

## **GENDER GAP IN SLOVAKIA: SELECTED PROBLEMS OF EDUCATION AND CAREER**

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### **Abstract**

#### **Gender gap in Slovakia: selected problems of education and career**

The article focuses on the gap between women education and their career. Women's education has significantly increased in a few last years, but their position on the labour market has been more difficult in comparison with men. The share of economical active women and also the share of working women with higher education have been growing till the present time. However, it is questionable how do women use their higher education in career or whether they can build even some career. We have used the data from Statistical Office of the Slovak Republic and some problems have been presented in the area of Slovakia on the level of regions (kraje).

#### **Key words**

Gender gap, education, career, Slovakia, leaky pipeline

## **1. Introduction**

Research in the area of gender gap in education and careers is important, because it calls for an attention to some phenomena which are typical in Slovakia and in other developed countries in the Middle and Western Europe and North America. No country can fully develop economically and socially if it fails to tap and fully utilize the talent of its citizens. The development and competitiveness of a village, state or nation depends on efficiently and effectively utilizing its resources. Human talent is a critical resource and women are half of that resource (Jackson at all 2009, 1). Today, women are also more likely than men to persist in college, obtain degrees, and enroll in graduate school (Bae at al. 2000, 7-8 in DiPrete, Buchmann 2006, 1). Many women feel that labour market is very demanding and often 'women un-friendly'; therefore their effort to get better education (and also better position on the labour market) is understandable. However, it is questionable if they have sufficient opportunities to use their education in the praxis. Women are in more difficult situation, because they have to divide their time between family and career. This problem was solved e.g. by Cukrowska-Rozewska and Lovasz (2006) and Valcour, Ladge (2008), where the authors were examining if or how many children in the family can be an obstacle in career and reason of gender gap. Not only children, but also care for older family members is usually duty of women. We can bear out this view with opinion of several authors (Schmid, Brandt, Haberkern 2012; Rodrigues et al 2012). Women are often less-favoured in the work; they are less interesting for employers than men. There arose also some differences among women. According to Waldfogel (1998), gap between women with children and those without children has been widening over the past few decades.

Slovakia has been confronted with several of these problems; many of them have amplified in nineties and after 2000. Gender gap has already existed in the socialist time, but social and economical changes after 1989 highlighted some more problems. The aim of this article is

- to point out to the fact that university-graduated women find an adequate job (to their education) more difficult despite of declared equality of opportunities,
- to focus to the inequality of remuneration in the selected sectors of NACE linked to the higher (university) education
- to present the selected problems in Slovakia on the level of regions (slov. kraje).

## **2. Data**

We have analyzed data from the Statistical Office of Slovak Republic, using selected indicators from parts of database DATAcube:

- Demography and social statistic (Labour, Labour cost and School system and education)
- Multi-domain statistics (Science, technology and innovation).

We have observed some problems of gender gap in education and career in the period 2000-2015, but some data were not available and therefore we have used some indicators in the shorter period. Some problems have been observed also in space on the level of regions of Slovakia, always in the period 2010-2015.

### 3. Gender gap in education

In the last time, after 2000, more women than men have been studying at universities in Slovakia. After 1989, in the time of gradual transition from centrally planned economy to the market economy, labour market has developed also in Slovakia. Obligation to work has changed into a competition as the best use of education, knowledge and skills in the searching for an adequate and well appreciated job. The position of women on the labour market was and still is more difficult, because searching for a job is complicated by motherhood and their traditional position in the family and society. Competition on the labour market has been reflected in the higher interest of education. In 1991 only 178 708 men and 128 212 women reached university degree (it represented 5.82% of Slovak population and the share of women in this level of education was 41.77%). Till 2001 the share of university educated men and women increased: 228919 men and 194405 women earned university degree (7.87% of Slovak population; share of women 45.92%). Since 2001 many employers have increased education requirements. At the same time several universities have been formed and it reflected also in level of education of Slovak population. In 2011 349 150 men and even 398 818 women reached university degree (13.86% of Slovak population; share of women on this level of education was 53.32%), (Census 1991, 2001, 2011).

Fig. 1 shows the number of university students and university graduates in Slovakia in the period 2008-2015. It is clear that the share of women is higher in whole period and this fact holds to the students and also to the graduates. In the last time, we can observe a decrease of number of students and the graduates; however, this fact is not caused by lower interest in education but by changed demographic situation in Slovakia.

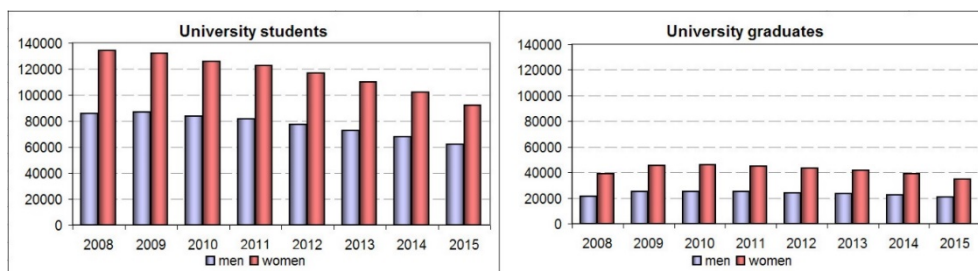


Fig. 1: Students and university graduates in Slovakia in the period 2008-2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

This higher share of women is notable in almost whole Slovakia in the period 2010-2015. We have used the same scale on every map in Fig. 2 and than we can compare the share of men and women in the frame of students and also in the frame of graduates. Only region Košice (KE) has recorded lower share of women in the period 2010-2015 (49.97%). There are Technical University (with faculties as Faculty of mining, Faculty of Metallurgy, Faculty of Mechanical Engineering, Faculty of Aeronautics, etc.) and Theological Faculty in Košice, with predominance of men. The highest share of women between the students and the graduates has been in region Prešov (PO). Average proportion of women-students in region Prešov was 70.23% in the observed period and 70.80% in 2015.

