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MINIMUM WAGE IMPACT ON THE POLISH ECONOMY

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Key words: minimum wage, labor market, unemployment, economy.

Abstract

This paper focuses on the analysis of the impact of the minimum wage on the Polish economy. It consists of three parts.

The first part contains a short overview of the economic literature on the minimum wage in Poland and the results of research on this subject. The conclusions of these studies are unclear, which indicated the need to further analyze statistical data and assess the effects of raising the minimum wage in Poland.

In the second part, an attempt is made to examine the correlation between the level of minimum wage and the rate of its change in Poland in the years 1992–2016 and basic economic indicators such as: level and rate of average wage growth, GDP, labor productivity, price growth dynamics and unemployment rate. Spearman's correlation coefficients were used for this analysis.

The third part concerns the perceived and potential effects of raising the minimum wage in 2017 to PLN 2,000 and introducing a minimum hourly rate of PLN 13. The focus is mainly on analyzing and assessing the impact of these decisions on the labor market in Poland. The positive aspects are presented as well as the dangers of introducing a minimum hourly wage.

The article concludes that both the statistical data covering the last 25 years and the labor market analysis in 2017 do not support the negative effects of the minimum wage for the Polish economy.

WPLYW PŁACY MINIMALNEJ NA POLSKĄ GOSPODARKE

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Słowa kluczowe: płaca minimalna, rynek pracy, bezrobocie, gospodarka.

Abstrakt

W artykule przeanalizowano wpływ płacy minimalnej na polską gospodarkę. Artykuł składa się z trzech części. Część pierwsza zawiera krótki przegląd literatury ekonomicznej dotyczącej płacy minimalnej oraz rezultaty badań na ten temat. Nie ma jednoznacznej konkluzji i zgodności na temat wpływu płacy minimalnej na gospodarkę, co sprawia, że potrzebne są dalsze badania i analizy dotyczące skutków wzrostu płacy minimalnej w Polsce.

W części drugiej nacisk położono na analizę korelacji między poziomem płacy minimalnej i tempem jej wzrostu w latach 1992–2016 oraz podstawowymi danymi makroekonomicznymi, takimi jak: poziom i tempo wzrostu płac przeciętnych, PKB, wydajność pracy, inflacja, stopa bezrobocia. Do badania tych zależności wykorzystano współczynniki korelacji rang Spearmana.

W trzeciej części skoncentrowano się na analizie potencjalnych skutków podniesienia płacy minimalnej w 2017 r. do 2000 zł oraz wprowadzenia minimalnej stawki godzinowej w wysokości 13 zł za godzinę. Nacisk położono na ocenę skutków tych decyzji na rynku pracy w Polsce. Wskazano korzyści i niebezpieczeństwa związane z wprowadzeniem minimalnej stawki godzinowej.

Zarówno dane statystyczne, obejmujące 25 lat, jak i analiza rynku pracy w 2017 r., nie dają podstaw do negatywnej oceny wpływu płacy minimalnej na polską gospodarkę.

Introduction

In Poland, the minimum wage has been in force since 1956 and is regulated by law. According to the Law on the Minimum Wage of October 10, 2002 (Journal of Laws of 2002, No. 200, item 1679) and its amendment dated July 1, 2005 (Journal of Laws of 2005, No. 157, item 1314), an annual increase in the minimum wage is guaranteed, not lower than the increase in price levels projected for a given year. The Law amended in 2005 has guaranteed an automatic annual increase in minimum wages by an additional two-thirds of the projected GDP growth rate, until the minimum wage exceeds half the average monthly wage in the economy.

The government was authorized to introduce the minimum wage increase from 1994 to 2015 following the negotiations under the Tripartite Commission for Economic and Social Affairs (the government as well as representatives of employer and employee organizations)¹. If the Tripartite Commission did not agree on the minimum wage by 15 July, the minimum wage decision would be taken up by the Council of Ministers. This was the case in 2013. The monthly minimum wage was then PLN 1,600 gross (PLN 1,181 net). The government and employers proposed PLN 1,680 gross (PLN 1,240 net) for the year 2014, and the trade unions – as a minimum acceptable variant – PLN 1,720 gross (PLN 1,269 net). Negotiations between the government and employers and trade unions were discontinued, although the dispute involved a small net increase of PLN 29 a month. For the year 2014 the government introduced a minimum

¹ On October 24, 2015 the President of the Republic of Poland, under the Act of July 24 (Journal of Laws of 2015 item 1240) established a Council of Social Dialogue, which replaced the Tripartite Socio-Economic Commission.

wage of PLN 1,680. This example shows that the liberal economic policy pursued in Poland is clearly conducive to entrepreneurs. This was reflected, among others, in the reduction of taxes for entrepreneurs, in making the labor market flexible, in providing low and very short-term unemployment benefits, in reducing social benefits, and in tolerating a vast gray area, which allows employers to avoid tax burdens and hire employees on a fixed-term basis and unfavorable financial terms. The attitude of the government, politicians, employers, the media and many researchers towards the minimum wage was also unfavorable.

A short overview of the economic literature on the minimum wage in Poland

Proponents of the minimum wage invoke the 1928 International Labor Organization Convention (*Konwencje i zalecenia...* 1996, pp. 95, 96), which justified its introduction by striving to:

- reduce the over-exploitation of workers, especially the uneducated and unskilled;
- ensure a fair standard of living for those who perform the simplest work, i.e., the fight against poverty;
- eliminate certain forms of unfair competition in the labor market (including discrimination against women, minors, and foreigners).

On the other hand, opponents of the minimum wage in Poland most often raise the following arguments:

- raising the minimum wage contributes to a rise in unemployment for example: WOJCIECHOWSKI (2008), KAMIŃSKA and LEWANDOWSKI (2015);
- the rise in the minimum wage favors the increase in the average wage in the economy, which in turn produces an inflationary wage-price spiral (JARZYŃSKI et al. 2014);
- the minimum wage level and its growth rate often provide the basis for wage indexation in the state budgetary sphere and certain social benefits, leading to an increase in rigid expenditures in the state budget, unjustified by economic criteria (WYŻNIKIEWICZ 2012);
- the level of minimum wage, considered too high by entrepreneurs, leads to the widespread practice of paying employees “under the table” and deepens the shadow economy (FUNDOWICZ et al. 2018, p. 17);
- increasing the minimum wage raises labor costs and lowers the competitiveness of the economy and threatens the existence of enterprises, especially micro-entities, which operate on the verge of profitability, and can go bankrupt (GOLINOWSKA 2001).

Empirical research focuses mainly on showing the relationship between minimum wage and unemployment. The first empirical studies on the negative

impact of minimum wages on employment were carried out in the United States in 1915. Also in the following years many studies had been done (BROWN et al. 1982, 1983). All the studies showed that increases in the minimum wage led to a decline in employment (especially among the youth). But more recent and more methodologically sophisticated studies done by CARD and KRUEGER (1995) have shown that the minimum wage does not necessarily cause job loss. Even scholars who conclude that the minimum wage has negative employment effects generally agree that these are detectable only for disadvantaged teenagers (NEUMARK et al. 2014). These findings were confirmed by studies carried out recently in the United Kingdom (D'ARCY, CORLETT 2015).

The results of research on the impact of the minimum wage on the labor market in Poland are also not clear. The econometric studies of SUCHECKI (1999), covering the period 1990–1997, show that a 10% increase in the minimum wage led to a decrease in employment of less than 1% (about 0.76%), but for young workers (15–24 years) the same increase in the minimum wage led to a decrease in employment by 4.6%. The research also found a strong relationship between the increase in the minimum to average wage ratio and the increase in the youth unemployment rate. The increase of this ratio by 1 percentage point was accompanied by an increase in the unemployment rate in this group of employees by 0.61 percentage point. In turn, MAJCHROWSKA and ŻÓLKIEWSKI (2012) indicate, in turn, that the increase in the minimum wage had a negative impact on the level of employment in the years 1999–2010. The negative impact on employment was manifested in young workers (15–24 years) and in the period of a strong increase in the minimum wage (2005–2010). Moreover, the authors emphasize that the negative impact of the increase in the minimum wage on employment was particularly felt in the poorer regions of Poland. Similar conclusions result from the studies of KUROWSKA (2008), WOJCIECHOWSKI (2008) and KAMIŃSKA and LEWANDOWSKI (2015).

A different assessment of the minimum wage emerges from surveys conducted in 94 companies representing different sizes and different forms of ownership (BORKOWSKA 2001). Most respondents believed that changes in the minimum wage did not affect employment levels. This also applied to the employment of graduates of secondary schools and universities. Similar conclusions were drawn by GOLNAU (2007, pp. 253–274) from studies covering the years 2002–2004. The reduction of the minimum wage rate to 80% for people in the first year of employment and 90% in the second year of employment from January 1, 2003 was a good opportunity to conduct research. It turned out that the reduction in the minimum wage did not increase the employment of the people concerned. The introduction of reduced minimum wage rates also did not affect the reduction of unemployment. JACUKOWICZ (2007) also found that there is no alternative: low wages or unemployment. There was no relationship between the minimum wage level and the relationship between the minimum and average wages and the situation in the labor market in Poland.

Due to the lack of unanimity on this issue it is necessary to analyze statistics for the last 25 years, as well as to assess the impact of the decision to raise the minimum wage in 2017 from PLN 1,850 to PLN 2,000, i.e., by 8.1%. The analysis of the effects of raising the minimum wage should take into account not only its absolute level and rate of change, but also the percentage of employees who receive remuneration at the minimum wage level.

Eurostat data (*Minimum wage statistic*. 2016) for 2010, shows that out of the 20 EU countries where the minimum wage was in force²:

– Spain, had the lowest proportion (0.2%) of people whose wages were less than 105% of the minimum wage;

– in 11 EU countries, the percentage of such workers ranged from 2.0% to 4.7%;

– in the remaining eight EU countries this percentage exceeded 9.0%. This group included the following countries: France, Ireland and Croatia (9.2%), Poland (9.9%), Luxembourg (10.2%), Latvia (11.8%), Lithuania (13.7%) and Slovenia (19.2%).

This means that according to Eurostat data, in Poland about 10% of those employed receive minimum wages. However, it must be borne in mind that these data are based on Poland's Central Statistical Office (GUS) statistics, which record data from companies employing 10 or more employees. However, the percentage of those receiving minimum wages is much higher, as these data do not include those working in micro-entities employing 9 or fewer employees, as well as those employed on special contracts, other than contracts of employment and in the gray zone.

In recent years in Poland the discussion on minimum wage is not as lively as in the USA³. However, one can distinguish three quite distinct groups of debaters.

² Some 22 out of the 28 EU Member States apply the minimum wage. Those with no general statutory minimum wage are Austria, Cyprus, Denmark, Finland, Italy and Sweden.

³ In the US, the minimum wage which is being revised by Congress every few years, and has not kept up with the rising cost of living over many years. However, in the last decade, the problem was seriously discussed and aroused a lot of emotion. This change in approach to the minimum wage in the United States was manifested in 2006 when five Nobel Prize winners, five former Presidents of the American Economic Association, and hundreds of economists were demanding an increase in the minimum wage, claiming that the higher minimum wage would improve the living conditions of low paid workers and their families, without adverse effects, to which opponents referred (*A Strong Minimum Wage...* 2011). The need to raise a minimum wage was widely perceived in the US following the collapse of the US economy in 2007 and due to the growing social differentiation, as well as the need to stimulate consumer demand. Increasingly, the discussion is taking place on the level of "for and against raising the minimum wage". It is also worth noting that the "Stand with President Obama and Democrats to support raising the minimum wage" petition was signed by 75,839 Americans (information dated May 8, 2014). The "Should the minimum wage be raised?" poll showed that 91% of Americans were in favor of raising the minimum wage (*Job Searching...* 2014). The following conclusion can be drawn from the analysis of the arguments for and against the rise in minimum wages. Conservatives believe that rising minimum wages will increase the burden on employers, especially small and medium-sized businesses, which will slow down economic growth and reduce employment. Opponents point out that increasing the minimum wage would not increase inflation, but would increase poverty.

The first group are opponents, i.e., the liberal circles of economists related to the Civic Development Forum: JARZYŃSKI, RZOŃCA, STOLARCZYK, WOJCIECHOWSKI (2011), WYŻNIKIEWICZ (2012), who clearly oppose raising the minimum wage, since they believe it harms the economy and labor market economists: BRONIATOWSKA, MAJCHROWSKA and ŻÓŁKIEWSKI (2013), who believe that the increase in the minimum wage will increase unemployment, especially among young people and those with low professional skills, therefore they argue to introduce a reduced minimum wage for individual groups of workers (young people, from regions with high unemployment and with low average wages). According to research by KAMIŃSKA and LEWANDOWSKI (2015), the increase in the minimum wage has adversely affected the labor market as it has led to dismissals or to the fact that part of them had to shift from fixed to temporary employment.

The second group are cautious persons i.e., those associated with the Ministry of Labor and Social Policy and the Institute of Labor and Social Affairs: BACZEWSKI, SARZALSKA, ZIELONKA (2013), and RUTKOWSKI (2013), who see the need to link the minimum wage with minimum existence, and researchers who believe that raising minimum wages within certain limits does not harm the economy (IDCZAK 2011).

The third group consists of those who believe that rising minimum wages do not hurt the economy. Under current conditions in Poland, apart from trade unions, these are JACUKOWICZ (2007), KABAJ (2013), KRAJEWSKA and KRAJEWSKI (2013) and KRAJEWSKA and ROSZKOWSKA (2016).

The correlation between the level of minimum wage and the main macroeconomic data

Statistics for the analysis include the 25-year period from 1992 to 2016. The choice of 1992 as the starting point for the analysis was dictated by the fact that in that year a personal income tax was introduced, that is, statistics on wages since 1992 contain information on net earnings.

In 1992, the minimum wage was PLN 109 and increased to PLN 1,850 in 2016, i.e., almost 17 times. The growth rate of average wages was lower. In 1992, the average wage was PLN 290, and in 2016 it was PLN 4,047, almost 14 times higher. This has improved the ratio between the minimum wage and the average wage from 0.376 in 1992 to 0.457 in 2016 (cf. Attachment 1). This means that we are approaching the ratios proposed by the International Labor Organization (0.50%) in Convention No. 137 of 1970. This level of minimum wage (50% of the average remuneration) was also included in the European Social

A review of U.S. studies shows that most of the Conservatives' arguments are clearly theoretical and are not supported by empirical research and U.S. economic statistics (KRAJEWSKA 2015).

Charter. In the European Union these relations ranged from 0.385 (Romania) to 0.564 (Greece) (*Minimum wage statistic...* 2016).

The Spearman's rank correlation coefficients were used to analyze the relationship between the minimum wage growth rate and the relationship between the minimum wage and the average wage (referred to as the Kaitz index) and the selected macroeconomic data. The Spearman correlation coefficient is calculated by the formula:

$$r_s = 1 - \frac{6 \cdot \sum d_i^2}{n(n^2 - 1)},$$

where:

- n – number of observations,
- d_i – difference between X and Y ranks,
- X – minimum wage growth rate or the Kaitz index,
- Y – macroeconomic variables.

Spearman's rank correlation takes values in the range of -1 to $+1$. Statisticians commenting on the strength of correlation between the variables consider that an index value below 0.2 means no linear relationship between the variables, the index in the range 0.2–0.4 indicates a weak correlation, the index at the level of 0.4–0.7 is considered as moderate correlation, and 0.7–0.9 already quite strong correlation.

The Spearman's rank correlation coefficients between the minimum wage growth rate and the selected macroeconomic data are presented in Table 1. All coefficients calculated for the years 1992–2016 have a positive value, which means that the minimum wage was increasing together with the increase in the macroeconomic variables specified in the table. The strongest correlation was found between the minimum wage growth rate and the average wage growth rate (0.76) and the growth rate of GDP in current prices (0.68). On the other hand, moderate correlation is observed between the minimum wage growth rate and the growth rate of GDP in constant prices (0.45), the rate of labor productivity

Table 1

Spearman's rank correlation coefficients between the minimum wage growth rate and selected macroeconomic data for 1992–2016

Specification	Correlation coefficient value
Average wage growth rate	0.76
GDP growth rate in current prices	0.68
GDP growth rate in constant prices	0.45
Labor productivity growth rate in current prices	0.55
Growth rate of goods and services prices	0.58
Registered unemployment rate	0.11

Source: authors' own calculation based on data from Annex 1.

growth in current prices (0.55) and the growth rate of goods and services prices (0.58). However the data did not support the hypothesis that the increase in minimum wage leads to an increase in unemployment. The Spearman's rank correlation coefficient was 0.11, indicating that there is no correlation between these variables.

