

IS POLAND A WELFARE STATE?

Jakub Sawulski

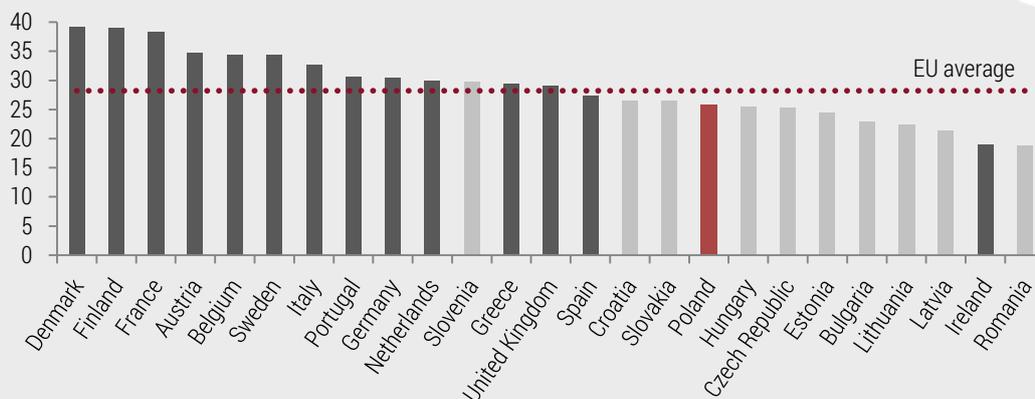
Abstract

We determine whether Poland is a welfare state by looking at social expenditures as a share of GDP, taking into account that the share tends to increase with the level of income. By this criterion Poland is a welfare state. The share of social expenditure in GDP is high in Poland compared to countries with similar income levels, although still lower than in the majority of wealthier EU Member States. The structure of social expenditure in Poland is marked by high pension expenditure. Education spending is close to the EU average. Low public health expenditure, on the other hand, diverges from EU standards. Following the introduction of the Family 500+ Programme, Poland has become one of the top EU spenders on family policy. The main challenge for social policy is to improve the quality of health care and limit the negative impact of certain types of social expenditure on labour force participation.

Key facts

- **25.8% of GDP** – this was the share of **social expenditure** in Poland in 2015. This is more than the average figure in the other Central and Eastern European (CEE) countries (24.3% of GDP), but less than the EU-15 average (28.2% of GDP).
- **13.5% of GDP** – this was the share of **pension expenditure** in Poland in 2015. This figure is 2.7 pp greater than the average in the other CEE countries. Pension expenditure is high in spite of the current low share of elderly citizens in Poland's population.
- **4.7% of GDP** – this was the share of **public health expenditure** in Poland in 2015. This figure is not only lower than the EU-15 average (6.9% of GDP), but also than the average in the other CEE countries (5.8% of GDP).
- **1.2–1.3% of GDP** – this is the annual **value of the Family 500+ programme**. Its introduction means a ca. 5% increase in social expenditure compared to 2015.

Social expenditure in Poland in comparison to the EU (% of GDP, 2015)



Source: own calculation based on Eurostat data.

Introduction

The process of economic transformation in Poland was accompanied by a debate on the state's role in the economy. In simple terms, this choice boils down to two options: adopting the (neo)liberal model, in which the state's responsibility for satisfying social needs is limited, or the welfare model, in which the state redistributes income and actively cares about the social security of its citizens. This article attempts to answer the question whether the term 'welfare state' could be applied to Poland.

There is no single and generally applicable definition of a welfare state. Therefore, it has been defined here as "a state which actively participates in securing and promoting the economic welfare of its citizens", in an attempt at presenting a condensed version of several, usually more lengthy definitions found in literature (see Frame 1). The welfare state may be measured based on two dimensions: effort (the amount of state expenditure allocated to this purpose) and results (e.g., the impact of state activity on reducing the poverty rate or income inequality levels). This article analyses only the first dimension, using the most common indicator to measure the extent of the welfare state: the share of social expenditure in GDP.

Social expenditure encompasses three categories of public expenditure:¹ social protection expenditure (such as pensions or social assistance), education expenditure and health expenditure. The following parts of the article analyse:

- the public sector's role in Poland's economy;
- the amount of social expenditure in Poland compared to other EU Member States;
- the amount and structure of expenditure per category: social protection, education and health;
- the impact of the Family 500+ Programme on the scope of the welfare state in Poland.

The situation in other EU Member States forms the background for analysis. The average social expenditure in all EU Member States has been adopted as a point of reference in establishing the extent of the welfare state. However, two groups of countries are also usually described: Central and Eastern Europe (sometimes also referred to as CEE countries) and the so-called EU-15, as the differences in wealth between new and old Member States significantly influence the scope of the welfare state. Relative figures (the ratio of expenditure to GDP) have been analysed instead of absolute ones (spending in EUR) as this is the only approach that ensures the comparability of data between countries. Due to the limited availability of data, the statistical analysis mostly covers the year 2015. However, the last chapter discusses the impact of the Family 500+ Programme, which was introduced in 2016, on the amount of social expenditure in Poland.

¹ Based on the so-called COFOG, i.e. Classification of the Functions of Government – a classification of public expenditure, broken down by function, which is generally applied in the EU.

Frame 1. Definition of a welfare state

The term 'welfare state' raises considerable controversy and source literature abounds in differing definitions. A comprehensive review thereof, together with the authors' commentary, may be found in R. Scharfenberg's volume (2008, pp. 350–59). One of the most important books on the subject is N. Barr's *Economics of the Welfare State*. In it, the objective of creating a welfare state is described as follows: "The welfare state exists to enhance the welfare of people who

- a) are weak and vulnerable, largely by providing social care,
- b) are poor, largely through redistributive income transfers, or
- c) are neither vulnerable nor poor, by organising cash benefits to provide insurance and consumption smoothing, and by providing medical insurance and school education".