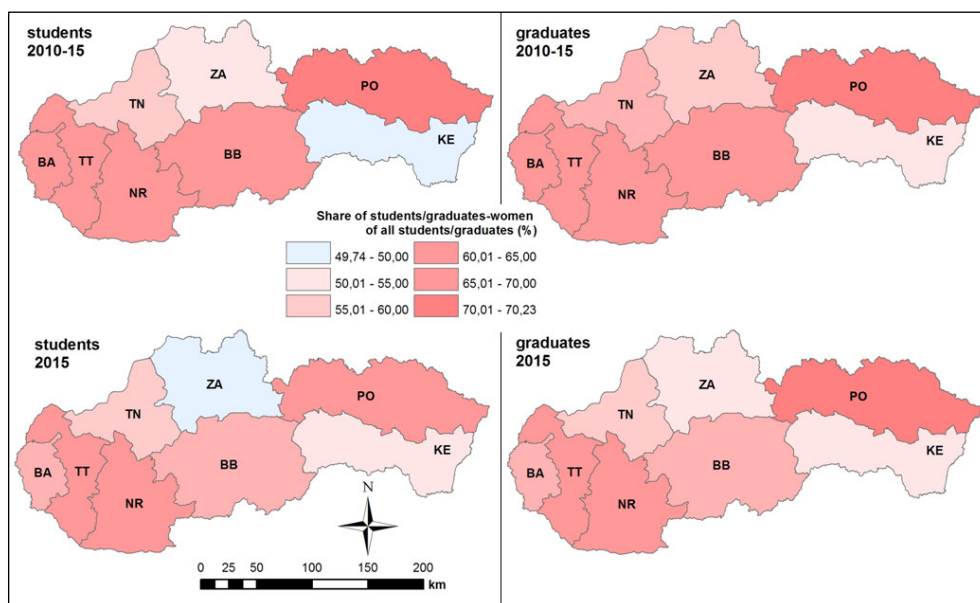


Fig. 2: The share of university students and the share of university graduates in the regions of Slovakia in the period 2010-2015 and in 2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

We can notice the similar share of women-graduates (average share 70.80% and share in 2015 74.34%). The high number of women among students and graduates in this region is due to existence University of Prešov with many faculties (Faculty of Humanities and Natural Sciences, Faculty of Education, Faculty of Health Care) which are more attractive for women. Region Prešov belongs to the poorer regions of Slovakia and therefore it is understandable that women try to get higher education to succeed on the labour market. Several technological faculties are localized in the regions of Žilina (ZA) and Trenčín (TN) and therefore the predominance of women in these regions is not so strong. Regions as Bratislava (BA), Banská Bystrica (BB), Trnava (TT) a Nitra (NR) have got traditionally a broad offer of possibilities for studying for men and women.

The same indicator is expressed by other method (Fig. 3). We have used gender gap, which we can calculate as divide of difference of numbers of men and women and number of men:

$$GG = (W_m - W_f) / W_m$$

where GG is gender gap  $W_m$  is selected characteristic of men (number, average wage,..) and  $W_f$  is selected characteristic of women.

We have used the same scale again on each map in Fig. 3. The most expressive prevalence of women is evident among graduates in region Prešov (PO). Generally we can say that numbers of graduates-women have been higher in the whole observed period and in whole Slovakia. This fact submits an idea that women are more unremitting in acquiring education in comparison to men. Nowadays, demographic situation in Slovakia is changing and number of students is decreasing.

Many faculties reduce requirements for admission procedure and therefore it is easier to change the study.

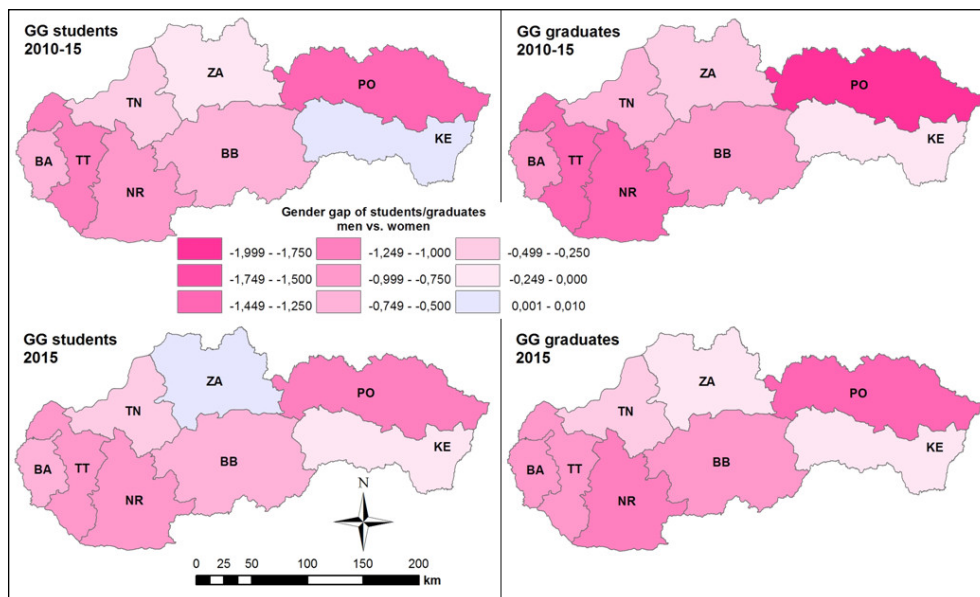


Fig. 3: Gender gap of university students and gender gap of university graduates in the regions of Slovakia in the period 2010-2015 and in 2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

Women's higher (university) education increased significantly in comparison to the past, because nowadays women have got better terms for studying in whole country. Despite of current decreased number of students, the share of women persists higher more than a half. Although we noticed disparities among regions of Slovakia, these differences are often caused by diverse offer of study fields at the universities.

