Polish science and the higher education system - gender still matters?

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Abstract. The article presents stereotypes and fixed roles assigned to women who have compiled to contemporary trends and changing conditions of their presence in social and economic life. The authors carry out a diagnosis of the current situation in Poland, focusing mainly on obstacles and opportunities that have emerged against women who choose a scientific career with particular reference to its academic dimension. One of the main purposes of this paper is to propose initiatives and programs conducted by various institutions in various sectors.

Keywords: Gender; higher education; science; women; Poland.

1 Introduction

Polish females in science shall face a triple glass ceiling, created by society, institutions and their partners, while the promoted model presenting a woman-mother and a return to a traditional role woman plays at home would cause a regress as far as the presence of women in Polish science is concerned. This is how pessimistically some women researchers and certain male researchers of the problem perceive the situation that women scientists experience. What remains true, is the fact that the majority of modern women in Poland still create their identity around the axis including family related obligations, and for the most part – motherhood. Nevertheless, it is possible to observe breaking of a traditional manner of perceiving the social role played by woman. It covers individual business activity and, in particular, higher education. Nowadays, there is a clearly visible tendency relating a high percentage of business women and women scientists, combined with a positive stereotype as well as faith in gaining success within this field, creating the new personal model of a woman, [14].

However, not all people recognize the high degree of feminisation in the education system as a positive aspect. Although the percentage of women among research and didactic workers in Polish higher education institutions is close to the average level in the

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European Union, and even higher, yet this phenomenon cannot be easily accepted as a proof of increasingly equal treatment between women and men. More probably, this stands as a result of creating a specific space, which appears in colleges, where some academic employees, especially men, move to the economic branches that create more beneficial conditions associated with employment and remuneration, [28]. This tendency is quite specific for Eastern and Central Europe, including Poland, and it has also been perceived by the European Commission, which clearly warns that feminisation in the field of science should not be seen as a reason for satisfaction, as it is only an obvious confirmation that the science sector is evidently underfunded. The rule is that more women are employed in the research and development sector in countries where science is at a lower level (European Commission, 2003). The biggest difference regarding proportions in hiring women and men (gender gap) is noted in Japan (Hayes), where women make up only 12.7 percent of scientists [15].

It is also important to bear in mind that despite a substantial participation of women in the educational system in Poland, quite disturbing phenomena can be observed: first of all, women constitute only a fraction of bodies governing the overall education system and institutions operating within the scope of the system; second of all – the majority of women leave the academic system after obtaining PhD titles, and this is related with the fact that a career in science is parallel to the development of family life [33].

Agnieszka Janiak-Jasińska indicates that the academic work model created by men, and assumed by women, in a historically short time, imposes certain behaviours when a female researcher has to wear an uniform made for a male scientist, and the rejection of such an approach leads to their marginalization, [22]. We attempt to declare that a peculiar frustration declared by Polish women scientists results from the fact that they are moving forward while the surrounding world remains unchanged.

The issues mentioned above clearly shows that the methodology used to investigate gender questions must involve assertive question shifting, the redefining of issues, sharp attention to the power of dominant values, and vigilant monitoring of how questions are asked and how research is used. There is a need for looking beyond their domain in order to combine educational data and approaches with larger, gender-focused data sets. Creation of a richer picture of the gender problem in the higher education sector in Poland, demands moving beyond the abstract figures and it is clear that qualitative and quantitative research methods have been combined. The authors, during their analysis employed: literature reviews, programme objectives, programme evaluations, and reports on best practices.

1.1 Women in Polish science in the light of historic and statistical data

In Poland women have been allowed to university studies almost 120 years ago. The year 1894 is perceived as the beginning of the change, as the first women obtained individual permission to participate in lectures from the Jagiellonian University Senate. The academic year 1902/1903 was the year when the first woman in the history of the Jagiellonian University sat a doctoral examination. Polish women obtained the right to study at foreign universities much earlier than the entitlement to study at national universities, that is why women desiring to study frequently moved abroad. It is very difficult to determine in general how many Polish women studied abroad during the period mentioned, since during the partitions of Poland they were registered in these lands as citizens of Austria, Russia and Prussia , [13]. After a trial period lasting for three years, when there were already about a dozen female students studying in Cracow, in 1897 a group of more than 100 women entered lecture rooms at the Jagiellonian University.