It has been widely accepted, also in the scientific research⁴, that the increase in the ratio between the minimum wage and the average wage leads to an increase in labor costs and thus to an increase in the unemployment rate. It appears, however, that in Poland there has been no positive correlation between these variables over the last 25 years. The information in Table 2 shows that there is a strong negative correlation (−0.67), i.e., we observe an increase in the Kaitz index, which is accompanied by a decrease in the unemployment rate. This is yet another proof that statistical analyses do not confirm the negative impact of the minimum wage on the labor market and unemployment in Poland⁵.

Table 2

Spearman's rank correlation coefficients between the ratio of minimum wage to average wage and selected macroeconomic data for 1992–2016

Specification	Correlation coefficient value
Minimum wage growth rate	−0.284
Labor productivity growth rate	−0.427
Registered unemployment rate	0.450

Source: as in Table 1.

The information in Table 2 on the negative direction of the relation between the Kaitz index and the minimum wage growth rate is also interesting. It turns out that when the relationship between the minimum wage and the average wage is improving, there is less pressure to increase the minimum wage level.

Since the correlation coefficients discussed so far do not show a clear correlation between the minimum wage and unemployment, an attempt was made to determine the correlation between the registered unemployment rate and the selected macroeconomic data (Tab. 3). It turns out that for most variables the Spearman's rank correlation coefficients are less than 0.2, which means no linear relationship between the phenomena under study. A weak positive correlation can only be observed between the registered unemployment rate and the labor productivity growth rate (0.41), which seems logical, since the increase

⁴ The studies of the Polish economy (1996–2007) show that the impact of the relationship between the minimum wage and the average wage on employment is non-linear. It turns out that increasing the minimum wage up to a value at which its share in the average wage is 41% is favorable, but after exceeding this value the employment will begin to decline (IDCZAK 2011).

⁵ In a similar manner one can probably explain a negative correlation, although not very strong, between the relation of the minimum wage to average wage and labor productivity growth.

Table 3

Spearman's rank correlation coefficients between the registered unemployment rate and selected macroeconomic data for 1992–2016

Specification	Correlation coefficient value
GDP growth rate in current prices	0.09
GDP growth rate in constant prices	-0.11
Labor productivity growth rate (current prices)	0.41
Average wage growth rate	0.13
Minimum wage growth rate	0.11
Minimum wage level	-0.57
The relationship between the minimum wage and the average wage	-0.48

Source: as in Table 1.

in labor productivity resulting from, e.g., the introduction of new technical solutions, can lead to an increase in the unemployment rate.

In theoretical analyses and in empirical research, it is often pointed out that the negative effects of raising minimum wages are more felt by women than men, by rural residents more than by urban dwellers, but above all by young and/or unskilled people. Spearman's rank correlation coefficients were computed on the basis of the GUS data on unemployment rates in the fourth quarter in the years 1992–2015 (Annex 2) showing the relationship between the unemployment rate and the minimum wage growth rate broken down by gender, place of residence, age and educational level (Tab. 4).

Table 4

Spearman's rank correlation coefficients between the minimum wage growth rate and selected characteristics of the labor market in the fourth quarter of each year for the years 1992–2015

Specification	Correlation coefficient value
Total unemployment rate	0.01
Male unemployment rate	-0.05
Female unemployment rate	+0.02
Urban unemployment rate	-0.01
Rural unemployment rate	0.12
Unemployment rate among young people aged 15–19	0.19
Unemployment rate among young people aged 20–24	-0.15
Unemployment rate among people with lower secondary education, primary and incomplete primary education	-0.57
Unemployment rate among people with vocational education	0.04
Unemployment rate among people with tertiary education	-0.44

Source: authors' calculations based on data from Annex 2.

It turns out that the correlation coefficients between the minimum wage growth rate and the unemployment rate by gender, place of residence and age (15–19 years and 20–24 years) are less than 0.2, which means no linear relationship between the phenomena under study. The level of coefficients approaching zero indicates that when minimum wages rise, the unemployment varies – it sometimes grows and sometimes decreases. There is also no correlation between the minimum wage growth rate and the rate of unemployment among people with vocational education (the correlation coefficient is 0.04).

However, the correlation coefficients for persons with the lowest and highest education levels require further comment. Attention is drawn both to the negative coefficient and its relatively high level, -0.44 for people with tertiary education and -0.57 for people with lower secondary education, primary and incomplete primary education. A correlation coefficient with a negative sign should be interpreted as follows – when the minimum wage growth rate is high then the unemployment rate decreases. In the case of people with low vocational qualifications, this can be explained by the fact that along with the increase in the minimum wage, the attractiveness of work is increasing. Getting a job involves needing to give up, for example, unemployment benefits and housework, finding a babysitter, covering the cost of commuting to work etc. If the minimum wage is low, these so-called “fixed costs of getting a job” may be so high that colloquially speaking, “it does not pay to work” for the unemployed. Only a significant increase in the minimum wage makes the job attractive, employment is rising and the unemployment rate is falling.

How to explain the relatively high negative correlation between the minimum wage growth rate and the rate of unemployment among people with tertiary education? This segment of the labor market appears to be still too distant from the labor market of people receiving the minimum or slightly higher wage. Statistics show, however, that in Poland as many as 19% of employees, including 20.1% of women in 2014, received remuneration below 50% of the average gross wage in the national economy. It should be added that this circle included such occupational groups as: salespersons and related (47.1%), personal service workers (43.5%), as well as financial and statistical staff and material inventory employees (18.4%) and specialists in economic and management matters (5.9%) and law, social and culture specialists (4.3%) (Rocznik Statystyczny Pracy 2015, pp. 306–308). Some of these workers undoubtedly have attained tertiary education or work and study at the same time, while some work part-time or illegally. The prospect of raising the minimum wage is therefore, similarly as for unqualified workers, the motivation to continue working in these positions or to take a full-time job.

Minimum wage in 2017

From January 1, 2017 two important changes in the labor law entered into force:

- the minimum wage was increased from PLN 1,850 (2016) to PLN 2,000;
- a minimum hourly rate of PLN 13 was introduced.

Each of them, due to their effects on the labor market and employees, needs to be considered separately.

Minimum wage PLN 2000

Let us begin with the fact that the amount of the minimum wage effective from January 1, 2017, i.e., PLN 2000, was a surprise for observers of negotiations between various social partners. Employers cautiously proposed PLN 1,862, although the Polish Confederation of Private Employers Lewiatan opted for PLN 1,900. Trade unions proposed PLN 1,970, while the Ministry of Family, Labor and Social Policy opted for a compromise amount of PLN 1,920. Suddenly, however, the government decided to raise the minimum wage to PLN 2,000. This was a clear government gesture to the electorate of the Law and Justice party which consisted to a large extent of low income groups.

This was an important political decision: Besides the 500+ program (PLN 500 monthly for the second and every other child in the family, as well as the first and only child for low-income families), the poorest workers received an extra bonus of a PLN 2000 minimum wage. This was a very important political decision, because for years in Poland a relatively high percentage of employees (compared to the European Union) had been receiving the minimum wage.

The minimum wage changes which have been in place since 2017 are not only significant because the government was the main initiator of the amount of PLN 2,000 per month, but also because the minimum wage in this amount applies to all employees. The Minimum Wage Act of 2002 made it possible to pay employees during their first year of employment not less than 80% of the minimum wage, and since 2005 the remuneration cannot be less than 90% of the minimum wage in the second year of employment. Since 2017, the amount of the minimum wage is the same for all employees (Journal of Laws of 2016 item 1456).

It is also worth emphasizing that the increase in the minimum wage automatically leads to an increase in wages, as many of the work-related benefits depend on the minimum wage. This mainly concerns:

- night work allowance (20% of the hourly rate resulting from the minimum wage);
- sick pay and sickness benefit;
- severance pay due to termination of employment for reasons not related to employees.

The increase in the minimum wage and the resulting increase in income from work are always critically evaluated by employers. They always proclaim economic disaster because their interests are being violated. This has been the case since the beginning of capitalism, and any improvement in the situation of workers was forced by them, and afterwards it turned out that surprisingly the economy did not collapse. It turns out that this was also the case in 2017. The situation in the labor market is exceptionally good. According to the GUS data, registered unemployment by mid-2017 did not exceed 7%, so it is at a level that has not been seen for many years. There is also a high demand for simple jobs which do not require high professional qualifications. In this situation, employers are forced to raise wages. This is clearly evident in large retail chains. For many years lower personnel received minimum wages, so their earnings increased only as a result of the government's decision to raise minimum wages. In 2017, we witnessed an unusual situation which could have also been affected by the 500+ Program, as a result of which some women could give up work or choose to work shorter hours. Since mid-2016, and even more clearly in 2017, the wages in supermarkets have been growing. When one retailer raises wages, other retailers must also do it. According to press reports, there is a salary war in the retail trade. Already in January 2017, retailers offered higher pay than the minimum wage. And so it was PLN 2,300 in Biedronka, PLN 2,350 in Tesco, PLN 2,550 in Lidl, and PLN 2,600 in Kaufland (MIĄCZYŃSKI 2017).

Minimum hourly rate

The introduction of a minimum hourly rate was a very important event in the labor market. The Act introduced a minimum hourly rate of PLN 13 gross under freelance contracts from January 1, 2017 (Act of July 22, 2016 amending the Act on Minimum Wage and Some Other Acts, Journal of Laws 2016 item 1265). According to the provisions of the Act, the minimum hourly rate will be adjusted annually by the ratio resulting from dividing the amount of the minimum remuneration, determined for the following year, by the amount of the minimum remuneration, in a given year.

This decision is an important step to civilize the labor market and counteract the atrociously low wages for work performed under contracts for services and the self-employed, which have provided single-person services to businesses. The very low hourly rates in the range of PLN 4–7, maintained for years, have been well known. Everybody – politicians, representatives of government and trade unions, academics and publicists – knew about it and tacitly accepted, assuming that it was the way in which the market assessed the workers. However, it was not taken into account that the labor market is not perfect, i.e., employers have more bargaining power than employees, their labor mobility, especially of

those low-skilled, is smaller than capital mobility, and the labor force is more dispersed and has less access to information than entrepreneurs. These reasons alone make interference in the labor market necessary, including interference in the form of the minimum wage. Social and political considerations also need to be taken into account – too much differentiation of income from work can lead to a collapse of the social order.

Does the first year of the functioning of the minimum hourly rate already show positive effects? It turns out that this is indeed the case. Here are the key successes:

- the introduction of a minimum hourly rate and the simultaneous increase in the monthly minimum wage to PLN 2,000 in the context of falling unemployment and the high demand for simple jobs leads to an increase in wages in the economy, stimulating global demand and positively affecting the economy;

- an obligation to confirm working hours has been introduced with the introduction of a minimum hourly rate, which along with the reinforced inspections the Chief Labor Inspectorate reduces fictitious contracts and the shadow economy;

- it is becoming profitable for employers to switch from freelance contracts to employment contracts. The calculation for an entrepreneur is as follows: According to the Labor Code the worker needs to work 168 hours a month. After multiplying it by the rate of PLN 13 it is PLN 2,184. This means that it pays for employers to hire a worker for a full time job at a wage of PLN 2,000, as they gain PLN 184 a month. The GUS data confirm that in 2017 the number of full-time employees increased. This was already visible in January 2017, when employment in the corporate sector increased by 4.5% compared to January 2016, and in some sections significantly higher, e.g., in information and communication – 7.1%, in transport and warehousing – 7.2%, in administration and support activities – 8.8%, and in accommodation and catering by as much as 9.4% (GUZA 2016, GODUSŁAWSKI 2017). This is a positive phenomenon as it leads to increased work stability;

- after the boom of outsourcing, especially in cleaning, catering and security services, based over the years on low-skilled and low-paid workers, it has become apparent that introducing the minimum hourly rate clearly increases the costs of these services and entrepreneurs, as well as public institutions begin to calculate what is more profitable for them and are considering departing from outsourcing in favor of employing full time employees.

Of course, the introduction of the minimum hourly rate met with the critical evaluation of entrepreneurs. The criticism focused mainly on identifying hazards associated with the minimum hourly rate. Among the most important are:

- security agencies, cleaning and catering companies were surprised by the rate of PLN 13 per hour, especially as the government spoke about a rate of PLN 12 in the middle of 2016, and it was not certain that these changes would be introduced. There was not enough time to renegotiate contracts with the principals;

– the above-mentioned services are becoming expensive, and many companies lay off employees and are threatened by bankruptcy. Security companies attracted a lot of press attention (WOJCIECHOWSKI 2017, ROZWADOWSKA 2016, 2013a, LENTOWICZ 2017). This is because the security sector employs more than 250,000 employees, is exceptionally sensitive to rising labor costs, and it is there that, unlike as in the case of other services, people can be more easily replaced by electronic surveillance, such as video surveillance. It is often pointed out that the decline in employment will be large there;

– some companies offering until now salaries far out of the statutory PLN 13 per hour are adjusting to the new rules in a dishonest way. The press and the Internet are rife with examples including such: the security guard's remuneration was raised up to PLN 13 per hour, but the security company charged him PLN 5 per hour for the uniform, a cleaning lady signs the contract at PLN 13 per hour, but is obliged to rent a vacuum cleaner for which she is charged PLN 4–5 per hour. Other companies see the chance in part-time employment for the same job as before or escape into the gray zone;

– many public institutions (hospitals, schools, government and local government offices) used cheap outsourcing services, and did not secure adequate financial resources in the 2017 budget for the increases provided by the minimum hourly rate law. The press reports that even such esteemed institutions as the Polish Social Insurance Institution (ZUS) and the Supreme Audit Office (NIK) in their formally held auctions do not observe the statutory hourly rates (ROZWADOWSKA 2017b).

Consistent compliance with the minimum hourly rate law requires increased inspection by the National Labor Inspectorate. This, in turn, entails additional financial resources to increase employment, salaries and improve technical facilities for officials. There is no indication that such funds have been secured. This shows, however, the inconsistency of the government in the introduction of a minimum hourly rate.

Conclusions

The following conclusions are drawn from the study:

– the correlations between the different macroeconomic variables presented for 1992–2016 do not indicate the harmfulness of the minimum wage for the economy. Furthermore, the increase in the relation of the minimum wage to the average wage does not lead to an increase in the unemployment rate;

– the rise in the minimum wage in 2017 had a positive effect on:

- households (increase in wages),
- national economy (increase in demand),
- public finances (larger receipts from advances on personal income tax and health and social insurance contributions);

– in the long run, the increase in the minimum wage may also be beneficial to entrepreneurs and the economy as:

- the increase in labor costs should lead to innovation,
- the rise in the level of remuneration in the economy will affect demand growth and will improve economic recovery,
- the increase in labor costs should be an important impetus for changing the strategy of competing and moving from a low-tech, low-skilled economic structure to a structure which requires modern technology, high qualifications and high salaries.

It would seem that there is no reason for concern. However, the announcement by the Minister of Family, Labor and Social Policy on the minimum wage increase up to PLN 2010 in 2018 encountered resistance. R. Trzeciakowski, an expert of the Civil Development Forum, believes that such changes will lead to the loss of 100,000 jobs per year (*Będą zwolnienia pracowników...* 2017). He believes that the minimum wage increase will affect the most the people with the lowest qualifications and from poorer regions, because most people receiving minimum wages work there.

So, the dispute concerning the effects of the minimum wage continues, and this should stimulate further research on this subject.

