
ECONOMICS

Sociology

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Introduction

Wage differentiation may be caused by many reasons because a wide range of factors are influencing the situation with wage rate at all labour markets. If the occurring wage inequalities between men and women result from differences in their education, job experience, the position held, professional group, workplace etc. – these inequalities are thus justified, stemming from different socio-professional and demographic characteristics. However, when the pay gap disfavoring women occurs in a situation of very similar socio-professional and demographic characteristics of men and women – it may be stated that it is wage discrimination against women.

The legislation and rules in force in Poland ensure formally the equality of men and women at the labor market. Regulations regarding the elimination of all forms of discrimination against women at the labor market¹ are included in the United Nations

¹ Discrimination of women on the labor market may also take the form of the employment, occupational, positional discrimination as well as access to trainings.

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WAGE INEQUALITIES BETWEEN MEN AND WOMEN IN POLAND – A JUSTIFIED DIFFERENTIATION OR ACCEPTED WAGE DISCRIMINATION OF WOMEN?

ABSTRACT. Wage differentiation of men and women may be caused by various reasons since many factors influence the level of individual wage rate of. We formulate a research hypothesis that lasting wage discrimination of women exists in Poland. It results mainly from shared values and cultural norms and this discrimination is accepted by a larger section of society. Therefore, the primary aim of this paper is the assessment of wages formation for men and women in Poland, taking into account similar socio-professional and demographic characteristics as well as the presentation of basic theories concerning wage discrimination against women and their verification in the case of Polish labor market. The research period was 1991 to 2015, a quarter of a century, thus allowing to determine the already formed regularities, also verifying the formulated research hypothesis.

Convention and the Conventions of International Labour Organization². The European Union, by means of its policy of equal opportunities in Member States, implemented a number of directives, recommendations and programs concerning the elimination of discrimination against women³. Among the national laws, the Constitution of the Republic of Poland should be enumerated, which states that “a woman and a man have in particular equal rights to education, employment, promotion, equal wages for work of equal value...”⁴. The principle of equal treatment of men and women in the matters of employment, remuneration and promotions, as well as access to training⁵ is covered in the Labor Code of Poland.

The analysis of statistical data, as well as the result of numerous studies on wage formation show that in Poland there is a gender pay gap unfavorable for women. If – in spite of legislation and rules in force – such differentiation results from wage discrimination of women, it would mean there is a market in Poland and hence both supply and demand for such discrimination. We formulate a research hypothesis that lasting wage discrimination of women exists in Poland. It results mainly from commonly shared values, norms and traditional roles in the society, and this discrimination is accepted by a vast majority in the society⁶. Therefore, the key aim of this paper is the assessment of wage formation for men and women in Poland, taking into account the situations when men and women have very similar socio-professional and demographic situations, and also the presentation of most widely spread theories of wage discrimination against women along with their verification on the study case of Polish labor market. For our research we have chosen the time period from 1991 till 2015, and since this is a quarter of a century under study, this would allow us determine the developed regularities, therefore, we were also able to verify the formulated above research hypothesis⁷.

1. Wage discrimination of women in selected economic and sociological theories

Numerous economic and sociological theories have been dedicated to the phenomenon and causes of discrimination of women on the labor market. Presenting all these theories in this paper is neither possible nor reasonable⁸. Therefore, only such theories were selected which seem to be of particular usefulness, from the viewpoint of wage discrimination of women, and for which there is a possibility of partial verification in the aspect of the research hypothesis and the aim of this paper⁹.

² Art. 11 of the UN Convention on the Elimination of All Forms of Discrimination Against Women of 18 December 1979, the International Labour Organisation Conventions (No 110 of 29 June 1951 and No 111 of 25 June 1958).

³ The principle of equal pay for men and women was set out in the first Directive 75/117/EEC of the Council of the European Communities of 10 February 1975.

⁴ The Constitution of the Republic of Poland of 02 April 1997. art. 33.

⁵ The Labour Code in Poland was subjected to many amendments. From the standpoint of the discussed matter, significant changes were introduced by the Law of 2001, The Labour Code, Dz. U. No. 154. The papers of Borut, 2004, pp. 2-8, Kalinowska-Sufinowicz, 2013, pp. 163-166 include the discussion of the changes introduced to the Labour Code.

⁶ Social-cultural norms have also a significant influence on other forms of discrimination on the labor market which are not under considerations in this paper.

⁷ Due to the fact that consolidated statistics are not available – in some cases the analysis does not include the entire research period.

⁸ A more explicit discussion of theories connected with the discrimination of women on the labor market is included among other things in the papers of: Reszke, 1991, Kalinowska-Nawrotek, 2004, 2005.

⁹ In particular theories other forms of discrimination of women on the labor market, not under consideration in this paper, are also included.

*In economic theories the causes of wage discrimination of women are considered in the approach of perfect and imperfect labor market¹⁰. Among the economic theories based on the assumptions of *perfect labor market*, it is worth to consider presenting the taste for discrimination (personal prejudice) theory, Human Capital Theory and the information cost theory. These theories, despite perfect labor market assumptions, may also refer to the economic reality (Kalinowska-Nawrotek, 2005, p. 13). *The personal prejudice* (taste for discrimination) *theory* was formulated by G. S. Becker in the fifties (Becker, 1957). Employers, employees and clients are listed here as the main source of the gender pay gap. In the first case, employers who have a taste for discrimination may force women to receive lower remuneration than men, to be employed at all. However, if the employees have the tendency for discrimination against women, they will avoid the employers employing women. Therefore, the employers willing to employ men will pay them more than women at a given position. In the case of clients having taste for discrimination – their regard for men as better employees in certain professions will result in positions segregation. This segregation will result in lower wages for women (Ehrenberg, Smith, 2000, pp. 433-440).*

In each of the studied cases wage discrimination against women will thus occur and their remuneration will equal the salary of men diminished by the discrimination coefficient. This coefficient, illustrating the percentage by which women's remuneration is lower than the salary of men can be presented using the following equation: $MDC = d/W_f$ (Becker, 1957, p. 45), where: MDC – wage discrimination coefficient, d – difference between the salary of men and women, W_f – the salary of women.