#### 4. Gender gap in economic activity

In the second part of this article we want to compare women's education and women's economic activity. The number of economically active population was increasing in the nineties, what was caused by population growth, population ageing (baby boomers from the seventies and eighties had moved to the productive age), but also by changed social situation in Slovakia. In comparison with socialist period, families have gradually become smaller with fewer children. Many couples often preferred only one or two children, perhaps even they based a family in the later age and this reflected into the higher share of economically active population.

In 1991 economically active population included 1 389 829 men and 1 228 106 women, what corresponded to 49.64% of whole population and women made up 46.91% of economically population. Till 2001 number of economically active persons increased: 1 428 518 men and 1 319 532 women accounted 51.08% of the population and share of women was 48.02% of all economically active people. Social and economic situation has improved after 2001, what reflected in the growing birth rate. Population depression of nineties caused that many kindergarten were closed in this

time and many retired women have solved their situation after 2001 in their families with small children like an au-pair. With growing competition on the labour market mainly older women increasingly difficult search a job and therefore stay at home like a housewife. We can see this fact in the numbers of economically active men and women in 2011: 1 422 590 men and 1 207 462 women, when women correspond to 45.91% of economically active population (Census 1991, 2001, 2011).

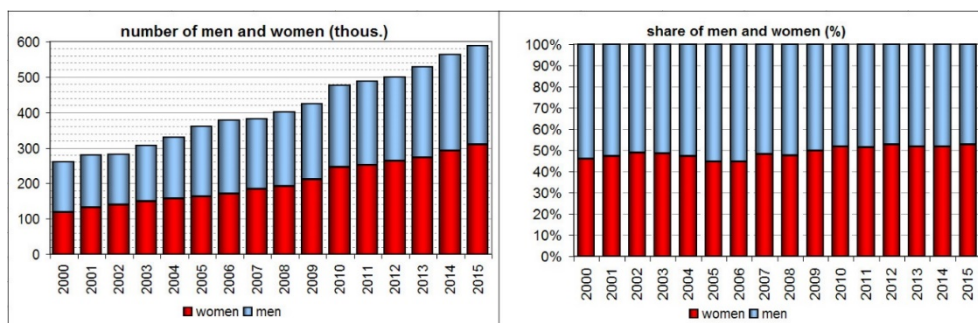


Fig. 4: Economically active men and women with the higher (university) education in Slovakia in 2000-2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

Fig. 4 zooms in more detailed view to economic activity of population with university education since 2000. It is positive that the share of higher educated people is growing. The share of women is growing gently since 2006 and we can observe the similar situation on figure 5, which shows working men and women with the university degree. The number and also the share of women are increasing similarly with figure 4 and it means that many women try to use their education in praxis.

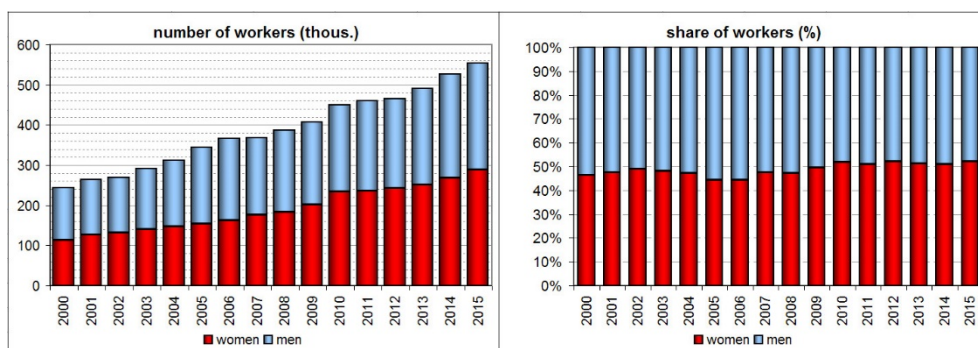


Fig. 5: Working men and women with higher (university) education in Slovakia in the period 2000-2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

However, we can see more expressive growth of number of economically active women with higher education in comparison to number of economically active women without university degree (figure 6). It is similar as the share of working women with and without university degree. The women's effort to be better and more desired on the labour market reflects exactly here. Number of economically active women with university education was 118.6 thousand (only 10.0% of economically active women)

in 2000 and 309.6 thousand (25.1%) in 2015. The share of working women with university degree didn't exceed 11.72% of all working women in 2000 (113 thousand), but in 2015, it took the value of 26.83% (288 thousand). The count of working women with university education more than doubled.

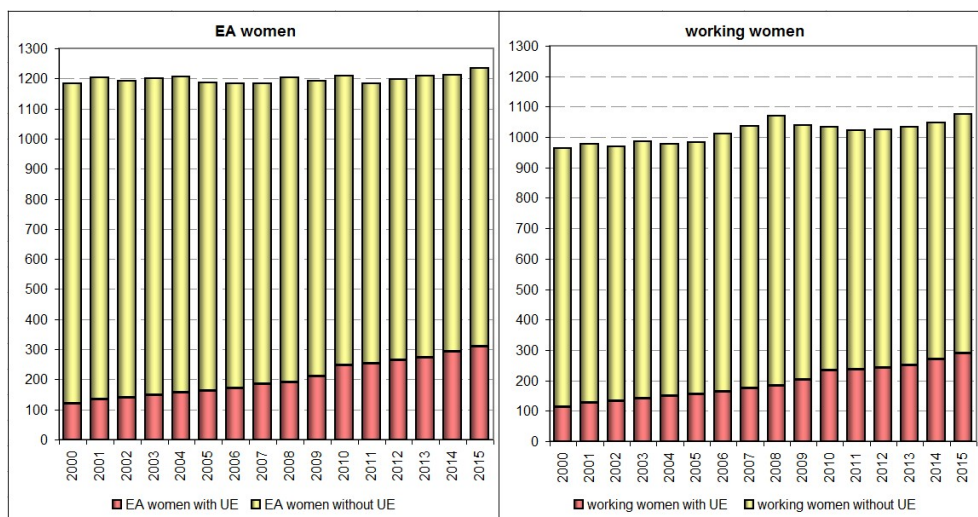


Fig. 6: The share of women with higher (university) education (UE) and without higher education among economically active and working women in Slovakia in 2000-2015 (thous.).