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Basic statistical data used to analyze the correlation between different variables

Years	Average wages [PLN]	Minimum wage [PLN] ^a	Relation between the minimum wage and average wage	Wage growth rate [%]		Growth rate [%]				Registered unemployment rate
				average	minimum	GDP at current prices	labor efficiency in current prices	GDP in constant prices	goods and services prices	
1992	290	109	0.376	64.8	78.7	42.1	48.4	2.6	42.4	14.3
1993	390	160	0.410	34.5	46.8	35.5	38.8	3.8	34.6	16.4
1994	525	214	0.408	34.6	36.9	35.1	33.7	5.2	30.7	16.0
1995	691	277	0.401	33.9	25.1	60.3	57.4	7.0	26.8	14.9
1996	874	354	0.405	24.3	29.2	15.0	10.7	6.1	19.4	13.2
1997	1,066	427	0.401	22.0	19.5	21.8	20.8	6.8	14.8	10.3
1998	1,239	500	0.404	16.2	18.2	17.2	10.4	4.8	11.6	10.4
1999	1,707	552	0.323	37.8	10.4	11.5	18.9	4.1	7.4	13.1
2000	1,894	700	0.370	10.9	26.8	20.7	29.0	4.2	10.4	15.1
2001	2,045	760	0.372	8.0	8.6	4.6	0.8	1.1	5.5	18.3
2002	2,133	760	0.356	4.3	0.0	3.7	13.3	1.3	1.8	20.0
2003	2,185	800	0.366	2.4	5.3	4.2	12.4	3.6	1.1	20.0
2004	2,273	824	0.363	4.0	3.0	9.5	9.9	5.3	4.3	19.1
2005	2,360	849	0.360	3.8	3.0	6.8	5.9	3.5	2.4	17.6
2006	2,477	899	0.363	5.0	5.9	7.6	6.4	6.2	1.1	13.9
2007	2,673	936	0.350	7.9	4.1	11.0	7.2	6.8	3.2	9.6
2008	2,942	1,126	0.383	10.6	20.3	8.4	4.1	3.9	5.2	7.1
2009	3,103	1,276	0.411	5.5	13.3	5.4	6.2	2.6	3.1	12.1
2010	3,224	1,317	0.408	3.9	3.2	7.5	3.2	3.7	2.7	12.4
2011	3,404	1,386	0.407	5.6	5.2	5.4	8.4	5.0	5.0	9.7
2012	3,530	1,500	0.425	3.7	8.2	4.7	5.1	1.6	4.3	10.1
2013	3,659	1,600	0.437	3.6	6.7	3.8	1.6	1.3	0.7	10.3
2014	3,777	1,680	0.445	3.2	5.0	3.8	2.6	3.3	-0.2	11.4
2015	3,908	1,750	0.448	3.5	4.2	4.6	3.3	3.9	-1.2	9.7
2016	4,047	1,850	0.457	3.6	5.7	2.7	3.0	2.7	0.3	8.8

^a Until 1999, the minimum wage was determined several times a year – the table shows the weighted average for each year.

Source: authors' own study based on Statistical Yearbooks of Central Statistical Office.

Basic statistical data on the unemployment rate in the IV quarter of each year in Poland used to analyze the correlation between different variables

Years	Registered unemployment rate	Unemployment rate [%]									
		total	women	men	urban unemployment	rural unemployment	among people aged		by educational level		
							15–19 years old	20–24 years old	primary ^a	basic vocational	tertiary
1992	14.3	13.7	15.2	12.4	15.8	15.9	36.4	26.1	12.7	16.9	5.3
1993	16.4	14.9	16.5	13.6	16.9	12.0	42.9	27.9	15.0	18.4	5.0
1994	16.0	13.9	15.7	12.3	14.8	12.4	48.3	27.6	14.1	17.8	3.6
1995	14.9	13.1	14.4	12.1	13.9	12.2	44.1	27.1	14.4	16.4	3.0
1996	13.2	11.5	13.4	9.9	12.0	10.7	35.0	23.9	12.9	14.1	2.9
1997	10.3	10.2	12.0	8.7	10.7	9.3	31.7	21.2	12.5	12.0	1.4
1998	10.4	10.6	12.2	9.3	11.1	9.9	32.5	28.5	14.4	12.5	3.0
1999	13.1	15.3	18.1	13.0	15.9	14.5	45.6	29.7	19.3	18.4	4.8
2000	15.1	16.0	18.1	14.2	16.9	14.3	41.8	32.4	20.2	19.2	4.8
2001	18.3	18.5	20.0	17.3	19.6	16.7	41.8	32.4	22.6	22.4	6.4
2002	20.0	19.7	20.6	19.0	21.3	17.2	46.7	40.0	25.4	23.8	7.5
2003	20.0	19.3	20.3	18.4	20.9	16.6	46.5	40.2	26.0	23.5	7.7
2004	19.1	18.0	19.5	16.7	19.1	16.2	36.7	37.4	27.1	23.0	7.2
2005	17.6	16.7	18.3	15.4	17.4	15.7	35.2	34.5	36.7	21.5	7.1
2006	13.9	13.8	14.9	13.0	14.4	13.0	30.8	29.6	21.9	16.6	5.9
2007	9.6	8.5	9.4	7.8	8.8	8.0	17.0	16.9	13.0	10.0	4.5
2008	7.1	6.7	7.6	6.0	6.9	6.4	22.2	16.5	11.4	7.0	3.6
2009	12.1	8.5	8.8	8.2	6.4	8.2	30.4	21.3	15.9	9.3	5.0
2010	12.4	9.3	9.9	8.9	9.5	9.0	32.0	22.5	17.1	10.4	4.7
2011	9.7	9.7	10.8	8.8	9.7	9.8	35.3	25.4	16.9	11.3	5.2
2012	10.1	10.1	11.1	9.3	10.2	10.0	41.9	25.7	18.7	11.9	5.7
2013	10.3	9.8	10.5	9.1	9.8	9.7	37.0	26.4	19.0	11.7	5.6
2014	11.4	8.1	8.7	7.6	7.8	8.5	30.0	21.2	16.9	9.5	4.6
2015	9.7	9.7	10.1	9.2	9.6	9.8	20.8	21.0	16.8	9.2	4.0
2016	8.8	–	–	–	–	–	–	–	–	–	–

^a lower secondary, primary and incomplete primary.

Source: as in Annex 1.

REFORMS IN POLAND – OPINIONS AND FACTS

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Key words: systemic transformation, economic reforms, market liberalism, command and control system.

Abstract

In this paper we show that all attempts at major economic reforms introduced in Poland since the 1980s have incurred negative reactions on the part of large social groups (strikes, lack of support for the political forces which prepared and introduced reforms). We try to determine if such reactions are justified and whether there are serious arguments for them. We come to the conclusion that there were serious reasons for distrust and dislike of reforms. The main one involves the discrepancy between the declared goals and the assumed effects of reforms, and the actual effects felt by the public.

Two issues will be presented: 1) to what extent are social feelings influenced by the demanding attitude of the public and its immaturity, which impede understanding of the need to reform the economy, 2) the inability of political elites to correctly formulate goals, identify the means of their implementation, and act effectively.

The experience so far has made the political elites less and less interested in introducing serious reforms, which is manifested in the preference for a policy of providing basic utilities or relying on economic programs on the budgetary revenue generated by rising taxation.

POLSKIE REFORMY W ŚWIETLE FAKTÓW I OPINII

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Słowa kluczowe: transformacja systemowa, reformy gospodarcze, liberalizm rynkowy, system nakazowo-rozdzielczy.

Abstrakt

W artykule pokazano, że wszystkie próby znaczących reform gospodarczych wprowadzanych w Polsce od lat 80. wywoływały negatywne reakcje dużych grup społecznych (m.in. strajki, brak poparcia dla sił politycznych, które przygotowywały i wprowadzały reformy). Próbowano ustalić, czy takie reakcje są zasadne i czy można znaleźć poważne argumenty na ich poparcie. Wyciągnięto wnioski, że występowały poważne przyczyny tłumaczące nieufność i niechęć wobec reform. Jako główną można uznać rozdzwięk między deklarowanymi celami i zakładanymi efektami reform a rzeczywistością odczuwalnymi przez społeczeństwo skutkami.

Przedstawiono też dwie kwestie: 1) odpowiedź na pytanie, w jakim stopniu na odczucia społeczne wpływa roszczeniowość społeczeństwa i jego niedojrzałość, utrudniające zrozumienie konieczności reformowania gospodarki, oraz 2) niezdolność elit politycznych do prawidłowego formułowania celów, doboru środków ich realizacji i skutecznego działania. Dotychczasowe doświadczenia powodują, że elity polityczne coraz mniej są zainteresowane wprowadzaniem poważnych reform, czego wyrazem jest m.in. preferowanie polityki zapewniającej „ciepłą wodę w kranie”, czy opieranie programów gospodarczych na dochodach budżetowych uzyskiwanych z rosnącej ściążalności podatków.

Introduction

The aim of the article is to evaluate selected reforms (not only economic) which were implemented in Poland during the period 1988–2017. This evaluation is based on the analysis of facts associated with these reforms, different assessments and views formulated in scientific and opinion-forming institutions, as well as available statistics.

This article also attempts to answer the question whether Polish society (or at least a large part of it) is averse to economic reforms, and if so, what are the reasons for the aversion¹. The answer may not only be cognitive but also practical, for future economic policy.

As reforms, we treat important changes in the economic system, including narrowly understood institutional arrangements, decision-making powers, and methods and tools of economic policy. These changes should accelerate the growth of production factors and contribute to their more efficient use to better meet the needs of society.

It is understandable that in the modern economy such changes are made by the state. Depending on the existing political system, the process of initiating, preparing and implementing changes varies. Where political power is monocentric and a centrally planned economy dominates, the processes of adjustment to changing conditions is generally difficult, because doctrinal constraints tend to accumulate irregularities and do not give rise to optimal solutions.

¹ We are not dealing with the question of whether aversion to reforms is a manifestation of populism, although such a relationship is likely to occur. Hence, we do not want to expand the analysis excessively. We treat the concept of populism as conceived by LACLAU (1989).

Attempts to reform the centrally planned economy

In Poland, the problems with the implementation of centrally laid out plans were most often borne by the society on which the effects of system failure were shifted. This has become evident by the need to reduce the real incomes of basic groups of society, occurring every now and then. As a rule, this was achieved by introducing incremental increases in consumer prices, frequently presented by the authorities as the reforms necessary and beneficial for society. Such acts from political and state authorities led to violent social protests. It was so in June 1956 (Poznań), December 1970 on the coast, June 1976 in Radom, Ursus and Płock, and in August 1980 on the coast. A belief persisted in the social consciousness that political and state authorities were not interested in genuine reforms, but only in abstract changes, which preserved an otherwise inefficient system, without the possibility of a satisfactory increase in consumption.

The shock for the ruling party, the Polish United Workers Party (PZPR), included the events that followed in 1980–1981; in particular the creation of the Solidarity movement. This made it clear for some leading officials that the introduction of serious (but doctrinally limited) reforms is inevitable and even desirable in order to avoid an uncontrolled process of losing economic and political power. Cautious and limited attempts at change began in 1982. This was evidenced by the Law on State-Owned Enterprises (September 1982) giving the enterprises far-reaching freedom of action. The Law introduced a strong employee self-government, which had (formally) the right to appoint a director and deprived, in practice, the superior institutions of the possibility of addressing individual orders to enterprises concerning individual entities². After this change, the system had to a large extent lost its commanding nature³. Enterprises had become increasingly independent of the control and pressure of the ruling party, whose influence on the economy was declining. The influence of overriding institutions of state power was also declining. The processes taking place in the economy began to be spontaneous and were increasingly difficult to control.

In the 1980s, the then authorities made numerous attempts to carry out limited reforms aimed primarily at increasing the efficiency of the economy. Their positive effects, however, were small. The economy had increasingly lost its ability to develop, among others due to public distrust and a lack of support for changes. This was reflected in 1987 by the results of a referendum that was unfavorable for the ruling party, in which the society was to say whether they wanted radical, healing reforms. The response (with low attendance) was

² This law allows the use of individual orders (with full compensation for possible losses in this respect) only in three cases: defense needs, natural disasters and the need to comply with international agreements. In practice, such interference was avoided.

³ The scope of central distribution had also decreased. The percentage of centrally distributed materials dropped from 90% in 1978 to 35% in 1987.

negative. The ruling party then recognized that the situation was becoming unpredictable and dangerous, so it was necessary to take corrective measures and even change the foundations of the existing socio-economic system.

In 1988, the last government (with Prime Minister Mieczysław Rakowski) representing the then socio-economic system introduced several solutions which soon made it easier (at the end of 1989) to move Poland to a market economy. At this stage, one should mention the following:

– the privatization of state property launched in 1988, mainly intended to grant property rights to people forming the core of the nomenclature⁴, which was to encourage them to support such radical changes and secure a good position in the new system. But this had reaffirmed the belief in society that the ruling elites would take over (almost for free) the property produced by all working citizens;

– adoption at the end of 1988 of the so-called Wilczek's⁵ Act on running a business. This law was revolutionary. It equalized the various property sectors, drastically limited state interference (deregulation – acknowledging that anything, which is not prohibited is acceptable). Up to now, many entrepreneurs, economists and politicians believe that this was perhaps the best law regulating economic activity in the history of Poland;

– freeing food prices from administrative control as of August 1, 1989, which triggered large-scale inflation of course, but allowed equilibrium prices to develop in the market after a few months (in 1989 consumer prices rose by around 350%).

The public saw it primarily through the decline in real wages due to government decisions. However, there was no violent reaction from the public. It was probably because people were looking forward to the future with optimism and hope after the June 4, 1989 election.

Beginning of transformation: Shock therapy

The preparation of the new economic system began in autumn of 1989 when the parliament, who had been elected on June 4, 1989, began to legislate, and a government was formed with a dominant majority of representatives and supporters of Solidarity. Polish politicians had accepted the suggestions of the World Bank (especially of Professor Jeffrey Sachs, a colleague of Milton Friedman) containing an outline of recommended solutions. They were based on the so-called Washington Consensus and included a package of proposals addressed to developing economies, such as South America, Asia and Africa, by international financial institutions (mainly the International Monetary Fund and the World

⁴ Nomenclature was commonly referred to as people holding positions, which required the approval (and sometimes the recommendation) of the relevant institutions of the ruling party.

⁵ Mieczysław Wilczek, businessman, minister in the government of Mieczysław Rakowski.

Bank). This package was based on three pillars: Privatization, liberalization and deregulation. This was consistent with the generally accepted liberal market doctrine. In the period of systemic breakthrough in Poland this doctrine was considered to be in line with our expectations and needs, which was understandable, given the bad experience with the system that existed up to then.

The proposal to assume responsibility to prepare and legally regulate new solutions was submitted by the Prime Minister Tadeusz Mazowiecki to, among others, Prof. Witold Trzeciakowski and Prof. Cezary Józefiak; however, neither of them undertook this task. They concluded that the implementation of the proposed concept may encounter barriers difficult to overcome and lead to high unemployment and a reduced income of the population. Therefore, they did not want to take responsibility for it⁶. Ultimately, this task was undertaken by Dr. Leszek Balcerowicz, then assistant professor at the Main School of Planning and Statistics, (he became minister of finance and deputy prime minister). A package of ten new laws regulating business activities was prepared very quickly. The Government presented the bills to the Sejm on December 17, 1989; in the same month the bills were passed by the parliament and approved by the President. The new system has been in effect since January 1, 1990.

The pace of work on the new system, covering almost the entire economy, was therefore extremely fast. Under these conditions it was not possible to carry out in-depth analyses, discussions and public consultations. The preparation of a huge number of executive regulations had become a problem. It should be borne in mind that many new people came into the new administrative structures who had no experience in managing large institutions or substantive qualifications. It is difficult in such a situation to avoid errors and to take into account all the important aspects and problems. In practice, it soon became clear that the difficulties were greater than anticipated.

The results actually obtained at the beginning of the transformation process were generally much worse than the assumptions and forecasts adopted in the fall of 1989⁷. This concerned the basic values: GDP changes, industrial output, inflation, real wages, agricultural incomes and the unemployment rate. The deterioration of the economic situation in Poland was comparable (in terms of scale) to the situation in the US at the beginning of the Great Depression which broke out in 1929, although the reasons in both cases were quite different.

In Poland, the rapid “plunge” was the price which the economy and society paid for switching to a market system and opening up to the outside world in the form of a shock therapy. The question remains: Was this solution the best or the only one possible? After 1989, for many years it was generally accepted without discussion that it was a necessity, with no alternative. Only a few Polish

⁶ Also Prof. Władysław Szymański refused. The candidacies of Prof. Janusz Beksiak, Prof. Witold Kieżun and Prof. Janusz Kancinski were also considered. See: KOWALIK (2009, p. 82).

⁷ Włodzimierz BAKA (2007, p. 275) cites J. Sachs’ opinion that the stabilization plan will bring about over one hundred thousand unemployed people in Poland.

economists had a different opinion on this issue and proclaimed this openly, Prof. Tadeusz Kowalik and Prof. Grzegorz Kołodko among others.

In this article, we focus not so much on the substantive analysis of the content of Balcerowicz's program, but mainly on how this program was implemented and why it did not gain clear social acceptance. Probably the most critical stand on the reforms undertaken in 1989 was presented by KOWALIK (2001, p. 134). He believed that "... in the period of exceptionally large margin of freedom which history gives us very seldom, the unfortunate path of systemic change has been chosen, leading to a socially unjust socio-economic system. Its contours are already sufficiently expressive and persistent, and treating them as transitory social costs is a delusion". The potential of the reformist forces, the largest in the bloc of socialist states, had not been exploited. There was a drastic restriction of public debate, and negotiations with the trade unions were not allowed. According to T. Kowalik, Lech Walesa felt that a strong trade union movement was a hindrance to reforms; therefore he did not seek to rebuild Solidarity and proposed to give extraordinary powers of virtually unlimited scope to the government. With the imposed mode of passing laws, parliamentarians had no opportunity to get acquainted with the presented projects. KOWALIK (2001, p. 135) believes that "there is something shocking in that when asked whether Mazowiecki or Balcerowicz presented to Walesa, then the leader of Solidarity, the principles of reconstruction of the Polish economy, he responds: No, I do not think so, although I cannot recall it clearly anymore".

