DOI: 10.21005/oe2019.95.2.02

FOLIA POMERANAE UNIVERSITATIS TECHNOLOGIAE STETINENSIS
Folia Pomer. Univ. Technol. Stetin., Oeconomica 2019, 353(95)2, 17–32

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THE GENDER GAP IN PENSIONS IN ITALY AND POLAND

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Summary. The article discusses the gender pension gap understood as the difference between the amounts of pensions received by men and women, focusing on Italy and Poland. It analyzes the inequalities and changes in men's and women's pensions and identifies the causes of such inequalities. As a result of the analysis, an attempt is made to identify the most important factors affecting inequalities in the pension amounts. The study finds that the retirement age gap and the related years in employment figures for men and women have a significant impact on the pension gap, in addition to the existence of the pay gap between the two sexes. Life expectancy and the working and post-working age population structure are factors that affect the pension gap even further. A comparison between Italy and Poland allows for the conclusion that although the pension gap is present in both the countries, the former presents a lower one than the latter. Moreover, the actions planned to be taken in Italy are bound to reduce the gap even further. On the contrary, not only is Poland's pension gap widening, but there are also few factors likely to restrain it in the future.

Key words: gender gap, pension system, pension gap.

INTRODUCTION

Modern economies, including the highly developed ones, face numerous difficulties, also in the area of the economic inequalities between men and women. One of the major challenges in here are the inequalities in the pension amounts received. Despite many reforms implemented in Italy, including in 1992, 1995 and 2012 (Plak 2014), and in Poland in 1999, 2012, 2014 and later, no equality in the pensions of men and women has been achieved (Garbiec 2017).

The aim of the article is to analyze the inequalities and changes in men's and women's pensions in Poland and Italy and identify the causes of such inequalities. The choice of pension inequality was dictated by the relatively small number of publications dealing with this problem, as well as the desire to highlight the need for changes aimed at bridging the existing gap.

The combination of the effects of the economic crisis and population ageing has put a substantial pressure on the public finances in all the advanced countries. In countries like Italy, the problem is additionally worsened by the high debt-to GDP ratio and the inequalities in accessing the economic resources for the elderly. Indeed, women pensioners in Italy face higher risks of poverty than men (similarly to other countries, even those that prohibit different treatment based on gender) (Ginn 2004; Frericks and Maier 2008). Despite this evidence, the literature on the gender gap in pensions is relatively poor (Folbre et al. 2005; Adami et al. 2013). Female behaviors with respect to employment and retirement have been observed as a result of the interaction between a plurality of factors and spheres of life, first of all between work and family (Lumsdaine and Mitchell 1999). Some researchers have attempted to identify the impact of the asymmetric division of domestic activities in the family on careers, access to pension schemes, and the amounts of the benefit (Damman et al. 2015).

THE PROBLEM OF THE PENSION GAP IN POLAND AND ITALY

In the analyzed case, the pension gap is defined as the difference between the values of men's and women's pensions. The gender gap in pensions is calculated as the difference between the mean pension income of men and women over the mean pension income of men.

The possible causes of the pension gap abound. However, the most important of them include:

- earnings,
- retirement age,
- life expectancy,
- fertility rate,
- years of employment,
- fixed-term work,
- structure and numbers of the working and post-working age population.

The factors affecting the degree of the pension gap are analyzed further on in the paper.

The choice to compare Poland and Italy was dictated by certain common characteristics of the pension gap between the two countries. According to the OECD, the average pension gap in the years 2010–2018 was 21% for Poland and 28% for Italy.

Tables 1, 2 contain data on the value of the pension gap in Italy and Poland.

Table 1. The pension gap in Italy in 2015–2018

Year	Average amount of pension [EUR]		Pension gap in nominal value [EUR]	Pension gap [%]	Ratio of women's pension to men's pension [%]
	men	women			
2018	2,259	1,687	572	25.0	74.7
2017	2,288	1,661	627	27.4	72.6
2016	2,295	1,583	712	31.0	69.0
2015	2,017	1,573	444	22.0	78.0

Source: Authors' own calculations based on INPS.

Table 1 shows that there is still a gender pension gap in Italy. Also, detailed statistical data confirm that the gender gap is found both in the private and the public sectors. In Italy, the difference in the value of the pension is linked, *inter alia*, to women's participation in the labor market, the levels of which are among the lowest in Europe, with wide differences being linked to the levels of completed education (Bettio and Villa 1999; Cutuli and Scherer 2014).