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

Fig. 6 shows some regional differences among regions in Slovakia in the period 2010-2015. In the observed period (2010-2015) the best situation for women was in region Banská Bystrica (BB). The share of women with university degree was higher than 20% among economically active population and also among all workers with higher education. Women have got the lowest representation in regions Bratislava (BA) and Trnava (TT). This fact is caused by concentration of head offices of many companies, where men dominate on the managements positions (Bratislava region) or by higher share of automotive industry in economy of region (Trnava).

The spatial structure of share of women with and without university degree is gently different. The highest share of economically active women and also working women with university degree is in Bratislava region (Fig. 8). It is understandable, because the region of capital city provides the highest amount of work possibilities linked to the higher education. If we compare average values of whole observed period to the values in 2015, we can say that in the last time women's effort to use their education in praxis became stronger. This situation is joined to the demanding labour market, but also to changed demographic situation in Slovakia and to changed scale of values. In the socialist time young couples got married quickly after obtaining their degree and soon began the family. The social security was higher, e.g. the flats were allocated to the young couples and everyone had the right to work. Changed economic and social situation in the transition time brought changed succession of life values. Young people after obtaining university degree look for some adequate job, than they try to buy some housing and to build their career. Family and children are coming later. Women study much more in comparison to the socialist time and therefore the share

of women with university degree has been growing in all regions of Slovakia in the last time.

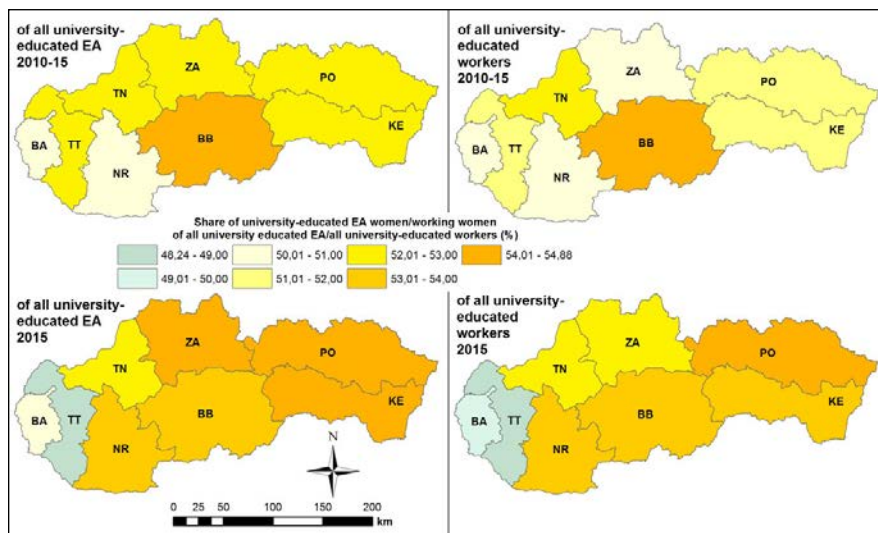


Fig. 7: The share of economically active (EA) women with university education of all economically active population with university education and the share of working women with university education of all workers with university education in the regions of Slovakia in the period 2010-2015 and in 2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

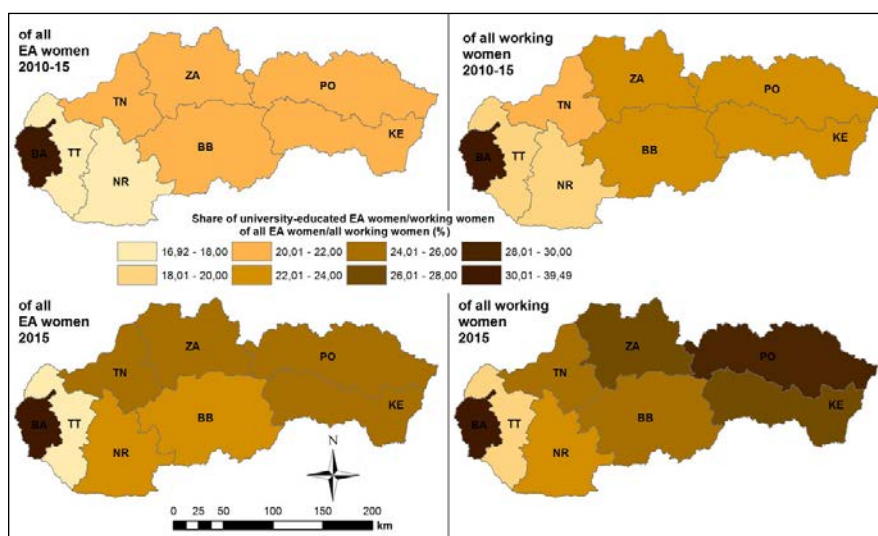


Fig. 8: The share of economically active women with university education of all economically active women and the share of working women with university education of all working women in the regions of Slovakia in the period 2010-2015 and in 2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.



Many employers require higher education not only in Bratislava region, but in other parts of Slovakia, too. This showed in 2015, what we can see on Fig. 8. The share of working women with university degree of all working women was higher than 20% in almost whole area of Slovakia with exception of region Trnava (TT) – traditionally strong automotive region. The highest proportion of working women with higher education with the exception of the Bratislava region (BA) was in region Prešov (PO). This region is poorer a therefore education is some benefit in getting the job. Prešov and Košice (KE) are two regions in the east of Slovakia together with the region of Bratislava, where the share of university educated working women exceeded a quarter of all working women.

### 5. Gender gap in career

Although education and economic activity of women grew significantly, gender gap still persists. It showed, if we compared two selected sectors of NACE – Professional, scientific and technical activities and Education. The majority of occupations in these sectors demand generally a university degree. To the Professional, scientific and technical activities, we assign e.g. Legal and accounting activities, Activities of head offices; management consultancy activities, Architectural and engineering activities; technical testing and analysis; Scientific research and development and others. Sector Education includes Pre-primary education, Primary education, Secondary education, higher education, Other education and Educational support activities (Eurostat/RAMON).