It is difficult to find confirmation that the prolongation of the reform's duration could jeopardize its implementation on the part of former political elites and the "nomenclature" (there is no evidence for it). It is more likely, instead, that the adopted form of the reform could have been really threatened by a time-consuming discussion and clash of views within the new political forces, which had become influential after 1989. There was no consensus on the core issues in these circles. It is evidenced by the content of some of the 21 demands formulated by Solidarity, treated by this trade union as the basis of the action program. For example, there were the following demands:

- introduction of food coupons for basic foodstuffs, i.e., the so-called "Cards" until the needs of consumers are met;
- prohibition on the export of goods which are deficient in the internal market;
- reduction in the age for retirement for women to 50 and for men to 55.

It was probably decided that in this situation, it would be more advantageous to use the method of *fait accompli*, using a very large capital of social trust for the new power.

Not all post-socialist countries have opted for immediate shock therapy. For example, in Czechoslovakia⁸ it was decided that the transition process should

⁸ It was not until 1992 (formally since January 1, 1993) that two separate states emerged: the Czech Republic and Slovakia.

be gradual, so that it would not lead to high unemployment and a decline in real incomes. Protecting these short-term interests of society was treated as a priority.

In 1989, registered unemployment rates in Poland and Czechoslovakia were negligible. The Czech Republic managed to maintain a low unemployment rate. It was generally a few percent, while in Poland unemployment rates reached a dozen or so percent (i.e., several times more). The Czech Republic also succeeded in considerably increasing real wages. Only in 1990 did they decrease by 6% compared to the previous year, while in Poland at the same time real wages decreased by as much as 25%. Between 1990 and 1995 real wages increased by as much as 46% in the Czech Republic, while in Poland between 1990 and 1996 only by 3%. In the Czech Republic, inflation was also significantly lower (in terms of consumer prices). In 1997, prices in the Czech Republic were 3 times higher than in 1990, while in Poland 7.5 times higher. Poland in turn had a strong advantage in the GDP growth rate. It is true that its collapse occurred in Poland faster and more violently (1990–1991) than in the Czech Republic (1991–1992), but faster and stronger was the recovery. For the entire 1990–1997 period, GDP declined by 2% in the Czech Republic and in Poland it increased by 26%.

It can be concluded that different goals were treated as priorities during the transformation process in Poland and in the Czech Republic. In Poland, the political elites treated the high growth rate as the main reason that the country was considered an example of the greatest success in the transition period in Central and Eastern Europe. This success should therefore provide social acceptance for pro-reform political forces, but in practice it was not clearly visible, perhaps because, as many economists say, there is no simple relationship between the level and growth rate of GDP and the social perception of well-being, standard of living and quality of life. The same measure of the level and quality of life and GDP as a measure of economic activity has been the subject of much controversy, cf. STIGLITZ et al. (2013), BOGLE (2009), CHANG (2013), KOTLER (2016), AKSMAN (2010), and STIGLITZ (2013). The results of research are often surprising and hard to interpret unambiguously. For example, the Nobel Prize winner in 2015, Agnus DEATON (2010, pp. 67–71) believes that we do not have sufficient grounds to determine “whether or not the growth in the world over the past half-century has brought an increase in life evaluation. But this seemingly uncontroversial conclusion has been mired in debate”. For example, the specificity of individual regions of the world and countries affects the evaluation of the level of happiness. But “... most notably there is a weaker relationship with national income” (than in the case of life evaluation – K.S.). “It turns out that a higher percentage of people in Bangladesh, Kenya, Nepal or Pakistan are experiencing higher levels of happiness than Danes or Italians. In turn Russia and its former satellites are among the unhappiest countries in the world”. Also the level of life evaluation is exceptionally low in Russia, the former Soviet Union countries and Eastern European countries (especially among elderly people).

As already mentioned, the violent and radical conversion of the Polish economy to the market system and private ownership took place at a very high social cost, much higher than promised while introducing reforms. Compared to the beginning of 1990, in 1993 about 40% of people lived below the social minimum; wages, old-age pensions and disability pensions fell by 30% and farmers' income was down by 50%. Nearly 3 million people remained unemployed, and consumer goods prices rose a few hundred percent.

There was a rapid change in the economic position and prestige of particular socio-occupational groups. Prior to transformation, differences in property and income were relatively small. The ability to provide oneself (family) with attractive consumption depended not so much on nominal income, but rather on:

- the place occupied in the power system (nomenclature, the apparatus of the Polish United Workers' Party), symbolized by “shops behind yellow curtains”, where authorized persons could buy hard to find goods at low price;
- employment in companies which produced or distributed (sold) attractive, hard to find goods;
- free time (pensioners had a lot of time and stood in line to buy goods in the official market);
- participation in the “gray zone” dealing with the illegal distribution of hard to find goods.

Already after the first months of transition, the determinants of access to attractive consumption had changed radically. Commodity prices were rising and rapidly approaching equilibrium. Almost everything could be bought effortlessly, provided the buyer had the money for it. The owners of private companies had become more and more affluent (in a short period of time their number had increased by several hundred thousand) as well as specialists – managers in economics, finance, management, marketing, and law, who were underestimated before the transformation. The role of engineers and technicians was declining (also in terms of income). Poland was entering a system in which the economic account and sales skills became more important than production.

For the many reasons mentioned above, support for reforms was weakening. Anxiety about the future, bitterness and resentment were increasing. Political elites had been trying to explain some of the failures by the fact that society was not yet exploiting the opportunities that the new system created, yet expected the state to take over the vital affairs of citizens; and that was no longer possible. Everyone should be active and determined to “take matters into their own hands”. But such expectations were not fully justified in society, which for decades had no motivation for creative effort, taking initiatives and competition. It was difficult to expect that such a passive attitude would change dramatically over a period of a year or two, especially in small towns, rural areas (e.g., among State Farms workers), and in low-educated environments. It was especially there that the conditions of life before the transformation were positively evaluated, including the mass transfer of the village population into cities, the possibility

of “getting” the apartment (albeit of low standard and after many years of waiting but almost for free), job security (albeit mostly poorly paid, but knowing that others are no better off), and the ability to meet basic consumer needs⁹.

The strikes, which were increasingly breaking out in the early stages of transformation in Poland, were a clear sign of declining trust and public support. This is shown in Table 1 (no data on strikes in Poland prior to 1990).

Table 1

Strikes in Poland in the years 1990–1996

Years	1990	1991	1992	1993	1994	1995	1996
Number of strikes	250	305	6,351	7,443	429	42	21

Source: based on Statistical Yearbook (1997, p. 139).

This information can be treated as a clear picture of the mood of Polish society. This image is even more expressive if the data on strikes in other countries is taken into account. For example, in 1992 there were 4–6 times more strikes in Poland than in any other country with the highest number of strikes (Spain, former USSR, India, and France). In the USA, there were 35 strikes, one in Austria and one Switzerland, 20 in Sweden and four in Hungary (International Yearbook of Statistics 1994, p. 105).

Continuation of the liberal economic system

The political parties that promoted reforms failed in the elections held in September 1993. It may be surprising that the successor to the Polish United Workers’ Party that ruled before 1990, the SLD (Democratic Left Alliance), decisively won the election. For the winners of this election, it was a very good time to take power, for two reasons:

– firstly, the Polish economy demonstrated visible signs of “recovery” and was entering the phase of accelerated growth based on the good foundation created by the reforms already under way;

– secondly, the international environment was creating increasingly favorable conditions for development, the Polish economy had already freed itself from

⁹ Definitely, during the so-called “late Gierek era” (1976–1980), two-three times more apartments were constructed than in the later years. For example in 1978 it was as many as 283,000 apartments (Statistical Yearbook 1984, p. 424). And the meat consumption was highest in Poland in 1980 (69.1 kg) and so far this level has not been exceeded. The decline in meat consumption during martial law was over twenty percent, however the empty shelves in the shops made a bad impression (Statistical Yearbook 1984, p. 122).

the pre-existing dominant relationships with the former socialist bloc and was increasingly strengthening its position in the western markets.

And that is why, despite the lack of significant systemic changes, the Polish economy achieved serious successes in the following years. This is evidenced by the data in Table 2.

Table 2

Changes in basic economic values in the years 1993–2015

Economic values	1993	1997	2001	2005	2007	2015	2016
GDP growth rate (previous year 100%)	103.8	106.8	101.0	103.5	103.3	103.6	102.8
Number of registered unemployed (in millions) (at the end of the year)	2.89	1.83	3.15	2.77	1.75	1.56	1.33
Unemployment rate at the end of the year (in %)	16.4	10.3	17.4	17.6	11.2	9.8	8.3
Commodity and services price index (previous year 100%)	134.6	114.8	105.5	102.1	102.5	99.3	100.8
Budget deficit at the end of year (in %)	-2.7	-1.4	-4.3	-2.9	1.4	-2.6	-2.3
Average monthly real remuneration (previous year 100%)	97.1 Net	107.3 Net	102.5 Gross	101.8 Gross	105.5 Gross	104.2 Gross	4.4 Gross

Source: based on Statistical Yearbooks (1993–2015).

And perhaps the attachment to the liberal-market doctrine, demonstrated by the SLD (and the PSL – Polish Peasant Party) in avoiding major changes improving the situation of socio-occupational groups which did not feel themselves to be beneficiaries of the systemic transformation determined the outcome of the 1997 parliamentary elections. The Solidarity Electoral Action, which was strongly linked to the program and personnel of Solidarity, gained social support. Probably a large proportion of voters (dissatisfied with previous governments) believed that the government representing the trade union was best able to represent the interests of salaried employees and those who believed that they had not succeeded in the transition process and had been discriminated against.

The AWS (Solidarity Electoral Action) government was a unique experiment, not only in Poland, but also internationally. So far, there have been no cases of such far-reaching intervention and interference of the trade union into the sphere of politics. However, also at this time liberal-market economic policy continued, and the government was quite successful in opposing the introduction of elements of social solidarity and social needs into its program. Therefore, it is no wonder that Leszek Balcerowicz became the Minister of Finance and Deputy Prime Minister responsible for the economy, for the second time (his first term was in the years 1989–1991). Therefore, the economic policy, initiated

in 1990, with modifications and additions, was continued. The AWS government had no significant success in the economic sphere. This is demonstrated by the data in Table 2.

Reforms of the budgetary sphere

The AWS government focused on issues not directly related to the economy but to the broadly defined budgetary sphere. Already in his first expose at the end of 1997, Prime Minister Jerzy Buzek announced that his government would prioritize the preparation and implementation of four reforms covering the areas important to society: health care, education, pension systems and the administrative division of the country (local government system). These areas had been omitted in the reforms so far. It was decided that radical changes would be needed to improve the quality of services provided and rationalize their costs; all four reforms were to be implemented on January 1, 1999. Time was short, and many difficult problems had to be solved. Again the question arises (as with regard to the year 1989), why in such a short time and in so many fields at the same time? There were probably even fewer arguments in favor of this approach than in 1989. However, at the time, external pressures (the IMF, the World Bank) played a large role, as well as the lack of experience in undertaking such large reform projects. In 1998, such pressures mainly constituted mild incentives, and experience gained after 1989 should have encouraged caution and prudence. It seems that in 1998 the political criteria predominated again.

Large reforms in sectors relevant to the functioning of society in the early stages generally trigger disturbances and additional costs, even when well prepared. And yet there were no funds available to cover the additional expenses, and the experience so far gave no reason to believe that everything would be perfectly designed and implemented. It must be borne in mind that all reforms had provoked turbulent discussions and controversies. In general, the reforms were supposed to improve service quality and rationalize spending by increasing the role of market mechanisms and private ownership (this did not apply to reform of the administrative structure). A new wave of strikes became another manifestation of disapproval and opposition (after the first in the years 1992–1993). In 1999, there were 920 strikes, while in 1997–1998 respectively 35 and 37, and between 2000 and 2001 respectively 44 and 11.

Over time, the weaknesses of the solutions adopted in 1999 became increasingly apparent¹⁰. They did not produce expected positive results. Furthermore, important and difficult problems were still waiting for a solution and were still causing dangerous tensions for the functioning of society.

¹⁰ Even the legitimacy of the administrative structure reform, especially the creation of powiaty (counties), is being questioned.

Dani Rodrik argues that one should not overextend at the same time the field and scope of institutional reforms. Based on an analysis of more than 80 cases in which different countries have increased their growth rates by at least two percentage points for at least seven years, he (in collaboration with Ricardo Hansmann and Lant Pritchett) concludes that the vast majority of them were unrelated with important economic reforms (e.g., liberalization and opening up of the economy). Growth impulses mainly consisted in loosening specific constraints and institutional changes were moderate. That undermines the legitimacy of “prescriptions” formulated under the Washington consensus. It seems that Andrzej Wojtyna (2008) agrees with this approach, quoting the following statement by D. RODRIK (2006): “In the limit, the obsession with comprehensive institutional reform leads to a policy agenda that is hopelessly ambitious and virtually impossible to fulfill”.

In Poland, as in other post-socialist countries, discussions about the role of the state in transforming economies are still ongoing. At the beginning of the transformation, the views that this role should be minimized clearly prevailed. Such attitudes softened over time. Since the outbreak of the crisis (2008) more and more economists, economic activists and politicians are willing to accept greater state activity in the economy.

2006 Nobel Prize winner Edmund S. Phelps in an interview for “Polityka” *The Market in the Reins* (2008), already at the beginning of the crisis, said that “market mechanisms need to be corrected more than usual in order to ease the shocks caused by the poorly regulated market.” Dani RODRIK (2011, p. 216, 217), believes that under current conditions “... traditional dichotomies between market and state or laissez-faire and intervention begin to make less sense. These alternatives are not competing ways of organizing a society’s economic affairs; they are complementary elements that render the system sustainable. Every well-functioning market economy is a mix of state and market, laissez-faire and intervention”.

The current crisis has prompted the majority of Western European countries to increase their activity focused on initiating and financially supporting the desired changes in the economic structure, including in particular increasing the role of renewable energies and the fight against the causes and effects of global warming. The state plays the leading role here, not the market. As Mariana MAZZUCATO (2016, 37, 38) notes, “In fact, history shows that those areas of the risk landscape... that are defined by high capital intensity and high technological and market risk tend to be avoided by the private sector and have required a great amounts of public sector funding (of different types) as well as public sector vision and leadership, to get them off the ground. The State has been behind most technological revolutions and periods of long-term growth. This is why an ‘entrepreneurial State’ is needed to engage in risk taking and the creation of a new vision, rather than just fixing market failures”.

However, in Poland such views have gained few supporters. It was argued that liberal-market reforms should be continued (despite the fear that they would not have much public support), but they need to be conducted more carefully and to a limited extent, while focusing attention on issues which should not evoke negative emotions.

Extending the retirement age

That was probably why the Civil Platform (PO) (as a ruling party) had undertaken another major reform, but one that, as it was supposed, did not entail serious political risk. It was an extension of the retirement age: for women from 60 years to 67, and for men from 65 to 67 years. This should have protected the state budget from collapse in the future as a result of growing subsidies to pension funds under conditions of a deteriorating demographic situation and prevent a drastic reduction in pensions (the so-called replacement rate showing the share of the average pension in the average wage would inevitably fall). It was considered that these arguments were so clear and convincing that they would easily be approved by the public. The authors of this reform, as its additional assets saw little implementation costs, a small range of organizational and personnel changes. The reform was passed on January 01, 2013).

However, it turned out that all these arguments did not convince a large part of the population, and the Law and Justice party (PIS) in its program for election (who won in 2015) promised to restore the previous retirement age (and indeed did)¹¹. Again the question arises: is this lack of support due to irrational causes or is it possible to explain it reasonably? It seems that the authors of this reform did not adequately take into account the specificity of the Polish economy nor the impact of this specificity on social awareness and values. And especially that:

- the economy continues to create a high demand for low-skilled workers, performing simple tasks requiring physical effort. For those employed in these positions, extending the working period by several years may lead to extreme physical and mental exhaustion¹²;

- high share of unstable employment forms has been achieved (about 25%, the highest in the EU next to Spain), mostly low paid, without social security (so-called junk contracts);

¹¹ As we have mentioned, one of the 21 Solidarity demands was retirement age of 50 for women and 55 for men. At the time of adopting the Act on the extension of retirement age (2012), only three EU countries had a longer retirement age for men than in Poland (and only by one year). In the case of women we were in a position close to the average.