Table 2. The pension gap in Poland in 2015–2018

Year	Average amount of pension [PLN]		Pension gap in nominal value [PLN]	Pension gap [%]	Ratio of women's pension to men's pension [%]
	men	women			
2018	2,717	1,818	899	33.1	66.9
2017	2,583	1,747	836	32.4	67.6
2016	2,526	1,722	804	31.8	68.2
2015	2,481	1,698	783	31.6	68.4

Source: Authors' own calculations and elaboration based on ZUS (Polish Social Insurance Institution) reports. The structure of benefits paid by ZUS after adjustments between 2012 and 2019.

Table 2 shows that the pension gap exists in Poland, as well, and that in the years 2015–2018 it demonstrated an increasing trend. The nominal value increased from PLN 783 in 2015 to almost PLN 900 in 2018. Moreover, the ratio of women's pensions to men's pensions tended to decline and in the analyzed period it dropped from more than 68% to less than 67%. This indicated a deepening of the already difficult economic situation of post-working age women.

The existence of the pension gap may be justified by objective factors. However, a comparison of retirement benefits for men and women to their average income illustrates a more serious problem with the occurrence of this gap (Table 3). One of the major problems of the pension system is the low replacement rate after reaching retirement age. According to OECD data, the average retirement benefit in relation to the average income for an employee starting work in 2016, provided that constant and full remuneration is ensured until retirement, from public funds and private funds together will be 38.6% in Poland and 83.1% in Italy (OECD 2019).

Table 3. Comparison of the average monthly pension of women and men with the average monthly income in Italy between 2015 and 2018

Year	Average salary [EUR]	Women's pension [EUR]	Ratio of women's pension to average salaries [%]	Men's pension [EUR]	Ratio of men's pension to average salaries [%]
2018	2,467	1,687	68.39	2,259	91.58
2017	2,463	1,661	67.43	2,288	92.89
2016	2,487	1,583	63.65	2,295	92.28
2015	2,470	1,573	63.70	2,017	81.68

Source: Own calculations on basis of Average annual wages in Italy from 2000 to 2018 (in euros), https://www.statista.com/statistics/416213/average-annual-wages-italy-y-on-y-in-euros/, access: 20.12.2019.

Over the recent years, the average monthly income in Italy has decreased from EUR 2,470 in 2015 to EUR 2,467 in 2018.

Table 4 shows that between 2013 and 2018 the share of women's pensions did not exceed 50%. What is worse, the ratio of women's pensions to the average income decreased year by year. In 2018, this ratio in Poland was below 40%.

Importantly, the gender pay gap (calculated as the difference between the average gross hourly earnings of male and female employees, expressed as % of male gross earnings) was 7.2% in Poland and 5% in Italy in 2017. By way of comparison, in the EU-28 as a whole women were paid an average of 16.0% less than men (Eurostat 2019). As regards salary equality for similar work, however, Italy ranked 125th and Poland ranked 116th out of a total of 153 countries according to the latest Global Gender Gap Report 2020.

Table 4. Comparison of the average monthly pension of women and men to the average monthly income in Poland between 2015 and 2018

Year	Average salary [PLN]	Women's pension [PLN]	Share of women's pension in average salaries [%]	Men's pension [PLN]	Share of men's pension in average salaries [%]
2018	4,585.03	1,817.75	39.65	2,717.09	59.26
2017	4,271.51	1,747.25	40.90	2,582.96	60.47
2016	4,047.21	1,722.09	42.55	2,525.67	62.41
2015	3,899.78	1,698.09	43.54	2,481.18	63.62

Source: Own calculations based on Communiques on the average wage in the national economy between 2015 and 2018, GUS (Statistics Poland).

CAUSES OF THE PENSION GAP IN POLAND AND ITALY

The gender gap in pensions is a logical extension of the wage inequalities women experience during their working life. In Italy, equal pay and gender equality legislation has been in place since 1991. Despite that, in 2017, jobs held by men accounted for 59% of the total number, and men's median hourly wage of EUR 11.61 was 7.4% higher than that of women (EUR 10.81). In Italy, the pay gap in the public sector amounts to 4.1%, thanks to labor relations being regulated by national contracts, while the figure in the private sector is 20.7%. In fact, there is no law that obliges companies to publish employee wages, as has been the case in other European countries for 2 years already. Table 5 contains data on the percentage difference in the wages of men and women in Italy and Poland.