It is clear that the number of employees in Education is incomparably higher than the number in the Professional, scientific and technical activities (Fig. 9). Different levels and kinds of schools are localized almost in each town and city and many villages in whole Slovakia, because it is necessary to educate the children and the youth in each region. However, this number has been decreasing since 2010. It is caused by changed demographic situation in Slovakia what mainly the schools in small villages have affected. The number of children has decreased; several schools have reduced the count of classes causing the firing of school workers. In extreme cases some schools were closed.

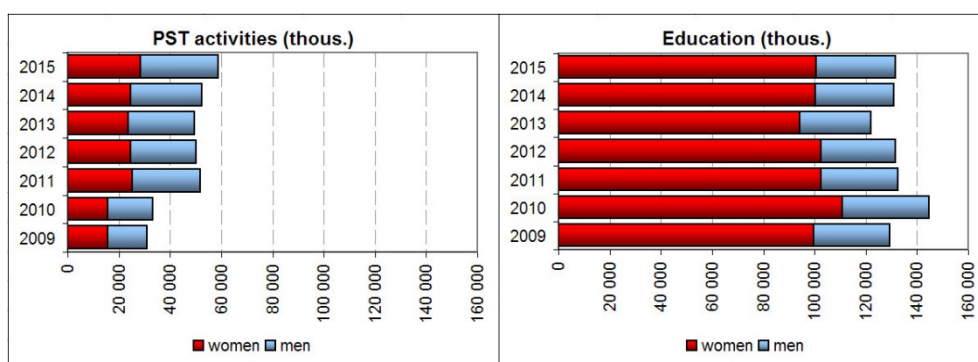


Fig. 9: Employees in the selected sectors NACE – Professional, scientific and technical activities (PST activities) and Education (thous.) in Slovakia in 2010-2015. Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

Contrary situation is in the Professional, scientific and technical activities where the number of employees has been growing since 2009. It is related to the development of Science and research generally, to the localization of many head offices of foreign companies, etc. However, generally it is caused by development of automotive industry, which doesn't include only production, but also research and development.

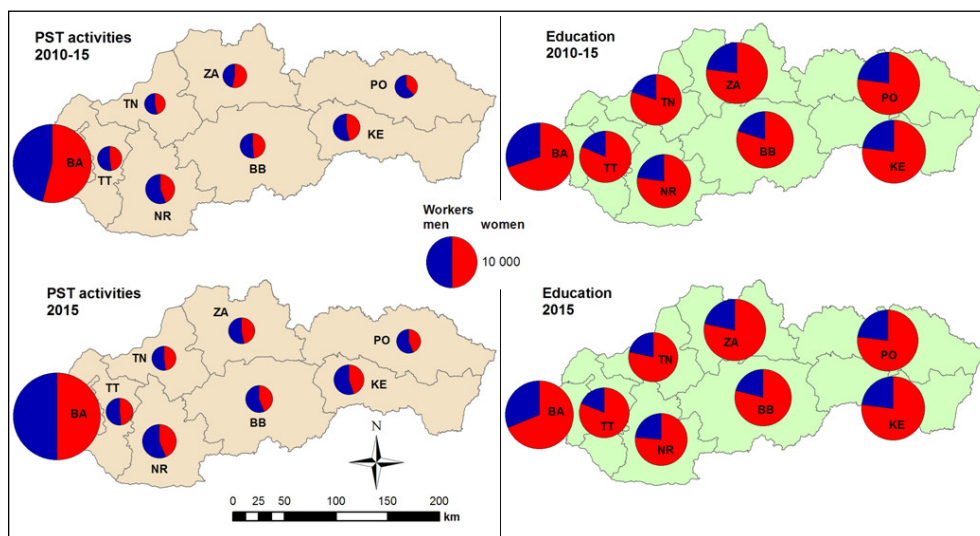


Fig. 10: The employees in the selected sectors of NACE – Professional, scientific and technical activities (PST activities) and Education – the share of men and women in the region of Slovakia in the period 2010-2015 and in 2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

The share of women in both sectors is very different. While in the case of Education women significantly predominate – they have made up more than three quarters of employees in the observed period (78.86%) – in the case of Professional, scientific and technical activities their share has been lower than one half of all employees (47.78%).

The differences have occurred also in the area of whole country (Fig. 10). The share of women in education employment in different regions of Slovakia is similar, more than 75%. Only Bratislava (BA) region is an exception, because there are many schools of higher level, where the share of men is higher (colleges, universities). The count of employees (men and women together) is also similar and comparable. Bratislava outnumbers slightly other regions thanks to mentioned higher concentration of many schools.

On the contrary, the Professional, scientific and technical activities have less homogeneous distribution in the area. Almost 60% of all employees of this sector work in Bratislava region, where the most of scientific institutes, legal offices, head offices and other institutions is concentrated. We can see the differences also in the share of men and women. Men have dominance in the most of Slovak regions in whole observed period; in case of Bratislava is the share of men and women more equal, perhaps even the share of women is higher. We can point out again that there are e.g. many institutes of humanities in Bratislava which are more accessible for women.

In other regions there are more technological institutes which are preferred by men. (E.g. Trnava (TT) – research of automotive industry, Research institutes of nuclear energy; Žilina (ZA) – institutes of University of Žilina – university with transport fields of study; Trenčín (TN) – electrical research institutes, engineering research institutes, Košice (KE) – metallurgical research institutes and others).