¹² This has been noted by Thomas PIKETTY (2016, p. 221) who considers the proposals suggesting the extension of the working period as a weakness.

– the labor market is unstable, there were almost 3 million unemployed in 1994, about 3.4 million in 2002, after joining the EU unemployment fell to 1.5–2 million (but about 2 million people work abroad). It was not until July 2017 that registered unemployment reached its lowest level in twenty-five years (about 1.14 million people);

– there are not enough job offers for people over the age of 50;

– a large part of society still does not have high consumer aspirations. This applies in particular to (but not limited to) older, less skilled people. They have a relatively low but stable income and a sense of confidence that they will receive it on a regular basis;

– there is widespread concern that in the future pensions may be relatively (in relation to wages) lower and lower. This fear is generated by politicians and the media;

– retirement worsens the current income situation, but this difference is small, especially for people with low wages.

In preparing the reform, which extended the retirement age, all this was not adequately taken into account. It made it difficult to make an accurate assessment of the attitude and reaction of the public. It turned out that a significant portion of the public believed that extending the retirement age was not beneficial to them. And it does not seem justified to blame the same society for it. It is rather that the political-state power should better formulate proposals for systemic changes, i.e., to ensure that they do not exceed the expectations of the public and that they are acceptable to them. This sometimes requires tedious and long-term arrangements and educational activities. But in democratic systems of governance it is necessary to avoid serious social and economic shocks and disturbances. It should be borne in mind that economics is not an experimental science. All the more, it imposes a great obligation and responsibility on the experimenters (reformers), because insufficiently justified and inaccurate recommendations and guidelines of economists can adversely affect the living conditions of society, especially when they are used hastily by economic policy.

“Good changes” (since 2015)

By 2015, economic policy was aimed at consolidating and expanding market mechanisms, deregulation (often declared and unrealized), and the creation of favorable business conditions for entrepreneurs. The Law and Justice party after taking over power seeks to:

– strengthen the economic position of the most vulnerable sections of society (Program 500+, raising the tax-free income of individuals, striving to liquidate so-called junk contracts, raising the minimum wage and the lowest hourly rate);

– strengthen the role of the state sector in the economy (taking over private banks, insurance companies, repolonization, large development programs

formulated by the Minister of Development, e.g., utilization of graphene, restoration of the shipbuilding industry, launch of mass production of electric cars¹³ and drones;

– pursue an industrial policy which ensures optimal interaction between the public and private sectors. A brief explanation was given by Deputy Prime Minister M. Morawiecki in the preface to M. Mazukato’s book *Przedsiębiorcze państwo* [The Entrepreneurial State: debunking public vs. private sector myths.] He wrote there (p. XXVII) that from the beginning of the transition there was quiet consent “... to roll up the state and avoid strategic decisions in economic policy”. This was confirmed by the Minister of Economy’s statement that “The best industrial policy is none at all”¹⁴. This attitude needs to be changed, while “... it does not necessarily mean that the state should conduct extraordinary activity – it is enough to support industry, entrepreneurship and innovation in the same way that the world’s most developed countries do”. And apply the same tools that these countries use;

– implement the ideas and postulates of social solidarity: strengthen the weakest positions, introduce solutions that enable equal opportunities, e.g., greater supply of public goods, reduction of private and commercial mechanisms which regulate supply and access to e.g., health and education, providing by the state pensions enabling decent living for post-working age population. The share of high-income people in securing financial resources for the realization of postulates of social solidarity should increase, also by e.g., a more efficient collection of VAT and CIT, introduction of new types of taxation on large-scale stores and banks, and increasing the effectiveness of the fight against the gray zone.

The PiS program requires very high financial resources. At present, there is a favorable situation facilitating the provision of necessary funds, because:

1) the growth rate of Poland’s major foreign partners (including Germany) is quite high, which is conducive to the growth of Polish exports;

2) internal consumption is increasing due to the influx of money from the 500+ Program, wage growth (this is also due to raising minimum and hourly wages and increasing employment);

3) tax revenues are growing as the GDP growth rate is quite high and the tax collection is improving;

4) it can be assumed that a large inflow of EU funds (2014–2020 budget) will reach Poland in the coming years.

However, these exceptionally favorable conditions at present do not have the features which ensure their stability. The positive effect of some of them will decline over time (mainly points 2 and 3), the growth rate abroad (item 1) is beyond our control and the EU funds will probably be smaller (this is

¹³ Production of ‘ordinary’ cars is increasingly seen as a declining sector (see, for example, CHANG 2013, p. 292).

¹⁴ He quoted US economist Gary Becker.

a common belief). It should also be noted that these present favorable conditions are mainly of a demand nature, which determines their instability and volatility. In order to ensure financial resources for the implementation of the program in the long-run it is necessary, as soon as possible, to make such structural changes which will significantly increase the share of modern economic sectors, increase the technical level of production, and ensure a high level of innovation. This requires the creation of a truly knowledge-based economy. In order to achieve this, however, we need to make fundamental changes in economic policy and bear very high costs, e.g., for education, R&D, production investment. It seems impossible to achieve this over the next few years. Therefore, one has to be skeptical of the reality and the possibility of achieving the program objectives formulated by the Law and Justice party, especially in the long run.

There is insufficient evidence so far to assess the response of the public to the current economic policy pursued by PiS and the reforms related to this policy. There are two main reasons:

- the objectives set by PiS have only been implemented for a short time (since 2015);
- the controversy over the political aspects of the PiS program, including institutional reforms, may have a strong impact on the assessment.

Serious premises facilitating the assessment can be provided by results of the elections which will take place in the coming years: self-governmental, parliamentary, and presidential.

At present, one can conclude that the socio-economic goals proposed by PiS in the electoral programs in 2015 were adopted by a large proportion of voters positively, which enabled PiS to take over power.

Social approval for such a course of events may be due to a negative assessment of previous market-oriented reforms, but also the fear that power may be taken over by political forces which would like to undertake market reforms again, similar to the previous ones. Such fears are caused, among others, by the fact that the two main opposition parties which declare their interest in pursuing pro-market reforms have failed to critically assess the reforms and activities of L. Balcerowicz, who had been the chief implementer of the largest reform projects: in 1989 and 1999. L. Balcerowicz is still an authority on economic matters for these parties¹⁵. His views on the desired shape of the economic system and the need for reforms, which would allow such a system to succeed in principle, have not changed after the experiences of 1989 and 1999. The impression is that they have become even more liberal-market oriented. This is evidenced by the content of an interview with L. Balcerowicz, published in 2014 in “Polityka” (No. 37). He is in favor of further limiting the role of the state. He believes that the

¹⁵ For many years Ryszard Petru (chairman of the Nowoczesna party), as well as Andrzej Rzońca, the chief economist of PO since 2017, responsible for shaping the economic program of this party, were Leszek Balcerowicz’s close associates.

supporters of the state are either those who want to get more money from the state and protection from the competition, or “ideological followers of statism”. He admits that he has “no respect for the moral and intellectual qualities of these people... They break the standards of logic and experience”. He advocates for consistent commercialization and privatization of health and education (he believes private colleges are better than public ones). He is opposed to raising minimum wages, because as a method to reduce poverty “it is a remedy worse than the disease”. He advocates a drastic reduction of public goods – in his opinion, the state should finance, “Surely defense and to some extent the judiciary”; and partly internal security. “If only strictly public goods were to be financed by the budget, expenditures would not exceed 5–10% of GDP”. He believes that “the over-developed and poorly constructed social states under the slogans of charity produce people addicted to social welfare... What is worse, it affects the children. The worst thing that can be done to poor people is to make it harder for entrepreneurs to create jobs and to discourage employees from working”. In this regard, he suggests that women who have lost their jobs and are raising a few children alone should get help “First of all, from family and friends. You cannot release people from moral obligations. And due to the expansion of the welfare state people lose a sense of responsibility to help others. Some minimum social assistance is needed, but of short duration...”¹⁶. It is questionable whether in Poland such views increase the attractiveness of pro-reformist parties (those referring to the authority of L. Balcerowicz); and this may consolidate aversion to reforms among large social groups.

It must also be noted that extreme liberal-market views are less and less popular in mainstream economics. Critical evaluations of the systemic transformation in the post-socialist states are more and more often expressed by Western economists. For example STIGLITZ (2010, p. 262) considers that “The former communist countries generally turned, after the dismal failure of their postwar system, to capitalism, but some turned to a distorted version of a market economy: they replaced Karl Marx with Milton Friedman as their god. The new religion has not served them well”. He also says, (STIGLITZ 2007, p. 7) that “the shock therapy they had pushed in the former Soviet Union and its satellites played an important role in the failures of the transition”. RODRIK (2011, p. 200) notes that “Governments worldwide have started looking for more balanced strategies since liberalization and privatization have not produced the expected results”.

CHANG (2013, p. 312) is of the opinion that the free-market economy must be abandoned because “during the last three decades, the increasing influence of free-market economics has resulted in poorer economic performance all over the world... If we need economics at all, it’s not free market economics”.

¹⁶ This begs the question of whether such proposals may provide equal opportunities widely recognized as a key feature of the modern democratic state (see e.g., ATKINSON (2017, p. 485) and provide children with a good childhood enabling development, which is increasingly postulated as a primary political goal (see THERBORN 2015, p. 195).

Does the public have grounds for aversion to reforms? (Conclusions)

We have shown in this paper that the changes to reform the economy introduced in Poland in the 1980s generally triggered negative reactions of large social groups (strikes, lack of support for the political forces which prepared and introduced reforms). We try to ascertain whether such reactions are justified, and whether there are serious arguments for them or whether these are the immaturity and the demanding attitude of the public, which impede understanding of the need to reform the economy. We come to the conclusion that there are serious reasons for distrust and unwillingness to reforms. We present the point of view of society (rather than of experts – economists), and especially of the social groups which articulate their preferences most profoundly and effectively.

When analyzing the reactions to reforms, we take into account a relatively short period, at most several years, because with longer time horizons it becomes increasingly difficult to establish and understand cause-and-effect relationships between the various phenomena and to identify the impact of individual factors on the events and changing situations. Moreover, during the election campaigns (i.e., periodically, every few years) new proposals and reform programs are usually submitted, which are later (albeit to varying degrees) implemented. It is more difficult than to identify the impact of previous and new reforms on economic reality¹⁷.

When analyzing the response of society to changes, which are to reform the economy, one should use uniform evaluation criteria which include features of objectivity and generality and therefore are applicable in different conditions. We distinguish eight such evaluation criteria:

- 1) the objectives of reforms – were they consistent with the expectations of those social groups which played an important role in setting the political and legal agenda and had the greatest impact on the results of the elections;
- 2) the degree of consistency between goals and achieved results;
- 3) when did the benefits materialize for those social groups, which determined the results of the elections?;
- 4) the significant positive impact on the economic condition (position) of the social groups which supported the proposed reform program and enabled the political forces presenting these programs to gain power (through elections);
- 5) the pace of reform, measured by the time lapsed from initiative to implementation (i.e., effective date);
- 6) proper preparation (whether it contains substantive and formal errors, constitutional compliance, etc.);

¹⁷ With such a short-term approach one cannot fully assess the impact of the 1989–1990 reform, which pioneered the change of the principles of the socio-economic system and was a unique undertaking on a global scale.

7) consultations with stakeholders, ability to compromise;

8) ability to correct errors, irregularities and undesirable phenomena which occur during implementation (validity).

Taking into account the above-mentioned criteria and time constraints of the analysis, the reform processes of the economy in Poland can be considered to have raised a lot of objections of these social groups which played an important role in shaping the political order (since, for example, they influenced the outcome of the parliamentary and presidential elections). It is difficult to find examples of respecting criteria 6, 7 and 8 in politics. Most often the opposition is not allowed to prepare the draft changes, its demands are rejected, the new legal norms require many amendments, reformers do not accept criticisms and arguments that the effects are unfavorable and not in line with expectations. The pace of reform (criterion 5) is often quick, but is generally achieved at the expense of not meeting the requirements of criteria 6 and 7. The reforms of the 1989–1990, 1999 and the 2015–2016 reforms can serve as examples in this respect. It is often difficult to see a clear consistency between goals and achieved results (criterion 2). This also applies to the biggest reforms: 1989–1990 and 1999, considered over a several year period.

The positive impact of the reforms on the economic situation of the social groups, which supported these reforms (criterion 4) was most clearly manifested between 2015 and 2016. In other cases, there was no such clear relationship. Relatively large benefits from the reforms of 2016–2017 (criterion 3) have appeared quickly, (500+ Program, raising the minimum wage, increase in minimum hourly rates, raising the threshold for personal income taxation). So far, there have been no cases of such significant benefits gained in a short time. Probably the most important criterion is the first one. The consistency of reform objectives with expectations was clearly visible in 2015. Social groups with low incomes and a weak position in the labor market decided then that this would be a reform for them and not for the hitherto existing political and economic elites.

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TRENDS IN THE DEVELOPMENT OF LONG-TERM CARE IN SELECTED EUROPEAN COUNTRIES

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Abstract

This paper is devoted to the analysis of the relationships between the level of development of long-term care (LTC) support for the elderly in selected European countries and public expenditure on long-term care, the health condition of the population and the scale of labor market flexibility in connection with a need to provide home care for dependents by working family members (informal carers). For this purpose, one performed a multidimensional analysis of the relationship and showed spatial similarities, creating their own rankings.

TRENDY ROZWOJU OPIEKI DŁGOOKRESOWEJ W WYBRANYCH KRAJACH EUROPEJSKICH

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Słowa kluczowe: opieka długookresowa, opieka nieformalna, starzenie się, analiza przestrzenna, analiza wielowymiarowa.

Abstrakt

Przedmiotem artykułu jest analiza związków między poziomem rozwoju systemu wsparcia opieki długookresowej (LTC) nad osobami starszymi w wybranych krajach europejskich a wydatkami publicznymi na opiekę długookresową, stanem zdrowia społeczeństwa i skalą elastyczności rynku pracy w związku z koniecznością świadczenia opieki domowej nad osobami zależnymi przez pracujących członków rodziny (opiekunowie nieformalni). W tym celu przeprowadzono analizę wielowymiarową zależności oraz ukazano podobieństwa przestrzenne i utworzono własne rankingi.

Introduction

Long-term support for the elderly (LTCs) should enable them to live as long as possible in their home environment, in line with the concept of ageing in place. The scope of this assistance depends on the level of independence of the elderly. This offer is addressed to people requiring limited support (people referred to as fragile) and to dependent people who rely on the help and care of third parties. The aim of this paper is to determine the scale of dependence between the level of development of LTC support systems in selected European countries and public expenditure on LTC, the health condition of the population and the scale of labor market flexibility in connection with a need to provide home care for dependents by working family members (informal carers).

A reference point for the authors' own research is the classification of European countries in terms of the development of support systems for informal carers by BOUGET et al. (2016). One formulated a hypothesis which postulates that, when taking into account the additional variables, and referring only to informal care, the population of EU countries, in which long-term care (formal and informal) is well developed, is more numerous than the group of countries identified by the above-mentioned authors.

Informal long-term care as a supplement to institutional care for the elderly

All ageing and elderly people can be divided into three categories:

- independent,
- requiring some help and support (fragile),
- dependent (relying on the help and care of third parties).

The last two groups of people should be supported by third parties (*Adequate social protection...* 2014, p. 30). In spite of the existing limitations in fulfilling everyday duties, these people should enjoy life in their home environment for as long as possible, in accordance with the concept of ageing in place. It is a difficult task, requiring institutional support, because people who usually provide

help to dependent elderly persons are members of their immediate or extended family (assistance is provided mainly by spouses, daughters or daughter-in-law who are themselves at a mature age) and by friends and acquaintances (which is usually neighborly support). Informal carers, apart from their willingness to offer assistance (however, in many situations the provision of care services is forced by the circumstances), do not have any professional preparation for the caring tasks. Moreover, the family members have to adjust their personal life to a new situation, which results in the limitation or abandonment of their professional activity, among other things, or diminishes one's performance at work. The research shows that combining the role of an employee with family roles, including the role of an informal carer looking after an elderly person in the family, creates conflict, leads to time constraints, and is associated with stressful situations (eg EBY et al. 2005, p. 124–130). The conflict of roles is based on the assumption of the limited time and energy resources available to the employee – carer (PARASURAMAN, GREENHAUS 2002, p. 299–312). It is based on the conservation of resources model (HOBFOLL 2002, pp. 307–310) and the Job Demands–Resources model (BAKKER, GEURTS 2004, p. 345–366), which allow one to explain the sources of stress experienced by an employee who simultaneously performs family roles. Explanations based on these two models indicate that the more demands, which are imposed on the employees at work, and the weaker their individual skills are to deal with these demands, the more likely these employees are to devote their time and energy resources. This results in increased stress at work and hinders work performance. This also causes stress and burnout while performing the duties of informal carer (TEN BRUMMELHUIS et al. 2010, p. 1409–1410). In this case, flexible forms of employment and a different way of managing time and energy can be helpful. They can be treated as potential absorbers of stress, to which an employee, who acts at the same time as an informal carer in the home environment is exposed.