Table 5. Gender wage gap (gross earnings median) in 2012, 2014 and 2016 in %

Country	2012	2014	2016
Italy	11.1	5.6	5.6
Poland	10.6	11.1	9.4

Source: Gender wage gap (gross earnings median), https://stats.oecd.org/Index.aspx?DataSetCode =AV_AN_WAGE, access: 21.12.2019.

Table 5 shows that both Italy and Poland demonstrated differences in the salaries of men and women. However, although the gap was halved in Italy by 2016, it still remained at a relatively high level of nearly 10% in Poland.

Another important factor affecting the amounts of the retirement benefit is years in employment and the time of retirement. In 2018, the average retirement age in OECD countries for a person with a full career who entered the labor market at the age of 22 was 63.5 years for women and 64.2 years for men. One distinctive characteristic of the process of the Italian pension reform is that most of the relevant legislative changes were established during the country's financial crisis with the hope of reassuring the financial markets that Italy's public finances were sustainable. Italy provides old-age pension payable upon reaching the statutory age to workers with a record of at least 20 years of insurance premium payments. For 2019, the retirement age was set at 67 years (with an increase of 5 months compared to 2018) for all categories of workers, i.e. both men and women, and both employees and the self-employed. As life expectancy increases, the age limit to be reached in order to access the old-age pension grows, as well.

Consequently, starting in 2019 adjustments are made every two years. Therefore, there is a double requirement in place of 67 years of age and a record of 20 years of insurance premium payments. This requirement is valid in principle, even if there are some exceptions. In actual fact, the age of access to the old-age pension varied from 66 to 71 years in 2019. Before the old-age pension system, Italy adopted a retirement pension system offered to people with a record of 35 years of premium payments and 62 years of age, or with a record of 40 years of premium payments.

Compared to the old-age pension, there are obviously some exceptions to the requirements, such as early retirement. This means that it is possible to retire before the age of 67 and obtain your old-age pension provided you have accumulated a certain number of contributions. In 2019, male workers required at least 42 years and 10 months of contributory record, regardless of the age, and female workers required at least 41 years and 10 months of contributory record, regardless of the age. Unlike what happens with the old-age pension, in this case, there is a difference in the requirements between the two sexes. Finally, there is a series of additional options that allow workers to anticipate their pension compared to the retirement age. One of the most recent is the so-called “Quota 100”. Introduced in 2019, it allows pension to be obtained at the age of 62 years and with a record of 38 years of contributions. This is a temporary measure, scheduled for the next three years.

A further hypothesis is the “Women's Option”, available to women only, which grants access to pension to those with a record of at least 35 years of contribution and 58 years of age in case of employees, and 59 years of age in case of the self-employed, as an alternative to other forms retirement, provided that the entitlements were accrued by 31 December 2018. In Italy, satisfying the requirements for obtaining your pension does not in itself imply that you must retire. With particular reference to the old-age pension, that is to say that the worker is not obliged to retire upon reaching the age of 67: on the contrary, the law allows for continuation of work even beyond one’s professional career until the individual reaches an age at which the so-called forced retirement is triggered. In general terms, for private sector workers this threshold is 71 years of age. For public sector workers, on the other hand, there is a tendency to favor retirement upon reaching the entitlement to one’s old-age pension.

In Poland, two conditions must be met to receive the entitlement to retirement benefits. The first is the minimum contributory record of 22 years for women and 25 years for men, and the second is the retirement age of 60 years for women and 65 for men, respectively (Serwis emerytalny 2019). In 2017, Poland restored the statutory retirement age of 65 years for men and 60 for women (OECD 2017) from the earlier age of 67 for both the sexes. Since then, the difference in the retirement age between men and women in Poland has been one of the highest in Europe.

According Table 6, the average retirement age in Italy in 2018 was 67 for men and 66.6 for women, while in Poland it was 65 for men and 60.8 for women.

These factors are likely to hamper the bridging of the employment gender gap at older ages: among the 55- to 64-year-olds, employment rates were a mere 38% for women and 56% for men in Poland in 2016, compared to the OECD average of 51% and 68%, respectively. According to OECD forecasts, while in Italy the pension gap is expected to decrease, Poland is expected to see the pension gap remain at the same level and continue to be one of the highest in Europe (OECD 2017).

Table 6. Average early and normal retirement age in Italy and Poland in 2018

Country	Sex	Early retirement age	Normal retirement age
Italy	men	63.6	67.0
	women	63.6	66.6
Poland	men	n.a.	65.0
	women	n.a.	60.8

Source*:* OECD, Pensions at a glance (2019), p. 139.