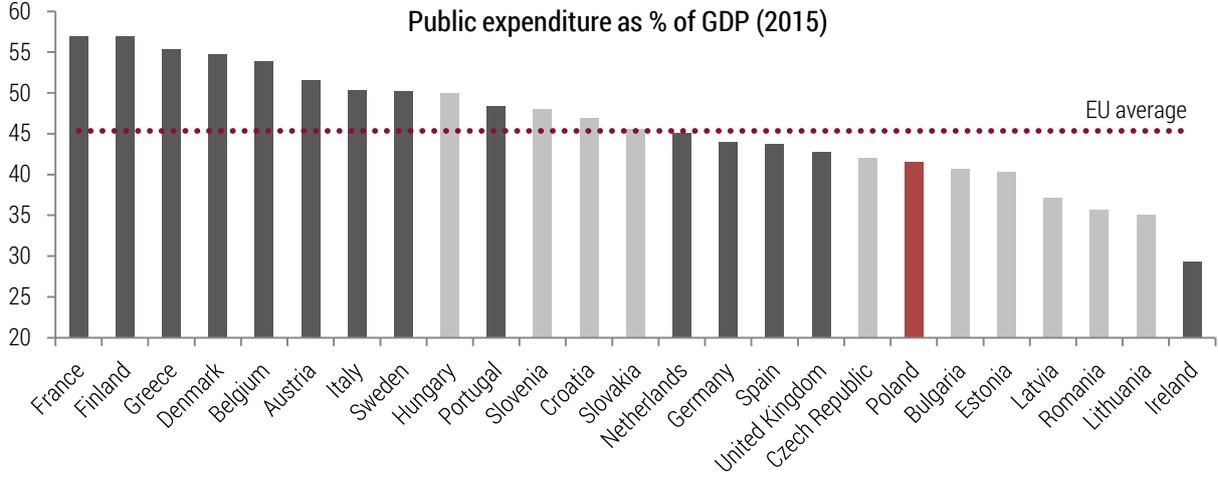
1. The share of public expenditure in the economy

The state's share in the Polish economy, measured with the ratio of public spending to GDP, is lower than the EU average. It is not dramatically different from the CEE average, however. In 2015, public spending amounted to 41.5% of Poland's GDP, with the EU average being 45.4% and the CEE average (excluding Poland) 42.2% (see Figure 1). In the EU context, lower public expenditure is typical of countries with lower national income levels. Traditionally, the state's role is greater in the EU-15 Member States (with the exception of Ireland). On the other hand, a lower share of public expenditure in the economy is mostly (with some exceptions) recorded in new Member States. This corroborates the principle referred to as Wagner's law,² according to which collective needs grow faster than individual ones, and consequently the share of the public sector in the economy increases together with the income level. This law should be taken into account when interpreting data on state spending as a share of GDP. According to Wagner's law, this share tends to be lower in poorer countries and higher in wealthier ones.

The share of public expenditure in GDP has decreased significantly in Poland over the last few years. In the record-breaking 2010, it amounted to 45.7%. At that time, a number of significant infrastructure investment projects were underway in Poland. The decline in infrastructure investment in the following years, coupled with quick GDP growth and lowering the service cost of public debt, led to a lower ratio of public expenditure to GDP and contributed to reducing the public finance deficit – from 7.3% of GDP in 2010 to 2.6% of GDP in 2015 (Eurostat data).

² Named after Adolph Wagner. For a more comprehensive description of Wagner's law, see Włodarczyk (2011), p. 12.

Figure 1. Public expenditure in Poland is rather low compared to other EU Member States



Poland is marked in red, Central and Eastern European countries in light grey, and EU-15 Member States in dark grey. Cyprus, Luxembourg and Malta have been omitted.

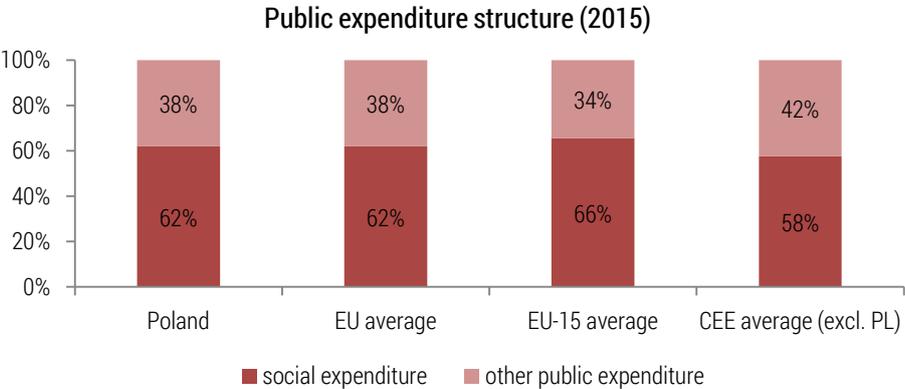
Source: own calculation based on Eurostat data.

2. Social expenditure within the structure of public expenditure

In all EU Member States, social expenditure constitutes at least 50% of total public spending. However, the share of social expenditure is considerably higher in EU-15 Member States (an average of 66% in 2015) than in CEE states (an average of 58%). The high share of social expenditure (around 70%) is particularly typical of the Nordic countries – Denmark, Finland and Sweden – as well as Germany.

Compared to other CEE countries, Poland is characterised by a high share of social spending in public expenditure, namely 62%. While this figure is lower than the EU-15 average, it is also significantly greater than the CEE average (see Figure 2). Only one country in Central and Eastern Europe, Lithuania, may boast a greater share of social spending in state expenditure.

