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STATISTICAL PORTRAIT OF WOMEN AND MEN IN BSR COUNTRIES - GENDER, ICT AND ENTREPRENEURSHIP

Introduction

A condition of smart and sustainable economic growth is the inclusion and usage of as many talents as possible. In other words, it is the inclusion of women and men in the process of creating economic prosperity and social harmony. Apparent changes in the public sphere are not always easy to understand or accept. However often the process of change offers the opportunity to refresh and reformulate the anachronistic structure of the old order. The process of various types of changes in the labour market- demographic, institutional, economic, legal is an opportunity to improve the situation of women in the labour market. This opportunity must be used in order to obtain positive changes.

To influence the economic development, including processes in the labour market, knowledge of the quantitative accuracy of the phenomena in the labour market is essential. Lord Kelvin has claimed that "*When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind"*[1].

The following analysis is focused on the quantitative dimension of the labour market phenomena, entrepreneurship, innovation and ICT in the Baltic Sea Region countries, although the authors are aware of the fact that the qualitative dimension of these phenomena is equally important.

Description of the target group and source of the statistical data

The analysis was carried out for 9 countries of the Baltic Sea Region that is for: Denmark (DK), Estonia (EE), Finland (FI), Germany (DE), Latvia (LV), Lithuania (LT), Poland (PL), Sweden (SE) and Norway (NO). The statistical analysis was based on data from Eurostat. In

[1] "*Mathematical and physical papers*" (1882-1912, 6 toms)

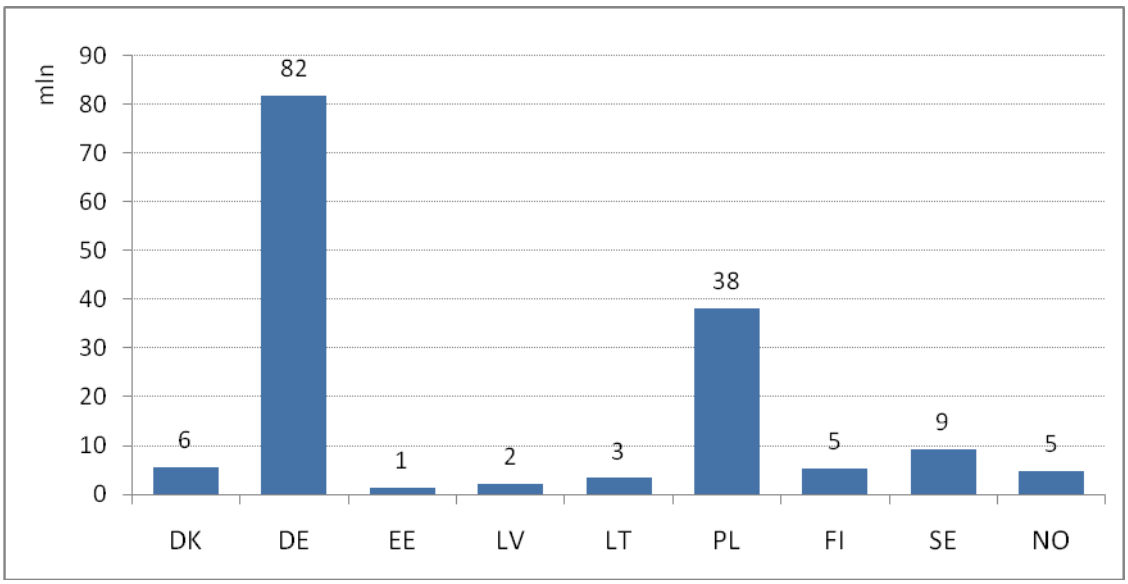
detail chosen data concerns demographic, labour market (including entrepreneurship) and ICT variables. Data for most variables relate to the year 2009, however in some cases, authors were forced to use older data, the oldest regards 2006.

Results

Demographic changes influencing the labour market

Baltic Sea Region (BSR) countries form two distinct groups of countries in terms of size: a two-element group of large countries and a group of small countries, although further analysis will show them as leaders in many aspects. This is important information in terms of common policies and programmes prepared and implemented in those countries. A different dimension is for example, implementing new practices in a country that consists of nearly 40 million people and in a country a dozen times smaller. The most populated of the BSR countries are Germany (82 million) and Poland (38 million). The German population is over 10 million greater than the population of all other BSR countries combined together. The three smallest countries include Lithuania (3.3 million), Latvia (2.2 million) and Estonia (1.3 million), which represent a total population not exceeding 7 million.

Figure 1.Total population in millions in 2010



Source: Eurostat

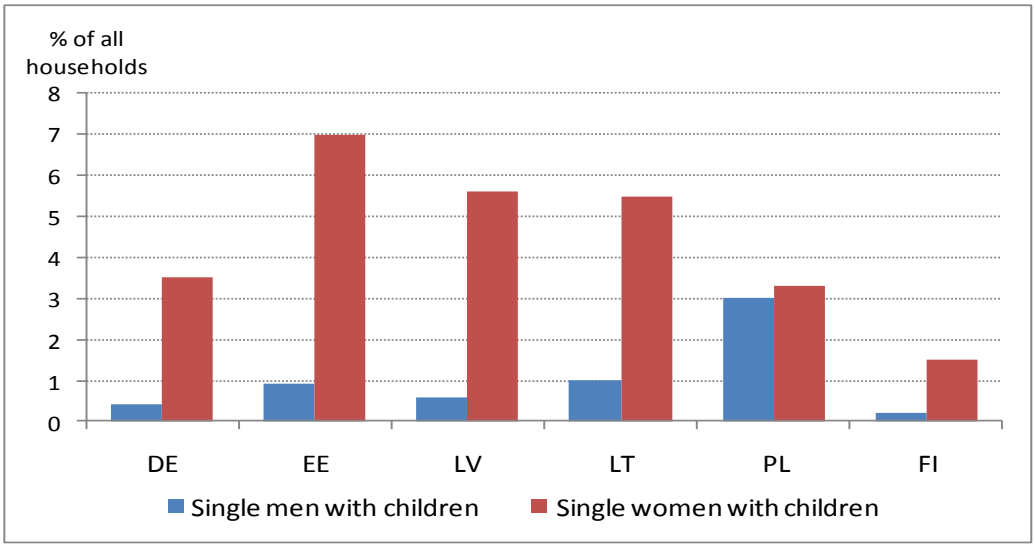
In all of the countries, women constitute more than 50% of the total population. This percentage is mostly constant for each country, i.e. does not change with time. The smallest

percentage of women is in Norway (50%) and the largest in Estonia (54%), Latvia (54%) and Lithuania (53%).

It can be concluded that in the whole of Europe, including BSR countries, there is the highest share of women in the total population. It is caused by, amongst other factors, longer life expectancy for women than men, and by the high level of emigration of men in some European countries such as Lithuania, Latvia, Ukraine, and Belarus. It is worth noting that the lowest rates of feminization in the world, meaning the lowest quantitative shares of women in the total population, occur in Asian countries. The main reason of it is the extremely low status of women in this geographic area, and consequently the reluctance to have female offspring. Families often settle on very strange and sometimes even drastic measures of avoiding giving birth to a daughter; for example, removal of female foetuses.

Mentioned emigration movements is one of the reasons why in Estonia, Lithuania, Latvia single mothers constitute such high percentage of households. Detailed data for some BSR countries are shown in figure 2.