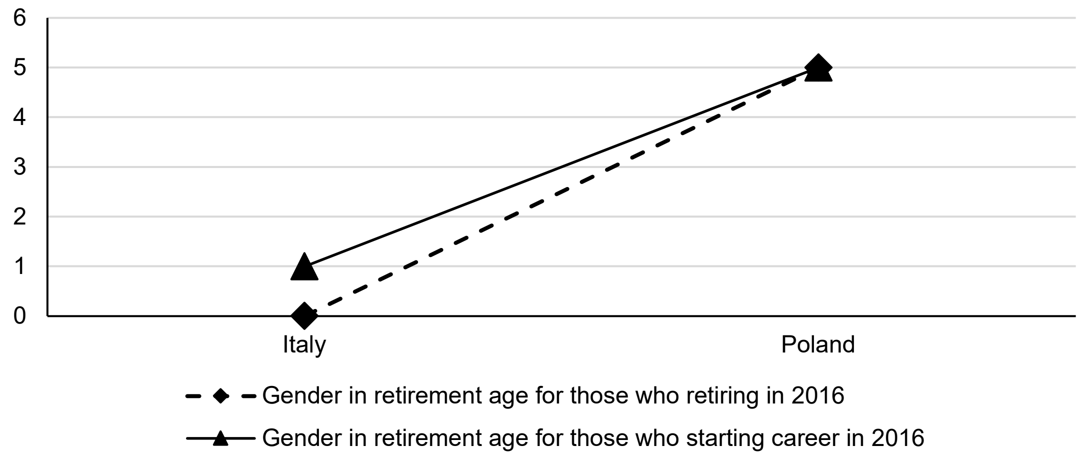

Fig. 1. The gender gap with regard to the retirement age in Italy and Poland for those retiring in 2016 and those starting their careers in 2016
Source: OECD, Pensions at a glance (2017), p. 1, https://www.oecd.org/poland/PAG2017-POL.pdf.

Figure 1 shows that the gender gap with regard to the normal retirement age for those retiring in 2016 was larger in Poland. Poland is also going to have a larger gender gap in case of those starting their careers 2016. In Italy, the new retirement age is 67 for both men and women, which is why the country is going to have no gender gap with regard to the normal retirement age in the future. By 2050, the retirement age is expected to be extended to 70 for both the sexes (Plak 2014).

The data presented above suggest that in Poland women are retiring faster than men, which leads to fewer years in employment and, thus, lower pensions than those of men.

Moreover, the longer life expectancy of women is another factors reducing the amounts of their pensions. According to estimates for Italy, men and women born in 2018 will live an average of 80.9 and 85.2 years, respectively (I.Stat 2019). In Poland, these figures are expected to be 73.8 and 81.7 years, respectively (GUS a 2019).

The persistent imbalance with regard to the retirement age of men and women combined with life expectancy issues (Table 6) also contribute to the fact that women's pensions are lower than those men. There are important grounds for analyzing gender inequalities in pensions, also considering that women enjoy a longer life expectancy and thus represent the majority of the ageing population. Between 2012 and 2017 in Italy, the average life expectancy of women remained (almost) steady at approx. 85.3 years. On the other hand, the life expectancy of men slightly increased from 79.8 years in 2012 to 81 in 2017. Nevertheless, the difference between the two sexes in 2017 it was still 4.6 years.

Table 7. Life expectancy at birth for men and women Italy and Poland between 2012 and 2017

Country	Gender/Difference	2012	2013	2014	2015	2016	2017
Italy	men	79.8	80.3	80.7	80.3	81.0	81.0
	women	84.8	85.2	85.6	84.9	85.6	85.6
	difference	5.0	4.9	4.9	4.6	4.6	4.6
Poland	men	72.6	73.0	73.7	73.5	73.9	73.9
	women	81.1	81.2	81.7	81.6	82.0	82.0
	difference	8.5	8.2	8.0	8.1	8.1	8.1

Source: Own calculations on the basis of the World Bank data, https://data.worldbank.org/ indicator/ /SP.DYN.LE00.FE.IN?end=2017&start=2012, access: 21.12.2019 and https://data.worldbank.org/indicator/ /SP.DYN.LE00.MA.IN? end=2017&start=2012, access: 20.12.2019.

Table 7 shows that Polish women lived over 8 years longer than Polish men, but shorter than Italian women. Some studies have shown that retirement decisions are not only determined by individual preferences, but also by the structure and needs of the family unit (Saraceno 2003). The fertility rate is another factor worth analyzing, as the literature indicates that the burden of domestic work is still concentrated on the female component and that the availability or lack of support services for women with children has a decisive effect on the extension of careers (Saraceno Naldini 2011). Fron this point of view, the fertility rate affects retirement choices, as well (Radl Himmelreicher 2015), especially with the excessive private assistance costs (Esping-Andersen 1999, SaracenoNaldini 2011).