Eurofound 2015 research shows that about 20% of women in EU countries, aged between 55 and 64, look after a disabled family member. Considering the fact that 80% of informal carers are women, there arises an important issue regarding the development of national solutions in the field of social policy, giving such persons the opportunity to combine work with informal care over the eldest family members. One talks in this context about facilitating the reconciliation of work and informal care to strike a balance between work and life (work-life balance). At the meeting of the ministers of labor and social affairs of the EU member states held in Tallinn in July 2017, there appeared an urgent need to develop and introduce minimum standards in the field of law allowing informal carers to take advantage of additional leaves, days off, etc. in connection with their provision of informal care (HAINSWORTH 2017, p. 1). An example of this can be the solutions in some countries, e.g. in the form of palliative leave in Belgium, lasting up to 2 months and envisaged for an employed person taking care of a terminally ill relative, combined with the payment of a financial benefit.

Informal carers are a significant complement to formal care and they play an important role in European countries (TRIANTAFILLOU et al. 2010, p. 2). This role may increase with the spread of the idea of deinstitutionalisation of care and the related concept of ageing in place (URBANIAK 2017, p. 4). This is, among others, the effect of the recommendations of the Committee of Ministers of the Council of Europe with regard to elderly people's rights and access to care services "that should be available within the community, so as to enable older people to stay in their homes as long as possible". Meanwhile, informal carers looking after the elderly in their homes, should receive appropriate training and support to enable them to properly provide the necessary support (Rekomendacja CM/Rec (2014)2:5... 2014, pp. 12, 13). The postulate of informal care also applies to those countries where formal care is very well developed. The difference in informal care between countries in northern and southern Europe consists in the fact in the countries of the South the care covers people in a difficult situation resulting from a low assessment of their functional independence (according to the Katz's ADL scale). In the Northern countries, on the other hand, people are assisted in complex activities of their everyday life (according to Lawton's scale, IADL) (HUBERT et al. 2010). Thus, informal carers from Northern European countries only offer additional help, which is not as much a burden for the carers as in the case of the southern European countries. It also does not restrict the carers' work to such an extent as in the southern European countries, where informal carers decide to give up their work or limit it very substantially (*Long-term care...* 2013).

Formal care, supplemented by informal care, is financed from public funds. The public sector is involved in the financing of care to the greatest extent in these countries, where funds for this purpose come from taxes (*Long-term care...* 2013). The right to care services financed from public funds is an individual right, as is the case, for example, in Denmark or Sweden. Assistance services are provided in a given person's home, and care services are provided in nursing homes for people with severe mental and physical limitations. Most expenditure on long-term care is incurred by the formal sector, which makes them more visible and subject to activities under the social policy. As a disadvantage of this system, one can indicate its high costs and possible restrictions in the case of difficulties in the financing of public expenditure. Another option of the financing of formal care is caring services under social security rendered by private organizations, both operating for profit and non-profit ones. In most EU countries, private profit-making organizations play a limited role as providers of care for older people.

The existing solutions in the provision of assistance and care services in the EU countries differ in terms of sharing the risk between the entities which provide the services (risk pooling) and equity in access to those services (equity in access), and also in the ability to optimize the quality and efficiency of the services. A document prepared for the European Commission emphasizes

the fact that public expenditure related to long-term care is only the tip of the iceberg of the total social expenditure related to the provision of care for the elderly (*Long-term care...* 2013).

The above-mentioned conditions for the provision of informal care (LTC) in various EU countries have included the authors to address the issue of spatial relations between public expenditure on long-term care, the health condition and the scale of labor market flexibility and the level of development of informal care in these countries. The considerations on legal solutions facilitating one to combine work with the provision of informal care were omitted, as these were indirectly taken into account when assessing the level of development of informal care systems. The classification of European countries in terms of the level of development of support systems for informal carers has been adopted. The authors have formulated a hypothesis, according to which, a group of EU countries distinguished by BOUGET et al. (2016), as those in which the informal care system is the most developed (extremely high developed), based on:

- the level of development of the system of leaves for carers;
- cash benefits received;
- benefits in kind for carers or benefits paid to dependents to pay for themselves, is less numerous than the group of EU countries, where the solutions include the economic and descriptive variables related to formal long-term care, such as:

- LTC spending as a percentage GDP,
- the percentage share of public expenditure on LTC in current public spending on health care,
 - the percentage of women aged 40–64 years employed part-time in total employment,
 - the percentage of women aged 40–64, which stated that part-time work in their case was conditioned by the necessity to look after children or dependent adults,
 - the percentage of people, who according to self-assessment, experience long-term restrictions in ordinary daily activities due to health problems,
 - the percentage of people in society with long-term diseases or health problems,
 - the percentage of people, who according to their self-assessment, are in a difficult financial situation (they are not able to make ends meet).

Research methodology

The empirical analyzes were based on statistical data from Eurostat 2012 and EU-SILC surveys describing the studied phenomenon in selected European countries. According to the information included in the BOUGET et al. (2016) reports, the European countries were divided into three groups, taking into

account the degree of development of support of informal care: with extremely high and high development of the support of informal care for the elderly and children (both are called countries with developed and mature support schemes) and underdeveloped support schemes; only EU member states were included in the author's own research (Tab. 1).

Table 1

The level of support of informal LTC for children, the disabled and frail elderly
in EU28 countries

Developed and mature support schemes		Underdeveloped support schemes
Extremely high developed level of support	high developed level of support	
Denmark, Sweden, Finland	Austria, Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Portugal, Romania, Slovenia, Slovakia, United Kingdom	Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Croatia, Hungary, Lithuania, Latvia, Malta, Poland

Source: *Work-life balance...* (2013, p. 9, 10).

The three-step country classification was the starting point for further comparative analyzes in which the following variables were adopted: expenditure on long-term care for children and elderly people (ELTC), general current expenditure on health (CHE), Gross Domestic Product (GDP), general employment of women aged 40–64 (TEW4065), the number of female part-time employees (PTW4065), the main reason for part-time employment of women aged 40–64 (MRPTW4065), the demographic structure of people with health problems and long-term diseases (PIH), the number of hospital beds per 100,000 inhabitants (CCBIN), formal care for children for 30h and more per week (CHC30w), the subjective assessment of long-term restrictions in normal activities due to health problems (SPLSAmw16 +), the financial situation (IMEM).

Adopting the previously accepted assumptions, empirical analyzes were carried out in several stages. In the first stage of the research, the variables were standardized, then the European countries were classified into three basic levels of development. The correlation between the determined variables was examined and their spatial relationship was described:

According to the adopted concept of research, the following methods were applied:

- standardization of variables in order to obtain their comparability and the application of multidimensional comparative analysis and determination of the ranking of countries according to the level of development of informal long-term care. In order to show a spatial similarity of countries, the taxonomic measures of development were used. The determination of the taxonomic measure of development (M_j) and the synthetic measure of development (Q) regulated in the range $[0,1]$ enables one to hierarchize multi-feature objects (the higher the

level of development of the complex phenomenon, the higher the value of the development measure) and to group them in similar clusters (MALINA 2004);

- Spearman’s rank correlation coefficient to show the relationship between two analyzed variables. For this purpose, the monotonic function was used. This measure is normalized in the range $[-1, +1]$. Values further from zero indicate a stronger relationship between the variables. In the case of an ideal conformity of the rank correlation, this measure takes the value $+1$, while in the case of maximum non-compliance, the correlation between the variables is -1 (JÓŹWIAK, PODGÓRSKI 2006). The sign of this meter also indicates the direction of dependencies between the pairs of variables;

- spatial data analysis methods enabling one to measure the interdependence (spatial correlation) in global (Moran statistics) and local terms (LISA). Moran I statistics is used to assess the degree of spatial correlation between neighboring locations. On the other hand, local spatial autocorrelation statistics make it possible to assess the share of global autocorrelation for each location of the studied area. Most often they are used to identify clusters of large or small values of the analyzed variable and non-typical locations (SUCHECKI, OLEJNIK 2010).

Research results

The starting point for the analysis of the correlation dependence between the development level of LTC support systems and distinguished determinants was the determination of significant diagnostic variables for the highlighted set of variables characterizing the highest LTC development level and qualification of individual countries to one of the areas suggested by BOUGET et al. (2016). The results of the author’s own classification, along with the use of development measures, are presented in the following map (Fig. 1).

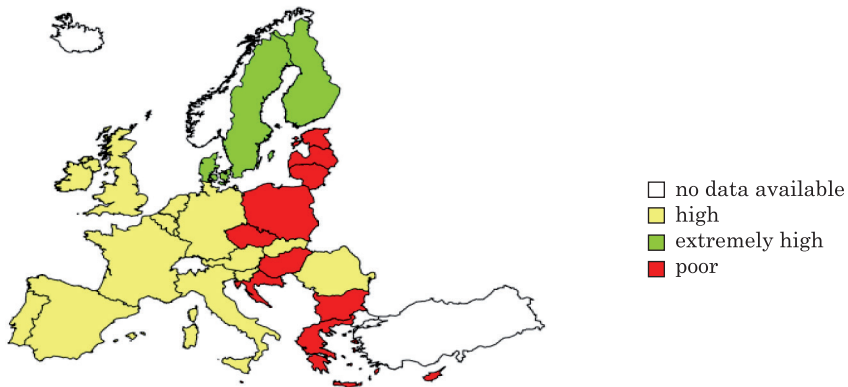


Fig 1. Ranking of 28 EU countries on the basis of the level of support of informal LTC
Source: own elaboration based on: *Work-life balance...* (2013, p. 10).

In the next stage, the values of the Spearman's rank correlation coefficient were calculated. The synthetic results of these analyzes are presented in Table 2.

The presented information suggests that the vast majority of correlative relationships is statistically significant at 0.01 and is characterized by a negative relationship (inverse correlations), and lack of correspondence between the variables studied. The incompatibility is the greater, the closer to zero are the values of the rank correlation coefficient.

Table 2

Spearman's coefficients

Spearman's ρ correlation Negative and positive association		
Percentage of gross domestic product (GDP) – Long term care	–0.875**	percentage share of having a long-standing illness or health problem, males aged 65+
Percentage share of total current health expenditure (CHE) – Long term care	–0.824**	
Part-time employment as percentage of the total employment, women aged 40–64	–0.543**	
Percentage share of having a long-standing illness or health problem, males aged 16–44	–0.470*	percentage share of having a long-standing illness or health problem, females aged 65+
Percentage share of having a long-standing illness or health problem, females aged 16–44	–0.637**	
Self-perceived long-standing limitations in usual activities due to a health problem, males aged 16–44	–0.570**	inability to make ends meet
Self-perceived long-standing limitations in usual activities due to a health problem, females aged 16–44	–0.773**	
Self-perceived long-standing limitations in usual activities due to health problems, females aged 45–54	–0.560**	

** – correlation significant at the 0.01 level

* – correlation significant at the 0.05 level

Source: own calculations.

When analyzing the obtained results, we can conclude that the level of LTC care for children and the elderly in EU28 is influenced by both macroeconomic and microeconomic factors, as well as by the individually perceived health condition and financial situation of their households.

The level of LTC development in individual countries has been characterized using two measures: the taxonomic measure of M_i development and the synthetic Q measures. The results of the developed rankings and their spatial ordering are presented on the maps below.

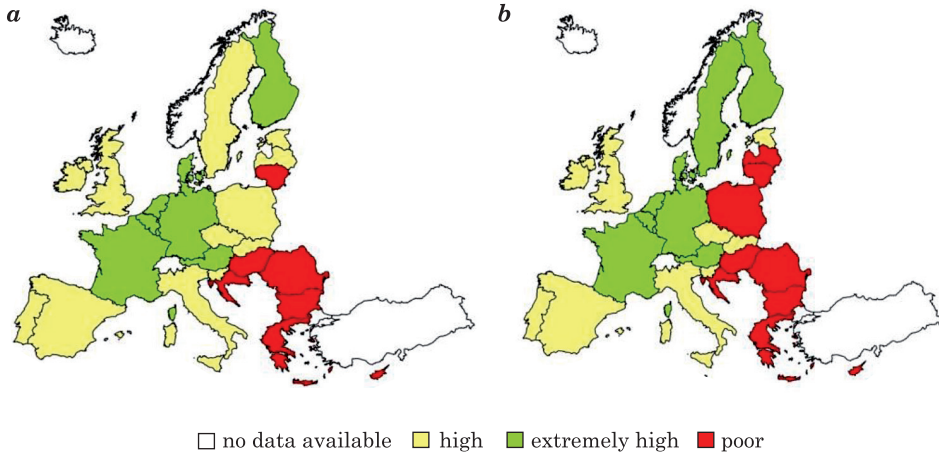


Fig. 2. Taxonomical M_i -measure of development and synthetic Q -measure:
 $a - \rho_{M_i}=0,657$, $b - \rho_Q=0,786$

Source: own elaboration.

The new ranking of countries according to the level of development of LTC care, taking into account their economic conditions, can be considered sufficient at the convergence of 66% for the taxonomic measure M_i and 79% for the synthetic index Q .

On the basis of the obtained ranking of countries, it can be stated that:

- the highest level of development of LTC care can be seen in economically highly developed countries, such as France, Germany, the Netherlands, Austria and Belgium; this group also includes, as distinguished by BOUGET et al. (2016) – Denmark, Sweden and Norway;
- a lower LTC level is observed in the countries of Central and Eastern Europe;
- weak LTC support can also be found in the Balkan Peninsula regions.

The next stage of the quantitative analysis was the application of spatial autocorrelation measures – Moran I statistics to assess the level of spatial correlation of the analysed variables between neighboring locations. In this way, we obtained the opportunity to estimate the spatial grouping of countries with a similar level of LTC development: clusters of European countries with a high and low LTC development level indicate the existence of positive autocorrelation (the Moran I statistics value was 0.254). Clusters identified in this way are presented on the following map (Fig. 3).

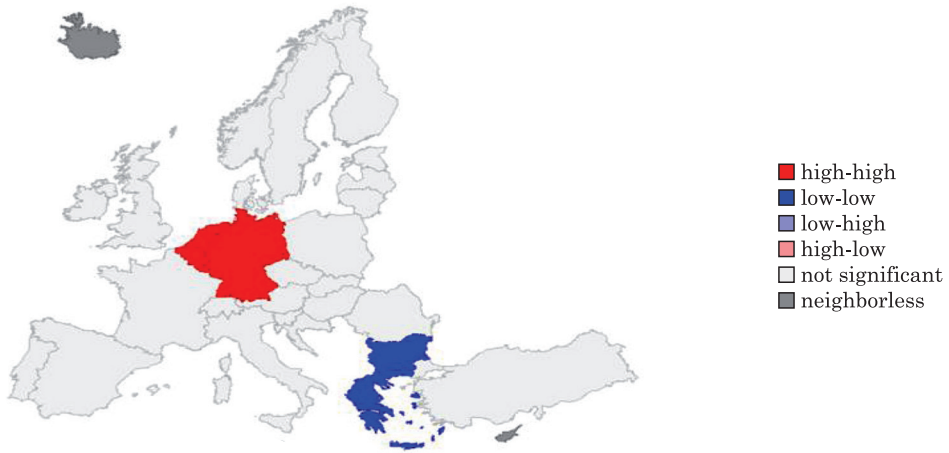


Fig 3. Spatial autocorrelation of European countries according to the level of LTC development
Source: own elaboration.

Conclusions

In selected European countries one can see a diversified level of development of informal long-term care determined on the one hand by such macroeconomic factors as GDP, general expenditure on health or accessibility of health care, and on the other hand by microeconomic factors such as labor market flexibility or economic conditions of households. The health of older people (self-assessment of health condition), especially disability or childcare, is not without significance. We are dealing with three levels of development of long-term care systems, covering EU countries such as Denmark, Sweden, Finland (distinguished by BOUGET et al. (2016) for informal care in the extremely high developed group), which additionally – according to the results of our research, after taking into account additional variables – include France, Germany, the Netherlands, Austria and Belgium. Thus, the authors confirmed the hypothesis put forward at the beginning of the paper, according to which the list of countries with a very high LTC standard is larger than the list of countries with a very high standard of informal care.