Figure 2. Single parents as % of all households in 2009



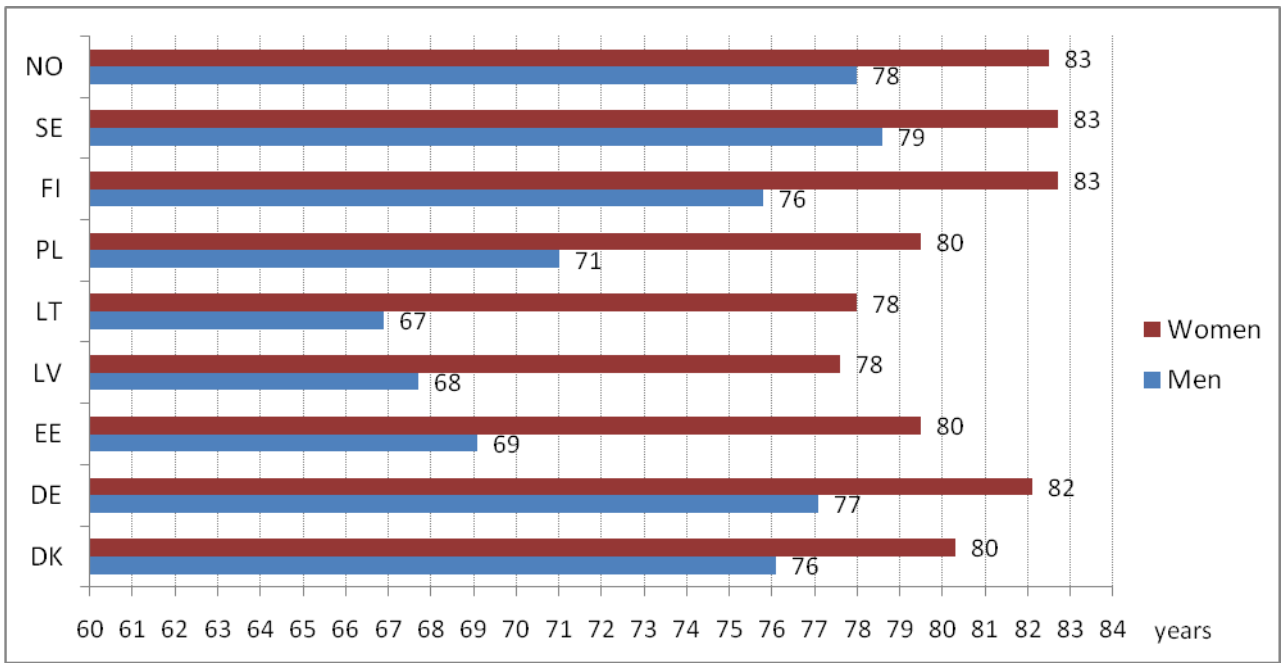
Source: Eurostat

Poland is an exceptional country in the study where the percentage of single fathers is only slightly lower than the percentage of single mothers. An interesting observation is the correlation between the number of single parents and divorce indicators, as divorce is one of the main reasons of a single parenthood. The divorce indicator for BSR countries in 2009 in the decreasing order is as follows: LT 2.8, DK 2.7, FI 2.5, SE 2.4, EE 2.4, DE 2.3, LV 2.3, NO 2.1, and PL 1.7. The indicator can be read as the number of divorces per 1000 persons.

Therefore, in contrast to a simple theory that divorce is always breaking up a family, there is no plain correlation between the variables as e.g., Finland with its high divorce rate presents the lowest single parents rate, while in Poland with the lowest divorce rate, around 7% of all households constitute single parents. Both single parenthood and divorce make the economic situation of a household less stable.

The next step was the analysis of life expectancy in the chosen part of Europe. It was observed that in all the BSR countries, women live longer than men, while the more wealthy country, citizens, including both women and men, live longer (see Fig.3).

Figure 3. Life expectancy at the age of 1 in 2009



Source: Eurostat

The longest life expectancy for women occurred in countries such as Finland, Sweden, Norway and Denmark - nearly 83 years in the first three countries and 82 years in the latest country. The numbers stand for the high quality of life, good economic condition and healthy life style. The worst situation in terms of life expectancy occurred for men in less developed countries - Lithuania, Latvia and Estonia, where according to the data from 2009, the average life expectancy for men is less than 70 years. What is the reason? There is no simple answer to the question why men live shorter. However, some factors that may affect life expectancy can be identified. Often mentioned are socio-cultural arguments (e.g., propensity for alcohol abuse), economic arguments (e.g., poverty, and excessive physical work related activity) and biological arguments (e.g., low quality of genetic material).

The next observation was that the poorer country is the greater difference in average life expectancy for men and women. In countries such as Lithuania, Latvia, Estonia and Poland, the difference is caused by relatively short life expectancy for men. The average life expectancy for women in all BSR countries does not differ so considerably.

The analyzed populations are similar in sense of being aging societies. Ageing is defined as the increased share of the elderly in the general population. In the individual dimension, however the process can be beneficial - it is better to live 85 than 60 years. However, ageing as the mass process causes a many negative, from the socioeconomic point of view, effects. Firstly, lack of manpower, as the young cohort (group of the population) entering the labour market are becoming less and less numerous, while the older cohort retirement more and more. Secondly, the old society is a society with people in a worse state of health. Thirdly, it is a society that usually needs immigrants to work what generates many difficult social situations, despite the obvious economic benefits.

Table 1. Population growth and Total Fertility Rate in BSR countries

	Population growth		TFR 2009
	1995-2000	2001-2005	
DK	0,4	0,3	1,8
DE	0,2	0,1	1,36
EE	-1,1	-0,4	1,62
LV	-1	-0,6	1,31
LT	-0,7	-0,6	1,55
PL	-0,7	-0,4	1,4
FI	0,3	0,3	1,86
SE	0,1	0,4	1,94
NO	0,6	0,6	1,98

Source: Eurostat

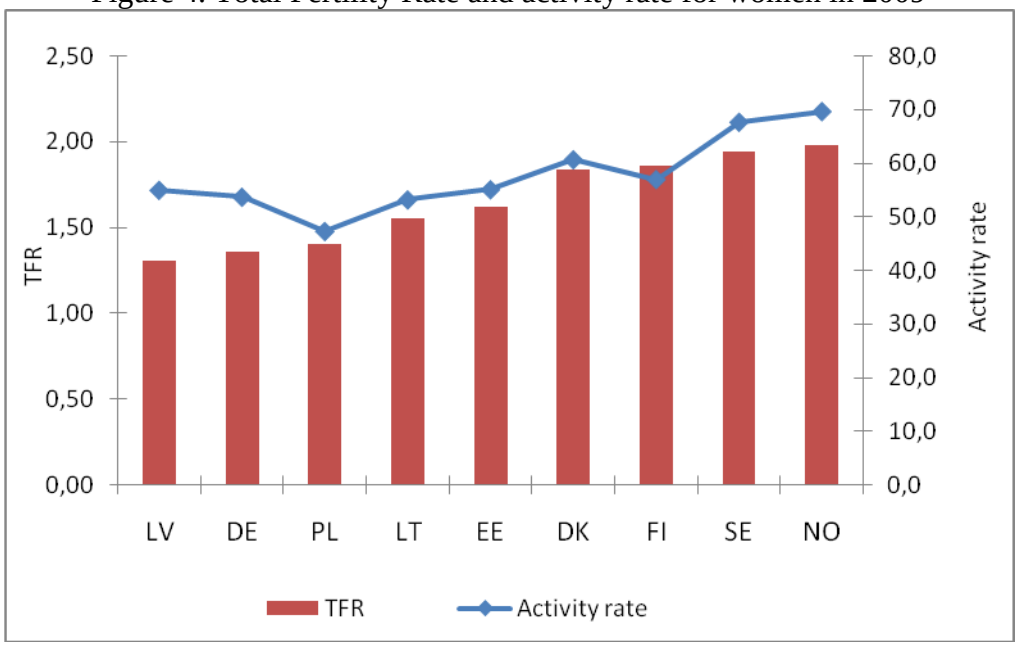
In ageing societies population growth oscillates around zero. Population growth is understood by the author as the average annual growth per annum in %. Table 1 shows population growth and the value of the Total Fertility Rate (TFR). TFR is a measure of fertility, which says what is the mean number of born-alive children of a woman during her lifetime.