The number of female students increased systematically. While in 1901 there were 174 female students, in 1912 – 510, and in 1913 this figure exceeded 2000. At that time these

women constituted nearly 1/3 of the whole students' collective. Altogether between 1894 and 1939 more than 12 thousand female students frequented lecture rooms of the oldest Polish academic institution. The first generation of female students proved their capabilities to study with good examination results. These women were characterised by overwhelming ambition and eagerness to gain knowledge.

The road towards research work was not easy at all. Even though the majority of professors gradually accepted the presence of female students in lecture rooms, yet allowing them to enter a didactic team faced substantial resistance. The first female assistant did not appear at Cracow's university until 1904. Lectureship was yet a much more difficult step to take for women. Following a request issued by the Austrian ministry of education in the year 1904, all departments at the Jagiellonian University declared their opinions regarding this issue. Bodies at two faculties, namely the faculty of theology and law, strongly opposed female habilitation; representatives of the medical faculty also stated their negative opinion on this subject, as they believed that habilitations of this kind are fairly premature. The statement declared by the Faculty of Philosophy at the Jagiellonian University differed noticeably from the above; nevertheless, this was not enough for the Senate of the Jagiellonian University to change its decision, as it was in opposition to allowing women to undertake lectureships. The Austrian authorities were much more liberal in this aspect, as they acknowledged the ability of lectureship for particularly skilled individuals. Because of the attitude presented by the university and the Ministry, together with not too abundant female collectives devoted to scientific work, the first female habilitation at the Jagiellonian University took place in the year 1919, [25].

Even though during the last decades we have observed a noteworthy growth in the number of women among all students, what is more, in 1980 in many countries, including Poland, the number of female students was higher than male ones and this tendency was maintained for several subsequent years, academic career does not seem to be a typical phenomenon in this particular group. Time has passed and there are still not too many women among academic workers. This tendency is characteristic not only for Poland, but it can be observed in the whole European Union.

Despite the fact that in the 90s and even later, proportions between men and women possessing an academic title of habilitated doctor and the title of professor faced crucial changes, the percentage of women who obtained such degrees after the year 2000 did not reflect the proportion of female students among all undergraduates. The higher academic degree or title we take into account, the bigger differences in the number of promoted women and men can be observed in particular scientific domains.

According to data published by the European Commission in 2007, women constituted 37 percent of scientists in Poland, [7]. This proportion is slightly higher than the average in the European Union, where it equals 33%, [7]. Comparative data covering Poland and 27 states of the European Union for the year 2009, indicating the percentage relation between people employed in science and the overall employed population, reveal that in Poland women hired in science related professions make up 42% of all employed women, whereas among men this value reaches only 25%. What concerns people holding doctoral degrees, women constitute about half of them (in the European Union this proportion reaches 45%), but the habilitation doctoral degree was granted to 26% and the level of professorship is available for 17% of women, [19].

In Poland women holding the position of a rector are an exception: according to data for the year 2006 there were 3 female rectors and in 2009 – 4. As far as other positions in governing bodies at universities are concerned, the vast majority were occupied by men: in 2006 15.3% of women were employed as pro-rectors, and in 2009 – 17.1%. In 2006 the position of a dean was entrusted to 9.8% of women, whilst in 2009 there were 13.8% female deans. The same tendencies could be observed in relation to the position of a vice

dean: in the year 2006 30.1% women held this position, and the situation was similar in the year 2009, with a slight decline to 30%, [30].

This is also the case of decisive bodies in Polish science, as female representation in this group is close to 7%. In the Polish Accreditation Committee there are 31 women among all 86 members of the Committee. The Presidium of the Central Commission for Academic Degrees and Titles has no female members at all, and in the Central Council for Higher Education managerial functions are occupied solely by men, with only one woman included among all 9 members of the presidium governing this body, and the Council itself has 33 members, including 7 women (Central Statistical Office, 2003). What is also quite characteristic is the fact that the institution established to finance and supervise scientific research, namely the National Science Centre, is managed by a man, although it is a woman who is the deputy director of this institution. The composition of the Council in this institution is not far from the characterized scheme: among 24 members we can enumerate only 3 women. Slightly more levelled proportions can be seen in the Unit of Discipline Coordinators, where we have 4 women in each of the two five-member teams, and even the Unit of Exact and Technical Sciences among 7 members there are 4 women. However, in the 23-member presidium of the Polish Academy of Sciences there is only one appointed female member (statistics for 2012).