Wage discrimination against women will occur when $MDC > 0$. When $MDC = 0$ discrimination does not occur, and in case of $MDC < 0$ there is a situation of nepotism or protection (Johnes, Sapsford, 1996, p. 11). *According to Human Capital Theory* (Schultz, 1961; Becker, 1964, 1975; Mincer, Polachek, 1974; Mincer, Ofek, 1982), employees possess different levels of skills and qualifications, as well as job experience, which influence the levels of their productivity and thus the level of their remuneration. According to this theory, the pay gap between women and men results from their smaller, compared with men's, resource of human capital. It is caused by a lower level of education of women, lower job experience or depreciation of their human capital resulting from their work breaks connected with raising children.

In information cost theory (Arrow, 1973), discrimination against women in the professional area results from the lack of information concerning the employees' level of productivity before employing them and from the employers' conviction of lower productivity of women. This conviction results in a situation where employers, willing to lower the information costs of usefulness of a given employee and fluctuation costs, agree to employ women but only for lower remuneration.

Among the economic theories adapting the assumptions of *imperfect labor market*, the theories of occupational segregation (market crowding), dual labor market and consumer's choice theory.

In occupational segregation theory (Bergman, 1971), horizontal and vertical occupational segregation occurs. The first takes place when women are crowded in less demanded professions which results in their salaries being lower. However, vertical occupational segregation is manifested in distorting the proportion between the number of men and women employed at managerial, well-paid posts. This phenomenon is described as "glass ceiling" (Gawrycka *et al.*, 2007). Therefore, the lower level of salaries of women than men will be a result of horizontal and vertical occupational segregation (Stevenson, 1975, p. 15).

¹⁰ A more explicit discussion of the labor market is included among other things in the paper of Kopycińska, Kryńska, 2015, 2016.

According to the *concept of dual labor market* (Piore, 1970; Doeringer, Piore, 1971), this market is divided into two segments. The primary segment (primal) offers well-paid posts, good working conditions, possibilities of promotion and certainty of employment. In the secondary segment, the posts are characterized by lower salaries, worse working conditions, lower possibilities of promotion and lack of certainty of employment, as well as high fluctuation of employees. Mobility between the segments is limited and it is difficult for the employees employed in the secondary segment to get to the primary segment, mainly due to their conviction of their job being instable and forming harmful habits of “secondary” employees. The probability of belonging to the category of secondary employees increases significantly in case of having such characteristics as: the ease with which workers can be dismissed, lesser interest in participating in professional training, willingness to accept lower wages, as well as the lack of solidarity. These characteristics are, to a great extent, ascribed to women (Barron, Noriss, 1976, pp. 125-148). Therefore, mainly men are employed in the primary segment of the labor market and women prevail in the secondary segment, which explains their lower remuneration or lower possibility of promotion. The theory of dual labor market is also considered a particular case of market crowding hypothesis (Kryńska, 2000, pp. 20-24). *According to the theory of consumer's choice*, discrimination against women is a particular form of behavior of one group of economic entities in relation to another group (Krug, 2003, p. 60). In accordance with this view, there are five groups of economic entities discriminating against women. They are: companies and direct superiors, labor unions, people occupying high and well-paid posts, husbands and political parties. These groups constitute the supply of discrimination. On the other hand, if there is discrimination, there must be demand for it and this demand occurs mainly because of the fact that a part of women agrees to this discrimination (Krug, 2003, pp. 61 and 63).

In sociological theories, lower salaries of women, as well as limited access to occupying well-paid posts, are explained chiefly by maternal functions of women, historical occurrences, traditional division of roles within families, asymmetric power relationships between men and women, as well as beliefs, convictions and stereotypes concerning the differences between men and women. Interesting considerations concerning the above aspects are presented, among other things, in theory of social stratification (T. Parsons), theory of classes formation (F. Parkin) (LIT) or, theory of discrimination (J. Acker). In *theory of social stratification* T. Parsons, accepting the assumptions of family solidarity, states that inside a family it is a man, the husband – father, who plays an instrumental role, i.e. supports family and thus the family income and reputation depends on the professional role of the husband – father. The woman, as the wife – mother, plays an expressive role, which boils down to running the home, offspring socialization, cultivating humanistic value etc. (Parsons, 1972, pp. 113, 252, 253). The consequence of the role division in the family is the professional discrimination of women, but “the positive basis for this phenomenon is the key importance the mother’s role within the family has for the society” (Parsons, 1972, p. 550).

Theory of classes formation (Parkin, 1974) assumes that social collectives seek to maximize rewards by restricting access to resources and opportunities to a limited circle of eligibles. In order to exclude a given collective e.g. women from having access to resources – the power of excluders must be greater than the power of the excluded. With the aim to achieve resources, strategies based on the power of exclusion or the power of solidarity may be used. Due to the fact that women are characterized by low level of solidarity conditioned by playing family roles, working in small companies or low participation in labor unions, men may apply the rules of solidarity towards employers more efficiently than women. Having the advantage over women – they may use their strategy towards employers and exclude women from better paid sectors and limit their access to managerial posts.

Theory of discrimination (J. Acker), *explaining* the wage discrimination against women on the labor market, is based on *the concept of gender*, which consists of beliefs, convictions and stereotypes concerning differences between men and women (Acker, 1988, pp. 25-37). These beliefs, as well as the asymmetry of power (and rewards) between men and women, take part in social interactions, and thus gender influences the pay gap. According to the theory, the determinants of wage discrimination against women are cultural norms, dividing economic sectors, professions and work places into female and male, segregating workplaces according to sex, traditional relations of power between men and women and traditional ascribing non-business, family, and care giving roles to women (Reszke, 1991, p. 172).