In both analyzed periods, 1995-2000 and 2000-2005, population growth was notably low (negative values) in less developed countries (EE, LV, LT, PL). The negative variable stands for the process of depopulation, that is, the decrease of the number of people living in the

country. As for the value of TFR - demographers are not satisfied of their low values. Particularly strong decrease in fertility rates occurred for women aged 20-29. Therefore, in Baltic Sea Region the fertility rate preserves below the replacement rate.

Is there a connection between fertility level and women's participation in the labour market? The answer is yes. Figure 4 shows the values of TFR coefficient and the activity rate of women in the analyzed countries.

Figure 4. Total Fertility Rate and activity rate for women in 2009



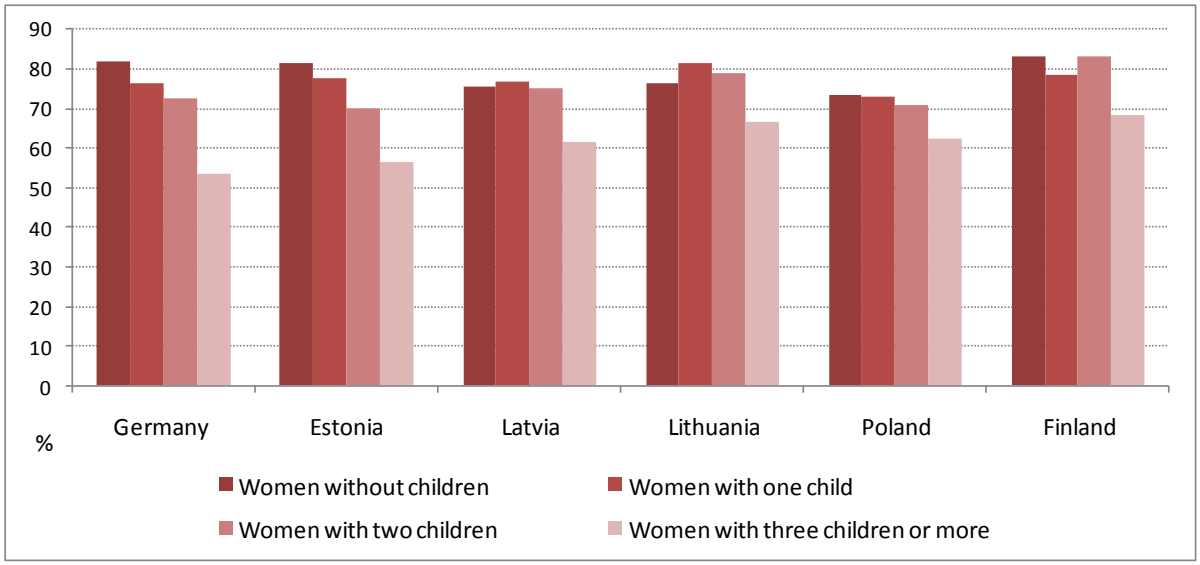
Source: Eurostat

In the last decades of the last century, fertility decline occurred in parallel with the increase of the economic activity of women. This process was caused by cultural changes regarding gender roles in the society and economic processes, such as economic transformation in post communism countries. Today in BSR countries a paradox can be observed: countries with a higher involvement of women in the labour market have also relatively high TFR.

In NO, SE, FI, DK there is close to two children per woman, and in those countries the economic activity rate for men and women is the highest. In Norway and Sweden for 100 women in working age over 70 is active. As a comparison, in Poland the number is 47. An economic activity means being employed or registered as unemployed, which means actively looking for a job. Described above quantitative data refute two stereotypes; first that women engaged in gainful work have fewer children, and second that women in post-communist countries (PL, LV, LT, and EE) choose a traditional family model with a large number of

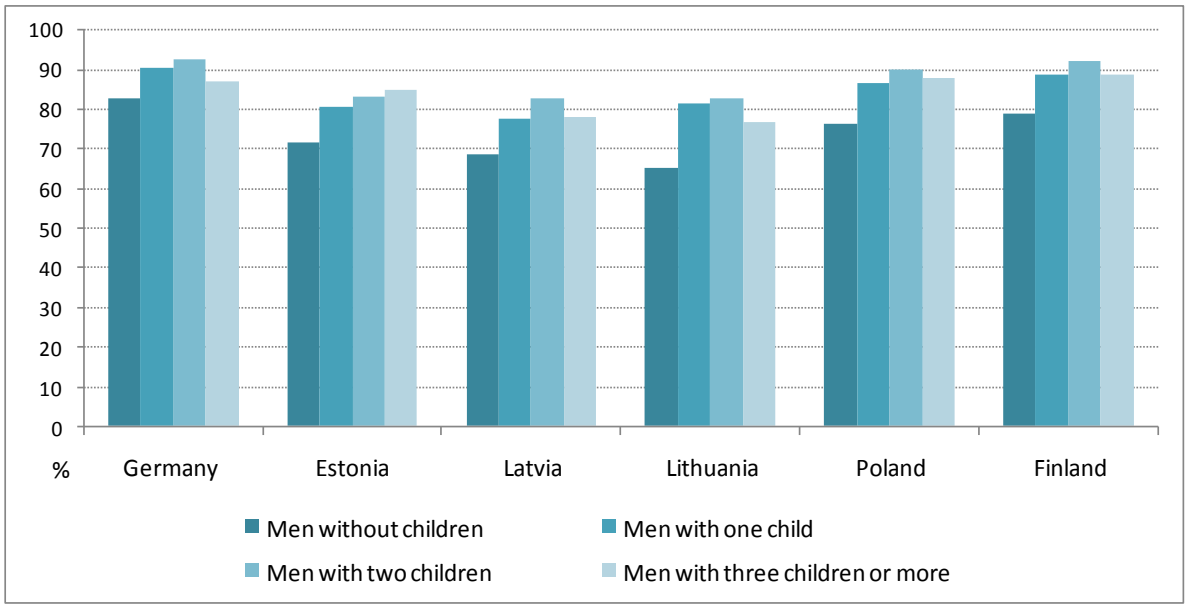
children. The study has shown clearly that in those countries the fertility rate is the lowest from all BSR countries. How is it possible that economically active women can enjoy fully the family life? One explanation is a well-organized childcare system. Another argument is the high culture of work, including employers who offer friendly conditions of gainful employment and a peaceful reconciliation of professional and family life.

Figure 5. Employment rate for women 26-64



Source: Eurostat

Figure 6. Employment rate for men 26-64



Source: Eurostat

Figures 5 and 6 shows correlation between activity rates for men and women and the number of children. For women, the more children the lower employment rate was observed. Variables for men show the opposite correlation - the more children the higher rate of

employment. Therefore, it can be said that employment rate for women is negatively correlated with the number of children, and for men the correlation is positive. Is the assertion that for women the more children the lower employment rate in contrast with a commentary to figure 4? The answer is, no. In countries with the high fertility rate occurs also the high employment, however the statement concerns women in general, without counting the number of children. However, by analyzing women's actions and choices in relation to the number of their children (no children and those with 1, 2 and 3 or more children), it was observed that the fact of having a large number of children strongly reduces commitment to the labour market.