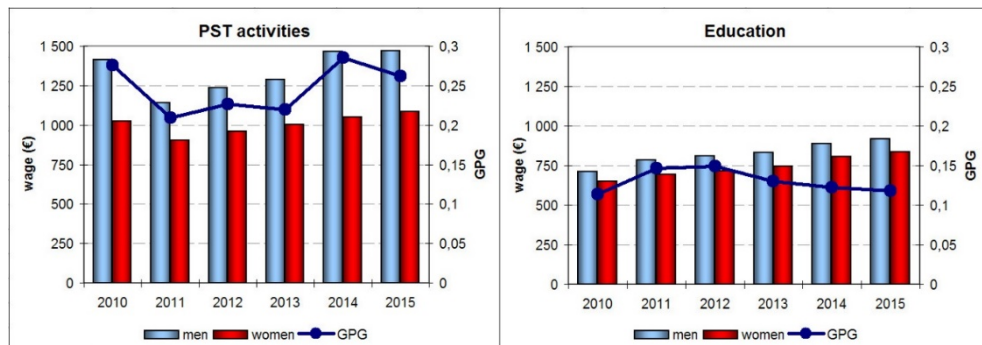


Fig. 11: The average nominal wages and gender pay gap (GPG) in the selected sectors of NACE –Professional, scientific and technical activities (PST activities) and Education in Slovakia in the period 2010-2015.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

However, it is more serious that women are worse appreciated in their work. Figure 11 shows the average nominal wages and gender pay gap in both of these sectors. The average nominal wage in the Professional, scientific and technical activities in 2010 was 1 230 €. Male average nominal wage had reached the value of 1 412 € and female average nominal wage only 1 023 € (DATAcube. 2016). The difference between male and female wages was 389 € and gender pay gap 0,275 (27.5%). Male average nominal wage increased till 2015 to the value 1 471 and female average nominal wage to 1 086 €. Difference cut back gently and gender pay gap took value 0.262 (26.2%). Average difference between male and female wages in the period 2010-2015 was 332 € and average gender pay gap 0,246 (24.0%). It means that women have been worse appreciated in work, because have had worse job positions in this sector, perhaps they have not so often taken a position in the management or head offices.

The situation in Education is more equal, but there is a problem that wages are too low. We have to say it is very sad that people in Slovakia caring for children and young people are paid so badly. The average nominal wage in Education in 2010 was 650 €, whereby men earned on the average 712 € and women only 631 € (DATAcube. 2016). The difference between male and female wages was 81 € and gender pay gap was 0.114 (11.4%). By 2015 male average nominal wage increased to the value of 920 € and female wage to the value of 811 €. The difference increased and took value 109 €, gender pay gap 0.118 (11.8%). Average difference in the period 2010-2015 was 107 € and average gender pay gap 0.130 (13.0%) These values are in comparison to the other sectors low, but it is bewildering that gender pay gap at all exists in sector with significant dominance of women.

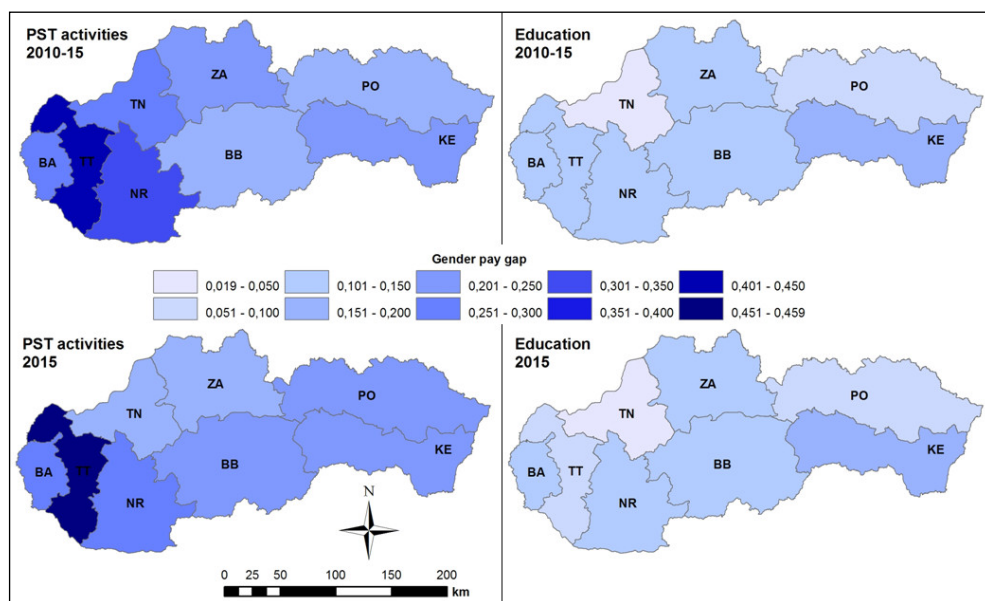


Fig. 12: Gender pay gap in the selected sectors of NACE – Professional, scientific and technical activities (PST activities) and Education in the regions of Slovakia in the period 2010-2015 and in 2015.  
Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

Significant differences of gender pay gap are also among the regions of Slovakia. The highest gender pay gap in whole observed period has been noticed in region Trnava (TT) – more than 0.400 (40.0%) and in 2015 even 0.459 (45.9%). In the contrary, eastern part of Slovakia has had the lower values 0.152-0.238 (15.2-23.8%). In sector Education the differences are significantly lower. Generally, gender pay gap of all Slovak regions has been lower than 0.19 (19%), in region Trenčín (TN) even lower than 0.033 (3.3%). In this region women have been often on the high position in many schools and this fact has influenced positively the values of gender pay gap.

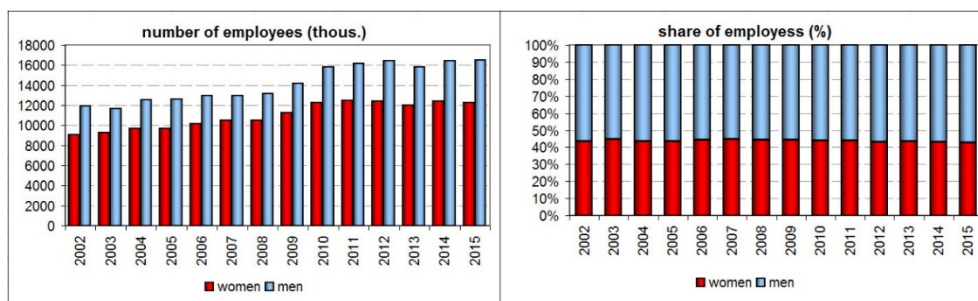


Fig. 13: The Employees in the Research and development in Slovakia in the period 2002-2015.  
Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

At the end of our analysis, we want to try to find out the differences in the Research and development. We have used the data from database DATAcube. – Multi-domain

statistics (Science, technology and innovation), where employees of the Research and development are defined: "R&D personnel include persons employed directly in the field of research and development as well as persons providing direct services to research and development. Pedagogical staffs at universities and colleges who within the framework of their work to a certain extent participate in research and development are also included".