2. Methodology of research

Statistical-economic analysis of the formation of wage inequalities of women and men in Poland in the aspect of wage discrimination against women was carried out based on the method of the earnings ratio consisting in comparing the average monthly gross nominal wages (or income) for both studied groups, taking into account all main professional criteria such as: the level of education, job experience, age, professional groups, levels of employment, ownership sectors of workplaces and company size. The measure of the variety of the level of pay for men and women will be earnings ratio – R. It determines what part of men's salary women's salary is¹¹. The difference between these salaries equals the pay gap. Becker's market discrimination coefficient MDC, assuming the values ranging from minus to infinity plus shall also be used for assessing the gender pay gap. According to this coefficient, it was assumed that wage discrimination will occur when $MDC > 0$. Due to the lack of consolidated statistics concerning wage developments by social-occupational and demographic features between 1991-2015 the data of the Central Statistical Office, the National Salary Study (OBW) carried out by Sedlak & Sedlak and the data of the Social Diagnosis will be the basis for the statistical-economic analysis carried out. Additional sources of data resulting from primary studies were also included in the statistical-economic analysis. The outcome of the above analysis will be a basis for verifying the first part of the formulated research hypothesis assuming the existence of permanent wage discrimination against women. Verifying the part of the hypothesis concerning cultural norms and acceptance of wage discrimination against women both by the discriminating and the discriminated will be carried out based on the results of public opinion surveys: Centre for Public Opinion Research (CBOS), Gender Equality Observatory, the Social Diagnosis.

The economic and sociological theories presented in the study which explain the causes for discrimination against women will be related to the Polish conditions and their verifiability will be carried out on the basis of the results of the statistical-economic analysis and public opinion surveys. In the personal prejudice theory – alongside public opinion surveys – MDC coefficients will be the basis of verification. The concept of Human Capital will be verified on the basis of comparison of the remunerations of men and women in Poland according to level of education. The verification of the concept of professional segregation will be based on a comparative study of the remunerations of men and women according to professional groups and section of employment, whereas the concept of dual labor market on remunerations analysis according to the ownership sector. The concept of discrimination market and sociological concepts will be related to the public opinion surveys results.

¹¹ The earnings ratio is commonly used and is the result of the equation: remuneration of women/ remuneration of men.

3. Wage formation of men and women in Poland over the period 1991-2015

Overall trends of wage formation of men and women in Poland may be observed by analyzing the level of average monthly gross remuneration and earnings ratios determining the scale of the inequalities (*Table 1*).

Table 1. Average monthly gross remuneration in Poland over the period 1991-2015 (PLN)

Specification	Years										
	1991	1997	1999	2001	2002	2004	2006	2008	2010	2012	2014
Total	176	1146	1800	2217	2230	2369	2654	3232	3543	3895	4108
Women	154	1000	1592	1989	2016	2150	2386	2893	3256	3539	3718
Men	200	1278	1991	2430	2425	2572	2904	3557	3832	4248	4482
R Earnings ratio (%)	77,1	78,3	0,80	81,9	83,1	83,6	82,2	81,3	85,0	83,3	83,0

Source: a report based on: Structure of wages and salaries by occupations, Central Statistical Office, 1992-2015.

On the basis of the data of the Central Statistical Office, it can be stated that throughout the entire 25-year-long period under consideration, the average remuneration of women was lower than that of men, which shows a constant (permanent) wages differentiation trend in Poland to the disadvantage of women.

Earnings ratio (R) of women in relation to remuneration of men, in the years 1991-2004 revealing a tendency to grow, decreased in the next decade following Poland's accession to the European Union (except in 2010) causing a decline in the (R) ratio from 83,6% in 2004 to 83,0% in 2014.

Therefore, the pay gap rose from 16,4% to 17,0% respectively. The research results of the Social Diagnosis concerning average net take-home pay (*Table 2*) also confirm a permanent trend of wages differentiation in Poland to the disadvantage of women. Over the studied period 2007-2015, remuneration of women was lower than remuneration of men and the (R) ratio amounting to 73,2% in 2007, increased to mere 74,8% in 2015.

It would seem appropriate to emphasize that in 2015 this ratio decreased in relation to the ratio of 2013 resulting in the gender pay gap increasing from 23,4% to 25,2%.

Table 2. Formation of net take-home pay of people over 18 years of age in Poland in the period 2007-2015 (PLN)

Specification	Years				
	2007	2009	2011	2013	2015
Women	1008	1397	1551	1637	1750
Men	1377	1861	2082	2136	2339
R Earnings ratio (%)	73,2	75,1	74,5	76,6	74,8

Source: a report, based on: Social Diagnosis (2007, p. 161; 2009, p. 176; 2011, p. 185; 2013, p. 203; 2015, p. 218).

It is obvious that the presented steady trend of the formation of a wage gap among men and women in Poland is no decisive proof that there is wage discrimination against women. Therefore, the formation of the level and relationship of remuneration of women and men, taking into account such basic factors influencing individual market level of remuneration as: the level of education, job experience, occupied position, professional groups, ownership

sectors of workplaces or size of company should be analyzed. The level and relationship of remuneration of women and men, taking into account education were presented in *Table 3*.