The reason for higher involvement of men in professional life while having numerous offspring is need for money to maintain a big household while the second salary (wife's or partner's) is often lower. The fact of having a family makes a human and in this case, a man, feeling responsible for more people, and thus he works in a more efficient way.

European Union authorities are aware of how important from the economic development standpoint is to stimulate and support the involvement of women and men in the labour market. The latest strategy, Europe 2020, for a smart, sustainable and inclusive growth is based on five targets. One of them is that 75 % of the population aged 20-64 should be employed.

Table 2. Employment rate by gender in 2009

Country	Females	Males
Denmark	74,8	**80,8**
Germany	69,8	**79,7**
Estonia	**68,8**	**71**
Latvia	**66,8**	**67,4**
Lithuania	**67,5**	**66,9**
Poland	**57,6**	**72,6**
Finland	72,4	74,7
Sweden	**75,7**	**80,9**
Norway	**77,9**	**83,1**

Source: Eurostat

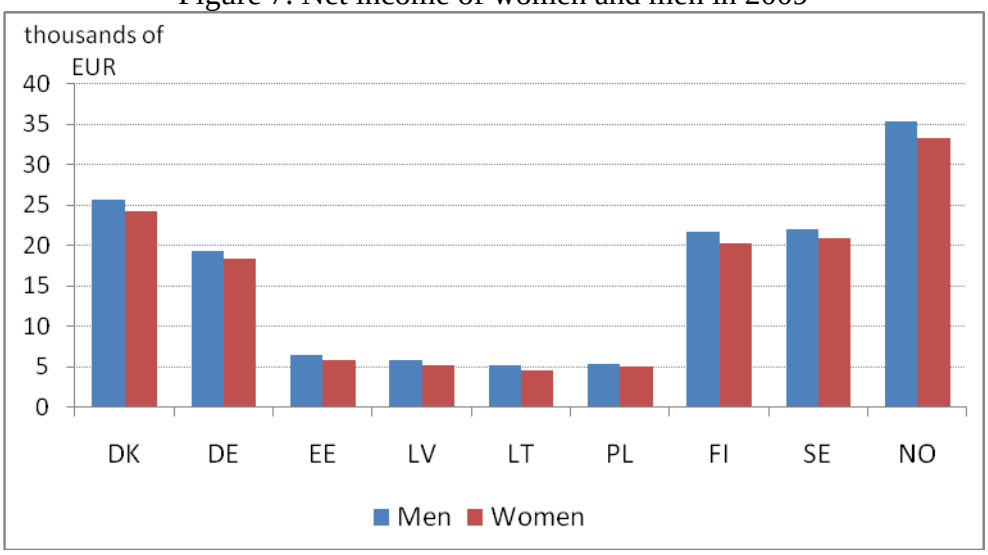
Table 2 shows the situation employment in the BSR countries regarding mentioned above EU target. Only two of the nine analyzed countries, Sweden and Norway, have met the designated level of employment rate - 75%, both for men and women. The next two countries, Denmark

and Germany, have met the criteria only for men. As for women, still some effort has to be put to activating them in the labour market. In fact, Denmark is already very close to achieving the required level of employment. In the four post-communist and the less economically developed countries occurred the lowest level of employment rates. Neither the rate for women nor for men has reached the required 75%. It is safe to say that in those countries only a really strong commitment of the authorities and institutions at national and regional level will lead to a satisfactory level of economic activity of the population. Mobilization of the population to increase the participation in the labour market is often a difficult process, because it requires a change in mentality, a change in thinking, and this kind of changes are the slowest.

Many actions in the area of activation of men and women in the labour market are financed by EU funds. In order to meet the required 75% a lot of work has to be done. It is noteworthy that the process goes in the right direction, as women and men are more and more aware of both individual and general benefits of the efficient activity in the labour market. The traditional roles and spheres of women and men are recently reconsider, more and more women have successful career, which later turns into their personal life success.

The next answered question was whether the activity in the market measured, inter alia, by the employment rate is linked to the population's income? The answer is, yes. The analysis of net income in BSR countries is 2009 showed still occurring division into two distinct groups of countries (see Fig.7).

Figure 7. Net income of women and men in 2009



Source: Eurostat

The net income was determined for the population over 16 years of age, which explains relatively low values. Poland, Lithuania, Latvia and Estonia form a cohesive group of low income countries. Another quite coherent group of richer countries is created by DK, DE, FI and SE. Norway clearly diverges from other countries. In what way the less developed countries take advantage of such situation? The first big opportunity is the possibility of direct participation and interaction with better organized and well developed markets. For example, through export or import of goods and services, access to newer technologies and better solutions, proven best practices from more developed countries.

The richer countries with their organized labour markets have also advantages of cooperation in BSR. Those advantages include cheaper labour force, new, large output markets for products and services, job and cooperation security as all the borders are open (in contrast to closed and hazardous areas as is the communism).

Cooperation and belief in shared values in all the BSR countries will contribute to create a strong civil society of this part of the EU, supported by a high level of material culture.

Entrepreneurship

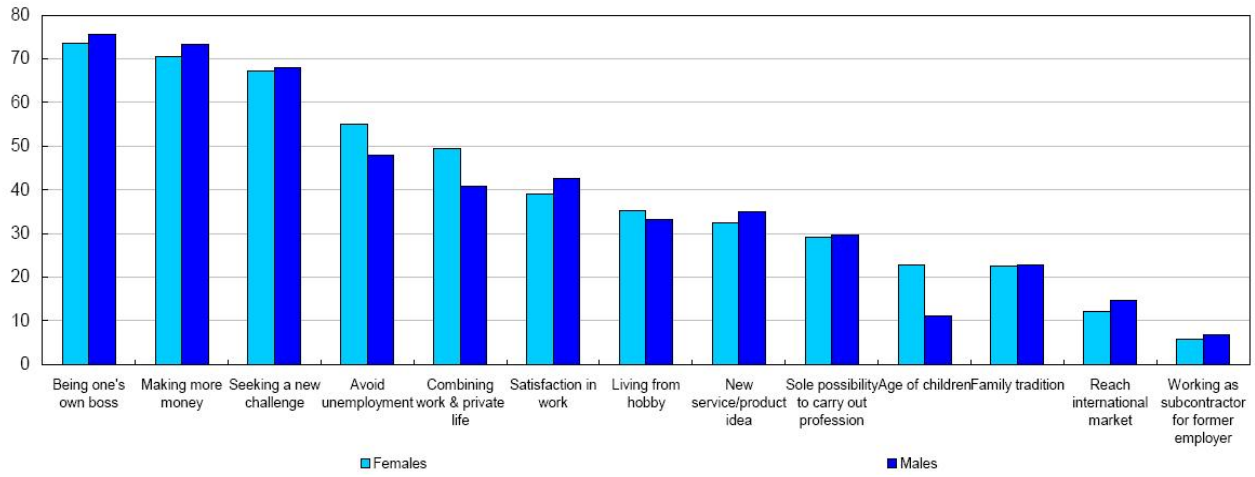
While analyzing women's and men's market activities it is necessary to relate them to the category of entrepreneurship. In the study of entrepreneurship can be seen fairly wide range of definitions of the term. The entrepreneurship is defined as running a formalized business activity, usually taxed and market-verifiable. Therefore, the entrepreneur is a person who sets up business deals in order to make a profit. In another definition it is someone who sets up business deals in order to make a profit, who arranges, manages and takes the risk of running a business. The adjective entrepreneurial can specify someone with the qualities that are needed for people to succeed as entrepreneurs.