Figure 2. The share of social expenditure in public spending in Poland is the same as the EU average



Source: own calculation based on Eurostat data.

3. The amount and evolution of social expenditure

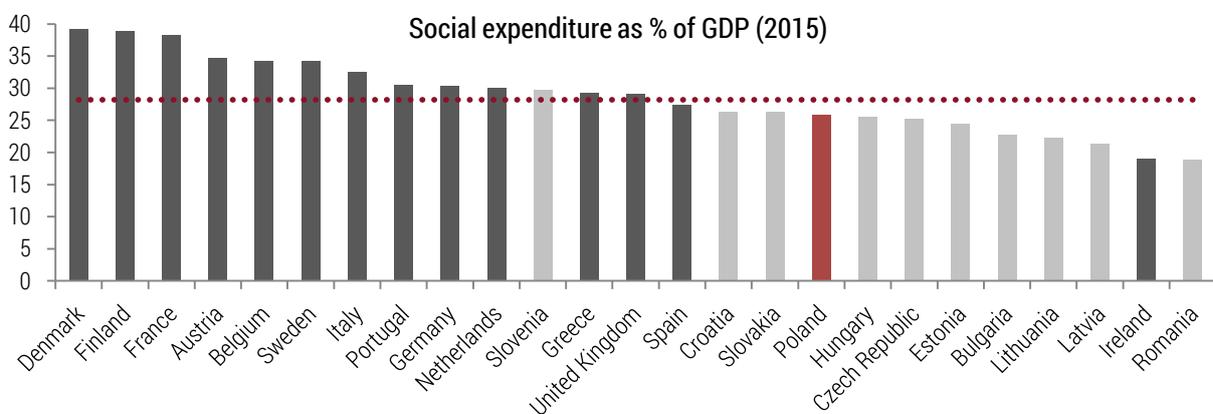
Social expenditure as a percentage of GDP in Poland is lower than the EU average, but higher than the CEE average. Such expenditure constitutes 25.8% of GDP, with the EU average being 28.2% and the CEE average 24.3% (2015). Only three Central and Eastern European countries recorded higher social spending than Poland: Croatia, Slovakia and Slovenia (see Figure 3).

The amount of social spending is strongly correlated with the wealth of a given country. Wealthier EU-15 Member States spend on average ca. 30% more on the welfare state (as a percentage of GDP) than poorer CEE countries. Only two countries represent an exception to this rule: Slovenia (much more social than other CEE countries) and Ireland (much less social than other EU-15 Member States).

The amount of social expenditure in Poland is more or less in line with GDP per capita. Over one-quarter of the generated GDP (25.8% in 2015) is spent on social protection. A similar share is recorded in most EU economies with comparable GDP per capita: Croatia, Estonia, Slovakia and Hungary (see Figure 4). In those countries, like in Poland, social protection amounts to 24–27% of GDP. Greater social spending has been recorded in EU-15 Member States, but these countries are also decidedly wealthier. Following the introduction of the Family 500+ Programme in 2016 (1.2–1.3% of GDP), social expenditure in Poland has grown to ca. 27% of GDP (for more information, see chapter 5). Consequently, such expenditure has reached the upper level of the social expenditure bracket for countries with similar income levels per capita.

Since 2011, social expenditure in Poland has remained virtually unchanged (ca. 26% of GDP). Before that, it was higher: between 2004 and 2006, it amounted to 27–28% of GDP, and in 2009 and 2010 it was around 27% of GDP (see Figure 5). Social spending decreased visibly in 2007 and 2011 (each time by over 1% of GDP). It was no coincidence that these were years of considerable economic growth, when GDP increased by 7,0% and 5,0% respectively. In developed countries, public expenditure as a share of GDP, in particular social expenditure, is countercyclical – it increases (decreases) slower than GDP, especially when deviations from the long-run trend of GDP dynamics are particularly high (Michaud and Rother 2016).

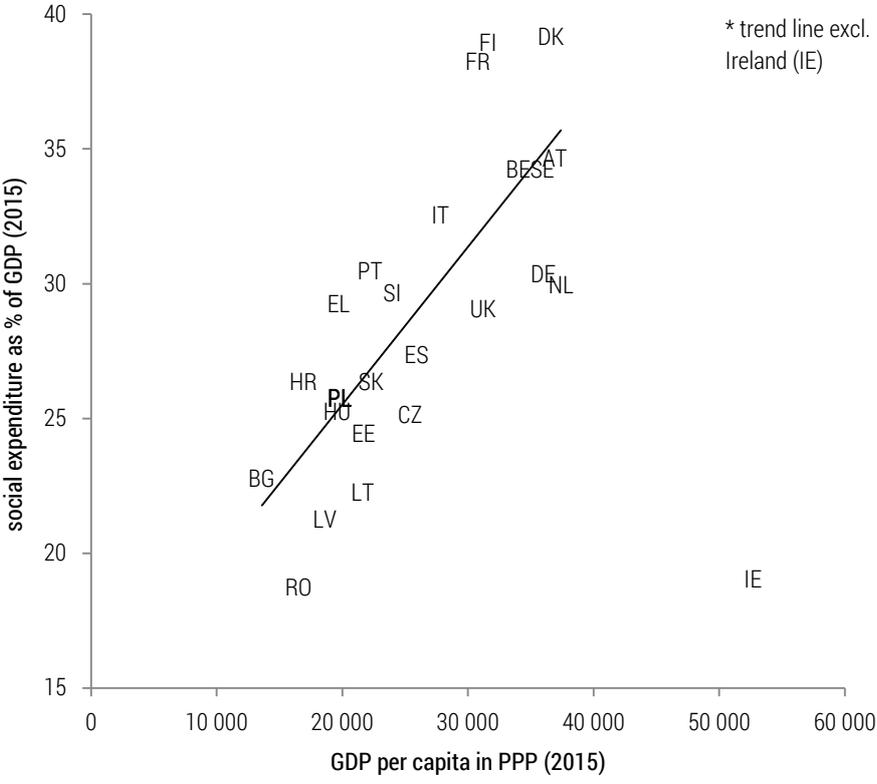
Figure 3. Social expenditure in Poland is lower than in most EU-15 Member States, but higher than the CEE average



Poland is marked in red, Central and Eastern European countries in light grey, and EU-15 Member States in dark grey. Cyprus, Luxembourg and Malta have been omitted.