Table 3. Average take-home pay of women and men according to education and earnings ratio (%) over the period 1998-2014¹² (PLN)

Remuneration / the level of education	Years				
	1998/1999	2004	2008	2012	2014
<i>Average take-home pay PLN</i>					
<i>1a. Higher education with at least the doctor's degree as well as master's degree or equivalent:</i>					
Women	x	3073	3905	4789	4919
Men	x	4564	5695	6749	7092
R Earnings ratio (%)	65,8	67,3	68,6	70,9	69,4
<i>1b. Higher education with an engineer, graduate economist or BSc degree or equivalent:</i>					
Women	1598	2587	3456	3780	3943
Men	2379	3972	5312	5537	5737
R Earnings ratio (%)	67,2	65,1	65,1	68,3	68,7
<i>2. Post-secondary non-tertiary education</i>					
Women	x	2005	2783	3126	3208
Men	x	2547	3253	3726	3954
R Earnings ratio (%)	78,0	78,7	85,6	83,8	81,0
<i>3. Vocational secondary education:</i>					
Women	1150	1917	2557	2918	3011
Men	1474	2361	3184	3686	3814
R Earnings ratio (%)	78,0	81,2	80,3	79,2	78,9
<i>4. General secondary education:</i>					
Women	1230	2006	2500	2771	2930
Men	1470	2352	2976	3537	3746
R Earnings ratio (%)	83,7	85,3	84,0	78,3	78,9
<i>5. Basic vocational education:</i>					
Women	855	1338	1799	2145	2324
Men	1207	1866	2696	3003	3244
R Earnings ratio (%)	70,9	71,7	66,7	69,1	71,6
<i>6. Lower secondary general education:</i>					
Women	x	1589	1654	2297	2346
Men	xx	2091	1913	2491	2619
R Earnings ratio (%)	xx	76,0	86,4	92,2	89,6
<i>7. Primary and incomplete primary education:</i>					
Women	x	1350	1799	2173	2367
Men	x	1829	2574	2944	3053
R Earnings ratio (%)	73,0	73,8	69,9	73,8	77,6

x – no data, xx junior high schools have existed in Poland since 1999/2000. A report based on: structure of wages and salaries by occupations in October, Central Statistical Office, GUS, 2000, 2004, 2006, 2008, 2012, 2014, 2015.

¹² consolidated statistics on the previous years are not available.

Analyzing the average monthly remuneration for women and men with comparable level of education, it can be stated that, regardless of the level of education – the remuneration of women was lower than that of men in all studied years. It is worth emphasizing that particularly unfavorable earnings ratio occurred in case of higher education. Thus, at the level 1a of higher education – women's earnings ratio related to the remuneration of men amounted to 69,4% in 2014 and was lower than the ratio of 2012 amounting to 70,9%. At the level 1b of higher education – these ratios amounted to 68,7% and 68,3% respectively. At these levels of education the pay gap in 2014 equaled 30,6% and 31,3%. Considering the data presented, it may also be stated that in all years and at all levels of education, the MDC discrimination coefficient was bigger than 0, so, according to the taste for discrimination theory, wage discrimination against women occurred. The highest discrimination coefficient occurred at the highest levels of education. In 2014, at the level 1a of higher education, the MDC coefficient equaled 55,1%, whereas at the level 1b of higher education, MDC=31,2%. The women's earnings were thus lower than men's by over 55% and 31%. Similar unfavorable earnings ratios, at the levels of education assumed in *Table 3*, occurred also in the analysis of average hourly wages (*Table 4*).

Table 4. Average hourly wages according to education level and R earnings ratio (%)

Average hourly wage	Years			
	1999 _x	2004	2008	2012
<i>1a. Higher education with at least the doctor's degree as well as master's degree or equivalent:</i>				
Women	xx	22,55	25,91	30,10
Men	xx	28,93	33,75	38,85
R Earnings ratio		77,9	76,8	77,4
<i>1b. Higher education with an engineer, graduate economist or BSc degree or equivalent:</i>				
Women	16,44	16,72	19,94	21,17
Men	21,37	23,93	29,19	30,15
R Earnings ratio (%)	76,9	69,9	68,3	70,2
<i>2. Post-secondary non-tertiary education:</i>				
Women	10,1	12,38	15,48	17,4
Men	12,13	15,07	17,66	20,22
R Earnings ratio (%)	82,5	82,1	87,6	86,1
<i>3. Vocational secondary education:</i>				
Women	9,10	11,45	13,97	16,02
Men	11,37	13,77	17,03	19,73
R Earnings ratio (%)	80,0	83,1	82,0	81,2
<i>4. General secondary education:</i>				
Women	9,73	11,89	13,55	15,03
Men	11,52	13,69	15,97	18,96
R Earnings ratio (%)	84,5	86,8	84,8	79,3
<i>5. Basic vocational education</i>				
Women	6,42	7,86	9,71	11,59
Men	9,09	10,76	14,32	15,52
R Earnings ratio (%)	70,3	73,01	68,7	70,2

x/ GUS has been examining hourly remuneration every two years, since 1999. xx no data. A report based on: Structure of wages and salaries by occupations in October, Central Statistical Office, GUS, 2002, 2006, 2010, 2014 GUS information memo

While analyzing the hourly wages it turned out that R earnings ratios were higher than in case of average gross monthly remunerations (and thus smaller pay gap). However, the regularity of wages differentiation to the disadvantage of women at all levels of education, in particular at the level of higher education, remained unchanged. Pointing to a particularly large pay discrimination coefficient of women, taking into account the highest level of education, it is worth to note here the key assumptions of Theory of Human Capital. On the basis of a comparison of the formal level of human capital of women and men measured by education and supplementary education it can be stated that in Poland both the level of women's education and their participation in improving their professional qualifications were higher than those of men. Over the period 2014/2015, 28,1% of women and 19,5% of men aged 15-64 had higher education. The women constituted 65% of higher education graduates and 70% of students of post-graduate programs (Informacja GUS, 2015, Tab. 1.1 and 4.1; Studia GUS, 2015, p. 47; Kopycińska, 2014, 2015). Over the period 2013-2015, approximately 55% of women and approximately 45% of men aged 35+ participated in improving their professional qualifications or other skills (Diagnosis, 2015, p. 151). Theory of Human Capital, assuming that lower pay for women results from their lower level of formal education, is not supported here.