Summing up this part of the article, it is worth referring to the latest report of the European Union "She Figures" published on 5 April 2013, which distinctively indicate that even though the percentage of female scientists in Europe is constantly increasing, yet the amount of women in academic and research positions still remains too small , [10].

1.2 Difficulties and obstacles

Obstacles, which we can observe when analysing professional development experience by Polish women scientists, may be generally divided into two groups: extra-institutional and institutional. Writing about the initial type of impediments, using the systematisation elaborated by Bogusława Budrowska, [1], we can indicate the following: first degree barriers, and these are internal barriers, as well as second degree barriers, namely entanglement in traditional roles.

The first ones result mainly from individual beliefs, fears or limits that women can feel in relation with their participation in professional life. Here the lack of faith in one's own skills comes first, [33]. Unfortunately, this feature is quite common among women and it frequently causes peculiar withdrawal, next to diminishing their individual achievements. On the other hand, from an objective point of view, once women decide to act, a certain sort of scepticism helps them perform all their actions and they demonstrate a very high level of preparation and professionalism. The second kind of extra-institutional barrier lies in socially imposed traditional roles. A modern woman must play various diverse roles. She is supposed to be a lovely wife, wonderful mother, amazing cook, sensuous lover, perfect housewife, excellent employer, etc. Are these tasks that can be realized by an average woman? We are perfectly aware of the fact that people can realize themselves and be truly good in one or maybe two domains. Anything more than that soon proves that we are doing one thing at the cost of something else, [4].

In the introduction to this article we have indicated that the axis around which modern Polish women create their identity are still mainly associated with family related obligations, and especially motherhood. And maternity is the crucial reason related with the fact so many women leave science, [24]. A multitude of talented women, despite their professional preparation and passion for science, are not capable of dealing with this twofold pressure: on one hand the social pressure associated with being a good mother, on the other hand the environmental pressure related with considerable competition. When one

takes into consideration time pressure, which is extremely noticeable in an academic career, Polish solutions are characterized with a small degree of flexibility. This phenomenon related to the draining of talented female scientists, who limit or entirely suspend their professional development because of family obligations is known as a leaky pipeline.

Within this scope, the environment of Polish female scientists emphasizes the need for full flexibility when taking advantage of parental leaves, which could pose considerable influence on the efficiency connected with planning a household and the professional engagement of both parents. Maternity leave “releases” the female academic from didactic and administrative obligations performed for the benefit of the university, but it cannot result in negligence of academic development. While being on the maternity leave – in the Polish system a female scientist is deprived by her mother university the possibility of obtaining financial support (for example) for her participation in conferences, symposiums or publishing fees. There are no systemic solutions, which would not exclude young parents, mainly mothers (female scientists) from the possibility of obtaining financial support for academic development. Another problem lies in the restricted flexibility of grant programmes offered in Poland, with little possibility to change grant schedules, prolong them or suspend them for a certain period of time, [26].

The issues associated with female and male doctoral students who are parents is yet another quite complicated matter. Most of them have to balance their academic work with their occupation and possibly with taking care of their children. Regularity underlying the payment of provisions for male and female doctoral students evokes major reservations, making them almost impossible to plan household budgets. Whereas the obligation to conduct “gratuitous” classes, which is present in a multitude of Polish universities, simultaneously with no possibility to take advantage of child care opportunities (lack of kindergarten services), places young parents in a very difficult situation, [26].

Here to finish divagations on barriers resulting from social conditions, it is worth emphasizing that statistically a truly complete academic activation of women occurs around their fortieth year of life. Children are already older, and aspirations are not diminished at all. That is why we need to emphasize once more that it would be a good solution to prolong the time essential to conclude doctoral or habilitation proceedings. [26]. It is also equally important for women to urge children’s fathers to engage in childcare activities – today Polish law enables the use of paternal leave, although Polish men rather rarely, at least until now, take advantage of this opportunity. Female scientists may also negotiate their return to work after maternity leave with their employee: settle on working hours (both didactic and administrative work), and academic work, to some extent provide the possibility to work at home.

The second type of barriers Polish female scientists have to face is enumerated within the group of institutional impediments, which usually result from unfair regulations, discriminating attitudes. This is explicitly visible in statistics recalled in the previous part of this article. Discrepancies are also reflected in the level of remuneration. In the European Union, female scientists earned on average between 25% and 40% less than male scientists in the public sector in 2006 . Although the average pay gap is smaller in the United States, the disparity is particularly large in physics and astronomy, where women earn 40% less than men.