The existence of a spatial relationship between LTC and distinguished factors as well as spatial autocorrelation was also demonstrated. Positive spatial autocorrelation indicates the existence of groups of neighboring countries representing a similar level of long-term care. And so, a higher level of LTC development is characterized by neighboring countries with a higher level of economic development (Scandinavian countries, Belgium, the Netherlands, France, Germany and Austria). On the other hand, the countries of Eastern and Central Europe

and the countries of the Balkan Peninsula, which were subject to systemic transformation, show similar values of the degree of development of long-term care. Despite the adoption by these countries of social policy directions in line with the European Commission's findings to support long-term care initiatives in the place where a person requiring third party care is located, care called 'family care' is still important. The change of this disadvantageous situation due to social and economic reasons is conditioned primarily by macroeconomic factors and the organization of appropriate care services.

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DEMOGRAPHIC DETERMINANTS OF RURAL LABOUR RESOURCES IN POLAND

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Key words: potential labour force, working-age subpopulation, changes in the population age structure, rural areas, counties.

Abstract

The article discusses the state and age structure of the subpopulation comprising the potential labour force in Polish voivodships and counties, particularly in their rural areas, between 2002 and 2030. It also shows how the balance of the potential labour force changed as a result of the inflow of birth cohorts at early-working age and the outflow of people at pre-retirement and early retirement age. The analysis additionally takes account of selected social characteristics of the population such as education and health. The necessary statistical data were sourced from the publications of the Central Statistical Office.

DEMOGRAFICZNE UWARUNKOWANIA ZASOBÓW PRACY NA OBSZARACH WIEJSKICH W POLSCE

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Słowa kluczowe: potencjalne zasoby pracy, ludność w wieku produkcyjnym, zmiany w strukturze wieku populacji, obszary wiejskie, powiaty.

Abstrakt

W opracowaniu przedstawiono rozważania na temat stanu i struktury wieku subpopulacji tworzącej potencjalne zasoby pracy w latach 2002–2030 w Polsce, w województwach i powiatach, ze szczególnym uwzględnieniem obszarów wiejskich. Sporządzono także bilanse potencjalnych

zasobów pracy, wynikające z napływu do tej subpopulacji młodych roczników z przedpola lub początku aktywności zawodowej oraz odpływu poza rynek pracy roczników z przedpola lub początku wieku poprodukcyjnego. W analizach uwzględniono również wybrane charakterystyki społeczne, jak wykształcenie i stan zdrowia ludności. Źródłem danych były publikacje Głównego Urzędu Statystycznego.

Introduction

This article seeks to answer the question about whether Poland's rural areas can still be a resource for the labour force for industry and services, as they were in the second half of the 20th c., when rural areas, particularly agriculture, were losing labour force or reserve labour because of permanent migration and bi-occupational persons (part-time farmers with industrial jobs) engaging in circular migrations or seeking primary or secondary jobs outside agriculture. Declining demand for labour in the 1990s, especially in industry, considerably reduced the number of bi-occupational persons in rural areas who were usually among the first who lost jobs in industry in the wake of rising unemployment. The farming population temporarily grew in size and the agriculture share of employment considerably increased (from 47.8 to 59.0% between 1988 and 1995) (FRENKEL 2003, p. 111).

This discussion of changes in the size of the potential labour force in rural areas (to the year 2030) focuses on its age structure. Special attention is given to the early-working age group (15–24 years) and the pre-retirement age and early-retirement age groups (55–64 years). It is noteworthy that the term 'potential labour force' is sometimes applied to the working-age subpopulation¹. Many studies (including this one) use a simplified definition of potential labour force, according to which the subpopulation comprises people aged 15–64 years. This article presents research findings for the country, voivodeships and counties. All numerical data used in analyses were sourced from the publications of the Central Statistical Office (GUS).

The size of the potential labour force in Poland and by voivodeship

Changes in the age structure of Poland's population accelerated after the political transition – a declining number of children were accompanied by a rising share of elderly people. The process was driven by a sort of 'swinging' of age structures (birth cohorts of baby-boomers and baby-busters moving to older

¹ The working age groups in Poland are 18–59 years for women and 18–64 for men.

age groups) and by the decreasing number of population living in the peripheral areas (distant from large cities) and in some large cities.

The percentage of population aged 15–64 years was rising until the end of the first decade of the 21st and then, around 2011, a downward trend emerged (in 2010 in towns and in 2013 in rural areas). It will probably continue for the next dozen or so to several tens of years (Fig. 1). Towns had a greater percentage of this population than rural areas until 2013, but since 2014 it is the rural areas where the percentage is slightly higher (it will remain so in the future).

In 2016, the potential labour force accounted for 68.6% of the total population in Poland (68.1% and 69.3% in towns and rural areas, respectively). By 2020 it will drop to 66.3% (65.2% and 67.9%) and by 2040 to 61.5% (60.5% and 62.8%).

The potential labour force that owes its present size to the sizeable birth cohorts of baby boomers from the 1950s and the echo baby boomers from the 1980s is still relatively favourable (it is much larger than in the 1990s), but in the future it will decrease considerably, because of the outflow of both of these age groups (the older one is already leaving it) and because the birth cohorts at early-working age are too small to compensate for the decline in the pre-retirement age subpopulation.

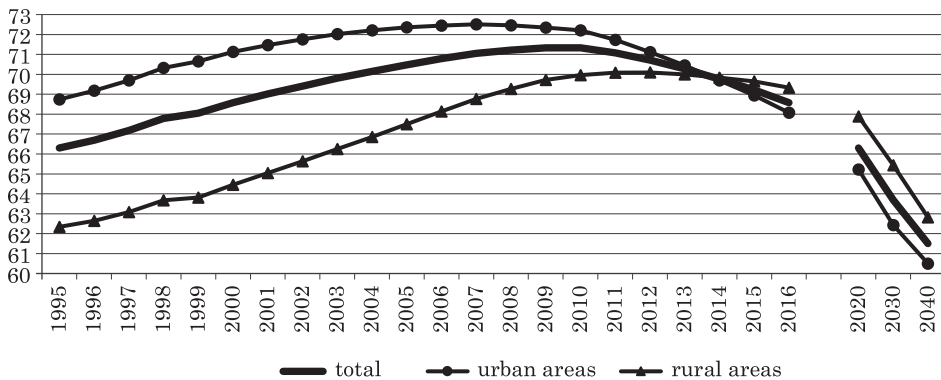


Fig. 1. Population aged 15–64 years, 1995–2016 and 2020, 2030 and 2040 [%]

Source: GUS, developed by the authors.

In 2002, towns had larger percentages of the potential labour force in all voivodeships. By 2016 the situation changed and slightly higher percentages were noted in the rural areas in most voivodeships (the highest in the Zachodniopomorskie voivodeship). The trend implies that by 2030 they will definitely be larger in the rural areas of all voivodeships (Tab. 1).

Table 1

Population aged 15–64 years in Poland and by voivodeship, years 2002, 2016 and 2030 [%]

Specification	2002			2016			2030		
	total	urban	rural	total	urban	rural	total	urban	rural
Poland	69.4	71.8	65.6	68.6	68.1	69.3	63.7	62.4	65.4
Dolnośląskie	70.7	71.9	67.7	68.9	68.0	70.8	63.4	62.0	66.1
Kujawsko-Pomorskie	69.7	71.5	66.6	69.0	68.4	69.9	63.7	62.3	65.6
Lubelskie	67.4	72.3	63.1	68.5	68.8	68.1	63.4	61.8	64.7
Lubuskie	70.5	72.1	67.5	69.4	68.7	70.7	63.7	62.4	65.7
Łódzkie	69.2	71.6	64.8	67.6	67.4	68.1	62.7	61.4	64.7
Małopolskie	68.2	71.2	65.1	68.5	67.9	69.1	64.5	63.1	65.7
Mazowieckie	68.9	71.3	64.5	67.4	66.7	68.6	64.0	63.4	65.0
Opolskie	70.4	72.3	68.3	69.8	68.7	70.9	63.8	62.0	65.6
Podkarpackie	67.4	71.5	64.6	69.5	69.5	69.5	64.6	62.3	66.1
Podlaskie	67.1	71.0	61.5	69.2	70.3	67.3	63.5	62.9	64.4
Pomorskie	69.9	71.4	66.7	68.3	67.4	70.0	63.9	62.5	66.1
Śląskie	71.6	72.5	68.0	68.5	68.3	69.3	62.8	62.2	64.8
Świętokrzyskie	67.7	72.0	64.2	68.5	68.0	68.8	62.8	60.4	64.6
Warmińsko-Mazurskie	69.3	71.4	66.3	70.0	69.5	70.7	63.8	62.4	65.7
Wielkopolskie	69.8	71.7	67.1	68.7	68.0	69.4	64.3	62.8	65.9
Zachodniopomorskie	70.7	72.2	67.3	69.4	68.6	71.2	63.4	62.2	65.9

Source: developed by the authors based on the GUS data.

Assessment of the potential labour force in rural counties

As already mentioned, the percentages of the potential labour force are higher in rural areas when compared to towns (particularly in the large ones), meaning that the rural areas frequently function as a population reserve for the towns. The research also found the potential labour force to be irregularly distributed in the country, as well as finding changes in its relative percentages (Fig. 2–5). Today, the highest percentages occur in the rural parts of northern and western Poland (>70%) and are somewhat lower in central and southern Poland and around large cities (Fig. 3).

The regional differences in the percentages of this age group are determined by region-specific fertility and mortality rates and the destinations and volume of migration, as well as by the „location rent” and historical circumstances (see STANNY 2010, p. 41). Higher percentages of the potential labour force noted in western and northern Poland are due to the post-war inflow of settlers from Poland’s eastern territories that were incorporated into the USSR, who are younger than the residents of other parts of Poland. In the former Prussian

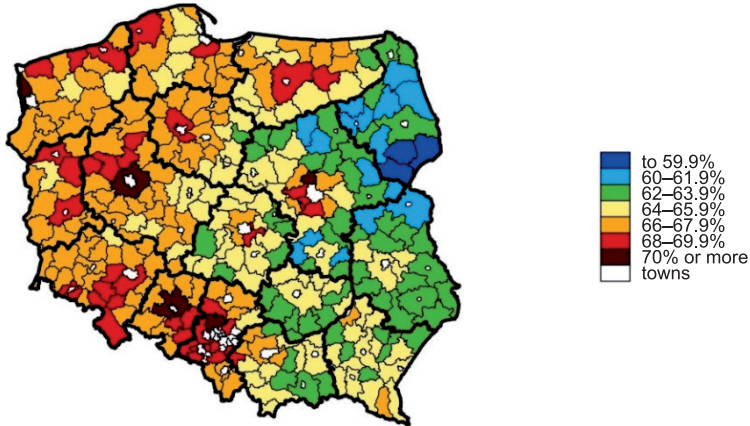


Fig. 2. Population aged 15–64 years in counties' rural areas (2002, %)

Source: developed by the authors based on the GUS data.

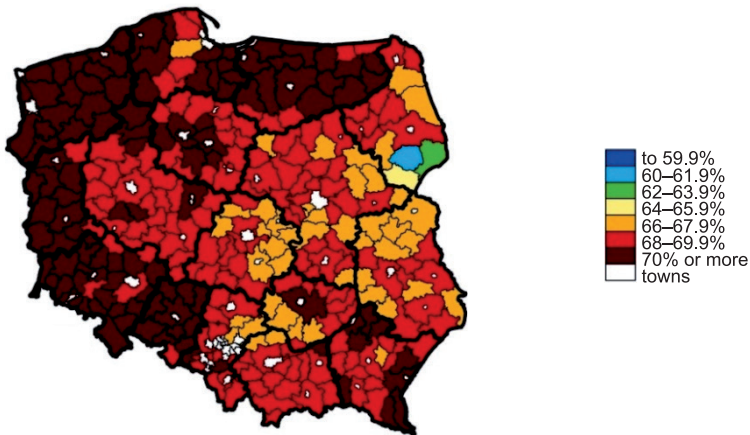


Fig. 3. Population aged 15–64 years counties' rural areas (2016, %)

Source: developed by the authors based on the GUS data.

partition, the percentage of the working-age population is relatively high and the percentage of the retirement-age population is relatively low (unlike the ex-Russian partition).

In 2016, the highest percentages of the potential labour force in rural areas (from 71.7 to 72.1%) were recorded in counties such as Olsztyński (Warmińsko-Mazurskie voivodeship), Lubański (Dolnośląskie), Koszaliński, Białogardzki and Policki (Zachodniopomorskie), Zgorzelecki, Lwówecki and Złotoryjski (Dolnośląskie), and the lowest percentages were noted in Bialski (60.5%), Hajnowski (62.4%), Siemiatycki (65.4%) and Wysokomazowiecki (66.3%) (Podlaskie). Low percentages ranging from 66.4 to 66.6% were also noted in Łosicki, Sokółowski (Mazowieckie), and Opoczyński (Łódzkie).

In the next several years, the percentages of the potential labour force will be falling with the 1950's baby boomers reaching the threshold of old age (Fig. 4 and 5). In 2030, the highest rural percentages of this age group will probably be noted in counties such as Policki in Zachodniopomorskie (70.4%), Głogowski and Wrocławski in Dolnośląskie, Poznański in Wielkopolskie, Legionowski in Mazowieckie, Gdański in Pomorskie and Bydgoski in Kujawsko-Pomorskie (in the latter counties the percentages will range from 68.1 to 69.1%). The lowest percentages will be noted in Hajnowski and Bialski in Podlaskie (57.7% and 61.2%) and in Łosicki and Sokołowski in Mazowieckie (61.2% and 61.8%).

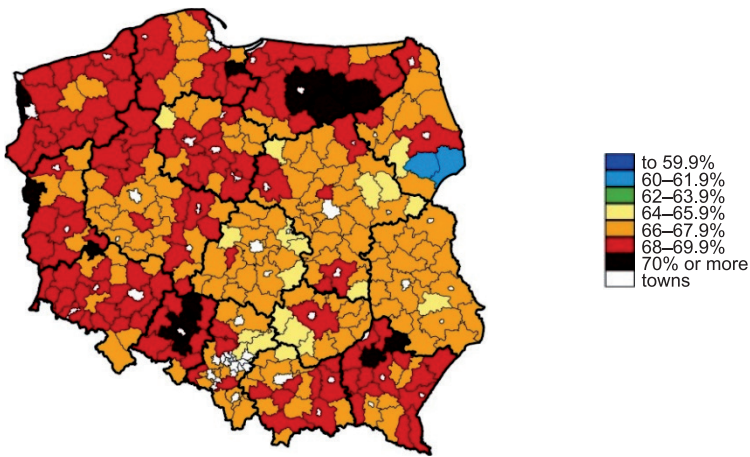


Fig. 4. Population aged 15–64 years in counties' rural areas (2020, %)

Source: developed by the authors based on the GUS data.

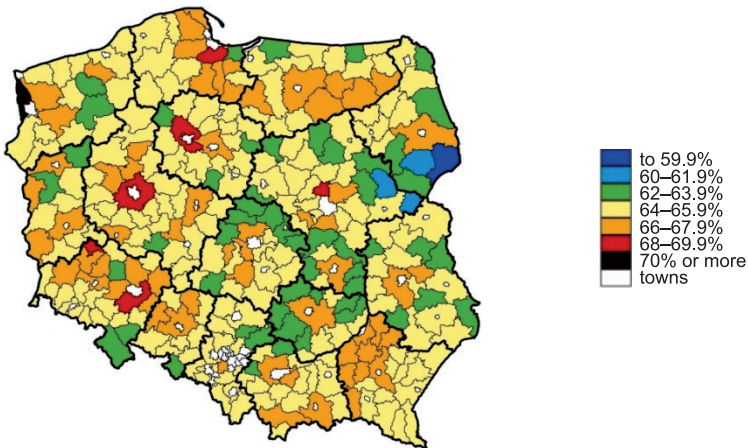


Fig. 5. Population aged 15–64 years in counties' rural areas (2030, %)

Source: developed by the authors based on the GUS data.