The EU officials, for whom the economic growth of regions is not indifferent, know how important it is to use the entrepreneurial potential of the population. There are many reports, programmes and action plans in this area, e.g., "Entrepreneurship in Europe" and "The European agenda for Entrepreneurship". EU understands that the entrepreneurship is focused on the business context although among the definitions given in the EU documents multidimensional concept is stressed out.

The importance of entrepreneurship results from the fact that it affects the creation of new jobs and the economic growth. Secondly, produces healthy competitiveness, which gives the dynamics into business life. Thirdly, entrepreneurial attitude and behaviour can take full advantage of personal potential. Last but not the least; it satisfies many social needs such as wealth, jobs and diversity of market choices [2].

An important skill for the policy makers is to know what factors create climate conducive to entrepreneurship, producing more entrepreneurial entities and making existing business grow. Despite this awareness, there are still quite numerous entry barriers like bureaucracy barriers and funding/financing barriers in the primary phase of functioning the company. A major role in overcoming these barriers plays professional training for young/starting entrepreneurs, public sector support in terms of risk-sharing and funds access.

Figure. 8. Motivation for start-up by gender in %



Source: FOBS survey, 2005

Why do people, women and men, start up their own businesses? Statistical analysis showed that motives are similar for both sexes. First of all, they want to be their own boss, as they appreciate the independence and feel that they are strong enough to manage on their own. Secondly, they want to earn more money and in the private sector average earnings are higher than e.g., in the public sector. Another often occurred argument was seeking a new challenge, without a doubt, a new business is a new challenge. Two of the least chosen motives were a will of continuing a family tradition, which shows that in the modern world, family pressures

[2] "Entrepreneurship in Europe", COM(2003) 27 final, European Commission, Brussels, 2003

on the choices of men and women appears to be much weaker than decades ago, as well as a desire of exploring international markets. The very last argument was the need to start their own business and work as subcontractor for a former employer. In the latter case, the decision may not always come from the new entrepreneur, but often the person has been encouraged or even forced to do so by the former employer.

A common problem while performing a quantitative analysis of entrepreneurship in the BSR countries is the lack of accessible and structured data in this area. However, general patterns can be observed. In all BSR countries the number of self-employed women was much lower than self-employed men. Gender equality in the promotion of entrepreneurship in most countries leaves much to be desired. Gender mainstreaming strategy is used mostly by the northern countries of the BSR, particularly good is the situation in Sweden and Norway.

It cannot be denied that the situation in terms of gender equality in entrepreneurship has significantly improved in the last 10, 20 years. Especially effective are methods such as networking, counselling, information and providing an incubator services for the starting up entrepreneurs.

Research team, authors of the analysis "Meeting the entrepreneurship and the Microfinance Challenge" formulated recommendations on gender mainstreaming in entrepreneurship for different groups of the stakeholders: the policy makers, the practitioners, funding providers and researchers. Together it creates a great signpost of how to promote and implement smart and equal entrepreneurship for both women and men. Some of them are: "1. Build supportive policy frameworks for inclusive entrepreneurship and viable microenterprises. Since female entrepreneurs are overrepresented in the group of small business owners, they would especially benefit from such environments on European, national and local level. 2. Extend and develop the many existing initiatives for women's entrepreneurship into full-fletched national strategies for women's enterprise. 3. Initiate an active networking policy throughout your country that helps to bring more women into self-employment and stabilize already started female led enterprises, 4. Ensure transparency in statistics. Gender-specific data has to be made available systematically for banks, public loan schemes and microfinance providers."[3].

[3] Lahn S., Hayen D., Unterberg M. (EVERS & JUNG), Lammermann S., Underwood T., Guichandut P. (EMN) "Meeting the entrepreneurship and the microfinance challenge", European Project Report

Computing and ICT

While promoting gender equity in the entrepreneurship it is crucial to increase women's involvement in ICT. Advantages of the process of changes in the labour market should be taken and women should be placed in the right place. In the authors' opinion it is crucial to increase women's involvement in information and communication technologies (ICT). The importance of ICT lies in its ability to create greater access to information and communication in underserved populations. Increasing women's participation in this sector will reduce labour market segregation and, as jobs related to ICTs are well paid, it will allow women to receive better salaries. Moreover, the appropriate use of women's IT skills will be the opportunity for many companies, institutions and private persons to benefit from their skills that have not been used before[4]. It has to be kept in mind that ICT nowadays is one of the most dynamic sectors of economy, and the participation in it allows women to influence economic growth and alleviate the effects of the economic crisis. Demographic changes cause structural changes in labour market, for example many people leave the market to retirement and women successfully can take part in economic activities, also the one connected to ICTs. It is essential to encourage them to train and find work in ICT sector.

To characterize the sector using statistical data the fields of computing, science and technology and highly developed knowledge-based sectors should be taken into consideration.

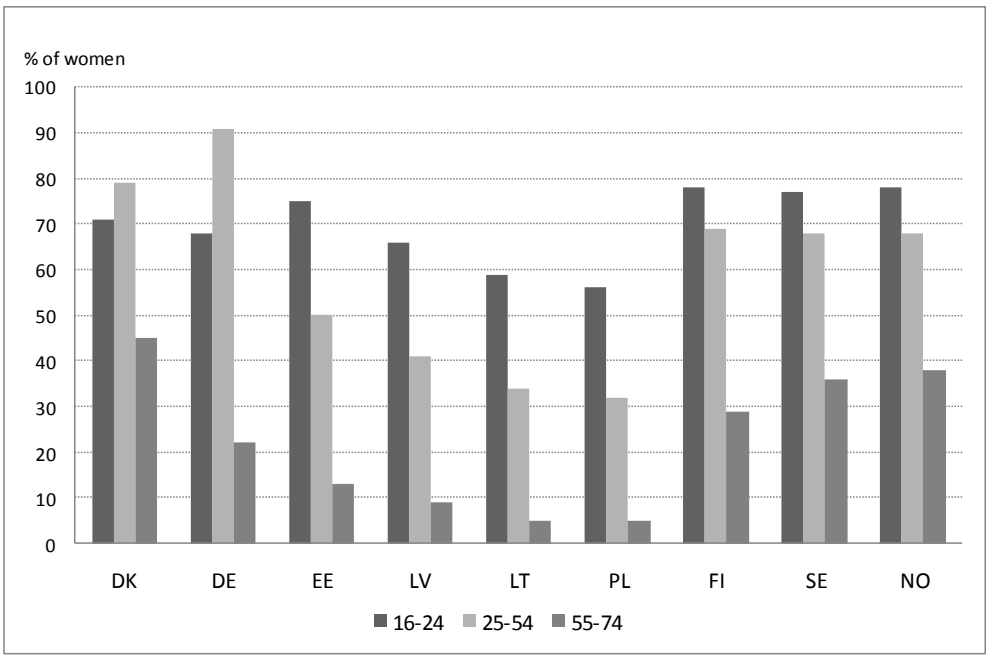
Female and male Computing[5]

In BSR countries observed quite strong disparities in the usage of computers by women in different age groups. Some similarities were also observed, e.g., young people declare a common use of computer at least once per day. In Norway, Finland and Sweden nearly 80% of young women claimed at least once per day usage of computers. However, aims and places of the computer usage in BSR countries differ (more on this later).

