their own business is in age between 25 and 40 years old. At the same time approximately 80% of female individual entrepreneurs are older than 40, which significantly limits their ability to be demanded in the labour market (Gudov, 2011).

However at the same time the ratio of women's wages is 74.5% comparing to men's wages in 2014 (Zinovsky, 2014). Belarusian women are more likely to be below the poverty line than men, because their level of income is on average much lower. This is not only because of financial problems or low level of salary payments, but also due to the gender imbalance in the labour market. From the Soviet period Belarus has preserved gender diversity of the economic sectors, which led to a clear feminization of the industries with low wages. Most of the women work alongside men, and are actively involved in many areas of economic activities (Asanovich & Ananyeu, 2013).

Female business in Belarus has comparatively the same characteristics by the features as the majority of other countries of the former Soviet Union. Women participation predominate among the low-paid jobs in such sectors of economy as medicine, education, services and trade. As a rule, such a business is significantly smaller compering to men's size, income and assets (World Bank & International Finance Corporation, 2014). Traditionally in Belarus women are more likely work and found their business in such areas as trade, hospitality and tourism, pharmaceuticals, finance, textile, beauty and sports industry, health and social services, as well as advertising and media, where their share is from 71 % to 85 % (Zinovsky, 2014). For example, there is the highest percentage of female participation in such important and demanded spheres as education (82%), medicine (85%), hotel and restaurant industry (76%), financial activities (74%), real estate (54%) and state administration (56%) (Medvedeva, 2016). Gender distribution by economic activities in different fields is shown in Figure 2.



Figure 2. Gender distribution by economic activities.

Source: Author's own elaboration based on Annual Statistical book (Zinovsky, 2013).

As we can see in Figure 2 the majority of both genders work in sphere of services. But women take part in spheres of services and industry more likely than men and also agricultural field can be called the male one as women have jobs in this area more than 3 times less than men are.

When compared to Belarus and the neighbouring countries of Europe and Central Asia, it can be added that Belarus has higher indexes in female participation in management and ownership, what is presents in Figure 3.

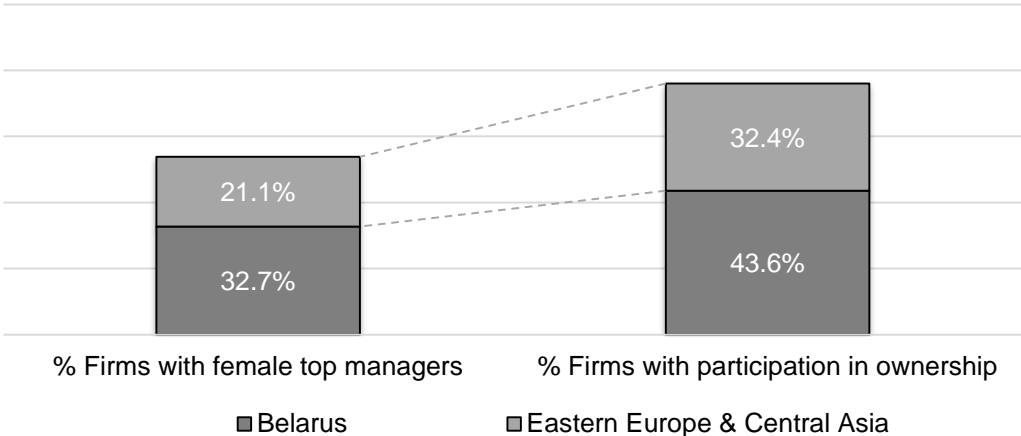


Figure 3. Female in management and ownership.

Source: Author's own elaboration based on research of World Bank (2013).

On Figure 3 indexes provide a reflection of female participation in management and firm ownership. These indicators can help to evaluate whether gender can be a determinant of the effect to regulations in the firm and the firm's impact level to external factors, such as corruption, access to finance, and technology.

In general it should be emphasized that indexes and level values can be varied depending on investigated factor. Female participation in company's performance comparing to various countries of different regions of the world is revealed in Figure 4.

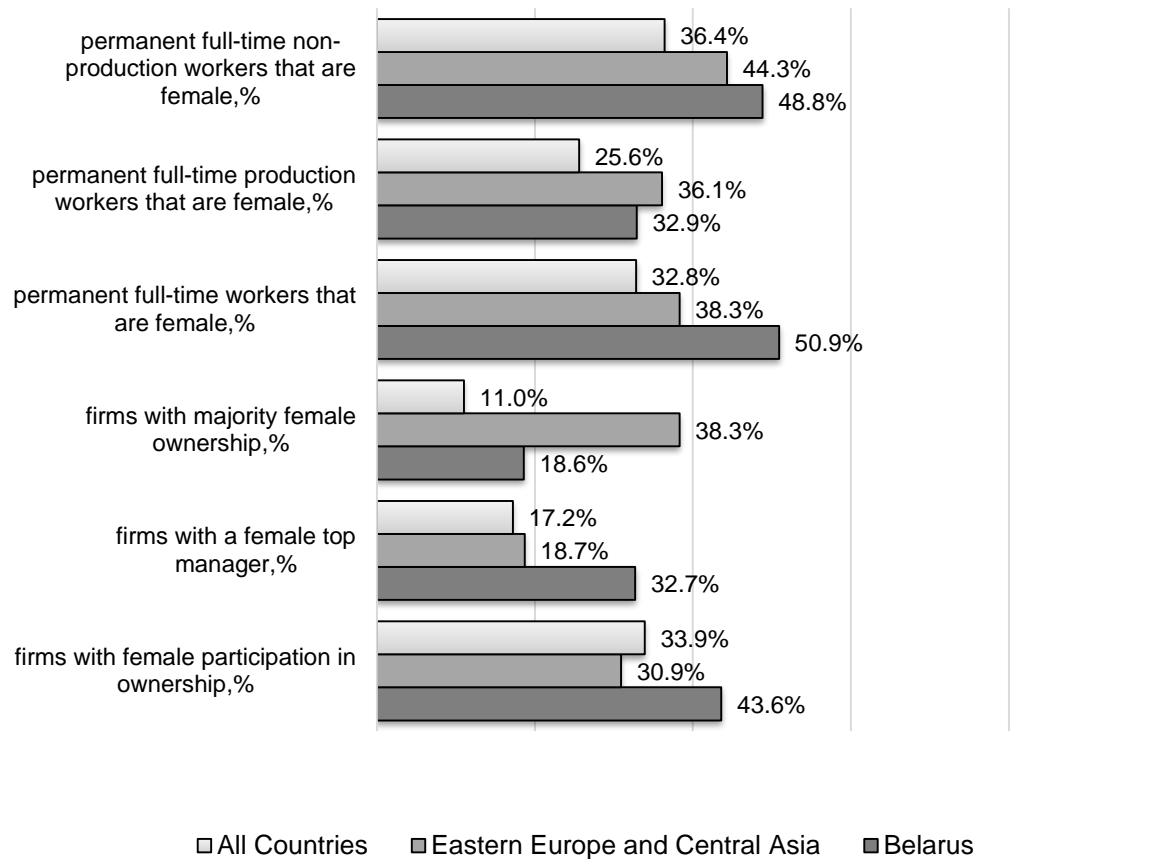


Figure 4. Female participation in company's performance.