Unfortunately, the data of wages were not available; therefore we have focused on comparison of the count of male and female employees. The number of men exceeded the number of women (figure 13), whereby the share of women was moving at intervals 42.6-44.7%. However, we can see significant differences among regions of Slovakia: the smallest proportion of women has worked in region Trenčín (TN) – less than 26% (figure 14). The research in this region has been highly technical (electrotechnical, building, defence), in which women have participated less. The lower share of women is represented also in regions Trnava (TT) and Žilina (ZA), what are the regions with developed automotive industry. The most equal share of women was in region Bratislava (BA) – almost 46% and Nitra (NR) – more than 48.5%. There are many institutes of natural science research, medicines research and humanities in these regions which are more attractive for women and therefore they have got a higher proportion here.

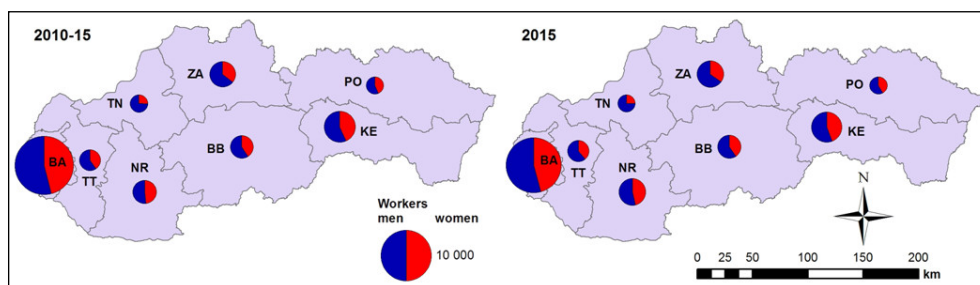


Fig. 14: The employees in the Research and development – the share of men and women in the region of Slovakia in the period 2010-2015 and in 2015.  
Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

The economy structure has partly an influence on the inequality of representation of men and women in the Research and Development. Some fields are more attractive for women or women more exceed in them. Some fields are more male domain. Women are under-represented in science, technology, engineering and mathematics majors and careers in most industrialized countries around the world (Blickenstaff 2005, 369). However, gender gap often also depends on work position and occupation.

We compared positions of men and women by occupation in Research and development in the time period 2004-2014 a we found out that women more often work on the lower position than men – such as technicians and equivalent personnel or supporting staff (figure 15). In the period 2004-2014 almost 58% of researchers were men. Men exceeded the women also on the positions of technicians and equivalent personnel (52%). Women have had more a higher share only on the last position – supporting staff. Work position is all right if we take into account the relationship between education and occupation. However, the question is – why do so few women work in the Research and development on the researcher position? Why

do so often women work on the technical or supporting staff positions? It is in the conflict with the fact that women education has raised significantly till the present time.

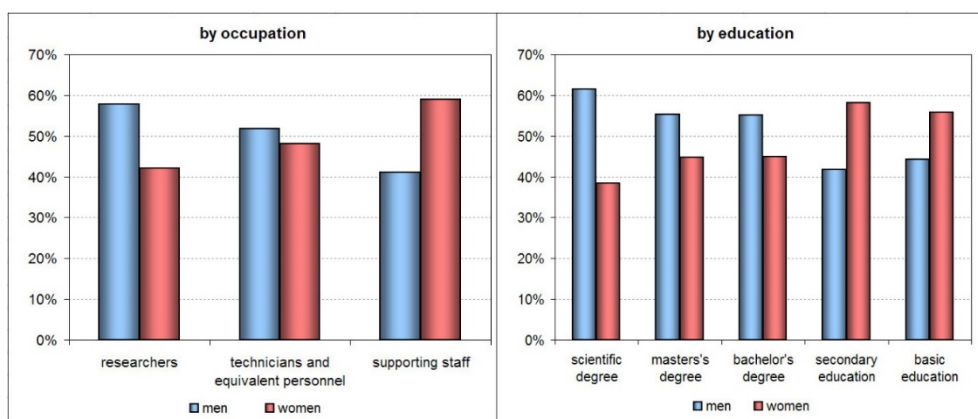


Fig. 15: The average share of male and female employees in the Research and development by occupation and education in Slovakia in 2004-2014.

Source: data from Statistical Office of the Slovak Republic, DATAcube., processed by authors.

## 6. Conclusion

Human capital theory argues that education is an investment decision (DiPrete, Buchmann 2006, 2). In Slovakia women's education has increased significantly in recent years, but women with a higher education (with Bachelor, Master or PhD. degree) haven't got the same amount of opportunities despite of declared equality to find the adequate and well appreciated job in comparison to men. Nowadays, women have achieved dominance in studying at universities and more women are acquiring university degree. Women awake the importance of education on the labour market and therefore they are often more persistent in the effort to accomplish a university education.

However, if we compare some selected sectors of economy linked to the higher education we can see the gap between education and occupation. Sector NACE – Education is highly feminized; more than 75% of all employees in all regions in Slovakia are women. Unfortunately this sector is deeply undervalued from wages point of view. Despite of dominance of women gender pay gap also exists here, it is not high (11.8% in 2015) but persists.