[4] "*Women and ICT - Status Report 2009*", European Commission, Information Society and Media, Luxembourg, 2010

[5] The part concerning computing and ICT was presented at *the Baltic Sea Region Conference with focus on Gender ICT* , Sztokholm 2010

Figure 9. Computer usage by age on average once per day in the last 3 months in 2006

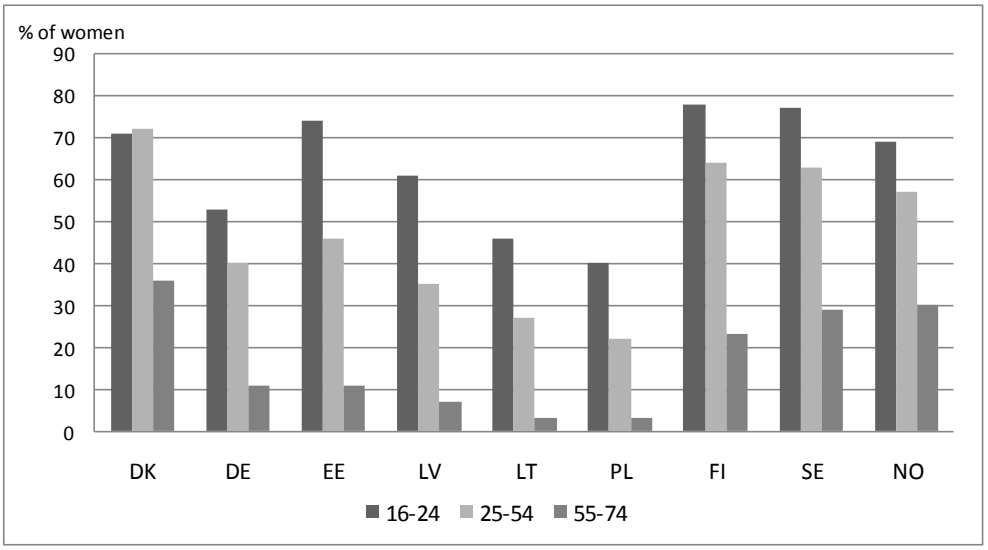


Source: Eurostat

In 7 out of 9 analyzed countries the middle age group (25-54) had the moderate values, i.e. higher than in the oldest group, lower than the youngest. The exception was Denmark and Germany, where the median age in the frequency of using a computer at least once per day was the highest.

The least satisfying results when it comes to computer usage were observed in the oldest group. Despite different values, this regularity was observed. What are reasons of this situation? One of them, without a doubt, is the fact that the elderly for most of their lives were living and working simply "without a computer". Only in some exceptional cases, the computer has become an indispensable tool for them. In the future, the usage of computers by the oldest group of people will considerably increase as young people in their twenties who today very often use this tool, will also use it while being in their seventies.

Figure 10. Internet usage by age on average once per day in the last 3 months in 2006



Source: Eurostat

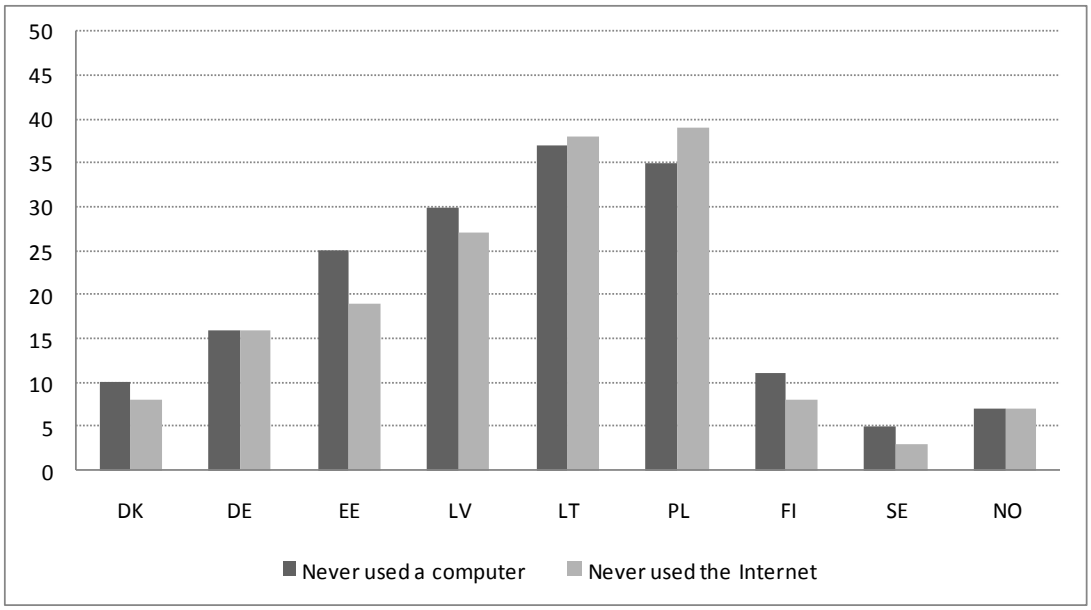
Without a doubt the Internet is one of the most powerful tools of ICTs. Analyzing women's participation in ICTs, Internet usage, together with its aims, was one of the main studies. Firstly, the use of the Internet (see Fig. 10) showed quite strong differences both between BSR countries and between age groups. Similar to the computer usage, statistics for younger women using the Internet were higher, followed by middle-aged women, and the last place belonged to the oldest women.

Highest values were noted for young women in Finland, Sweden and Estonia. It has to be marked that in those countries, more than 75% of young women claimed a daily Internet usage. The smallest value of the test coincided with a variable for oldest women in Poland, Lithuania and Latvia - on average 4% of women from that group use the Internet daily. The relatively low frequency of Internet usage is also registered in Germany (11% of the oldest women use this tool of communication). However, the fact is that the result would surely be different if East and West Germany would be analyzed separately. This is a proof that the communist system and centrally controlled economy, which continued throughout the decade in some of BSR countries, such as PL, LT, LV, and Western Germany deprived economic growth and development of information society. Hence the strong differences in the case of many of the compared variables. Less frequent use of the Internet described as "at least once a week" turned out to be considerably much more common among women. The structure remains unchanged, young women use the Internet most frequently and least do the oldest. Impressive are the amount approaching 100%, characterized by use of the Internet by young

women. In countries such as Finland, Sweden, Norway, Denmark and Estonia more than 90% of young women at least once a week use the Internet for different purposes.

Noteworthy are results of Estonian women. Even if the country belongs to the group of poorer countries in BSR, in many cases (using a computer, Internet) presents high values of the variables tested. What is the reason? Firstly, it is a small country territorially, and therefore certain procedures and solutions for information technology are easier. Secondly, Estonia remained for a long time under the influence of Sweden taking a certain extent the culture of communication and standards of social behaviour from the North.

Figure 11. Women who have never used a computer or the Internet in 2009



Source: Eurostat

Despite some satisfying aspects of the use of communication tools presented earlier, it should be noted that in some BSR countries a large number of women in age 16-74 in general do not use the computer and the Internet (see Figure 11). Again BSR countries divided into two groups of countries, the first – well developed in terms of the information flow, prosperous northern countries- Norway, Finland and Denmark, where less than 10% of women have not use the internet or the computer. The second group consists of less developed countries, less wealthy: Poland, Lithuania and Latvia. In the first two countries: Poland and Lithuania almost 40% of women in age 16-74 have never used a computer and the Internet. Statistics of Poland itself refer to the approximately 6 million of Polish women.

Study of the frequency of using computers and the Internet should be expanded into the purpose of using these tools. Table 3 presents data concerning usage of e-services. Comparing variables for years 2004 and 2009, a clear increase in the popularity of all analyzed e-serviced was noted.