Source: Author's own elaboration based on research of Atamanov & Sattar (2014).

As it is illustrated in Figure 4 Belarus has higher rates not in all positions. Big differences in values are in firm's category with female participation in ownership, female top managers and amount of full-time workers that are women included non-production workers. Here Belarus has relatively high comparative figures what shows high female participation in Belorussian company's activities. However from position of majority female ownership and full-time production workers in firms Belarus falls behind and has lower indexes especially in comparison with countries of ECA. On the whole the Republic of Belarus has above average level of female participation in field of entrepreneurship. Nevertheless the country is characterized by slow development of the private women's business where women interfere a variety of social, economic and legal barriers.

Participation of women in political and public life of Belarus is limited and have low percentage from the total amount. Women are poorly represented in top positions in the Government, judiciary positions and Diplomatic Service. Along with economic barriers preventing women from participation in political and public life of their country, experts name prejudiced attitudes to women politicians and absence of

representation in the media can be named as an obstacle to growth of percentage of women in business (Asanovich & Ananyeu, 2013).

Presently women are not enough involved into decision-making processes at varied number of levels, such as executive, legislative power or political parties. For instance, there is only one women minister in the government of Republic of Belarus. There are no women among 7 chairpersons of regional executive committees, only 1 women from 43 deputies, 2 women are presented in district and city executive committees among 132 chairpersons and only 20% of women are in state administration of the republican bodies and their deputies. It is mostly men, who are members of political parties and who have leading positions there. Also there is only one political party is headed by a woman among 15 official ones in Belarus (Zinovsky, 2014). This situation can indicates existence of limited impact of woman on the decision-making processes in political parties and governmental units. However, on the other hand the percentage of women the Parliament is relatively high in the country and represents 26,4 % of the total amount of members in Parliament. In the local councils of all levels women make up about 45% of the deputy corps (Abritalina, 2006).

In addition, women are less risk-averse than men, they are guided by the strategy of having a steady income more than on the company's growth. In sum, all listed features lead to the fact that they are less likely to refer to the banks, and, as the result, women receive loans for the worst conditions, or even are denied in obtaining bank's credits. As a result, women earn less money for development of their own business than male entrepreneurs (Skvortsova & Semenchuk, 2008). Thus, one of the main female entrepreneurs' issues is a poor access to financing. Hereby, there are also some negative features that prevent stable extension of female entrepreneurship in the country. Some of these issues are listed below:

- Cultural stereotypes and peculiarities of Belarusian mentality: women are not confident enough for be a successful entrepreneur, less risk-averse, women are more afraid of making a mistake and make a wrong decision with comparing to men. These traditions to date determine the role and the place of women in society, define the frameworks for their potential (Asanovich & Ananyeu, 2013).
- Discrimination in employment: in 4 of 5 cases, employers are looking for men for the position of top manager in Belarusian companies (Zinovsky, 2013).
- One of the latent reasons for weak women's business activities is a kind of patriarchal opinion of Belarusian people about female role in society: most of them share the installation that earning money is the prerogative of men, whereas women engaged in household chores.
- Lack of economic and legal knowledge. Developed system of permanent training, educational seminars and forums aimed for increasing knowledge in licensing, taxation, receiving start/debt capital, legal and regulatory norms help beginners in individual entrepreneurship to be informed and educated in business and economic sector (Naymova, 2004).

- Poor access to financing and inappropriate tax rates. The issue is not about macroeconomics, but the reason is in the psychological readiness to fund and maintain women's entrepreneurship (Burova & Yanchuk, 2014). There is lack of funding and difficulties in obtaining and repaying on credits in banking and financial sphere in Republic of Belarus.
- Common problems Belarusian business as insufficient attention of the state to business development and at the same time strict control of all activities, weak competence of civil servants and imperfect legal framework in sphere of business regulation.

As it was already said women have different reasons and motivation to start their own business and became an entrepreneur. Particularly in Belarus women are motivated to be an individual entrepreneur more because of such reasons as: desire and need to implement their professional knowledge and inborn skills, financial independence, guaranteed workplace, opportunity for career growth, hope to occupy more important and significant place in society being an individual entrepreneur and possibility of flexible time scheduling (Abritalina, 2006).

Therefore female entrepreneur in Belarus can be imagined as a specialist with high education in age between 26 and 40 years, who previously was working in trade, services, sphere of education or medicine, owner of business most likely in sector of trade or services (Elsunova, 2008). As have been presented, in despite of high level of education and qualifications, active participation in economic and social life, women still have very limited access to decision making process at all levels and in all spheres and areas of political and public life.

Besides, there are some international programs and projects in Belarus which support women in business and female entrepreneurship generally. One of such projects is the program "Women in business" that is initiated by the European Bank for Reconstruction and Development (EBRD) in 2016, and established with the target to help the development and growth of the Belarusian female entrepreneurship. The program is implemented in countries of the Eastern Partnership, which includes Armenia, Azerbaijan, Georgia, Moldova and Ukraine. In general, it is implemented in 16 countries (EBRD, 2014). The EBRR will provide Belarus in 2016 about 10 million euros from total project's budget of 55 million for the program's development.

The program "Women in Business" is funded by the European Bank of Reconstruction and Development, the European Union, Sweden and the Fund that support countries with transition economies in early stage of development. This program support women-owned companies of any industry and sector of the country with number of employees is up to 200 people and have maximum turnover less than € 50 million. In consequence, it provides an opportunity to support small and medium enterprises (SMEs), which owners are women, by providing access to finance, information, know-how, non-financial business development services and networking opportunities that are necessary for development of their business (EBRD, 2014).

At the same time it should be acknowledged that many international and local programs in the country that have been realized in recent years, adopted instruments and national plans support female entrepreneurship and has led to the development and growth in this sector, but do not have significant social effect and do not change traditional gender roles, Belarusian mentality or relations in Belarus.

Summing up all foresaid, there is legal and regulatory base in Belarus, which proclaims the equality of the sexes, but it does not contain mechanisms for the real protection of these rights in the case of its violation (Asanovich & Ananyeu, 2013). On the one hand, the accession of Belarus to international standards requires recognition of democratic norms and their implementation in the country. On the other hand, there is a marked intention to lay aside specific decisions, to postpone introduction of legal measures and legislative decisions in this regard.

2. Methodology of the empirical part

2.1. Objective of the study

The main objective of this study is to identify the most important factors that influence the development of female entrepreneurship in Republic of Belarus and determine the level of its significance for the researched concept. Also it is important to find out are investigated factors positively or negatively affect the field of entrepreneurship.

2.2. Description of Data Collection¹

The objective of the research is to gain an understanding of firms' perception of the environment in which they operate, obtain feedback from enterprises in client countries on the state of the private sector.

This research was conducted in Belarus between July 2012 and August 2013. Data was analysed from 360 establishments with five or more employees in the country with use of random sampling. Thus, an establishment is a physical location where business is carried out and where industrial operations take place or services are provided. Questionnaires of the given research cover a broad range of topics including such topics as product, process, marketing and organization innovations, research and development, acquisition of external knowledge and use of computers, protection of innovation, management practices, and interaction with the state and public-private partnerships. The database includes answers from all the survey questions- both global questions as well as country-specific questions.