While analyzing the level of wages according to the levels of education, it is worth to present interesting results of original studies concerning, among other things, wage discrimination against women. They were carried out in Szczecin, Koszalin and Poznań regions in 2004, on a representative LIT group of N=602. In the surveyed population, the structure of the group by sex was similar, all respondents held managerial positions, their overall job experience as well as their job experience on the managerial position were similar too (Zwiech, 2006). The results of these studies confirm the regularity presented previously that regardless of the level of education, the remuneration of women was lower than that of men, and a particularly unfavorable situation occurred while taking into account the highest level of formal education (*Table 5*)¹³.

Table 5. Formation of wages levels of women and men, by education

Education	Remuneration		R Earnings ratio	Pay gap	MDC Coefficient
	Women	Men			
Doctorate	7000,00	10000,00	70,0	30,0	0,43
MBA	7500,00	8500,00	88,2	11,8	0,13
Higher –2 faculties or post-graduate studies	3812,50	7640,00	49,9	50,1	1,00
Higher – master	3702,20	5170,73	71,6	28,4	0,40
BSc	3879,31	4382,35	88,5	11,5	0,13
Post-secondary non-tertiary	3750,00	3944,44	95,1	4,9	0,05
Vocational secondary education	3250,00	4875,00	66,7	33,3	0,50
General secondary education	3500,00	3937,50	88,9	11,1	0,13

Source: Zwiech, 2006, p. 50.

Thus, while analyzing the levels of remuneration of women and men who have tertiary education of two faculties or postgraduate studies – the earnings ratio equaled only 49,9%

¹³ The exception here was only the earnings ratio in case of vocational secondary education which was a result of the fact that mainly men have this level of education.

here, so the pay gap amounted to 50,1%. With a doctorate, the R ratio equaled 70,0% and the pay gap 30,0%, with a master's degree R=71,6% and the pay gap was 28,4%. The earnings ratio was better only in case of MBA where the pay gap equaled 11,8%. It is worth adding, that the highest MDC discrimination coefficient amounting to 1, was reported for people who completed two faculties of study. The remuneration of men was thus twice higher than this of women with the same education¹⁴.

Let's analyze the formation of wages levels of women and men, taking into account occupational groups, age, job experience and level of professional career. The formation of wages levels of women and men in so called broad occupational groups, according to the Polish Statistical Office was presented in *Table 6*.

Table 6. Average monthly gross wages by broad occupational groups in Poland over the period of 1998-2014 (PLN)

Specification	1998			2004			2014		
	Women	Men	R Earnings ratio	Women	Men	R Earnings ratio	Women	Men	R Earnings ratio
I. Representatives of the authorities, senior officials and managers	2253	3007	74,9	4383	6181	70,9	6975	9541	73,1
II. Experts	1426	1989	71,7	2862	3751	76,3	4532	6055	74,8
III. Technicians and other middle-level staff	1194	1618	73,8	2106	2842	74,1	3645	4757	76,6
IV. Clerks	1187	1257	94,4	2023	2016	100,3	3256	3311	98,3
V. Service and sales workers 1/	812	1087	74,7	1508	1269	84,2	2311	2668	86,6

1/ the table does not take into account gr. VI: skilled agricultural and fishery workers, gardeners, foresters gr.VII: industrial workers and craftsmen gr. VIII: plant and machine operators or assemblers and gr. IX: unskilled workers.

A report based on: Structure of occupations in October, Central Statistical Office, GUS, 2000, 2006, Structure of occupations in October 2014, 2015 GUS information memo.

The remuneration of women was lower than that of men in all studied years and in all occupational groups. It is worth noting that the earnings ratio decreased from 74,9% in 1998 to 71,1 in 2014. Therefore, after 15 years the pay gap did not decrease but rose from 25,1% in the base year to 26,9 in the final period. While analyzing the level of wages according to broad occupational groups, similarly as in the case of education, the MDC discrimination coefficient was higher than 0 and e.g. in the case of group I – it equaled approximately 37% in 2014. In the light of both Becker's taste for discrimination theory and theory of professional segregation the above demonstrates wage discrimination against women. Results of other research give rise to similar observations. Earnings ratios of women in relation to earnings of men were more advantageous in Social Diagnosis 2015 research (*Table 7*) concerning average net take-home pay by discussed occupational groups compared with the ratios of average monthly remuneration according to the Polish Statistical Office. However, the regularity of the occurrence of unfavorable for women R earnings ratios and the pay gap remained unchanged.

¹⁴ The presented data concern employed persons representing 80% of the studied population 80.

Table 7. Net take-home pay formation in 2015 (PLN)

Specification	Average monthly net take-home pay by age and the number of years of studying		
	Women	Men	R earnings ratio W/M
I. Representatives of the authorities, senior officials and managers	3842	4334	88,6
II. Experts	2813	3938	71,4
III. Technicians and other middle-level staff	2367	2979	79,5
IV. Clerks	2013	2325	86,6
V. Service and sales workers	1660	2311	71,8

Source: a report based on: Diagnosis, 2015, p. 401.

The regularities of the negative development of net take-home pay of women occurred also in selected occupational groups. For example, the ratio of net take-home pay of women to net take-home pay of men, applying the criteria of age and number of years of studying, in 2015 equaled in the following group: representatives of the authorities and managers – 67,0%, engineers, architects, designers and related professions – 68,0%, doctors, veterinaries and dentists – 71,0%, sellers 73,0%, marketing experts – 75,0%, management and administration experts – 80,0%, etc (Diagnosis, 2015, p. 402). In the following analysis we will consider the formation of the level and earnings ratio, taking into account job experience, age and level of professional career. The results of the research based on the above criteria were presented in Table 8 and 9.