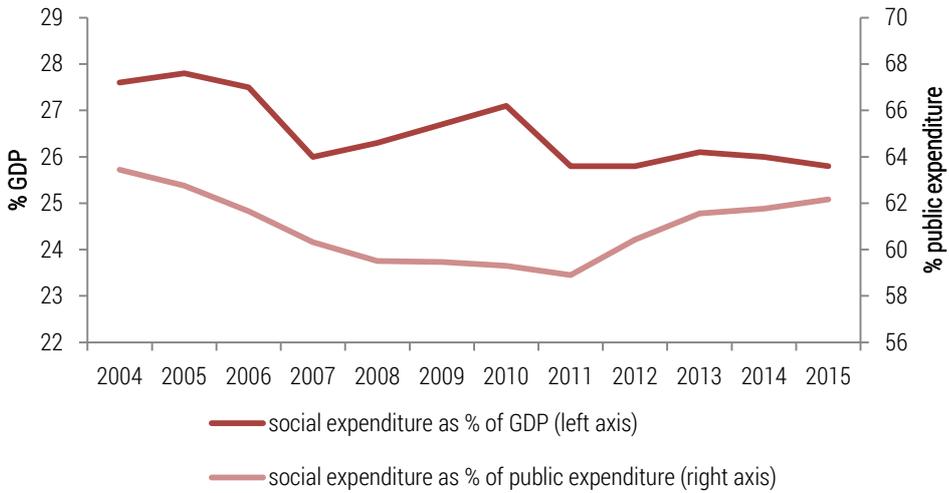
Source: own calculation based on Eurostat data.

Figure 4. Poland's social expenditure is more or less in line with the proportion of GDP per capita and social spending in EU Member States



Cyprus, Luxembourg and Malta have been omitted. For the list of country codes, see p. 12.
 Source: own calculation based on Eurostat data.

Figure 5. Between 2011 and 2015, social expenditure was stable in Poland and amounted to ca. 26% of GDP



Source: own calculation based on Eurostat data.

4. The structure of social expenditure per category

There are three main categories of social expenditure: social protection, education and health. This chapter presents a detailed analysis of state spending in each of these categories, demonstrating that compared to the rest of the EU, Poland's pension expenditure is high, its education expenditure matches the EU average, while expenditure on health, social exclusion and housing benefits is low.

Social protection expenditure

Social protection expenditure constitutes the largest category of public spending in all EU Member States. In 2015, it represented on average 37% of state expenditure and 59% of social expenditure in the EU. This type of expenditure safeguards the income of citizens suffering from risks such as old age, death of a family member, sickness and disability, unemployment, inability to cover housing costs and social exclusion. It also encompasses publicly funded family policy.

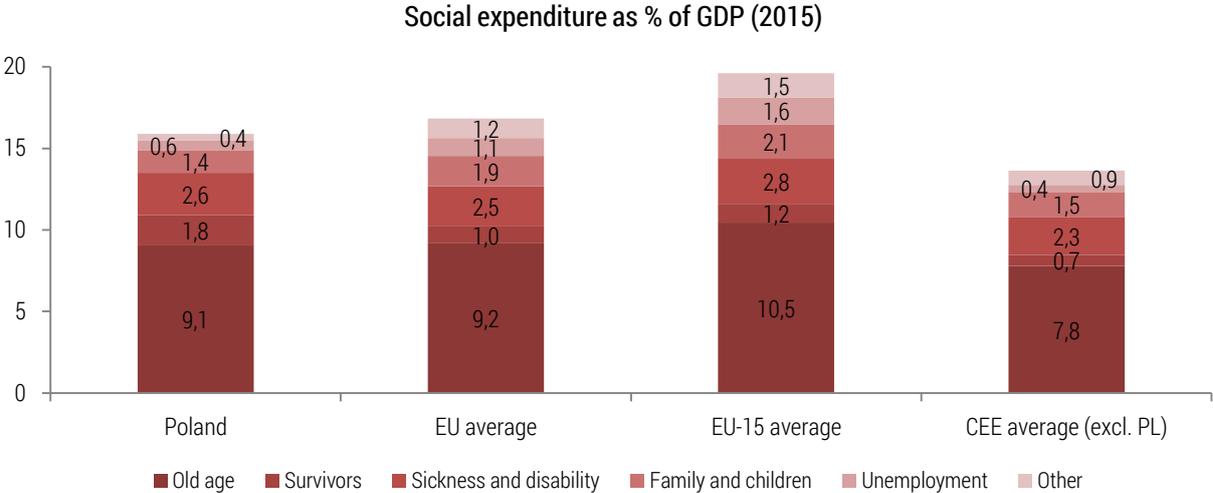
Compared to other Central and Eastern European countries, Poland is characterised by particularly high pension expenditure. It may be divided into three subcategories: benefits related to ageing (old age pensions), benefits related to the death of a family member (survivors' pensions and death grants) as well as benefits related to illness and disability (disability pension for incapacity for work and sickness benefits).³ In 2015, such spending comprised one-third of the total public spending in Poland. This corresponded to 13.5% of Poland's GDP – a figure that is 2.7% of GDP greater than the average in the remaining CEE countries (see Figure 6). In order to bring pension expenditure in Poland in line with the CEE average, it would have to be reduced by ca. 20%. This figure, broadly speaking, would correspond to the public finance sector deficit in 2015.⁴