¹ Enterprise Surveys (<http://www.enterprisesurveys.org>), The World Bank.

The Enterprise Surveys² are implemented a two-stage procedure for collecting the information for database. In the first stage, a screener questionnaire is applied over the phone to determine eligibility and to make appointments; the second stage was consisted in a face-to-face interview with the leaders or managers of each establishment. All interweaves were conducted in the local languages.

Three levels of stratification were used in Belarus: industry, establishment size, and region. The industrial structure is consist of one manufacturing industry, and two service industries (retail, and other services). The manufacturing and services sectors are the primary business sectors of interest. Size stratification was defined in a following way: small (5 to 19 employees), medium (20 to 99 employees), and large (more than 99 employees). For stratification purposes, the number of employees was defined on the basis of reported permanent full-time workers. Registered companies with 5 or more employees are targeted for research. Firms with 100% state ownership are not eligible to participate in Enterprise Surveys.

Regions covered are selected based on the number of establishments, contribution to employment, and value added. In most cases these regions are metropolitan areas and reflect the largest centers of economic activity in a country. Regional stratification was defined in 7 regions (city and the surrounding business area) throughout the Republic of Belarus. There were local subcontractors in each of the seven pointed regions.

The survey topics include firm characteristics, information about sales and suppliers, competition, infrastructure services, judiciary and law enforcement collaboration, security, government policies, laws and regulations, financing, overall business environment, bribery, capacity utilization, performance and investment activities, and workforce composition.

The quality of the frame was assessed through visits to a random amount of firms and in accordance with local Interviewee's knowledge. However, the sample frame had some typical problems in establishment surveys: positive rates of non-eligibility, repetition, non-existent units, etc. Given the impact that non-eligible units may have on the results, adjustments may be needed when computing the appropriate weights for individual observations.

All collected information was directed to the World Bank in batches (typically 10%, 50% or 100%). These data deliveries were checked for logical consistency, out of range values, skip patterns, and duplicate entries. Problems were distinguished and corrected by the implementing contractor through data checks, call backs, and revisiting establishments. Confidentiality of the respondents' answers and the provided information is necessary to ensure the greatest degree of survey participation, integrity and confidence in the quality of the data. Surveys are usually carried out mutually with business organizations,

² For more information about the World Bank Enterprises Surveys and the data they collect is suggested the webpage of the project: <http://www.enterprisesurveys.org/>. There is possible to find a more complete explanation about the project, the data collected and several publications made using the information collected by the surveys.

enterprises and government agencies that create new workplaces and facilitate economic growth, but confidentiality was never compromised.

Most significant factors was chosen to be studied in the empirical part. Identification and description of researched variables are illustrated in Table 2.

Table 2. Identification and description of variables.

Variable	Description
Women among the owners of the firm.	If the variable is equal to 1, the owner of the firm is a women, otherwise it is 0.
Female Top Managers.	If the variable is equal to 1, the woman is a top manager in a company.
Region	
Minsk city	In case when the variable is equal to 1, the region is Minsk city, otherwise it is 0.
Brestskay region	If the variable is equal to 1, it is Brestskay region, otherwise it is 0.
Gomelskay region	If it is equal to 1, the location is Gomelskay region, otherwise it is 0.
Grodnenskay region	If it is equal to 1, the location is Grodnenskay region, otherwise it is 0.
Mogilevskay region	If it is equal to 1, the location is Mogilevskay region, otherwise it is 0.
Minskay region	If it is equal to 1, the location is Minskay region, otherwise it is 0.
Vitevskay region	If i it is equal to 1, the location is Vitevskay region, otherwise it is equal to 0.
Sampling size.	
Small (>=5 and <=19).	If the variable is equal to 1, the firm's size is Small (>=5 and <=19), otherwise it is equal to 0.
Medium (>=20 and <=99)	If the variable is equal to 1, the firm's size is Medium (>=20 and <=99), otherwise it is equal to 0.
Large (≥ 100).	If the variable is equal to 1, the firm's size is Large (equal or more than 100), otherwise it is equal to 0.
Current legal status.	
Shareholding company deals with traded shares in the stock market	If the variable is equal to 1, shareholding company deals with traded shares in the stock market, otherwise it is equal to 0.
Shareholding company deals with non-traded shares or shares traded privately	If the variable is equal to 1, shareholding company deals with non-traded shares or shares traded privately, otherwise it is equal to 0.
Sole proprietorship	If the variable is equal to 1, the legal status is sole proprietorship, otherwise it is equal to 0.
Limited partnership	If the variable is equal to 1, it is legal status, otherwise it is equal to 0.
The legal status is unknown	If the variable is equal to 1, it is unknown, otherwise it is equal to 0.
Full-time employees of establishment at the starts of operations.	The variable shows the number of full-time employees of establishment at the starts of operations.
Domestic material inputs or supplies as a % of all material inputs or supplies.	The answer illustrates the proportion of all of the material inputs or supplies purchased in fiscal year, percent of the establishment's material inputs or supplies were: Material inputs or supplies of domestic origin.
Foreign material inputs or supplies as a % of all material inputs or supplies.	The answer represents the percent of all purchases of supplies and inputs purchased by the establishment for the fiscal year.
Main market	
Local Market	If the variable is equal to 1, the establishment is local, what means that main product sold mostly in same municipality where establishment is located, otherwise it is equal to 0.
National market	If the variable is equal to 1, the company is national, main product sold mostly across the country, otherwise it is equal to 0.
International market	If the variable is equal to 1, the firm is international and main product sold mostly to nations outside country, otherwise it is equal to 0.

Table 3. Identification and description of variables (continuation).

Variable	Description
Competitors for the main product/service in the main market.	The answer illustrates how many competitors the establishments traded with product or service face during the last fiscal year.
The use of technology licensed from a foreign-owned company.	
Establishment use technology licensed from a foreign-owned company	If the variable is equal to 1, the establishment use technology licensed from a foreign-owned company excluding office software, otherwise it is equal to 0.
New products/services	
Establishment introduced new products/services	If the variable is equal to 1, the establishment introduced new or significantly improved products/services during last 3 years. Otherwise, the variable will be equal to 0.
New production/supply methods introduced over last 3 years.	If the variable is equal to 1, the establishment introduced new or significantly improved production/supply during last 3 years, otherwise it is equal to 0.
New organizational/ management practices/ structures	
Establishment introduced new practices/structures	If the variable is equal to 1, the establishment introduced some new or significantly improved organizational or management practices or structures, otherwise the variable will be equal to 0.
New marketing methods	
Establishment introduced new marketing methods	If the variable is equal to 1, the establishment introduced new or significantly improved marketing methods over last 3 years. Otherwise, the variable will be equal to 0.
Spending on research and development activities.	
Establishment spent on research and development activities	If the variable is equal to 1, the establishment spent on research and development activities, either in-house or contracted with other companies (outsourced). Otherwise, the variable will be equal to 0.
Obstacles in business environment.	
Access to finance	If the variable is equal to 1, the main obstacle is low access to finance, otherwise it is equal to 0.
Access to land	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Business licensing and permits	If the variable is equal to 1, the main obstacle is restrictions in business licensing and permits, otherwise it is equal to 0.
Corruption	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Courts	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Crime, theft and disorder	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Customs and trade regulation	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Electricity	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Inadequately educated workforce	If the variable is equal to 1, the main obstacle is inadequately educated workforce, otherwise it is equal to 0.
Labour regulations	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Political instability	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Practices of competitors in the informal sector	If the variable is equal to 1, the main obstacle is practices of competitors in the informal sector, otherwise it is equal to 0.
Tax administration	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Tax rates	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Transport	If the variable is equal to 1, it is main obstacle, otherwise it is equal to 0.
Competition against unregistered or informal firms	
Establishment compete against unregistered or informal firms	If the variable is equal to 1, the establishment compete against unregistered or informal firms. Otherwise, the variable will be equal to 0.