A woman has to be much better than a man in order to obtain and maintain an attractive professional position. A glass ceiling is the name given to seemingly invisible barriers that ambitious, educated women are forced to face. It is frequently extremely hard to capture this phenomenon. These barriers are not caused by formal reasons, by regulations or decrees. Indeed, their origins lie in cultural models of femininity and masculinity, as well as in the mentality of both men and women. Pervasive beliefs determining roles and attributes relating women and men, their rights, obligations and mutual relations seem so obvious that

they become almost invisible and transparent like glass. This usually leads to discrimination, for example by decreasing remunerations, disregarding when promoting or employing, [16]. This particular phenomenon is visible in the Polish academic system, where women can be promoted by means of gaining subsequent academic titles, yet they can rarely hold any administrative and management positions, which ensure true influence on the functioning, the institutional structure and strategy of the educational system [33].

Whilst it can be clearly seen that women are very often employed as vice directors, vice deans or deputies dealing with all kinds of matters, as this distinctly unburdens the management of the entity. According to Izabela Wagner: Women are almost invited to take such positions. They will do the hardest work, and the head of the unit will be able to show that there is no discrimination in his institution [33]. Renata Kaczyńska-Maciejowska [16] declares explicitly that men prefer to have women as their subordinates, as people performing all the wearisome and humdrum duties, hence the less attractive ones. When discussing such phenomena we also use the glass wall metaphor, as it describes situations, where women working in various fields, including the more masculinised ones, occupy peripheral positions: auxiliary, administrative, even if they have documented education and skills predestining them to occupy other positions. It is extremely difficult to be promoted to other, more substantial or managerial positions, hence their developmental possibilities and prestige are greatly limited.

What is also worth recalling is yet another worrying phenomenon, namely the so-called runaway ladder. It can be associated with a lack of solidarity among women. According to Anna Titkow, women who are determined and strong, tend to realize their carriers based on individual strategies [33]. Unlike men, who help, support and employ each other. There were certain situations when a woman principal or woman holding an important position refused to employ or promote a female scientist. These situations usually are associated with a feeling of threat or attitude, where a woman in a higher position makes the promotion difficult or at least does not make it easier, because of her individual experience – she gained her position on her own, with much effort: "Since I had to fight with difficulties, so should you". The fact that women do not promote other women is an extremely important issue, although authors believe that we are facing a noteworthy change concerning this matter. The younger the generation of female scientists is, the more of them achieves considerable success, wins competitions, gains grants and scholarships. At the same time they are aware of the importance related with an informal network of contacts. These contacts may pose a remarkable influence on women functioning in the Polish academic system.

1.3 Opportunities and chances

Indicating changes that can be currently seen, it is worth to mention both global and regional actions, as well as organizations, which act to the benefit of women in a widely perceived science sector. Obviously, the issue relating to underrepresentation of the fair sex is not attributed solely to countries such as Poland, existing in the new political and economic reality only for the last two decades, but it also applies to states with a relatively higher level of development. What seems interesting as well is the fact that the majority of undertaken initiatives concentrate on the field of exact sciences and the attempt to increase female representation in this area. Undoubtedly, these types of actions are worth noticing, although they do not deal with the problem related to the insignificant representation of female scientists in higher education sector directly.

Promoting increased female access to the academic sector is a contribution to changes in the stiff image of the feminine role. The European Commission initiated a campaign, aiming to increase number of girls with exact sciences and to encourage women to choose

academic careers (Science: it's a girl thing, 2013). The aim of the campaign, started in the year 2012 and planned to last for three years, is, first, to interest teenagers in undertaking studies in the field of pure sciences, technology, engineering and mathematics. At later stages the campaign shall be addressed to all students, encouraging them to choose a scientific carrier (Horizon 2020 Programme, 2013). In Poland there are programmes considered as equivalent of the European campaign, entitled "Girls to Technical universities" and "Girls to pure sciences", [5].