Table 3. Usage of e-services among women between 16 and 74 in the last 3 months

Usage of:	e-government		e-health		e-commerce	
	2004	2009	2004	2009	2004	2009
DK	37	62,3	18	47	31	51
DE	28,6	31,5	25	43	-	51,1
EE	15,5	44,5	5	12	-	39,8
LV	14	24	9,6	38	2	8
LT	10	20	-	35,1	1	6
PL	11,5	16,4	2	16	6,1	26,4
FI	42,5	43,5	22	38	40,3	62,3
SE	33,6	46,9	28	44	22,7	43,9
NO	30,6	51,7	26	49	34,3	46,4

Source: Eurostat

Particularly strong increase occurred in Denmark, Norway and Sweden. For example, in Denmark the use of e-health services during the period increased by nearly 30%. Less developed countries also boast stunning increases. In Estonia, the popularity of e-government services has increased by nearly 30%. By nearly 30% in Latvia has also increased the frequency of usage of e-health. Those are strong steps towards active participation of women in the information society.

Table 4. Internet activities by age in 2009

	communication			sending/receiving e-mails			playing/ downloading		
	16-24	25-54	55-74	16-24	25-54	55-74	16-24	25-54	55-74
DK	96	89	60	94	88	60	53	30	13
DE	96	80	34	93	79	34	:	:	:
EE	98	77	26	96	76	25	76	33	4
LV	96	69	18	92	65	17	81	34	4
LT	90	58	13	88	53	11	75	28	3
PL	92	57	13	85	51	11	49	15	2
FI	97	91	46	97	91	46	75	37	11
SE	97	93	60	97	93	60	:	:	:
NO	100	90	56	99	88	56	50	34	13

	banking			looking for job		
	16-24	25-54	55-74	16-24	25-54	55-74
DK	59	76	44	35	37	6
DE	34	48	16	35	23	3
EE	76	81	28	33	25	:
LV	56	60	14	39	29	5
LT	37	45	8	24	17	1
PL	23	28	5	18	11	1
FI	76	88	46	67	30	3
SE	71	82	44	45	28	5
NO	74	85	47	44	26	3

Source: Eurostat

A detailed analysis of the Internet activities of women by age in 2009 in % showed clear differences between countries and between different age groups. Examined were 5 categories of Internet activity in 2009: communications (1), sending and receiving e-mails (2), playing games online and downloading multimedia files (3), the use of electronic banking (4) and looking for job or sending applications (5). In all categories and age groups the lowest statistics showed Poles. Scandinavians considerably took the lead. Alternately, Denmark, Finland, Sweden and Norway have showed the best statistics in almost all categories and all age groups. A situation in Denmark is an interesting observation, as the statistics for the age group from 55 to 74 in four cases out of five had the highest percentage out of all studied BSR countries. In other age groups Denmark gave place to other Scandinavian countries and in category 3 to Estonia or Lithuania. Young Lithuanian lead in the category 3, while Estonian and Finns most often use electronic banking services. Categories 1-3 are dominated by the youngest group of respondents, while 4 and 5 are dominated by the middle age group. In terms of communications among the youngest, Lithuanians did the worst, but still with a high score of 90%. What has to be pointed out, 100% of young Norwegian women used the Internet for communication purposes.

Another study covered the place of computer and the Internet usage. Asking for a place of computer use, women mostly answered “at home”, followed by work, rarely at school. The latter is rarely associated with the structure of women by age - the school is the only part. Particularly impressive results were observed in Sweden, Norway and Denmark, where high percentages of women applied to all three places of computer usage.

Table 5. Proportion of women with high and middle level of computer skills by age in 2006

	high level				middle level		
	16-24	25-54	55-74		16-24	25-54	55-74
DK	41	28	11	DK	88	72	39
DE	29	21	4	DE	82	61	23
EE	42	21	0	EE	76	47	9
LV	23	8	1	LV	66	33	7
LT	32	11	1	LT	76	38	7
PL	20	7	1	PL	63	27	5
FI	28	25	6	FI	76	65	20
SE	30	20	6	SE	74	61	36
NO	38	30	12	NO	84	63	32

Source: Eurostat

Next examined issue was the level of computer skills among women, which in the most general way would be described as very much dependent on age. For all BSR countries examined proportion of women with high and middle level of computer skills in 2006 is shown in table 5 Young women in all countries show the highest level of computer skills. The more developed country, the smaller disparity between the youngest and the middle age group in terms of computer literacy. Percentage of women in the oldest age group with high level of computer skills is nominal, e.g., in Poland, Lithuania, Latvia and Estonia it was 1%, in Estonia even 0%. Relatively, the best situation, more than 10% of the oldest women with high computer skills are in Norway and Denmark. Structure of the answers about the medium level of skills is similar to the previous case; however the statistics are much higher than for the high level of computer skills. Over 60% of young women in Poland, and nearly 90% of young women in Denmark and Norway declare computer knowledge at a middle level.

The most common ways of obtaining computer skills by women are self-study: the practice and learning from colleagues and family members. Next, the women declare the use of formalized education and self study: books. The least popular in terms of acquiring e-skills are training courses. Most active in acquiring e-skills are Swedish women, Norwegians and Danish women. The relatively low usage of the ways of obtaining e-skills (such as formalized education, training courses, courses demand by employer, self-study: books, self study: practice, colleague and family) were recorded in Poland, Lithuania and Latvia. Estonia, despite not being in a group of wealthy countries, could be a role model, especially in the self study from books, practice and learning from colleagues or family members.

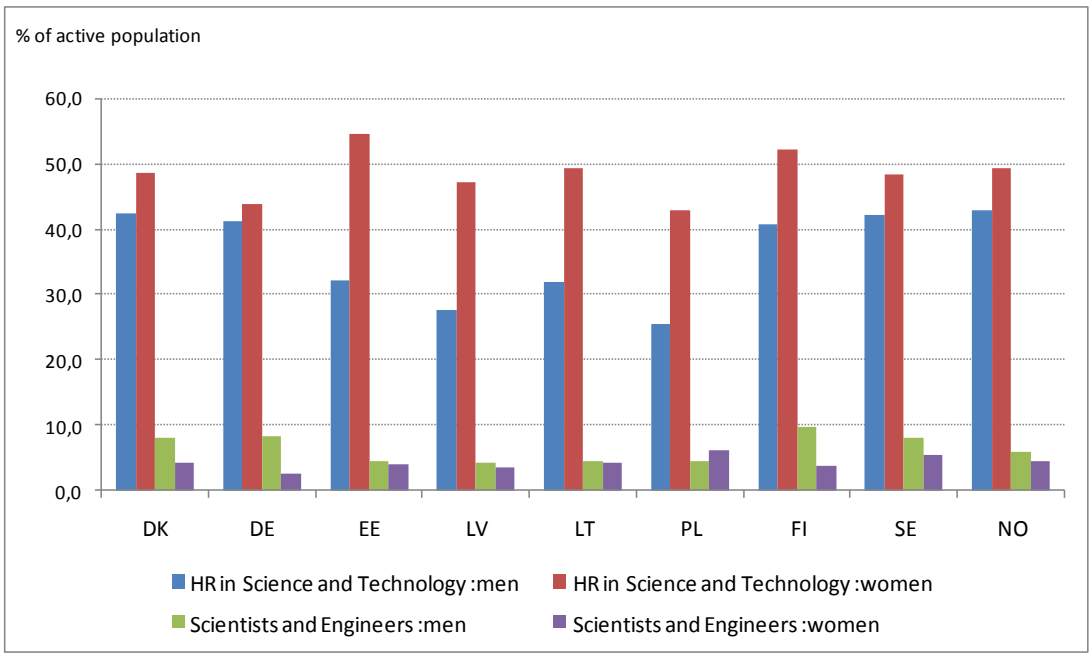
Women's computer skills are the base while searching for a job in ICTs field. Unfortunately, statistics of women's employment in computing activities showed alarming low results. The proportion of women employed in computing activities in relation to total employed women did not exceed 1.5% of total employment in 2006. The relatively highest values were observed in Sweden and Finland, respectively, 1.5 and 1.3%. Employment growth in years 2001-2006 in this area for most BSR countries was close to 0 change rates.