Source: Author's own elaboration.

2.3. Logistic regression models

In the logistic regression model the variables that are trying to be explained (explained variable) are dummy variables represented by only two values, 0 and 1. If occurs a given event, that is represented by one (1). If the event not happens, the result is zero (0) (Hosmer, Lemeshow, & Sturdivant, 2013). So, due to this characteristics of the dependent variable the predicted values of the model are probabilities and are restricted to the set of values (0, 1). So, the probability of an event is given by the following equation:

$$P(Y = 1) = p \quad (1)$$

By definition, the proportion of situations where it is observable the event ($Y = 1$), will be given by the following expression:

$$E(Y) = 1 \times p + 0 \times (1 - p) \quad (2)$$

Let Y be the dependent variable and X the variable that explains the behaviour of the first (the independent variables), the model that relates them, with β_0 the constant coefficient, β_1 the coefficient of the independent variables X_1 and, ε is the error term that expresses the observation's deviation from the conditional mean, is represented by

$$Y = \beta_0 + \beta_1 X + \varepsilon \quad (3)$$

For dependent dichotomous variables, $0 \leq E(Y|X) = P(Y = 1|X) \leq 1$, so:

$$P(Z) = \frac{e^z}{(1 + e^z)} \quad (4)$$

and:

$$Z = \text{logit}(p) = \ln \frac{p}{1 - p} = \beta_0 + \beta_1 X_1 + \varepsilon \quad (5)$$

The relation between the probabilities of an event and it not existence is known as the odds ratio of probabilities, this is, with $p = P(Y = 1)$, the odd-ratio is given by the mathematical expression:

$$\text{odds ratio} = \frac{p}{1 - p} \quad (6)$$

When, the model as only one explanatory variable, the odds ratio is equal to $\exp(\beta)$, or sometimes written as e^β .

3. Empirical Results and Analysis of female entrepreneurship

3.1. Descriptive analysis.

During the study some analysis was carried out in order to investigate and determine what positions women entrepreneurs have in the structure of a modern society, reveal main obstacles and topical issues on the way of doing business and elucidate the status women's entrepreneurship obtain in business today. First of all selected companies was explored by gender ownership in order to see what gender distribution is existed in Belarusian market. This observation is shown in Table 4.

Table 4. Distribution of observations by gender ownership.

Results	Gender			Total
	Male	Female	No answer	
Number	189	158	13	360
Percentage (%)	52.5	43.9	3.6	100

Source: Author's own elaboration.

Thus, women more rare become managers (almost 44%) among 360 companies of Republic of Belarus than men (52.5%) and 3.6% of respondents didn't give the answer to the question. The value of female owners' index is high enough with comparing to other countries and there are 8.5% of difference between men and women in this field.

Also female participation in top management was considered, which results are illustrated in Table 5.

Table 5. Gender participation in top management.

Results	Gender		Total
	Female	Male	
Number	129	231	360
Percentage (%)	35.83	64.17	100

Source: Author's own elaboration.

As it can be seen from the table above the number of female top managers (129) almost twice smaller than men (231) who hold top positions in the company. Thereby it can be told that top management is the sphere where women are represented poorly. It can be assumed that men are appointed to higher positions in companies more likely than women and probably this sphere has the barriers to female participation.

Furthermore, as firms was chosen randomly, regions of company's location is important factor that can indicate what distribution in the country exists among the given companies. The results of study is given in Table 6.

Table 6. Distribution of selected companies by region.

Region	Number	Percentage (%)
Minsk	109	30.28
Brestskay region	48	13.33
Gomelskay region	43	11.94
Grodnenskay region	48	13.33
Mogilevskay region	35	9.72
Minskay region	44	12.22
Vitebskay region	33	9.17
Total	360	100

Source: Author's own elaboration.

The table above represents that the bigger number of companies selected for the research situated in the capital of the country (Minsk), the centre of entrepreneurship and business activity. Also big amount of companies comparing to other regions are situated in Brestskay, Gomelskay and Minskay regions. However generally regional distribution is uniform that is significant factor for veracious study.

As well study of distribution of observations by sampling size was carried out to see what companies are more common in the female entrepreneurship market. The information is presented in Table 7.

Table 7. Distribution of observations by sampling size.

	Small ≥ 5 and ≤ 19	Medium ≥ 20 and ≤ 99	Large ≥ 100	Total
Number	195	102	63	360
Percentage (%)	54.17	28.33	17.5	100

Source: Author's own elaboration.

As it revealed in the table, small enterprises are more widespread (54%) from the total amount in the country. Distribution is gradual with increasing tendency with an emphasis on small and medium enterprises. As a result the bigger the company is the less the amount of it exists on the market.

Legal status is the next factor that was researched in the study. The results are in Table 8.

Table 8. Distribution of firm's current legal status.

	Number	Percentage (%)
Shareholding company with shares traded	2	0.56
Shareholding company with non-traded shares	206	57.22
Sole proprietorship	106	29.44
Limited partnership	38	10.56
Don't know	8	2.22
Total	360	100

Source: Author's own elaboration.

As it is seen from the given information above the dominant legal status is shareholding companies with non-traded shares (57%) and sole proprietorship (29%). Other variants have smaller value but still exist on the market of Belarus. Also only 8 respondents didn't give the answer concerned this issue.

Moreover, such variables as amount of full-time employees in companies, existence of domestic and foreign material inputs or supplies in the firm, competitors for the main product or service in the market were examined in order to find out the main indexes and values of these factors. All results are illustrated in Table 9.

Table 9 . Statistical description for the variables: full-time employees, domestic and foreign materials and competitors.

	Number of observations	Min	Max	Mean	Standard Deviation
Distribution of full-time employees on establishment at the start of operations.	360	1	1200	46.517	139.483
Domestic material inputs or supplies as a % of all material inputs or supplies.	117	0	100	50.376	35.952
Foreign material inputs or supplies as a % of all material inputs or supplies.	117	0	100	49.623	35.952
Competitors for the main product/service in the market.	240	0	100	12.291	19.555

Source: Author's own elaboration.

Table above shows that number of observations is different in variables due to the different number of responses received from the representatives of companies. Speaking about distribution of full-time employees the average number is 46 employees in the firm and it has big value of standard deviation what reflects great diversification in managers' answers, diversity in number of employees. Deeper research showed that companies with smaller amount (from 1 to 10 workers) of full-time employees is more prevalent and constitute half of total amount, but at the same time there are almost 15 companies with amount close to 700 employees.