Furthermore, it is also worth mentioning the WISAT (Women in Global Science & Technology) initiative, which is to promote the belief that women "should have equal access to technology and should be able to fully participate in national knowledge based economies". If we do not take it seriously into consideration, as WISAT prognoses the lack of their participation shall cause deprivation of creativity, different perspectives and experience. It shall result in a situation that women shall not be able to create and develop technologies, which have a substantial influence on their everyday life. Hence, WISAT shall be responsible for active engagement in influencing various practices, at various levels, national, regional or even international. The sign of this activity is supporting a strategy within the scope concerning flow of information, academic knowledge and new technologies which may help women, especially ones from developing countries, to participate actively in the world of science and new technologies.

The counselling activity of the organisation focuses on representatives from the third sector, central authorities, UN agencies as well as research and developmental organisations, where selected policy and research activity are the main field of activity, [5]. Data collected by WISAT as a result of cooperation with the above-mentioned bodies reveal that the problem of female underrepresentation in the field of science is serious, yet, on the other hand, implementing proper politics, according to experts, stands as a chance for changes in near future. It has been indicated that due to a lack of activity and reliable data collected based on these activities state authorities do not see the problem, or arbitrarily consider it an insignificant or even a marginal issue.

WISAT, in cooperation with the Organization for Women in Science for the Developing World (OWSD, 2013), and thanks to financial support from the Elsevier Foundations, was able to map the possibilities and obstacles that women in science in Brazil, India, Indonesia, Korea, RSA, EU and USA have to face.

In relation to the obtained research results European Union institutions undertook actions within the scope of the Seventh Research Framework Programme (7PR), and the basic objective of this programme lies in encouraging women to engage in conducting scientific research and innovative activity. One of the latest initiatives, "Science in society" offers financial help to research organisations. Its aim is to elaborate detailed plans of activity for the equality between women and men in the scientific and research sector. Funds offered by the programme are also used to organise workshops for scientists that should draw the attention of this group to gender issues and lead to the inclusion of levelling solutions in research projects (CORDIS, 2012).

EU funds, which Polish women can also participate in, are used to realise undertakings aiming to encourage women to undertake work in science, by means of a range of means supporting the balance between a professional career and family life. Almost 40% of recipients of Marie Skłodowska-Curie programme financed within the scope of the current Research Framework Programme (7PR) are women.

Data collected during research enable us to draw certain conclusions and create a rational scheme of action. They show that the equality of women within the field of science, technology and innovations (STI) is directly correlated with a series of associated elements. The main scope of these elements, which may be classified within the category of positive influence on the equality of female chances in the academic sector, include the following:

higher economic status, wider participation in authority and politics, availability of economic, technological and productive resources, good health care and accessibility to financial resources. The above-mentioned findings indicate, and this is not surprising at all, that women experience greater equality in countries where governmental policies aim to support parents by guaranteeing care for children or promoting equal remunerations both for women and men. Number of studies also reveal that a small number of countries accumulate coherent and reliable statistical data divided according to gender in all these areas, which as a result leads to inhibiting the possibility to implement effective supporting strategies and programmes (UNCTAD Current Studies on Science, Technology and Innovation, 2011).

As far as Polish programmes and initiatives are concerned, it is worth indicating several ones that are quite distinguishable. We can particularly talk about the POMOST programme elaborated by the Foundation for Polish Science, which initially was addressed to pregnant female scientists. After several editions the programme was modified and currently also provides support for men, who decided to take paternal leave in order to take care of their children (POMOST, 2013). Another popular programme, which is also very distinguishable in the environment of young scientists is the L'Oreal Poland programme, which is addressed to doctoral students, developing their research interests in the field of life sciences. Until now we already had thirteen editions of this scholarship programme, and the value of grants is higher every year, [32].

All examples, of which mention has been made above, are undoubtedly positive ones, although this description leads to the conclusion that the Polish market clearly lacks programmes addressed at young academics developing their interests in various fields of science. Financial support is obviously a crucial element, although undertaken activities should reveal a more systemic character. That is why it is worth looking at programmes that assume substantial support, and these are not fully present in the Polish academic market.

From this particular perspective, an initiative worthy of particular attention is a project that focuses directly on female scientists, and covers European Union member states. This project is entitled Encouragement to Advance, and it functions together with four other EU initiatives established within the scope of the 6 EU-Framework Programme for Research and Technological Development. The fundamental aim of the project is to conduct seminars designed especially for female scientists, who would like to apply for university positions in selected EU states. Unfortunately, it is useless to search for Poland among these states, and this only proves the hypothesis that at the national level the majority of such initiatives are ignored and gone without any response.