Table 8. Average monthly gross wages formation by job experience and level of employment (PLN)

Specification	Women	Men	R earnings ratio
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Year 2014</i>			
Average monthly remuneration			
<i>Job experience (years)</i>			
1 year or less	2.500	2.900	86,2
2-3	3.000	3.700	81,1
4-5	3.400	4.200	80,9
6-8	3.900	5.000	78,0
9-10	4.000	5.500	72,7
11-15	4.250	5.900	72,0
16+	4.000	5.000	80,0
<i>Year 2015</i>			
Levels of employment job experience (years)			
Director			
1 year or less	4.800	7.072	67,9
2-3	5.200	6.600	78,8
4-5	6.000	7.050	85,1
6-8	6.450	10.000	64,5
9-10	9.000	12.000	75,0

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<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
11-15	10.000	14.000	71,4
16+	9.400	13.629	69,0
Manager			
1 year or less	3.190	3.350	95,2
2-3	3.663	4.400	83,2
4-5	4.500	5.400	83,3
6-8	5.100	6.150	82,9
9-10	5.800	6.700	86,6
11-15	6.000	7.100	84,5
16+	5.500	6.000	91,7
Expert			
1 year or less	2.792	3.050	91,5
2-3	3.300	4.000	82,5
4-5	3.600	4.500	80,0
6-8	3.810	5.000	76,2
9-10	4.000	5.000	80,0
11-15	3.960	5.000	79,2
16+	3.600	4.400	81,8
Regular employee			
1 year or less	2.200	2.400	91,7
2-3	2.350	2.600	90,4
4-5	2.373	2.700	87,9
6-8	2.500	2.865	87,3
9-10	2.500	2.969	84,2
11-15	2.500	3.000	83,3
16+	2.650	2.900	91,4

A report based on: Rok 2014 – Wynagrodzenia Kobiet i mężczyzn w 2014 roku, wynagrodzenia.pl chart 2, Rok 2015 – Wynagrodzenia kobiet i mężczyzn w 2015 roku, wynagrodzenia.pl OBW Sedlak&Sedlak, 2014, 2015.

The analysis of the formation of the earnings ratios and levels of professional career confirms the regularity, shown by other criteria, of unfavorable for women earnings ratios in relation to the earnings of men since at the same level of employment and at the same job experience, women's earnings were lower than those of men, and this regularity concerned all levels of professional career and experience brackets. It is also worth noting that the least favorable ratios and thus the biggest pay gap occurred at the highest level of employment. In all cases the MDC discrimination coefficient was higher than 0 and for example in the office of a director it equaled from 17,5% (4-5 years of job experience) to 55% (6-8 years of job experience). Similar conclusions and regularities occurred also while analyzing the formation of average remunerations (income) by age and level of employment. In all studied age brackets and at all levels of employment remuneration (income) of women was lower than those of men, and the biggest pay gap occurred at the highest level. Here also, in each case under consideration, the MDC discrimination coefficient was higher than 0.

Table 9. The formation of monthly net take-home pay (personal income) by age and level of employment (PLN)

Specification	Women	Men	R earnings ratio
<i>Year 2004</i>			
Average monthly remuneration managerial post			
executive position	5.036	7.378	68,3
higher level	4.152	5.321	78,0
vice of higher level	4.034	4.736	85,2
medium-level	3.103	3.406	91,1
<i>Age: (years)</i>			
15-24	2.500	4.000	62,5
25-34	3.556	4.676	76,1
35-44	4.184	5.393	77,6
45-54	4.132	5.721	72,2
55+	4.500	7.500	60,0
<i>Year 2014</i>			
Average monthly remuneration			
<i>Levels of employment</i>			
Directors	10.000	13.800	72,5
Managers	5.700	6.600	86,4
Experts	3.800	4.600	82,6
Regular employees	2.500	2.800	89,3
<i>Year 2015</i>			
Average monthly net take-home pay in different age groups, taking into account the number of years of studying			
Up to 24 years	1.149	1.488	77,2
25-34 years	1.505	2.234	67,4
35-44 years	1.886	2.761	68,7
45-59 years	1.896	2.477	76,6
60-64 years	1.713	2.252	76,1
65+	1.911	2.233	85,6

A report based on: Rok 2004 – Zwiech, 2006, p. 49, Rok 2014 – Wynagrodzenia kobiet i mężczyzn na różnych szczeblach zatrudnienia w 2014 roku, wynagrodzenia.pl, Ogólnopolskie Badanie Wynagrodzeń, Sedlak&Sedlak 2014, year2015, Social Diagnosis Tab. 5.5.1.

In addition to the factors directly connected to human capital of a given employee, ownership sector of a company, company size or origin of capital may also have influence on the individual rate of pay. Let's analyze the earnings ratio of women and men, taking into account these criteria (*Table 10*).

Table 10. Wage (income) differences of women and men (income) in Poland

Specification	R ratio	Pay gap
Gross monthly remuneration / monthly net take-home pay		
<i>1. ownership sector / years</i>		
Public sector 1999	76,0	24,0
2002	78,0	22,0
2004	81,0	19,0
2008	81,0	19,0
2015	72,4	27,6

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<i>Private sector</i>		
1999	77,0	23,0
2002	81,0	19,0
2004	84,0	16,0
2008	82,0	18,0
2015	73,8	26,2
<i>2. Company size</i>		
<i>Year 2015</i>		
micro-companies	84,0	16,0
small companies	80,0	20,0
medium-sized companies	83,0	17,0
big companies	83,0	17,0
large companies	78,0	22,0
<i>3. Industries – Year 2014</i>		
IT	83,9	16,1
Business services	75,5	24,5
Trade	81,9	18,1
Services to the public	93,5	6,5
<i>Year 2015</i>		
Companies with Polish capital majority	79,7	20,3
Companies with foreign capital majority	81,8	18,2

A report based on: sektory własności za lata 1999-2008. Różnice w wynagrodzeniach kobiet i mężczyzn w Polsce w latach 1999-2008, wynagrodzenia.pl Tab. 1, Rok 2015; Social Diagnosis 2015, p. 400. p. 2 – Rok 2015 Wynagrodzenia kobiet i mężczyzn w 2015r. Wynagrodzenia.pl Chart 2. p. 3; Wynagrodzenia kobiet i mężczyzn w 2014 r. wynagrodzenia.pl Tab. 2, p.4 Rok 2006; Rok 2015 – Wynagrodzenia kobiet i mężczyzn w 2015 roku, wynagrodzenia.pl Chart 3.