In Italy, the fertility rate during the last years is both very low and decreasing from 1,43 kids per woman in 2012 to 1.34 in 2017. In Poland, it was 1.33 and 1.39 respectively (Table 8).

Table 8. Fertility rate in Italy and Poland between 2012 and 2017

Country	2012	2013	2014	2015	2016	2017
Italy	1.43	1.39	1.37	1.35	1.34	1.34
Poland	1.33	1.29	1.32	1.32	1.39	1.39

Source: Worldbank, http://api.worldbank.org/v2/en/indicator/SP.DYN.TFRT.IN?downloadformat=csv, access: 18.12.2019.

Staying on paternity or childcare leaves, mainly by women, results in a smaller number of years in employment and a smaller record of insurance contributions, which also affects women's pensions.

Furthermore, the low female labor market participation rate results from Italian women's higher likelihood of deciding to not re-enter the labor market after the birth of a child compared to other nationalities (Anxo et al. 2007, Solera 2009). This means that retirement entitlements only apply to a specific group of women, namely those who prolong their working careers. To offset this trend, since the 1990s, many Western countries including Italy have expanded their pension systems by enacting rules that are explicitly aimed at neutralizing the differences between men and women. More specifically, these regulations have tried to hit female disadvantages resulting from discontinuous careers and associated with longer periods of inactivity (Natali 2015). These measures were inspired by the logic of the "a posteriori compensation" of the disadvantages that women accumulate during their working career, even if they did not change the gender asymmetries within the family from which the disadvantages largely derive (Borella and Fornero 2002). In the latest reforms, this compensation has been gradually eliminated. Although on the one hand this initiative has shown a sign of overcoming the paternalistic attitude that formed the basis for the a posteriori compensation, on the other hand, however, the risk of increasing the gender gap with respect to pension benefits has increased. In fact, the measure – meant to eliminate retirement age inequalities between the sexes – has not been accompanied by any serious attempt to face the female disadvantages in the labor market, which were more marked in Italy than in other countries (Bekhouche et al. 2013).

Italian women's frequent decision not to re-enter the labor market after the birth of a child can be one of the reasons why more women than men undertake temporary work.

Table 9. Male temporary employment as a percentage of male employment

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	6.0	6.3	6.5	7.5	8.3	8.6	8.5	8.5	8.3	7.8
Poland	5.0	5.2	5.0	4.7	4.5	4.2	3.8	3.5	3.4	3.5

Source: OECD Labour Force Statistics (2019).

Table 9 suggests that the number of men undertaking fixed-term employment was declining. This share was slightly higher in Italy, although it remained relatively low and did not exceed 8% in 2018.

Table 10. Female temporary employment as a percentage of female employment

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	30.5	31.0	31.2	32.2	32.8	32.9	32.8	32.6	32.4	31.9
Poland	13.1	13.1	12.5	12.2	11.8	10.7	9.6	9.1	9.5	9.2

Source: OECD Labour Force Statistics (2019).

The data presented in Tables 9 and 10 show that both in Italy and Poland the ratios of women employed under fixed-term contracts to total female employment were higher than the ratios of men employed under fixed-term contracts to total employment of men. However, this ratio was approx. three times as high for Italian women as it was for Polish women in the studied period.

Table 11. Share of women in temporary employment in Italy and Poland

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	77.7	77.1	76.9	75.3	74.1	73.4	73.5	73.5	74.0	74.8
Poland	68.4	66.9	66.9	67.6	67.9	67.1	67.0	68.0	69.4	68.5

Source: OECD Labour Force Statistics (2019).

Based on the data in Table 11 regarding the ratio of women to total temporary employment, both in Italy and Poland women accounted for well over half of fixed-term workers.

Temporary employment increases the risk of interruptions in employment and may be associated with lower wages and lower contributory records. In Poland, for example, mandatory pension insurance contributions do not extend to temporary work regulated by civil law (OECD 2019).

One of the reasons for the aforementioned observations is the fact that Italian women are faced with the need to raise children much more often, which may be related to a shortage of nurseries and kindergartens.

Women's lower employment rates both in Italy and Poland are confirmed by the data presented in Table 12.