International collective of trainers conducted special seminars that indicated the specificity of the requirements posed in front of female scientists in particular states. What is interesting, during the course of the project it was proven that selection criteria are much more determined by cultural factors than by the true conditions and realities of the given country. It is essential to mention that as a result of the conducted evaluation of the project, it was shown that more than 90 percent of participants would recommend these workshops to their female friends facing a similar situation, [31].

Apart from the above-mentioned, another initiative that is undoubtedly worth mentioning within the scope of the discussed subject is the European Platform of Women Scientists. This is an international non-profit organization that aims to represent the needs, interests and aspirations of more than 1200 European female scientists. The organization does not limit its actions to the European zone, but desires to develop its activities outside the continent. From the date when it was established, namely since 2005, this organization has affiliated with more than 100 networks of female scientists and organizations dealing with promoting women in the academic sector. The main aims of this platform's activity lie in promoting equal chances in various academic fields and disciplines, and especially in

creating the possibility for better audibility of female scientists' voices in the area associated with the creation of European research and developmental policies, [11].

As far as Poland is concerned, similar aims are realised by the Polish Women Scientists Network, established in 2012, [26]. The actions of the Network focus on popularising Polish female researchers and supporting female scientists in every stage of their career. The organization attempts to solve problems, which can be experienced during scientific and research work, among others it offers counselling concerning copyright law, intellectual property protection and patent law. It creates possibilities to participate in international competitions and exhibitions. The Polish Women Scientists Network cooperates with scientific and female organizations, and it is also engaged in public debate by participating in meetings with governmental and social institutions.

2 Conclusion

Years of research have revealed that sex and gender bias is socially harmful and unfair. It is crucially important to identify gender bias and understand how it operates in science and technology, [9]. It is clearly visible that the situation of Polish women in the academic sector is not satisfying. Polish universities have career paths that are discriminatory, just as they are in other parts of the world. Academic careers are extremely competitive, for example, and advancement and rewards depend in part on a significant commitment to self-promotion. Yet study after study shows that women and men are different on these points, so building career paths which require this kind of behaviour is inviting gender imbalance. "Structural change" in universities and research institutions means making them more gender-aware, thereby modernising their organizational culture. This has important implications for equal opportunities, the full use of talent, the appeal of scientific careers, and the quality of scientific research. It implies systemic, integrated, long term approaches rather than piecemeal short-term measures, [8].

An element evoking concern of the authors is the small interest Poland has in EU scholarship programmes for young women starting their academic carrier. It is worth asking ourselves, why our neighbour, country, the Czech Republic, wants, and furthermore, is able to participate in a series of initiatives of this kind, and Poland, where the potential is much bigger, at least due to demographic advantage, seems not to appreciate the value of these actions. Numerous debates devoted in general to the situation of women and the levelling their chances in various areas, there is no response and interest in the academic sector. And exactly this sector should be the crucial for the decisive bodies to focus on, as it is enumerated among the most strategic ones, yet as it can be seen, it still is an undervalued one. We are facing a double undervaluation, first of all concerning the whole sector of science and higher education, and secondly the place and role women play in Polish science.

Undoubtedly, the EU policy is a positive impulse for changing the situation in the Polish scientific and research sector. The Polish Ministry of Science and Higher Education collaborates with a special unit of the General Directorate for Research and Innovation (Gender and Ethics) among others within the context of works conducted by the Seventh Research Framework Programme Science in the society and Helsinki Group (Helsinki Group on Gender in Research and Innovation). Promoting gender equality is also one of crucial priorities declared by the European Research Area (ERA). Due to EU policy, the Polish government and institutions responsible for the science and research sector are obliged to undertake actions aiming to eliminate barriers related to recruitment, blocking the profession and career development in the case of female scientists, as well as the efficient use of their competences.

Summing up, it is essential to clearly emphasize that statistics has shown that more Polish women gain higher education than Polish men. Young, ambitious women are aware of their value and they boldly reach for professional success. They believe their activity, deliberate self-promotion and constant investment in education, competences and individual development constitute the foundations of their success. Apparently, they are perfectly aware that this is a high stakes game, [16]. A growing number of women in science is not only an issue of individual careers, but also increasing the number of women having direct access to knowledge and information. It is not at all surprising that having these goods at one's disposal in today's world gives greater decision making ability as well as an opportunity to participate in exercising power, [21].

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