Analysis of women's employment in computing activities by age showed that in countries, such as Finland, Sweden, Germany and Poland, in computing activities are employed more often younger women, younger than 40. It is worth noting here Latvia, where occurred a particularly high compared to other countries involved of the older group of women. However the very low percentage terms the phenomenon studied - between 0.2 and 2% of all employed women should be kept in mind. Computing activities remains a sphere, where women should be encouraged to join, if the "vicious circle" of having less well-paid jobs in the less well-paid sectors of the labour market wants to be stopped.

In most developed countries of the Baltic Sea Region ICT staff is less than 5% of all employees[6]. In 2007, for Sweden and Finland, countries with the highest share of the study group in the general workforce, the figures were 4.8% and 4.5%. Minimum values were observed for Lithuania (1.6%) and Latvia (1.7%). The condition of information society development in the BSR countries is the increase share of ICT personnel on total employment.

[6] Data concerns both women and men.

Figure 12. Human Resources in Science and Technology in 2009



Source: Eurostat

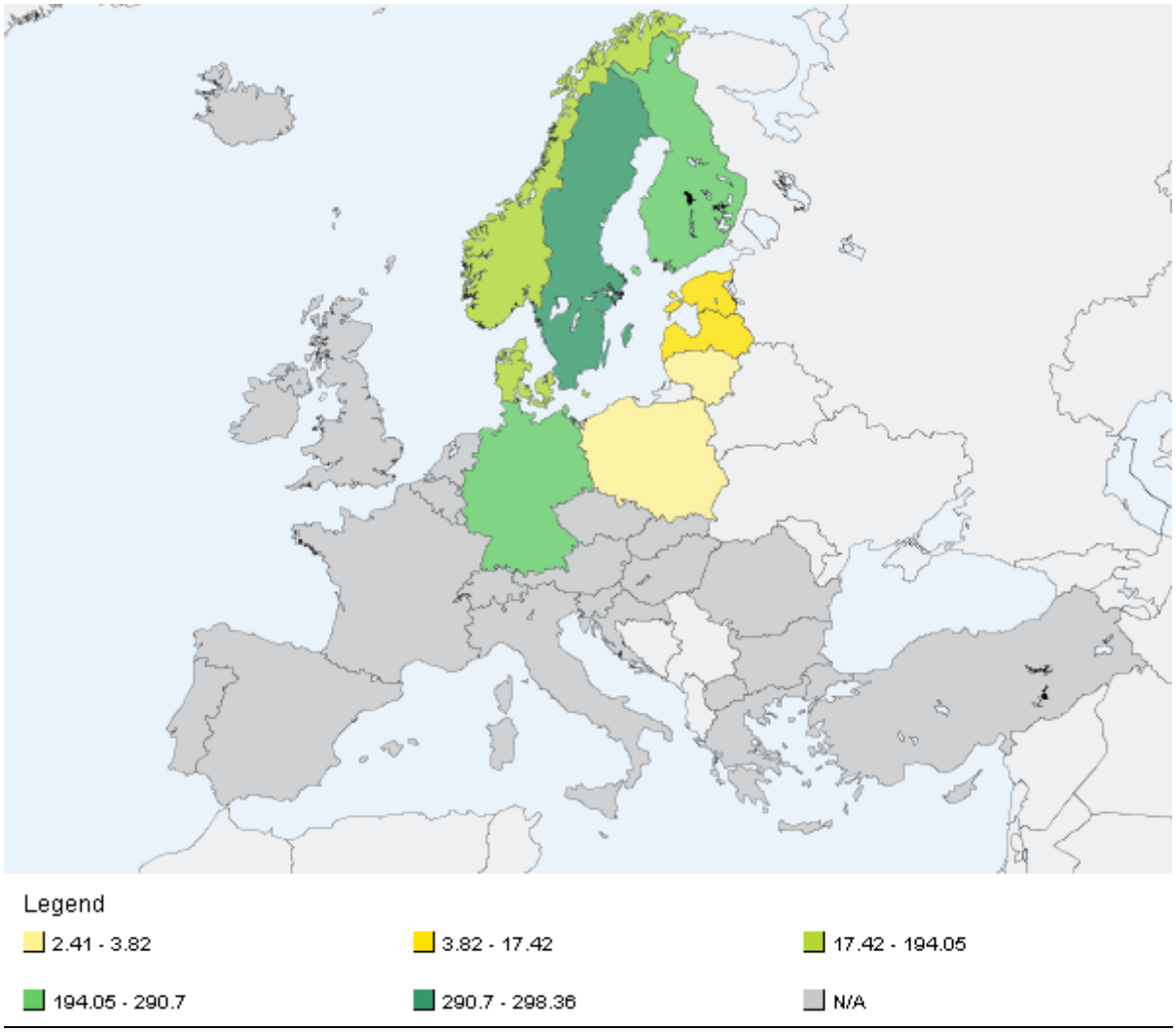
One of the last aspects of the empirical analysis of women in ICT is studying the human resources in science and technology and the participation of scientists and engineers employed (Fig. 12). A strong predominance of women over men in the case of HRST was observed. Different example is Germany, where men predominate in this category. The highest values of the test variable for women was observed in Finland and Estonia, the lowest share of employed HRST as % of active population occurred in Poland and Germany.

In the category of scientists and engineers, in general exists men's domination, the only exception among the countries is Poland. As for the highest share of female scientists and engineers it occurred in Poland (6.1%), Sweden (5.4%), and Norway (4.4%). However, it has to be marked that the percentages of the relation to the general active population is very small.[7]

Women's low interest in professions in the field of science and technology is linked with a small number of patents applications. The last issue analyzed in the paper is the statistical number of the patent application to the European Patent Office (EPO) (see Fig. 13).

[7] Confirmation of the major differences between women and men in the labour market, often running to the detriment of women, an analysis of participations in Highest Decision Making Body. In many of the most developed countries, such as BSR, Sweden, Denmark, Germany, the share of female presidents in HDMB is 0%.

Figure 13. Patent applications to the EPO per million inhab. In 2007



Source: Eurostat

The most active country in terms of applying for patents in 2007 was Denmark, Sweden and Germany. In these countries, observed the largest number of entries per 1000 population. It has to be marked, that variables concern total applications, both women's and men's. However, according to European Commission (2008) „Only 8.3% of patents awarded by the European Patent Office are awarded to women". The least active countries in this study were Poland and Lithuania. It was also observed that in these countries, the low number of patent applications was in contrast to a very high number of graduates of higher education, therein female graduates, and women with a doctorate degree.

This high level of women's schooling compared with a small number of patent applications made by a woman proves, inter alia, barriers to access to R&D financial resources.

Summary

Summarizing, the empirical analysis of the situation of women in the labour market, including the issue of entrepreneurship and ICT, showed very strong differences between the nine countries of the Baltic Sea Region. For most of the analyzed variables were formed two distinct groups of countries; the first group of wealthy northern countries - Norway, Sweden, Denmark and Finland, whereas the latter were: Poland, Lithuania and Latvia.

Occurred also strong differences by age for variables such as computer usage, Internet usage, Internet activities, proportion of women with high and middle level of computer skills and women's employment in computing activities.

The issue of women's participation in entrepreneurship and ICTs is particularly important in as the increased involvement of women in those areas will transform their lives for the better, cause the drop in the labour market segregation and enable women to influence the economic growth, alleviate the effects of the economic crisis. To the economic development unused talents will be included, often belonging to women.

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