The relatively high pension expenditure in Poland is not justified by the age structure of the population. Data for EU Member States indicates a rather clear correlation between the share of people aged 65+ and pension expenditure. Poland, however, stands out as, given its relatively young population (the 15% share of people aged 65+ represented the fifth lowest percentage in the EU in 2015), its pension expenditure is higher than the average value (see Figure 7). Most CEE countries – Bulgaria, Czech Republic, Estonia, Lithuania, Latvia, Romania and Hungary – spend less than Poland on pensions despite having a higher share of elderly citizens. It is also interesting to compare Poland to Germany: the latter's pension spending, in spite of a considerably older society (the share of people aged 65+ is higher by over one-third), is similar to that of Poland as a percentage of GDP.

³ One drawback of this definition of pension expenditure is that it also includes death grants and sickness benefits. However, their share in the entire category is rather insignificant. In Poland, death grants account for no more than 10% of survivors' benefits, and sickness benefits for no more than 25% of sickness and disability allowances.

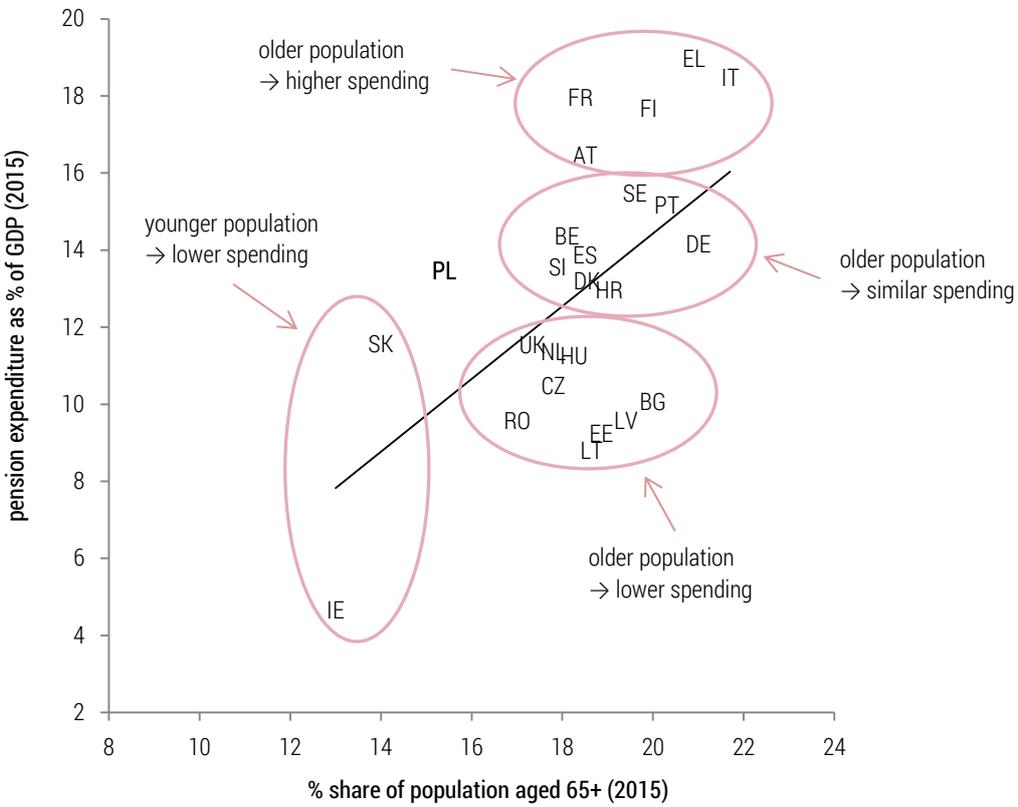
⁴ It is worth noting that pension expenditure is aimed first and foremost at securing the income of elderly people. In 2015, persons aged 55+ constituted 99% of recipients of pensions, 80% of recipients of survivors' pensions and 72% of recipients of disability pensions for incapacity for work from ZUS, the Polish Social Insurance Institution (ZUS 2016).

Figure 6. Poland's pension expenditure is relatively high, contrary to unemployment benefits, assistance for the socially excluded and housing benefits



Source: own calculation based on Eurostat data.

Figure 7. Poland's pension expenditure is disproportionately high compared to the age structure of the population



Cyprus, Luxembourg and Malta have been omitted. For the list of country codes, see p. 12.

Source: own calculation based on Eurostat data.

The high pension expenditure in Poland results from both the relatively low exit age from the labour market, and the relatively high level of said benefits. Poles usually exit the labour market at the age of 62, with the average age in EU Member States being 63 (data from 2013). This is particularly important in the case of Polish women, whose average exit age from the labour market at 60.2 was the third lowest in the EU as a whole (after Slovakia and Slovenia) (European Commission 2015). On the other hand, when it comes to the financial standing of the elderly, it is worth pointing out that in 2015 the median income of people aged 60+ was equal or higher than the median income of people aged 0–59 in only 8 Member States of the EU. One of them was Poland, where this ratio amounted to 1.00, i.e. the median income of the elderly was the same as that of the rest of the population. The EU and CEE average were lower, at 0.90 and 0.85 respectively (Eurostat data).