Table 12. Female and male employment as a percentage of total employment in Italy and Poland

Country	Sex	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	men	59.7	59.4	59.0	58.5	58.2	58.1	58.2	58.1	58.0	57.9
	women	40.3	40.6	41.0	41.5	41.8	41.9	41.8	41.9	42.0	42.1
Poland	men	55.0	55.4	55.6	55.5	55.5	55.3	55.1	55.2	55.2	55.1
	women	45.0	44.6	44.4	44.5	44.5	44.7	44.9	44.8	44.8	44.9

Source: Authors' own elaboration based on OECD, Labour Force Statistics (2019).

A comparison of Tables 12 and 13 allows for the conclusion that although there were more working age women than men in Italy, the male employment rate was higher in 2018. In Poland, this difference was less pronounced.

Table 13. Number of working and post-working age people in Italy and Poland at the beginning of 2018

Country	Gender	In working age 18–66	Share [%]	In post-working age 67 and above	Share [%]
Italy	men	19,125,939	49.8	5,253,251	42.9
	women	19,294,420	50.2	7,004,006	57.1
	total	38,420,359	100	12,257,257	100
Poland	gender	in working age 18–59 for women and 18–64 for man	share [%]	in post-working age 60 and above for women and 65 and above for men	share [%]
	men	12,470,748	53.0	2,570,930	32.2
	women	11,046,895	47.0	5,424,333	67.8
	total	23,517,643	100	7,995,263	100

Source: Authors' own elaboration and calculations based on GUS and I.Stat data, https://bdl.stat.gov.pl/ /BDL/dane/podgrup/tablica, access 21.12.2019, and GUS, istat.it http://demo.istat.it/pop2018/index_e.html, access: 21.12.2019.

Another essential aspect, apart from the social structure, is changes observed in the ratio of post-working age population to working age population, since retirement systems are pay-as-you-go systems.

Table 14 presents the ratio of post-working age population to working age population in Italy in Poland.

Table 14. The ratio of post-working age population to working age population in Italy and Poland between 2012 and 2018

Country	2012	2013	2014	2015	2016	2017	2018
Italy	32.7%	33.1%	33.7%	34.3%	34.8%	35.2%	35.7%
Poland	26.5%	27.6%	28.8%	30.0%	31.2%	32.5%	33.7%

Source: GUS, Population in pre-working age (14 years and under), working and post-working age by sex, https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica, access: 21.12.2019, I.Stat, Demographic indicators, old age dependency ratio, http://dati.istat.it/index.aspx?lang=en&SubSessionId=29e1230b-e3f3-40b0-8ccd-00a5cebc5dfd#, access: 21.12.2019.

Table 14 shows that the ratio of post-working age population to working age population in Poland increased, which may have a significantly detrimental effect on pensions and deepen the size of the pension gap in the future. The reason why women are more often employed on a temporary basis may be related to having to raise children and facing difficulties returning to the labor market. This may be due to the insufficient number of pre-school institutions and nurseries.

As for Italy, the development of early childhood services has been encouraged for several years both at national and European levels. Since 2002, the Barcelona European Council has defined as a goal for member states that the places available in early childhood facilities should cover at least one-third of the potential demand, i.e. 33% of children under the age of 3 by 2010, reconciliation of family and professional life should be supported and greater participation of women in the labor market should be promoted. In 2016–2017, 13,147 socio-educational services for children were registered in Italy, offering a total of approx. 354,000 places. Of these, just over half were public, and 48% were private. Most early childhood services took the form of kindergartens, with the so-called supplementary services contributing 9% to the overall offer.

Among the 11,017 nursery schools surveyed in Italy, there were slightly over 2,000 facilities for children aged between 2 and 3, and approx. 220 corporate nurseries. Within the 2,130 supplementary early childhood services, instead, almost half were defined as "play areas", more than 800 as "services in the home environment", or managed in a home, and 280 as "child and parent centers" where a related adult was expected to accompany the child.

In relation to the target population, the overall budget was below the 33% parameter set by the European Union: in fact, the available places only accounted for 24% of children below 3 years of age. In 2017, the total Italian population was 60,536,709. This meant that there were 5,8 places for children per 1,000 citizens.

For the sake of comparison, Polish nurseries and children's clubs offered 106,500 places in 2017, of which 53% were made available by private entities and 47% by public sector institutions (GUS a 2017). According to GUS (Statistics Poland) data, the country had a population of 38,433,600 in that year, which meant that there were 2.8 places for children in nurseries per 1,000 inhabitants. Moreover, there were more than 22,000 pre-school institutions in Poland with 358,418 places available to children, which meant that there were 9.3 kindergarten places per 1,000 citizens. It is also worth adding that more than 80% of children in nurseries received partial or total financial support from municipalities.