Die to domestic and foreign material inputs or supplies it is illustrated that only 117 representatives from 360 possible companies give the certain answer. Hereby companies split in half by the level of use of material inputs or supplies with a small margin of domestic materials in the average percentage. It can be said that an average Belarusian company uses both domestic and foreign materials inputs and supplies in their business performance.

Amount of competitors is significant indicator that affects the activity of the company in the market, its methods, price policy and strategies of doing business. In the table it is shown that among 240 observations there are 12 competitors for the average company in Belarus. On the whole majority of companies have from 1 to 10 competitors for the main product or service in their sphere, though almost 24 % of respondents answer that they have too many competitors in the fiscal year. As a result the companies divided on those who have less than 10 competitors and those who have great amount of rivals. It may happened due to the sphere of the company's activities and its size.

Also distribution of companies by main markets is one of the researched factors. Information is illustrated in Table 10.

Table 10. Distribution of main markets for the product/service in last fiscal year.

Main market	Frequency	Percentage (%)
Local	212	58.89
National	118	32.78
International	30	8.33
Total	360	100

Source: Author's own elaboration.

The table shows that most enterprises (59 %) work in a local market of Belarus, what means that mostly product or services are selling inside the company's place of registration and location. 32 % of firms can be called as national companies, what mean that they work across the country. And finally 8 % of firms are international, they have relationships with countries outside the country what represents the big activity mostly outside the place of location.

The information about the usage of technologies licensed from a foreign-owned companies are shown in Table 11.

Table 11.The use of technology licensed from a foreign-owned companies excluding office software.

	Firm use technology from a foreign-owned company	Firm doesn't use technology from a foreign-owned company	Total
Frequency	22	338	360
Percentage (%)	6,11	93,89	100

Source: Author's own elaboration.

It is obvious that majority of researched companies (94 %) doesn't use technology licensed from a foreign-owned companies. As a result only 6 % of researched enterprises are using such kind of technologies what confirm the adherence of Belarusian companies to the technology licensed from national companies.

Launching of a new product, methods or some practices can lead to growth of the firm, may develop working conditions, facilitate and accelerate the working process in the company what in its turn may increase future earnings and expand the influence and significance in the market, improve the relationship with customers and suppliers. These are the reasons why such factors as launching of new products or services, production and supply methods, new organizational and management practices, initiation of new marketing methods were included in the analysis of the study. The results of its research are in Tables 12-15.

Table 12. Launching of new products or services introduced over last 3 years.

	Don't know	Existence of new products or services	Lack of new products or services	Total
Frequency	2	111	247	360
Percentage (%)	0,56	30,83	68,61	100

Source: Author's own elaboration.

As we can see from Table 12, most enterprises don't introduce any new or significantly improved products and services during last 3 fiscal years. It can be the results of some general obstacles existing in the way to launch a new product or service on the market of the country what is considered below.

Table 13. Launching of new production/supply methods introduced over last 3 years.

	Don't know	Existence of new methods	Lack of new methods	Total
Frequency	2	133	225	360
Percentage (%)	0.56	36.94	62.5	100

Source: Author's own elaboration.

In general the results are similar to previous one, but additionally new production or supply methods are introduced on almost 6 % more often than new or significantly improved products and services.

Table 14. Initiation of new organizational/ management practices or structures introduced over last 3 years.

	Existence of new practices or structures	Lack of new practices or structures	Total
Frequency	151	209	360
Percentage (%)	41.94	58.06	100

Source: Author's own elaboration.

As it showed in the table above more than 40 % of selected in the research companies implement new organizational or management practices and structures in their business activities over last 3 years. However the amount of firms that don't use new practices and structures are higher than those which introduced it.

Table 15. Initiation of new marketing methods introduced over last 3 years.

	Don't know	Existence of new marketing methods	Lack of new marketing methods	Total
Frequency	1	171	188	360
Percentage (%)	0.28	47.50	52.22	100

Source: Author's own elaboration.

Hence, in this case companies split almost in half (48 % contrary 52%) on those who implements and who doesn't implement new marketing methods in their business performance during last 3 years. Generally speaking Belarusian companies are more willing to adopt new marketing methods and organizational/ management practices than launching new products and services in the market, what may block the development and expansion of companies or became an barrier towards obtaining greater profits.

Also it is significant if company spend its economic asset on research and development activities in order to find out weaknesses and correct them better way. The information is given in Table 16.

Table 16. Spending on research and development activities.

	Don't know	Firm spends on research and development activities	Firm doesn't spend on research and development activities	Total
Frequency	2	40	318	360
Percentage (%)	0.56	11.11	88.33	100

Source: Author's own elaboration.

Accordingly to the table most companies, almost 88 % prefer not to spend their assets on researches and development activities, either in-house or contracted with other companies (outsourced). As in previous case, this shows the lack of management actions forwarded to the development that affects negatively on the performance of companies.

Additionally attitude of researched companies to existence of unregistered or informal firms was studied. The results are illustrated in Table 17.

Table 17. Competition against unregistered or informal firms.

	Don't know	Establishment compete against unregistered or informal firms	Establishment doesn't compete against unregistered or informal firms	Total
Frequency	12	152	196	360
Percentage (%)	3.33	42.22	54.44	100

Source: Author's own elaboration.

The majority of companies (54%) doesn't compete against unregistered or informal firms contrary to 42% of those who do. The difference between such companies is almost 12%. Hence it can be concluded that existence of unregistered and informal firms is not a critical issue to local entrepreneurs.

There are many obstacles and barriers that entrepreneurs and companies may face while doing business and trying to develop or enhance the impact on the market. The main problematic issues was offered to representatives of companies in order to investigate, determine what significance they have within the framework of the Belarusian economy and the market. All the results are in Table 18.

Table 18. Significance of obstacles that entrepreneurs face in business environment of Belarus.

Obstacle	Frequency	Percentage (%)
Don't know	10	2.78
Refused	1	0.28
Does not apply	24	6.67
Access to finance	55	15.28
Access to land	16	4.44
Business licensing and permits	4	1.11
Corruption	12	3.33
Courts	1	0.28
Crimes, theft and disorder	10	2.78
Customs and trade regulations	6	1.67
Electricity	1	0.28
Inadequately educated workforce	64	17.78
Labour regulations	7	1.94
Political instability	19	5.28
Practices of competitors in the informal sector	45	12.50
Tax administration	2	0.56
Tax rates	79	21.94
Transport	4	1.11
Total	360	100

Source: Author's own elaboration.

Hereby, among the most insignificant obstacles there are such as difficulties with courts (0.28%), Electricity (0.28%), tax administration (0.56%), transport (1%), business licensing and permits (1%). Approximately 3-5% of companies face the following problems on the way of business development: political instability, access to land and corruption. Equally important that 24 respondents what contributes 6% have no obstacles while participating in sphere of female entrepreneurship. Thus, according to the answers of randomly selected respondents main obstacles are: tax rates (22%), inadequately educated workforce (18%), access to finance (15%) and practices of competitors in informal sector (12.5%).