Compared to the EU-15, there are three areas where Poland's social protection expenditure is significantly lower: unemployment benefits, social exclusion⁵ and housing benefits. In the 'unemployment' subcategory, Poland spent 0.6% of GDP in 2015, whereas expenditure in the 'other' subcategory, which mainly encompasses social exclusion and housing benefits, amounted to 0.4% of GDP. This is 1.0 and 1.1 pp less than the EU-15 average, respectively.

The relatively low level of unemployment expenditure in Poland is influenced by public policy (rather restrictive conditions of granting unemployment benefits), low level of unemployment and the specific situation on the Polish labour market (a high share of the long-term unemployed who are not entitled to claim unemployment benefits; registering as unemployed only to gain the right to health care). Between 2010 and 2016, only 13 to 17% of registered unemployed had the right to claim unemployment benefits (GUS 2017).

Low public spending on social exclusion and housing benefits indicates that these are not treated as priority social policy areas in Poland. Yet particularly in the EU-15, the state is very active in these areas. In 2015, for example, the United Kingdom spent 1.3% of GDP on housing benefits (compared to 0.1% GDP in Poland) and 1.6% of GDP on social exclusion (compared to 0.2% of GDP in Poland).

Education expenditure

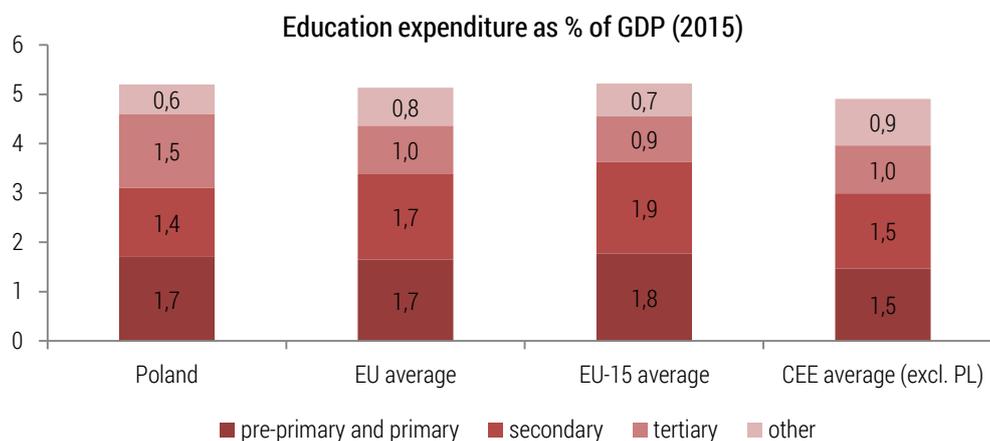
Education spending in Poland is not radically different from expenditure in other EU Member States. Poland allocates 5.2% of GDP to this purpose – the same as the EU average and EU-15 average, and slightly more than the CEE average (see Figure 8). The range of fluctuations for EU Member States in 2015 varied from 3.1% of GDP in Romania to 7% of GDP in Denmark. Poland was right in the middle of this bracket.

What distinguishes Poland from other EU Member States is the relatively high expenditure on tertiary education. It amounts to 1.5% of GDP, with only two EU Member States, Denmark and Finland, recording higher values (1.7 and 1.9% of GDP respectively). The average EU expenditure for this purpose amounted to 1% of GDP in 2015, which is one-third less than in Poland. Poland's high tertiary education spending results from both the high number of students and the relatively high expenditure per individual student. In 2015, there were 44 students per

⁵ Monetary benefits, benefits in kind and other forms of assistance for socially excluded persons, such as immigrants, refugees, persons battling addiction and victims of domestic violence. This subcategory also includes social exclusion expenditure on account of poverty, provided that this is the direct cause of granting the relevant benefit (for example, expenditure on family benefits in Poland is classified under the family policy subcategory, as it only indirectly tackles social exclusion).

1000 inhabitants in Poland, with the EU average being 41.⁶ In turn, the annual spending per one student in public universities in 2014 (latest available Eurostat data) amounted to 44% of GDP per capita in Poland compared to the EU average of 40% of GDP per capita.

Figure 8. Compared to other EU Member States, Poland stands out on account of its relatively high expenditure on tertiary education



Source: own calculation based on Eurostat data.

Health expenditure

One area of the Polish welfare state where public spending is radically lower than in most other EU Member States is healthcare. In 2015, its share in the GDP was a mere 4.7%. This figure is not only lower than the EU-15 average (6.9% of GDP), but is also lower than the average in the remaining CEE countries (5.8% of GDP). Only 5 EU Member States (Cyprus, Greece, Luxembourg, Latvia and Romania) recorded lower health expenditure than Poland in 2015.

Investment expenditure in the Polish health sector is well below other EU Member States. In 2015, only 0.1% of Polish GDP was allocated to medical products, appliances and equipment⁷ – a staggering 10 times less than the average in the remaining countries in the region (see Figure 9). It is worth noting that the average investment expenditure in the health sector is higher in CEE countries (excluding Poland) than in the EU-15.