Pension inequalities can also be affected by the type of assets invested in private pension programs. Based on the data shown in Table 15 it can be concluded that Poles invested more funds in equity and private pension programs by way of purchasing shares than Italians did, which is a type of behavior that carries a higher investment risk.

Table 15. Allocation of assets in funded and private pension plans in equities (the data refer to investments in pension funds only)

Country	Expo-sure	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	total	11.2	15.5	16.7	15.3	17.0	19.2	19.7	19.5	19.3	20.1	18.2
Poland	direct	21.5	30.2	36.3	30.7	34.8	41.5	81.9	82.3	82.8	85.2	84.9

Source: Pension Market in Focus 2019, Table A.B.8.

The rates of return achieved between 2008 and 2018, shown in Table 16, provide evidence of the increased risk of retirement investments carried by Polish and Italian private pensions plans.

Table 16. Annual nominal investment rates of return of all funded and private pension plans, 2008–2018

Country	Exposure	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy*	total	–3.2	6.4	3.1	0.4	6.4	4.5	5.7	1.8	2.5	2.9	–1.7
Poland**	direct	–14.7	13.0	10.5	–4.9	4.0	3.4	–	–6.7	9.3	17.0	–10.0

* The data refer to pension funds only; investment returns are net of taxes.
** Investment returns are net of taxes.
Source: Pension Market in Focus 2019, Table A.B.6.

The higher risk carried by the Polish pension funds resulted from a higher level of investment in shares, which was one consequence of changes in law.

As shown in Table 17, the Polish pension system in 2019 was organized in such a way that all forms of saving funds for one's retirement, except for the obligatory first pillar, were in fact voluntary, with the exception of the PPK which is quasi-voluntary in nature as its participants are automatically entered into the program with the opt-out option at their discretion. In Italy, additional pension system forms were voluntary in 2019, as well, but they were characterized by being more frequently organized by the employer who participated in the system, and by the contributions being protected on a more regular basis than they were in the case of the Polish funds.

The literature shows that the third pillar of the Polish pension system does not effectively protect against the risks associated with the old age, and thus does not reduce the pension gap (Jedynak 2016).

CONCLUSIONS

Based on the analyses performed in this study it was found that the pension gap existed both in Italy and Poland. The article attempted to identify the factors affecting the gap, after which it was established that these factors were similar for both the countries, although the similarities did not apply to all the aspects discovered. One of the most important factors affecting the pension gap appeared to be the retirement age. While Italy has extended the working age until 67 for both men and women, Poland – after an initial extension to 67 years of age – has now reduced it, again, with women retiring earlier and staying retired longer than men.

The study established several other aspects of the problem discussed herein, for instance that Poland has a larger pay gap between men and women than Italy does, which is another factor contributing to the imbalance. The other of the identified factors have less significant effects on the existing pension gap. One important conclusion is that Italy's pension gap is expected to narrow due to the legal measures undertaken, while Poland's gap will remain the same. One way to reduce the pension gap in Italy even further would be to increase the number of kindergarten and nursery places available to children.

Table 17. Comparison of Italian and Polish pensions systems

Country	Administrative national specifications	OECD classification			National administrative specifications of the plan/ fund			
	category	type of fund (pension fund / pension insurance contract / bank managed fund / investment company managed fund)	mandatory, quasi-mandatory or voluntary	DB – defined benefit traditional, defined benefit hybrid / mixed, DC – defined contribution protected or defined contribution unprotected	the employer can or must contribute (yes / no) / the employer or social partners establish the plan (yes / no)	type of guarantee (benefit level / annuity purchase price / capital guarantee / fixed return / absolute minimum return /relative minimum return / none)	risk-sharing (plan sponsor / active members / deferred members / pensioners / none)	guarantor (plan sponsor / pension fund / insurance company / none)
Italy	pre-existing autonomous pension funds (fondi pensione preesistenti autonomi)	pension fund pension fund	voluntary voluntary	DB traditional DC	yes / yes yes / yes	benefit level	none	plan sponsor
	pre-existing non autonomous pension funds (fondi pensione preesistenti non autonomi)	book reserve / non-autonomous fund	voluntary	DB traditional	yes / yes	benefit level	none	plan sponsor
	contractual pension funds (fondi pensione negoziali)	pension fund	voluntary	DC protected, DC unprotected	yes / yes	annuity purchase price	none	pension funds
	occupational plans served by open pension funds (fondi pensione aperti)	pension fund	voluntary	DC protected, DC unprotected	yes / yes	annuity purchase price	none	pension fund
	personal plans served by open pension funds (fondi pensione aperti)	pension fund	voluntary	DC protected, DC unprotected	no / no	annuity purchase price	none	pension fund
	individual pension plans provided through life insurance contracts (PIPs)	pension insurance contract	voluntary	DC protected, DC unprotected	no / no	annuity purchase price	none	insurance company

Table 17. Comparison of Italian and Polish pensions systems (cont.)