On the whole Belarusian entrepreneurship is characterized with such features as low level of women's participation in high management positions, big amount of small or medium size companies that frequently are situated in the capital, lack of new launching products and services, production/supply/marketing methods and practices in firm's activities. Companies rarely spend their

assets on development researches and have neutral positions to existence of unregistered firms in the market. Also more than half of firms have legal status as Shareholding Company with non-traded shares.

In other words it can be concluded that an average Belarusian company is small size enterprise that situated in Minsk and has small amount of women-managers, it is a shareholding company with non-traded shares that is working in the local market and rarely enters the market with a new product or service. Also the main issues are difficult system of taxation, uneducated workforce and poor access to finance.

3.1. Results of the logistic regression model and analysis.

Next step in the research is to see what factors influence female entrepreneurship in Republic of Belarus. Accordingly to this, different factors was explored to see their significance to pointed topic. The results are represented in the tables below.

In the following tables will be presented, the estimated logistic regression coefficient, the odd-ratio and the p-values associated with the test for individual significance (t-test). In order to understand better the significance level of each estimated coefficient the following notation will also be used: (*) for p-values between 0,05 and 0,1 that indicate 10% of significance level, (**)for p-values between 0,01 and 0,05 that indicate 5% of significance level and (***) for p-values lower than 0.001 indicate 1% of significance level.

It will be also presented some post estimation test. The pseudo coefficient of determination, the Wald test and the number of observations correctly predicted.

In the next table (Table 19) are presented results for the modal that explains the probability of a woman to be owner of a company having as explanatory variable the existence of women in the top management of that company.

Table 19. Estimation of the model with explanatory variable: participation of women in top management.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	Participation of women in top management.	1.323	3.75	0.000 ***
Model 1	Number of observations = 360			
	$\chi^2(1) = 32.59^{***}$			
	Pseudo $R^2 = 0.0697$			
	Correctly classified = 66.39%			

Source: Author's own elaboration.

As the results of the table show the estimated coefficient is positive which means the participation of women in the top management of companies in Belarus influences positively the female ownership of that company. If it was found that a woman has an important position a management of the company with more probability the company is owned by a woman. The odd-ratio indicates that the probability of a firm to be owned by a woman is 3.75 times bigger if in the management is another woman. This result is obtained with 99% of confidence (1% of significance level). The Wald test ($\chi^2(1)$) confirms the previous result regarding to the statistical significance level of the variable. This explanatory variable presents Pseudo R^2 of 6.97% witch is not being a big value is a common value in logistic regression methods that use only 1 variable to explain the one that is being under study. The model correctly classifies near 66% of the observations.

Table 20 illustrates the significance of company's location in Gomelskay region for the probability of women to be an owner of the own enterprise.

Table 20. Estimation of the model with explanatory variable: location in Gomelskay region.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	Gomelskay region	0.653	1.921	0.048**
Model 2	Number of observations = 360			
	$\chi^2(1) = 3.92^{**}$			
	Pseudo $R^2 = 0.0081$			
	Correctly classified = 58.06%			

Source: Author's own elaboration.

As the results of the table show, with 95% of confidence, the estimated coefficient is positive which means that if women live in Gomelskay region they have the bigger probability of became entrepreneurs. The odd-ratio shows that women in this region have almost twice mare probability to become an owner of the firm in the researched region than in other regions of the country. The Wald test ($\chi^2(1)$) confirms the result of the individual significance test. The variable illustrated a Pseudo R^2 of 0.81% witch not being a big value is a common value in logistic regression methods that use only 1 variable to explain the one that is being under study. The model 2 correctly classifies 58% of the selected observations.

Next table (Table 21) represents results that explains the probability of a woman to be a company's owner having as explanatory variable the location of this enterprise in Vitebskaya region.

Table 21. Estimation of the model with explanatory variable: location in Vitebskaya region.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	Vitebskaya region	-0.973	0.377	0.021**
Model 3	Number of observations = 360			
	$\chi^2(1) = 5.33^{**}$			
	Pseudo $R^2 = 0.0122$			
	Correctly classified = 56.11%			

Source: Author's own elaboration.

As the results of the table show the estimated coefficient is negative which means the location of women in Vitebskaya region influences negatively their entrepreneurial activity, the Odd-ratio shows that women in this region have almost 62 % less probability to become an owner comparing with the other regions with 95% of confidence. Also the Wald test confirms the previous results of the analysis. This explanatory variable presents a Pseudo R^2 very small and predicts correctly of 56% of the observations.

The significance of such explanatory variable as new organizational and management practices for the sphere of female entrepreneurship is given in Table 22.

Table 22. Estimation of the model with explanatory variable: new organizational/management practices.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	New organizational/management practices or structures introduced over last 3 years in the firm.	-0.544	0.62	0.012**
Model 4	Number of observations = 360			
	$\chi^2(1) = 6.31^{**}$			
	Pseudo $R^2 = 0.0129$			
	Correctly classified = 57.50 %			

Source: Author's own elaboration.

As it is shown in the table above the estimated coefficient is negative what means that the implantation of new organizational and management practices in the performance of the company impacts negatively on women's probability to be an owner of the company with 95% of confidence level. The odd-ratio illustrates that the probability of a firm to be owned by a woman is 38% lower if the firm have the tendency of implantation and usage of new organizational or management practices in its activity. The Wald test ($\chi^2(1)$) confirms the result of the individual significance test due to the statistical variable's level of significance. The explanatory variable represents a Pseudo R^2 of almost 1.3% witch is a rather small

value and is a common in logistic regression methods. The model correctly classifies at 57% of the observations.

In Table 23 are shown results for the modal that explicates the probability of a woman to be owner having as explanatory variable the existence of new marketing methods in the company.

Table 23. Estimation of the model with explanatory variable: new marketing methods.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	New marketing methods in the company.	0.451	1.570	0.035**
Model 5	Number of observations = 360			
	$\chi^2(1) = 4.45^{**}$			
	Pseudo $R^2 = 0.0091$			
	Correctly classified = 56.11%			

Source: Author's own elaboration.

It is indicated that the estimated coefficient has positive meaning which means that the initiation of new marketing methods in Belarusian companies has positive effect on the frequency of becoming an entrepreneur among women. The odd-ratio reveals that the probability for women to become an entrepreneur is 1.5 times higher if the company has new marketing methods. This result is obtained with 95% of confidence, what is 5% of significance level. The Wald test confirms the result of significance test in the analysis while Pseudo R^2 represents value of 0.91% what is a small meaning in logistic regression methods. Moreover the model correctly classifies around 56% of the observations.

The next table (Table 24) reveals the connection between probability of female ownership and absence of obstacles for being an entrepreneur.

Table 24. Estimation of the model with explanatory variable: no barriers.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	Obstacle: No barriers.	-0.907	0.403	0.061*
Model 6	Number of observations = 360			
	$\chi^2(1) = 3.51 *$			
	Pseudo $R^2 = 0.0080$			
	Correctly classified = 56.11%			

Source: Author's own elaboration.