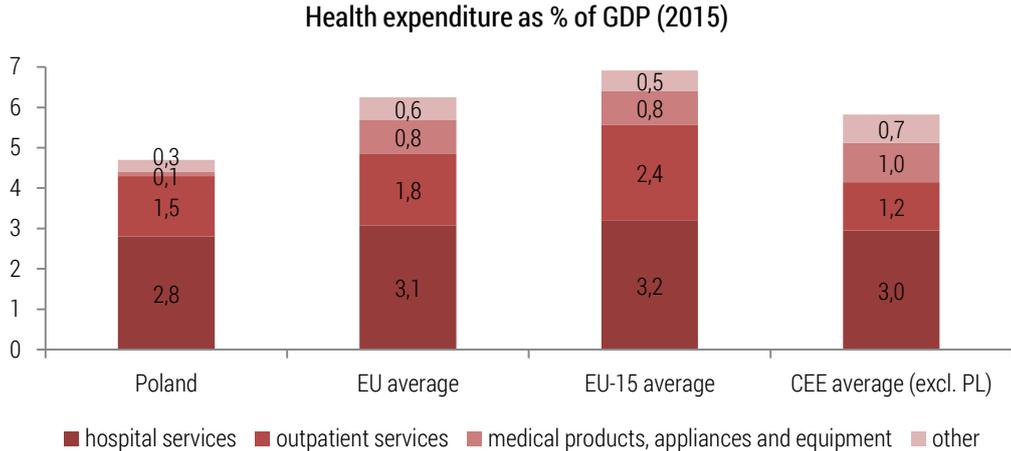
Compared to the EU-15, Poland spends considerably less on outpatient services. In 2015, spending in this subcategory amounted to 1.5% of GDP, with the EU-15 average being 2.4% of GDP. This difference is lower in the case of expenditure on hospital services: 2.8% of GDP in Poland compared to 3.2% of GDP in the EU-15. Innovative medical treatments, faster rehabilitation and the possibility to remotely monitor the patient's condition

⁶ Taking into account only public university students, the respective figures were 33 and 31.

⁷ Expenditure in this subcategory does not necessarily cover all investment expenditure. According to National Health Accounts, total investment expenditure on health care in Poland amounted to 0.4% of GDP in 2012 (the last year, in which investment expenditure was singled out in data collected by GUS, the Central Statistical Office of Poland). However, this figure encompassed both public and private spending (GUS 2014).

mean that many countries have recorded a significant decline in hospital stays and are more frequently turning to outpatient treatment programmes (PWC 2016). Experts believe that many procedures that are currently restricted to hospitals in Poland could also be performed as part of outpatient care or one-day interventions (PMR 2014; Szetelnicki 2017). However, this would require an increase in health expenditure as a whole, as savings generated by lowering the cost of hospital services would most likely not be sufficient.

Figure 9. Poland is one of the EU Member States with the lowest health expenditure



Source: own calculation based on Eurostat data.

5. The Family 500+ Programme as an instrument of the welfare state

With the introduction of the Family 500+ Programme, Poland became one of the most social states in Central and Eastern Europe. Nevertheless, social expenditure in Poland remains lower than in most EU-15 Member States. The annual value of the programme amounts to ca. 1.2–1.3% of GDP. Had a programme of this value existed back in 2015, social spending in Poland would have been the highest among CEE countries, with the exception of Slovenia. Still, the scope of the welfare state would have still been greater in 14 out of the 15 EU-15 Member States (the exception being Ireland – see Figure 3).

Following the introduction of the Family 500+, Poland became one of the top EU spenders on family policy. As a result of the programme, public expenditure in the ‘family and children’ subcategory will increase almost twofold: from 1.6% of GDP in 2015 to almost 3% of GDP in 2017. In 2015, only three EU Member States – Denmark, Finland and Luxembourg – spent more than 3% of GDP in this subcategory, with the general EU average being 1.9% of GDP.⁸

⁸ Nevertheless, in the social awareness, the impact of Family 500+ on public finance seems exaggerated. It is worth noting that total social expenditure is around 20 times greater than expenditure on Family 500+. This programme represents a substantial contribution to family policy, but its importance for the public finance sector as a whole is not as fundamental as often portrayed in the public sphere.

In spite of the considerable outlays on family policy, the low availability of crèches and kindergartens remains an important drawback. In 2014 in Poland, the share of children aged 0–2 in formal care amounted to 11%. This was the third lowest share among EU Member States (alongside Czech Republic and Slovakia). In turn, the share of children aged 3 to 5 in pre-school or school care amounted to 74%, with only 5 EU Member States recording lower figures. In as many as 16 EU Member States, at least 80% of children aged 3 to 5 and at least 20% of children under the age of 3 were in formal or (pre-)school care (OECD data). In this context, it should be pointed out that the availability of formal childcare is an important determinant of female labour market participation (Lovász 2016; Vuri 2016). The latter is currently low in Poland: the employment rate for women aged 20–64 amounts to 62%, with the EU average reaching 66% (Eurostat data for 2016). What is more, an analysis of Polish labour market data indicates that the low participation of women in the labour market is additionally exacerbated by the Family 500+ programme (Magda, Kiełczewska and Brandt, in preparation).

Summary

In the European Union, the extent to which a given state performs welfare functions is strongly correlated with its level of development – the higher the GDP per capita, the greater share of the generated income is allocated to social protection. Poland is another example of this relationship. In terms of the size of the welfare state, the Polish economy is situated between the group of Central and Eastern European countries and the so-called EU-15: social expenditure in Poland is one of the highest in the region, but still lower than in 14 out of 15 EU-15 Member States.

One expenditure category where Poland's spending is considerably higher than other CEE countries is pension expenditure. It is much higher than would normally result from the current age structure of the Polish population. The main reason for this is how quickly the elderly (women in particular) leave the labour market. A low retirement age coupled with the current level of benefits successfully deters elderly people from labour market participation. This, in turn, translates to lower national income levels, the need to impose higher taxes on the working population and lower availability of public funds for other social purposes.

Poland is one of the EU Member States with the lowest health expenditure, in particular in investment expenditure and outpatient services. Consequently, the public health care system is a source of general dissatisfaction. One of the identified faults of the current system is the excessive number of procedures restricted to hospital treatment, with too few outpatient services, contrary to the trend observed in other EU Member States. In order to increase the quality of the Polish health care system, what is required above all is increased expenditure to this end. In the face of an ageing Polish society, this is one of the most important challenges facing social policymakers.