Country	Administrative national specifications	OECD classification			National administrative specifications of the plan/ fund			
	category	type of fund (pension fund / pension insurance contract / bank managed fund / investment company managed fund)	mandatory, quasi-mandatory or voluntary	DB – defined benefit traditional, defined benefit hybrid / mixed, DC – defined contribution protected or defined contribution unprotected	the employer can or must contribute (yes / no) / the employer or social partners establish the plan (yes / no)	type of guarantee (benefit level / annuity purchase price / capital guarantee / fixed return / absolute minimum return / relative minimum return /none)	risk-sharing (plan sponsor / active members / deferred members / pensioners / none)	guarantor (plan sponsor / pension fund / insurance company / none)
Poland	open pension funds (OFE) since Aug 2014 contributions to OFE are voluntary (II pillar)	pension fund	voluntary	DC unprotected	no / no	none / benefit level indirectly (OFE account is combined with 1st pension pillar and should be no less than legal minimum pension)	none	none / the state (indirectly)
	employee pension plan (PPE) (III pillar)	pension fund pension insurance contract Bank / Inv. co. managed fund	voluntary	DC unprotected	yes / yes	none	none	none
	individual retirement account (IKE) (III pillar)	pension fund pension insurance contract Bank / Inv. co. managed fund	voluntary	DC unprotected	no / no	none	none	none
	individual pension insurance account (IKZE) – introduced in amended pension law in May, 2011. The first IKZE started to operate in 2012 (III pillar)	pension fund pension insurance contract Bank / Inv. co. managed fund	voluntary	DC unprotected	no / no	none	none	none
	employee capital plans (PPK) – not operating in 2018 – completing the third pillar	specialised investment fund unit-linked investment fund (by insurance companies) voluntary pension fund (by pension fund companies)	voluntary	DC unprotected	yes / yes	none	none	none

Source: OECD c, Overview of funded and private pension systems, http://www.oecd.org/finance/private-pensions/Overview-Funded-Private-Pension-Systems-2018.pdf, access: 18.12.2019, 28.10.2019, 22 and 34.

A comparison of the identified differences in Poland's and Italy's pension gaps with the average income in both the countries indicates that Poland's pension gap may potentially cause substantial impoverishment of retirement-age women and lead to the social exclusion and marginalization of the retirement-age population.

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LUKA EMERYTALNA W EMERYTURACH MĘŻCZYZN I KOBIET WE WŁOSZECH I W POLSCE

Streszczenie. Artykuł poświęcony został luce emerytalnej, rozumianej jako różnica między wysokością emerytur otrzymywanych przez mężczyzn i kobiety, ze szczególnym uwzględnieniem Włoch i Polski. W artykule dokonano analizy nierówności i zmian w emeryturach mężczyzn i kobiet oraz podjęto próbę identyfikacji przyczyn tych nierówności. W wyniku przeprowadzonego badania można stwierdzić, że poza nierównościami w wysokości wynagrodzeń, różnica w wieku przejścia na emeryturę mężczyzn i kobiet oraz długość czasu pracy mają znaczący wpływ na lukę emerytalną. Kolejnymi czynnikami mającymi wpływ na wysokość luki emerytalnej są oczekiwana długość życia oraz struktura ludności w wieku produkcyjnym i poprodukcyjnym. Przeprowadzona analiza porównawcza luki emerytalnej we Włoszech oraz w Polsce pozwala także na stwierdzenie, że poza faktem istnienia luki emerytalnej w obu krajach, w Polsce jest ona wyższa. Ponadto działania podjęte we Włoszech dają szansę na zmniejszenie luki emerytalnej w przyszłości w przeciwieństwie do Polski, gdzie luka emerytalna może się zwiększać, co zwiększa ryzyko wykluczenia społecznego kobiet na emeryturze w przyszłości.

Słowa kluczowe: różnica między płciami, system emerytalny, luka emerytalna.