In both the public and private sectors, in small, medium and large-scale enterprises, with foreign and Polish capital or in particular industries – the earnings ratios (incomes) of women showed negative developments in relation to the earnings (incomes) of men. The pay gap occurred in case of all analyzed criteria and the MDC discrimination coefficient was higher than 0. In relation to dual labor market theory, it may be stated that the gender wage gap to the disadvantage of women resulted from discrimination. It is also worth to mention, that according to the World Economic Forum's the earnings ratio of women in relation to the earnings of men in Poland in 2015 equaled 52,0% and was classified as lying in far 124th position among the countries limiting wage inequalities (Podskoczy, 2015).

Taking into account the obtained results of the analysis of the formation of remunerations of women and men in Poland over the period 1991-2015, in general it may be concluded, that in case of all the assumed criteria and over the whole research period, the remunerations of men were higher than the remunerations of women. The results of the analysis also showed that the occurring wage inequalities to the disadvantage of women did not result from differences in education, job experience, age, position held, form of ownership of the company etc. The carried out statistical-economic analysis took into account similar socio-professional and demographic characteristics of women and men. In the light of the results obtained from the analysis and the theories of discrimination presented in the study – it appears appropriate to state that wage discrimination of women exists in Poland. However, taking into account nearly a quarter-century long research period – it appears appropriate to state that wage discrimination of women existing in Poland is of permanent character.

4. Wage discrimination of women – acceptance of the discriminating and the discriminated

We share the view that if wage discrimination of women exists in a given country there must be a market for it. Therefore, there must be supply of it on the one hand and demand for it on the other hand¹⁵. The existence of discrimination thus requires consent (acceptance) both from the side of the discriminating and the discriminated (Krug, 2003, p. 60). The permanent discrimination of women in Poland demonstrated in this study – in spite of the existing legal regulations – exists because there is a consent to it of a large part of the population. This consent (acceptance) derives its legitimacy from the tradition and entrenched socio-cultural norms (Parsons, 1972; Acker, 1988; Dijkstra, 2003, p. 126; Plantenga, 2003, p. 101) which originate from the Christian-catholic tradition which is dominant in Poland. According to the social teaching of the catholic church, a traditional family represents the highest value. The professional roles (the breadwinner) are ascribed to men and those of the wife, mother, caregiver are ascribed to women. In Poland, the proportion of people that declare they are catholic equals – depending on the research methodology – from over 86% to over 88% of the total population (Łysoń 2013, p. 17; Woźniak-Jęchorek, 2016, pp. 162-163; GUS, 2015, pp. 92-93). Therefore, the traditional social infrastructure, where catholic church plays a crucial role and to which all the political and social priorities are adjusted, is well established. If – according to the shared values – the men as the breadwinners constitute the main entity on the labor market, it appears appropriate to ensure access to employment, high-quality jobs and higher remuneration primarily for men rather than for women, as this already follows from natural order of things (Reszke, 1991, p. 207). This natural order of things is supported by a large part of the population among which all economic entities enumerated in the theories are. The sources of wage discrimination of women are therefore: employers, employees, clients, the church, political parties, trade unions, people occupying high positions in the country, husbands (Becker, Krug). Therefore, these entities¹⁶ which utilize the discussed discrimination, have great social permission for it. A similar permission for applying the practices of wage discrimination of women occurs among a large part of women – including the discriminated. They accept the historically shaped, traditional role of women. The statements presented above are confirmed by results of public opinion surveys in Poland.

According to the polls conducted by the Polish Public Opinion Centre (CBOS) on a representative, randomized sample of adult Poles, 46% of women and 48% of men in 1992 said that they would prefer a male boss and 14% of women and 11% of men that they would prefer a female boss. In 2003, a male boss was preferred by 40% of women and 43% of men whereas a female boss was preferred by 11% of women and 13% of men. In 2013, in spite of a certain “drop” of male importance in the opinion of the surveyed – not only of men but also of women – a substantial advantage of male boss’s value over female boss’s value occurred. 35% of women and 38% of men wanted to have a male boss and only 10% and 9% respectively wanted to have a female boss (CBOS, 2013, p. 11).

Similar results were obtained from studies carried out by infoPraca portal. To the question „Who is a better boss? 39,4% of surveyed women and 34,2% of surveyed men replied that a man is a better boss whereas 9,8% of women and 13,3% of men said that a women is a better boss (Women nie chcą kobiet w zarządach, /e Gospodarka.pl.2016).

¹⁵ This statement applies obviously to other forms of discrimination too.

¹⁶ Indeed, such a view cannot be taken that all of the given economic groups use wage discrimination against women, as well as it cannot be considered that all the discriminating are men or that all men discriminate women.

The confirmation that Poland is a country with a dominant position of men and patriarchal approach to the role of women may also be found in the research results of Polish General Social Survey PGSS and World Values Survey. To the statement included in the survey: “the husband's role is to earn money, the wife's role is to take care of the home and family” 42,1% of the Poles surveyed in 2008 replied that they strongly agree or that they agree. In international research – World Values Survey covering the period 2010-2014, 26,1% of the Poles agreed with the statement that “when employment is decreasing, men should take precedence over women in obtaining it” and 16,5% had no opinion on the issue. In the CBOS research already cited above – to the question “would you like your wife (partner) to quit a job if you earned enough to sustain your family at the satisfactory level?” in 2006, 33% of men said that definitely yes and 23% rather yes. In 2013, 32% of men supported the statement definitely yes and 29% rather yes (CBOS, 2013, p. 17). Thus in comparison to the base period, not a decrease but a percentage increase of men preferring the traditional family model occurred.