Other sector NACE – Professional, scientific and technical activities is characterized by gentle predominance of men (about 52%). Gender pay gap is much higher – 26.2% in 2015. This inequality in remuneration is caused mainly by fact that women occupy lower position with lower average wage and by fact that in some regions of Slovakia (Trnava, Trenčín) many occupations in this sector are of a technical nature what is the male domain.

Even greater disproportion in the share between male and female employees is in the Research and development. Only 42% of researchers in Slovakia are women, men dominate in this position. Women usually work as a technicians personnel or

supporting staff. This is an area where leaky pipeline effect applies. 'Leaky pipeline' – this term is used in world literature with gender issues and means that even though nowadays women have more opportunities to study than in the past, they still have little chance to use their higher education in the research and science. On the way up to higher positions and higher scientific degree the number of women is declining such as falling out of the leaky pipeline (Danielová, Lauko 2015). This dropping has two important reasons. First one is an objective reason – persisted gender stereotypes. The role of women is to care of the household, children, ill or elderly family members. Women often offer their career and support the career of their spouse and create a suitable background for them. According to Kirchmeyer (2006), the scientific life is very demanding on the time and it is very difficult for women with family and children and without support of their partners to advance on higher rank. Very successful women are often single, divorced, and childless or they have a spouse that largely takes care for family and household.

The second reason is more subjective. Academic career trajectories are never a one-person enterprise (Leemann, Dubach, Boes 2010, 3). Each researcher needs some mentors and gradual recognition and integration in scientific world to his success. Science, research and development were in the past the men's domain and men still dominate in the competitive structure of the academic field. Women are less likely able to count on an academically established person who provides support and promotes their careers (Zimmer et al 2007 in Leemann, Dubach, Boes 2010,7) and therefore it is more difficult for them to access in academic networks. Together with the first reason we have the answer why do women fall out from the 'Science pipeline' and why do they more often work on the lower work position.

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## References

- Blickenstaff, J.C. 2005: Women and science careers: leaky pipeline or gender filter? *Gender and Education*, 17-4, pp. 369-386.
- Cukrowska-Torzewska, E., Lovasz, A. 2016: Are children driving the gender wage gap? *Economics of Transition*, 24-2, pp. 259-297.
- Danielová, K., Lauko, V. 2015: Gender gap: Educated Women and Men and Differences in Career Paths After Degree Attainment.
- DiPrete, T.A., Buchmann, C. 2006: Gender-specific trends in the value of education and the emerging gender gap in college completion. *Demography* 43-1, pp. 1-24, ISSN 0070-3370.
- Jackson, L.W. et al 2009: Educate the Women and You Change the World: Investing in the Education of Women is the Best in a Country's Growth and Development. *Forum on Public Policy*, 2009-2, pp. 1-28.
- Kirchmeyer, C. 2006: The different effects of family on objective career success across gender: A test of alternative explanations. *Journal of Vocational Behavior*, 68, pp. 323-346.
- Leemann, R.J., Dubach, P., Boes, S. 2010: The Leaky Pipeline in the Swiss University System. Identifying General Barriers in Postgraduate Education and Networks Using Longitudinal Data. *Swiss Journal of Sociology*, 36-2, pp. 299-323.

- Morgan, S.L., Gelbgiser, D., Weeden, K.A. 2013: Feeding the pipeline: Gender, occupational plans, and college major selection. *Social Science Research*, 42, pp. 989-1005.
- Schmid, T., Brandt, M. Haberkern, K. 2012: Gender support to older parents: do welfare states matter? *European Journal of Ageing*, 9-1, pp. 39-50.
- Valcour, M. Ladge, J.J. 2008: Family and career path characteristics as predictors of women's objective and subjective career success: Integrating traditional and protean career explanations. *Journal of Vocational Behavior*, 73, pp. 300-309
- Waldfoegel, J. 1998: Understanding the "Family Gap" in Pay for Women with Children. *Journal of Economic Perspectives*, 12-1, pp. 137-156.
- Census 1991. Statistical Office of Slovak Republic.
- Census 2001. Statistical Office of Slovak Republic.
- Census 2011. Statistical Office of Slovak Republic.
- DATAcube. Statistical Office of Slovak Republic.
- Eurostat, RAMON – Reference And Management of Nomenclature. Available: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST\\_NOM\\_DTL&StrNom=NACE\\_REV2](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2)



## **GENDER GAP IN SLOVAKIA: SELECTED PROBLEMS OF EDUCATION AND CAREER**

### ***Summary***

Women's education has increased in last two decades, but we can still observe difficult situation of high-educated women (with Bachelor, Master or PhD. Degree) on the labour market.

Our research was based on the freely accessible data of Statistical Office of the Slovak Republic – database DATAcube. and Census 1991, 2001 and 2011. The aim of this article is to point out to the fact that university-graduated women are finding an adequate job (to their education) more difficult despite of declared equality of opportunities; to focus on the inequality of remuneration in the selected sectors of NACE linked to the higher (university) education and to present the selected problems in Slovakia on the level of regions (kraje). We present the selected problems on the level of whole Slovakia in the time period 2000-2015 (some data were not available and therefore we use some indicators in the shorter period), on the level of regions in the period 2010-2015.

Women make up the majority of university students and university graduates; the lower share of women was in 2010-2015 in regions Trenčín, Trnava, Košice where the universities and colleges with technical fields of study are localized. The highest proportion of women was in region Prešov. Generally women with university degree are trying to place better on the labour market. The higher education of women also reflects in their higher share among economically active and working population. The share of men and women is comparable nowadays.

However, other situation is in the selected sectors of NACE linked to the higher education. We focused on Professional, scientific and technical activities and Education. Sector Education is highly feminized in each region of Slovakia, the share of women is higher than three quarters but average wages are very low. Despite of these facts there is also gender pay gap (11.8% in 2015). Men dominate in the sector Professional, scientific and technical activities – with the number but also with their average wages. Gender pay gap is much higher here (26.2% in 2015). Strong dominance of men is in Research and Development. However women's education is increasing. It is very difficult to find position in the academic world because of persistent gender stereotypes and certain closeness this 'men's world'.