The table represents that the estimated coefficient has negative value. It can be explicated that in case they say there are no barriers on the way of being female entrepreneur it negatively influences the women' possibility to become an owner with 90% of confidence level. Besides the odd-ratio illustrates that the probability of a firm to be owned by a woman is near 60% lower comparing to the cases where it was mentioned some kind of barrier to the entrepreneurial activity. This results stress the fact that women face obstacles when creating a business and when no obstacle is mentioned probably it is not a women an owner of the business. In addition the Wald test supports the result of the individual significance test and the model correctly classifies at 56% of the observations. The explanatory variable represents a Pseudo R^2 of almost 0.8% witch is not a big meaning and is common in logistic regression method.

In Table 25 it is shown the results explaining the probability of a woman to be owner of a company die to such explanatory variable as the influence of tax rates to female entrepreneurial activities.

Table 25. Estimation of the model with explanatory variable: tax rates as an obstacle.

	Explanatory variable	Coefficient	Odd-ratio	p-value
	Obstacle: Tax rates	0.479	1.612	0.062 *
Model 7	Number of observations = 360			
	$\chi^2(1) = 3.49^*$			
	Pseudo $R^2 = 0.0071$			
	Correctly classified = 57.50%			

Source: Author's own elaboration.

The table above illustrates that the estimated variable is positive which means that the tax rates barrier is an important and significant barrier in the field of female entrepreneurship with 90% of confidence. The odd-ratio shows that the probability for women to become an entrepreneur is 1.5 times lower because of such obstacle as difficulties with tax rate. Besides the model correctly classifies around 56% of the observations. The Wald test confirms the previous results in the given analysis. This explanatory variable presents a Pseudo R^2 very small value and is a common in logistic regression methods.

Consequently, according to the give logistic regression model and analysis above the most significant factors that explain the probability of women to become an owner of a company is already existed female participation in top management of the company which has the highest level of significance (99% of confidence). It means that women has better possibility to become an owner or it will be easier to get top positions in the company if women are already included in top management of an enterprise.

Additionally location of the firm in Gomelskay and Vitebskaya regions impacts the researching variable. For instance if the company is situated in Gomelskay region women have almost twice better possibilities

to be an owner comparing to other regions. This fact can be associated with large population (2nd place after Minskaya region) and high female percentage in the region. Also Gomelskay region is one of the most highly developed industrial sector in the country. Here is located more than 300 of big industrial enterprises that have high economic significance for the Republic of Belarus and constitutes 22% of the whole industry of the country. In addition 70% of production of such sectors as petrochemical, chemical and timber industries is exported to more than 100 countries of the world. All listed above may influence high probability for woman to participate in female entrepreneurship. On the contrary location in Vitebskaya region oppositely has negative influence on female entrepreneurship with 95% of confidence. This region has the lowest population density in the country and poorly developed industrial sector what can be the reason of such a negative index of female entrepreneurship.

At the same time existence and appearance of new marketing methods in the company positively influence the level of female participation in business with 95% of confidence. Women are more flexible and more disposed to promoting, advertising company in the market what may be the reason of revealed factor. Thus, usage of new marketing technologies and method in companies' activities has positive impact on improvement of women's position in the company and thus improves general gender equality.

However implementation of new organizational and management practices or structures have negative impact on female entrepreneurship. Companies of traditional structure, without new organizational and management practices in their activities are more likely to be owned by a woman.

Additionally there are some obstacles that is not actual for women on their way of becoming an owner. These problematic sectors are business licensing and permits, tax administration, transport, electricity and courts. These barriers have no impact on women's decision of being entrepreneur and determined as variables that is not included in the list of variables under the study.

In general there are such main significant barriers for entrepreneurs as tax rates, inadequately educated workforce, and access to finance, practices of competitors in the informal sector and political instability. Nevertheless according to performed logistic regression model and analysis there is only one obstacle which is tax rates that affect female participation in entrepreneurship greatly (90% of confidence). In other words traditionally Belarus has complex system of taxation what become a significant obstacle for new and already existed entrepreneurs in the field of real business sector. Besides, all variables that was determined as insignificant was studied and are illustrated in Table A.1 of Appendix I.

Conclusions, Limitations and Future Research Lines

Nowadays the emergence, growth and development of female entrepreneurship is a global trend. Many countries encourage the development of female entrepreneurship, using it as a tool to develop the national economy and strengthen the level of socially active population. Full participation of women in the economy and in society contributes directly to economic growth and prosperity of the country.

Furthermore women's entrepreneurship is an actual developing sphere in the modern society and requires special attention to this concept. Increasing number of women in entrepreneurship, female members of the board of directors of large companies and women that occupy high positions in top management becomes a progressive and perspective trend mostly in the countries with transitive economy. However women face many barriers and difficulties on the way of becoming a part of entrepreneurship, they are a subject of higher demands for employment with comparison to men, women have lower salaries at the same positions in firms and are less likely to be appointed to senior positions as in large enterprises and medium firms.

The chosen theme of study is a relatively new concept in the socio-economic development of countries what becomes the reason why this phenomenon is still poorly studied and requires to be carefully examined. This work includes theoretical part where information about status and development of female entrepreneurship in different countries and regions of the world and especially in Republic of Belarus is given, methodology description and empirical part where research, results of the logistic regression model and analysis of selected factors from World Bank Enterprise Surveys statistics were illustrated. Also there is a research that was initiated with the aim to study and determine significance level and influence of main obstacles that entrepreneurs may face during their business performance on women's possibility to become an owner or get high positions in top management of the company in this work.

Also it should be emphasized that this work is not perfect and has some limitations within the research and performed analysis. These limitations include small number of enterprises selected for the formation of a database (only 360 enterprises was randomly chosen among 310 thousands of legal entities officially registered in the country), fact that individual entrepreneurs are not included in the list of legal entities as an object of study (nowadays there are 958 thousands of individual entrepreneurs that are already registered in the country), lack of answers to some questions of the representatives of some companies that may reduce the effectiveness of the research and also small amount of similar studies in the field of women's entrepreneurship research what doesn't give an opportunity to compare the fulfilled study with other researches. Additionally, at the same time database that was used in this research wasn't applied in any other study that adds higher importance and uniqueness to the given work.

It was revealed during the research that there is a list of variables that impact probability of women being an owner in Republic of Belarus. These are such factors as existence of women in top management of the company, location in specific regions and implantation of new practices and marketing methods in firm's structure. The main obstacle on the way to development of women-owned companies is difficulties in sphere of tax rates.

Speaking about perspectives and future lines of the work it should be highlighted that the sphere is quite new and developing one in the modern society what is the reason of necessity to be investigated. The given study may be the basis for further researches in this field. Future researched lines may concern specific characteristics related to the structure of individual entrepreneurs in Republic of Belarus, its peculiarities, motivation and reasons of start-ups connected with female entrepreneurship in Belarus.