An important argument that confirms the acceptance of the traditional family role in Poland, not only by a large part of men but also a large part of women, are the results of the last parliamentary elections in 2015. Among 8 political parties fighting for seats in the Polish parliament only 3 presented slogans concerning gender equality on the labor market, including the same pay for equal job in their programs. Out of these parties, only one won seats in the Polish parliament. However, a party preferring traditional roles of a woman and man, negatively relating to the fight against discrimination and even combating gender had the highest number of votes (Chelstowska *et al.*, 2015). Interesting results of public opinion surveys concerning the satisfaction derived by the surveyed people from the received pay are also worth mentioning. In the research on the human capital in Poland carried out in 2014 – the satisfaction derived from the received pay, both in particular age brackets or by the level of education or professional category, did not differ substantially from the satisfaction of men.

And so, using a scale of marks: 1 – very dissatisfied, 5 – very satisfied, the satisfaction of women from their full-time earnings equaled 3,33 whereas the satisfaction of men 3,46. The difference in favor of men was mere 0,13 pt. Taking age into account, the biggest difference in satisfaction from the pay between women and men was – 0,19 pt in favor of men in the 35-44 age group. In the 18-24, 25-34, 45-55 and 55+ age group, this difference equaled from 0,06 to 0,13. Taking into account satisfaction from the pay in relation to the level of education – the differences in favor of men amounted to 0,13 pt. in case of lower education, 0,23 pt. in case of secondary and 0,12 pt. in case of higher education. Taking professional category into account, the differences were 0,20 pt. for managers, 0,17 pt. for specialists and 0,24 pt. for middle management (Czernik, Turek, 2015, pp. 41-42). In the light of the presented results, one may claim that the women questioned did not perceive wage discrimination. Similar conclusions can be drawn from analyzing the Social Diagnosis. The percentages of men and women feeling discriminated because of their sex in the period 2000-2015 were almost identical. In 2015, it was 1,5% for women and for 1,6% men. Even if we take into account the analysis regarding only working women and we compare the feeling of discrimination of men and women of the same job experience and level of education - the percentage of women feeling discriminated did not deviate significantly from the percentage of men. In 2015, the percentage of women feeling discriminated equaled 1,9% compared with 1,5% of men, so the statistical difference was negligible (Diagnosis, 2015, pp. 401-403)¹⁷.

¹⁷ In this time, the analysis showed that within particular occupational groups of relatively equal competences, responsibilities and positions – the level of wage discrimination against women amounted to 22%. Taking into account the level of education increased this discrimination to 23% (Diagnosis, 2015, p. 401).

In the light of the presented results one may claim that, according to the theories presented in the paper, the discrimination existing in Poland results mainly from the well-established and broadly accepted by a large part of society social and cultural norms preferring the traditional role of man and women. The acceptance of these norms also results in a situation where a big part of both men and women also accept gender pay gap disfavoring women, claiming that it is a natural order of things, not discrimination.

Conclusion

The results of the statistical-economic analysis of gender pay gap formation in Poland over the period 1992-2015 showed that over the entire period of the study the remuneration of women was lower than the remuneration of men and the lowest R earnings ratio and the biggest pay gap occurred at the highest level of education and employment¹⁸. This wage differentiation disfavoring women was not a result of differences in education, job experience, position held, professional group, ownership sector, industry or company size. The carried out analysis took into account similar social-professional and demographic characteristics of both studied groups. In this respect, it is also useful to mention that the gender wage gap disfavoring women has been taking place in a situation of higher level of human capital of women compared with men, measured by means of the formal education. Therefore, if for all social-professional and demographic characteristics analyzed, and over the entire period of the study, the remuneration of women was lower than the remuneration of men and the assumed MDC discrimination coefficient was higher than 0 ($MDC > 0$) – it appears appropriate to state that wage discrimination of women exists in Poland and that this discrimination is of permanent character. The legal regulations in force in Poland – both EU and national – forbid all forms of discrimination of women on the labor market. The reasons for the existence, in spite of the legal regulations, of the indicated wage discrimination of women, according to the presented theories of discrimination, should be primarily seen in the entrenched socio-cultural norms, beliefs and stereotypes. The presented results of public opinion surveys indicate that the historically shaped views on traditionally perceived roles of women and men originating from the Christian-catholic tradition which is dominant in Poland gain the acceptance of large sections of society. In the group accepting the role of the father – the breadwinner and the role of the women as the wife, mother and caregiver, there are both economic entities being the source of discrimination of women and the discriminated women. The acceptance of the role of the man as the main breadwinner of the family equals here the acceptance of his dominant role in the professional sector. In this context, higher remuneration of an employee – a man than an employee – a woman, even with similar social-professional characteristics is a natural order of things and as such, gains acceptance of a large part of both men and women, including the discriminated.

It seems that this widespread acceptance of the traditional role of the man in Poland also results in a situation where a large part of women – in spite of the indicated wage discrimination – do not feel discriminated on the labor market and the satisfaction of women derived from the received pay is comparable with the satisfaction of men. The obtained results of the statistical-economic analysis and the results of public opinion surveys together with relating them to the theory of wage discrimination allowed positive verification of the research hypothesis about permanent wage discrimination against women existing in Poland resulting mainly from the well-established and broadly accepted by a large part of society socio-cultural norms. The superiority of the socio-cultural norms over the formal anti-discrimination laws in force in Poland also justifies the statement that the phenomenon of

¹⁸ The pay gap here equaled over 30%.

wage discrimination is going to continue. It is going to be accepted and strengthened by particular social groups. The change of presumptions concerning traditional gender roles among a wide range of stakeholders – both the discriminating and the discriminated, does not seem possible in the nearest future.

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