Spending on housing benefits and assistance for the socially excluded is relatively low in Poland. Social policy address these issues but only to a limited extent – far less than in the majority of the EU-15 Member States. Actions aimed at satisfying housing needs are mostly limited to various forms of housing loan subsidies. In turn, instruments meant to prevent social exclusion are largely selective and addressed predominantly to families with children (e.g. family benefits and, to a certain extent, Family 500+ – both classified under family policy).

Following the introduction of the Family 500+ Programme, Poland is currently one of the top EU spenders on family policy. Nevertheless, in spite of considerable financial outlays, this policy fails to address the low availability of crèches and kindergartens. This is important as, while statistical data shows that the 500+

programme has a positive effect on reducing poverty, it negatively impacts female participation in the labour market, whose important determinant is the availability of formal childcare. Consequently, it would seem that current family policy spending should be verified in terms of allocating funds to specific goals.

Index of country codes

AT – Austria, BE – Belgium, BG – Bulgaria, CZ – Czech Republic, DE – Germany, DK – Denmark, EE – Estonia, EL – Greece, ES – Spain, FI – Finland, FR – France, HR – Croatia, HU – Hungary, IE – Ireland, IT – Italy, LT – Lithuania, LV – Latvia, NL – Netherlands, PL – Poland, PT – Portugal, RO – Romania, SE – Sweden, SI – Slovenia, SK – Slovakia, UK – United Kingdom.

Bibliography

Barr, N. (2004). *Economics of the Welfare State*. Oxford: Oxford University Press.

European Commission (2015). The 2015 Ageing Report. Economic and budgetary projections for the 28 EU Member States (2013–2060). *European Economy*, 3.

Eurostat (2017). Eurostat Statistical Database. Available at: <http://ec.europa.eu/eurostat/data/database> [retrieved: 20 July 2017].

GUS (2014). *Zdrowie i ochrona zdrowia w 2013 r.* Warsaw.

GUS (2017). *Bezrobocie rejestrowane – I kwartał 2017 r.* Warsaw.

Lovász, A. (2016). Childcare expansion and mothers' employment in post-socialist countries. *IZA World of Labor*, 241.

Magda, I., Kielczewska, A., Brandt, N. (in preparation). *The 500 PLN+ child allowance and female labour supply in Poland*. Warsaw: Institute for Structural Research.

Michaud, A., Rothert, J. (2016). Inequality, fiscal policy, and business cycle anomalies in emerging markets. *NBP Working Paper*, 253.

OECD (2017). OECD Family Database. Available at: <http://www.oecd.org/els/family/database.htm> [retrieved: 29 September 2017].

PMR (2014). *Sytuacja finansowa szpitali w Polsce. Edycja 2014*. Warsaw: Magellan.

PWC (2016). *10 trendów w polskiej ochronie zdrowia 2016*. Available at: <https://www.pwc.pl/pl/pdf/10-trendow-w-polskiej-ochronie-zdrowia-2016.pdf> [retrieved: 31 July 2017].

Szarfenberg, R. (2008). *Krytyka i afirmacja polityki społecznej*. Warsaw: Institute of Philosophy and Sociology of the Polish Academy of Sciences.

Szetelnicki, P. (2017). *System ochrony zdrowia powinniśmy zbudować niczym... twierdzą*. Available at: <https://wszystkoconajwazniejsze.pl/piotr-szetelnicki-100-idei-dla-polski-system-ochrony-zdrowia-niczym-twierdza/> [retrieved: 31 July 2017].

Vuri, D. (2016). Do childcare policies increase maternal employment? *IZA World of Labor*, 241.

Włodarczyk, P. (2011). Stabilność fiskalna – koncepcja teoretyczna i jej znaczenie praktyczne. Analiza na przykładzie państw Grupy Wyszehradzkiej w latach 1995–2009. *Materiały i Studia NBP*, 256.

ZUS (2016). *Ważniejsze informacje z zakresu ubezpieczeń społecznych – 2015 r.* Warsaw.

Jakub Sawulski

Institute for Structural Research (IBS)
Poznań University of Economics and Business

e-mail: jakub.sawulski@ibs.org.pl

Additional information

I would like to thank Jan Rutkowski for his helpful comments and remarks.

The content of this publication reflects the opinions of the author, which may diverge from the position of the Institute for Structural Research. The usual disclaimers apply.

Independent study based on Eurostat data. Eurostat is not liable for the presented results and conclusions.

IBS Policy Paper Series

The IBS Policy Paper series makes economic research findings accessible in order to enhance public debate.

Series editor – Jan Rutkowski

IBS Policy Paper 2/2017

ISSN: 2451-4365

Translation – Aleksandra Szkudłapska

Proofreading – Matthew Bastock

About IBS

The Institute for Structural Research (IBS) is an independent and politically neutral research foundation. Our research studies focus on economic analysis and evaluating the consequences of public policies in the following areas: labour markets, demography, education, family policy, public finance as well as energy and climate. We rely on modern modelling, statistical, econometric and IT tools. We take great care to ensure our research is objective and based on sound methodology.

Since our foundation in 2006, we have conducted almost 200 research projects for such entities as the World Bank, OECD, various ministries, Chancelleries of the Prime Minister and President of the Republic of Poland, the National Bank of Poland, employers' organisations as well as other associations and foundations. The Institute's research findings are generally available, with two series of publications being specifically responsible for their dissemination: IBS Working Paper and IBS Policy Paper. All articles, reports and information about our projects and conferences may be found at ibs.org.pl.

e-mail: ibs@ibs.org.pl

twitter: [@ibs_warsaw](https://twitter.com/ibs_warsaw)