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Appendix I: Estimated models with statistical insignificant variables

Table A. 1. Estimated logistic models with statistical insignificant variables

Variables	Coefficient	Odd-ratio	p-value
1. Minsk city	0.062	1.063	0.789
Number of observations = 360 $\chi^2(1) = 0.07$ Pseudo $R^2 = 0.0001$ Correctly classified = 56.11%			
2. Brestskaya region	0.283	1.328	0.361
Number of observations = 360 $\chi^2(1) = 0.83$ Pseudo $R^2 = 0.0017$ Correctly classified = 66.39%			
3. Grodnenskaya region	- 0.513	0.598	0.117
Number of observations = 360 $\chi^2(1) = 2.46$ Pseudo $R^2 = 0.0052$ Correctly classified = 56.11%			
4. Mogilevskaya region	0.209	1.232	0.558
Number of observations = 360 $\chi^2(1) = 0.34$ Pseudo $R^2 = 0.0007$ Correctly classified = 56.11%			
5. Minskaya region	-0.032	0.967	0.920
Number of observations = 360 $\chi^2(1) = 0.01$ Pseudo $R^2 = 0.000$ Correctly classified = 56.11%			
6. Small size of firm	0.109	1.116	0.607
Number of observations = 360 $\chi^2(1) = 0.26^*$ Pseudo $R^2 = 0.0005$ Correctly classified = 56.11%			

Table A. 1. Estimated logistic models with statistical insignificant variables (continuation)

Variables	Coefficient	Odd-ratio	p-value
7. Medium size of firm	0.178	1.195	0.447
Number of observations = 360 $\chi^2(1) = 0.58$ Pseudo $R^2 = 0.0012$ Correctly classified = 56.11%			
8. Large size of firm	-0.453	0.635	0.117
Number of observations = 360 $\chi^2(1) = 2.46$ Pseudo $R^2 = 0.0051$ Correctly classified = 56,11%			
9. Legal status: Shareholding company with shares traded in the stock market	0.247	1.280	0.862
Number of observations = 360 $\chi^2(1) = 0.03$ Pseudo $R^2 = 0.0001$ Correctly classified = 56.11%			
10. Legal status: Shareholding company with non-traded shares or shares traded privately	0.073	1.076	0.733
Number of observations = 360 $\chi^2(1) = 0.12$ Pseudo $R^2 = 0.0002$ Correctly classified = 56.11%			
11. Legal status: Sole proprietorship	-0.303	0.738	0.199
Number of observations = 360 $\chi^2(1) = 1.65$ Pseudo $R^2 = 0.0034$ Correctly classified = 56.11%			
12. Legal status: Limited partnership	0.393	1.481	0.254
Number of observations = 360 $\chi^2(1) = 1.30$ Pseudo $R^2 = 0.0026$ Correctly classified = 56.67%			

Table A. 1. Estimated logistic models with statistical insignificant variables (continuation)

Variables	Coefficient	Odd-ratio	p-value
13. Firm's full-time employees employed at the start of operations	0.0003	1,0004	0,662
Number of observations = 360 $\chi^2(1) = 0.19$ Pseudo $R^2 = 0.0004$ Correctly classified = 55.83%			
14. Domestic material inputs or supplies as a % of all material inputs or supplies	-0,005	0.995	0.356
Number of observations = 117 $\chi^2(1) = 0.85$ Pseudo $R^2 = 0.0054$ Correctly classified = 62.39%			
15. Activities on local market	0.184	1.202	0.394
Number of observations = 360 $\chi^2(1) = 0.73$ Pseudo $R^2 = 0.0015$ Correctly classified = 56.11%			
16. Activities on national market	-0.143	0.866	0.529
Number of observations = 360 $\chi^2(1) = 0.40$ Pseudo $R^2 = 0.0008$ Correctly classified = 56.11%			
17. Activities on international market	-0.174	0.840	0.655
Number of observations = 360 $\chi^2(1) = 0.20$ Pseudo $R^2 = 0.0004$ Correctly classified = 56.11%			
18. Competitors for the main product/service in the market	0.003	1.002	0.649
Number of observations = 330 $\chi^2(1) = 0.21$ Pseudo $R^2 = 0.0005$ Correctly classified = 56,0%			

Table A. 1. Estimated logistic models with statistical insignificant variables (continuation)

Variables	Coefficient	Odd-ratio	p-value
19. Company use technology licensed from a foreign-owned company	0.067	1.069	0.879
Number of observations = 360 $\chi^2(1) = 0.02$ Pseudo $R^2 = 0.0000$ Correctly classified = 56.11%			
20. New products/services introduced over last 3 years in the firm.	0.278	1.320	0.226
Number of observations = 360 $\chi^2(1) = 1.47$ Pseudo $R^2 = 0.0030$ Correctly classified = 56.6%			
21. New production/supply methods introduced over last 3 years in the firm.	0.271	1.312	0.217
Number of observations = 360 $\chi^2(1) = 1.53$ Pseudo $R^2 = 0.0031$ Correctly classified = 56.11%			
22. Spending on research and development activities.	-0.179	0.835	0.6
Number of observations = 360 $\chi^2(1) = 0.28$ Pseudo $R^2 = 0.0006$ Correctly classified = 56.11%			
23. Company compete against unregistered or informal firms.	0.198	1.219	0.357
Number of observations = 360 $\chi^2(1) = 0.85$ Pseudo $R^2 = 0.0017$ Correctly classified = 56.11%			

Table A. 1. Estimated logistic models with statistical insignificant variables (continuation)

Variables	Coefficient	Odd-ratio	p-value
24. Obstacle: Access to finance.	-0.368	0.691	0.224
Number of observations = 360 $\chi^2(1) = 1.48$ Pseudo $R^2 = 0.0031$ Correctly classified = 56.11%			
25. Obstacle: Access to land.	-0.566	0.567	0.304
Number of observations = 360 $\chi^2(1) = 1.06$ Pseudo $R^2 = 0.0023$ Correctly classified = 56.11 %			
26. Obstacle: Corruption	0.602	1.826	0.312
Number of observations = 360 $\chi^2(1) = 1.02$ Pseudo $R^2 = 0.0021$ Correctly classified = 56.67%			
27. Obstacle: Crimes, theft and disorder	-1.168	0.310	0.144
Number of observations = 360 $\chi^2(1) = 2.14$ Pseudo $R^2 = 0.0053$ Correctly classified = 56.11%			
28. Obstacle: Customs and trade regulations	-1.382	0.250	0.210
Number of observations = 360 $\chi^2(1) = 1.57$ Pseudo $R^2 = 0.0042$ Correctly classified = 56.11%			
29. Obstacle: Inadequately educated workforce	-0.241	0.785	0.392
Number of observations = 360 $\chi^2(1) = 0.73$ Pseudo $R^2 = 0.0015$ Correctly classified = 56.11%			

Table A. 1. Estimated logistic models with statistical insignificant variables (continuation)

Variables	Coefficient	Odd-ratio	p-value
30. Obstacle: Labor regulations	0.544	1.722	0.481
Number of observations = 360 $\chi^2(1) = 0.50$ Pseudo $R^2 = 0.0010$ Correctly classified = 56.39%			
31. Obstacle: Political instability	0.595	1.814	0.213
Number of observations = 360 $\chi^2(1) = 1.55$ Pseudo $R^2 = 0.0032$ Correctly classified = 56.94%			
32. Obstacle: Practices of competitors in the informal sector	0.434	1.543	0.175
Number of observations = 360 $\chi^2(1) = 1.84$ Pseudo $R^2 = 0.0037$ Correctly classified = 56.94%			