The trends that the percentages of the rural potential labour force followed in the years 2002–2016 and 2016–2030 are distinctly different (Fig. 6 and 7). In the first of the periods, increases occurred in almost all counties – the largest in Kolneński, Moniecki and Łomżyński Counties in Podlaskie, but those recorded in Ostrołęcki, Sierpecki, Koziernicki and Białobrzegi in Mazowieckie were also considerable (from 11 to 13%). Decreases (from 0.5 to 3%) were noted in only 10 counties: Piaseczyński, Pruszkowski, Warszawski Zachodni and Legionowski (Mazowieckie), Poznański (Wielkopolskie), and Będziński, Rybnicki, Tarnogórski,

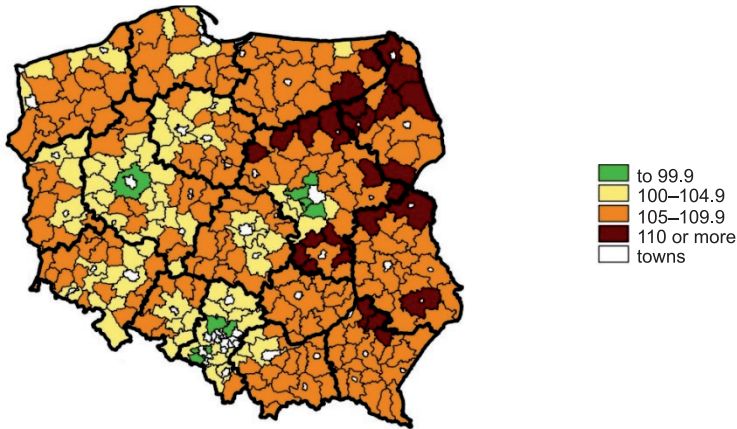


Fig. 6. Changes in the percentage of population aged 15–64 years in counties' rural areas, 2002–2016 (2002=100)

Source: developed by the authors based on the GUS data.

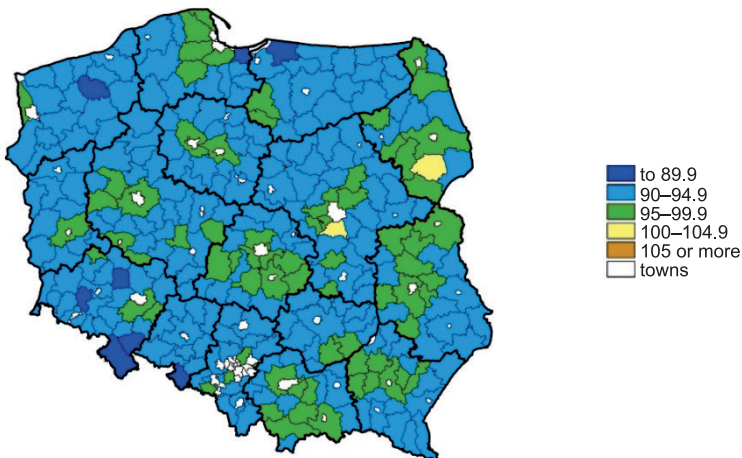


Fig. 7. Changes in the percentage of population aged 15–64 years in counties' rural areas, 2016–2030 (2016=100)

Source: developed by the authors based on the GUS data.

Gliwicki and Wodzisławski (Śląskie). Between 2016 and 2030, decreases will probably be noted in almost all counties. The largest ones, ranging from 10.5 to 11.3%, are predicted to occur in counties such as Ząbkowicki and Kłodzki (Dolnośląskie), Nowodworski (Pomorskie) and Głubczycki (Opolskie). In Piaszczyński (Mazowieckie) and Bielski (Podlaskie), the percentage of the potential labour force is likely to slightly increase (from 0.5 to 1.0%).

The aging of Poland's population has been observed for almost 20 years now. The process changes its age structure – the proportion of the youngest subpopulation is declining while the proportion of the oldest subpopulation is rising (see Tab. 2). Consequently, quantitative changes also affect birth cohorts comprising the potential labour force. In the next ten-to-twenty years, the inflow of the early-working age population (slightly more numerous in rural areas) to the potential labour force will be declining and the outflow of people that are now in the pre-retirement age group will be increasing.

Table 2

Age structure of Poland's population (total, urban and rural)
years 2002, 2016, 2020 and 2030 [%]

Year	Place of residence	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
2002	total	100.0	4.9	5.8	7.1	8.5	8.4	7.7	6.5	6.3	7.4	8.2	7.4	4.9	4.2	4.1	8.7
	urban	100.0	4.4	5.1	6.4	8.2	8.7	8.0	6.5	6.2	7.5	8.8	8.1	5.3	4.4	4.2	8.2
	rural	100.0	5.7	7.0	8.2	8.8	7.8	7.3	6.6	6.5	7.2	7.1	6.2	4.2	3.9	4.1	9.4
2016	total	100.0	4.9	5.4	4.7	5.0	6.0	7.2	8.4	8.1	7.4	6.2	6.1	7.1	7.2	5.9	10.5
	urban	100.0	4.8	5.1	4.3	4.5	5.3	6.9	8.7	8.4	7.4	6.0	6.0	7.3	7.8	6.6	11.2
	rural	100.0	5.1	5.9	5.4	5.8	7.1	7.6	7.9	7.7	7.3	6.5	6.4	6.8	6.2	4.9	9.4
2020	total	100.0	4.5	4.9	5.4	4.7	5.2	6.3	7.4	8.5	8.1	7.1	6.0	6.1	7.1	6.6	12.2
	urban	100.0	4.3	4.7	5.1	4.2	4.6	5.8	7.4	8.7	8.3	7.0	5.8	6.0	7.4	7.3	13.4
	rural	100.0	4.9	5.3	5.9	5.4	6.0	7.0	7.4	8.0	7.7	7.2	6.3	6.3	6.6	5.6	10.4
2030	total	100.0	4.0	4.4	4.7	5.0	5.5	4.8	5.3	6.4	7.5	8.5	8.0	6.9	5.7	5.7	17.6
	urban	100.0	3.7	4.1	4.4	4.7	5.2	4.5	5.0	6.1	7.5	8.7	8.2	6.9	5.6	5.7	19.7
	rural	100.0	4.4	4.8	5.1	5.4	6.0	5.2	5.7	6.9	7.5	8.2	7.7	7.0	5.9	5.7	14.7

Source: GUS, developed by the authors.

The percentages of age groups 15–19 and 20–24 years considerably decreased between 2002 and 2016, by 3.5 percentage points (3.7 p.p. in towns and 3 p.p. in rural areas) and 2.4 p.p. (3.4 and 0.7 p.p.), respectively. In the next years, the trend will continue in both rural areas and towns (see Tab. 2). The increases in

the age groups: 30–34 years, 35–39 years, 55–59 years and 60–64 years were caused in the sampled years by large inflows of baby boomers of the 1950s and 1980s. In the period of 5–10 years after 2016, both age groups will grow smaller because of the aforementioned ‘structural swinging’. The younger cohort will enter the 40–44 and 45–49 year age groups and the older cohort will leave the potential labour force (see Tab. 2).

In 2016, the percentages of the rural population aged 15–24 years were relatively high in most counties. The highest were noted in Limanowski and Nowosądecki in the Małopolskie voivodeship (15.2%). In Kolneński (Podlaskie), Iławski and Piski in Warmińsko-Mazurskie, Wejherowski and Bytowski in Pomorskie and in Mławski, Ostrołęcki, Białobrzegi and Sierpecki in Mazowieckie they ranged from 14.4 to 15.0%. The lowest percentages, from 9.6 to 10.8%, occurred in Będziński, Gliwicki and Raciborski (Śląskie), Hajnowski (Podlaskie), Poznański (Wielkopolskie), Opolski (Opolskie), Wrocławski (Dolnośląskie) and Pabianicki (Łódzkie) (Fig. 8). In the next 14 years, the 15–24 year age group will significantly decrease in proportion to the total population in most rural areas.

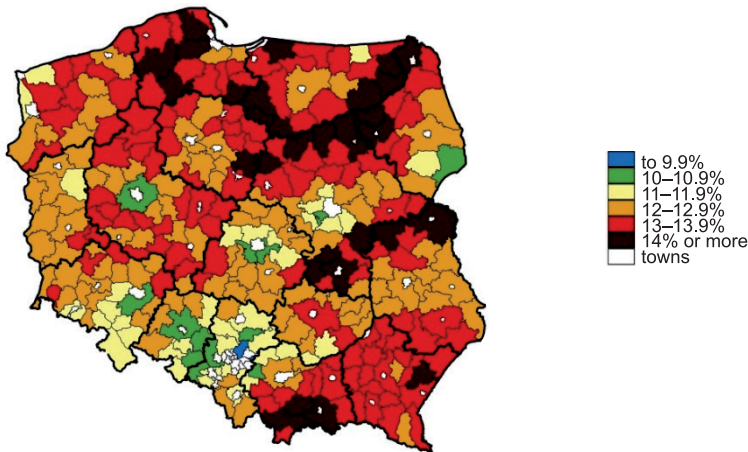


Fig. 8. Population aged 15–24 years in counties' rural areas in 2016 [%]

Source: GUS, developed by the authors.

In 2030, its lowest percentages (8–9.7%) will be noted in counties such as Hajnowski, Siemiatycki and Sejneński (Podlaskie), Kazmierski and Sandomierski (Świętokrzyskie), as well as Głubczycki, Kędzierzyńsko-Kozielski, Krapkowicki and Opolski (Opolskie). The highest percentages (12.9–13.8%) will occur in Kartuski and Wejherowski (Pomorskie), Poznański and Gnieźnieński (Wielkopolskie), and Nowosądecki (Małopolskie) (Fig. 9).

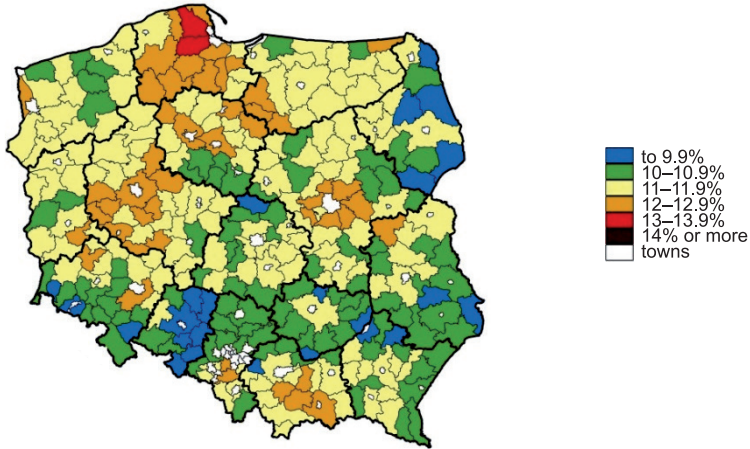


Fig. 9. Population aged 15–24 years in counties' rural areas in 2030 [%]

Source: GUS, developed by the authors.

A closer look at the trends shows that from 2002 to 2016 the rural areas of almost all counties experienced a decline in the 15–24 year age group. The largest decreases in the range of 35 to 40% occurred in western and northern Poland and in the counties surrounding large cities such as Poznański (Wielkopolskie), Wrocławski, Kłodzki and Dzierżoniowski (Dolnośląskie), Opolski (Opolskie), Międzyrzeczki (Lubuskie) and Pszyczyński and Raciborski (Śląskie). In Siemiatycki (Podlaskie), the proportion of the population aged 15–24 years did not change throughout the period of analysis (Fig. 10).

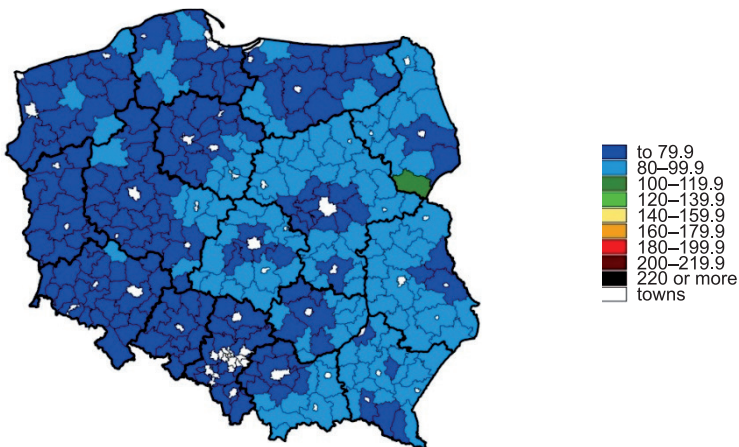


Fig. 10. Changes in the percentage of population aged 15–24 years in counties' rural areas, years 2002–2016 (2002=100)

Source: GUS, developed by the authors.

In the next dozen or so years, the percentage of the 15–24 year age group will be shrinking in most counties, but more slowly than before. Between 2016 and 2030, the largest decreases (from 25 to 30%) will be noted in Siemiatycki, Moniecki and Sejneński Counties (Podlaskie), Nizański, Kolbuszowski and Tarnobrzegi (Podkarpackie), Janowski (Lubelskie), Dąbrowski (Małopolskie) and Przysuski (Mazowieckie) (Fig. 11).

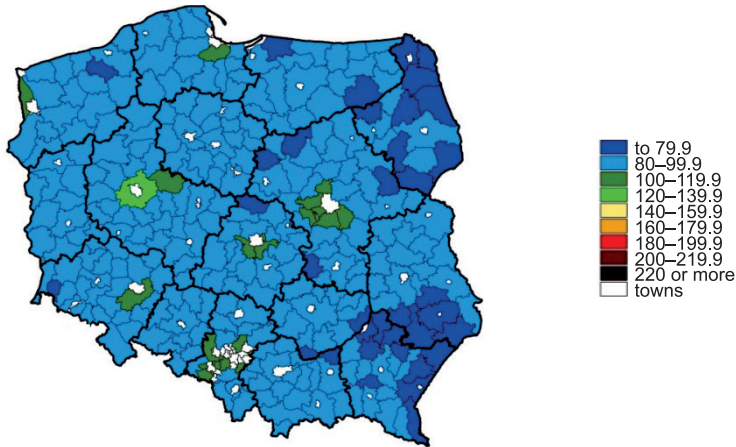


Fig. 11. Changes in the percentage of population aged 15–24 years in counties' rural areas, years 2016–2030 (2016=100)

Source: GUS, developed by the authors.

In 2016, the percentage of rural residents aged 55–64 years (gradually leaving the labour market) was relatively high in most counties. Its largest values, ranging from 16 to 16.6%, were noted in counties such as Jeleniogórski, Kłodzki, Wałbrzyski, Lwówecki, Ząbkowicki, Kamiennogórski and Dzierżoniowski (Dolnośląskie), and also in Kamieński (Zachodniopomorskie). The group of counties with the lowest values, between 10.3 and 11%, included Nowosądecki and Limanowski in Małopolskie, Kolneński in Podlaskie, Kartuski and Wejherowski in Pomorskie, and Mielecki and Ropczycko-Sędziszowski in Podkarpackie (Fig. 12).

In the next ten-to-twenty years, the outflows of the 1950s baby boomers will slightly reduce the percentage of rural residents aged 55–64 years in most counties (fig. 13). In 2030, they will probably be the smallest (11 to 11.5%) in counties such as Poznański (Wielkopolskie) and Kartuski, Gdański and Wejherowski (Pomorskie), and the highest (14.5 to 15.5%) in Siemiatycki, Hajnowski, Sokólski and Grajewski (Podlaskie) and Opolski, Głubczycki, Kędzierzyńsko-Kozielski, Oleski and Krapkowicki (Opolskie).

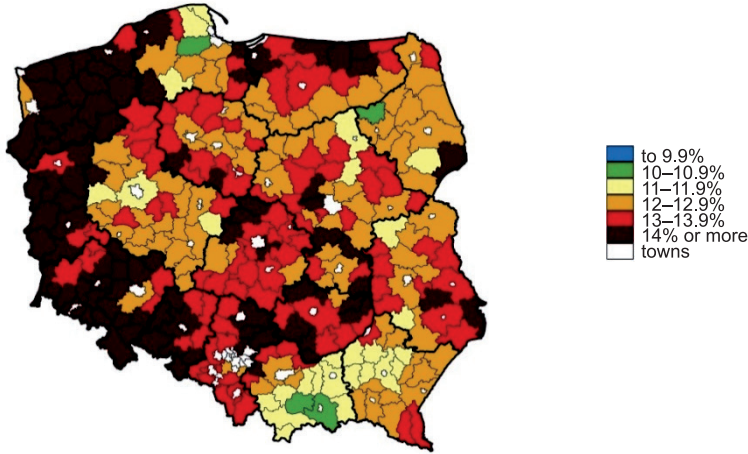


Fig. 12. Population aged 55–64 years in counties' rural areas in 2016 [%]

Source: GUS, developed by the authors.

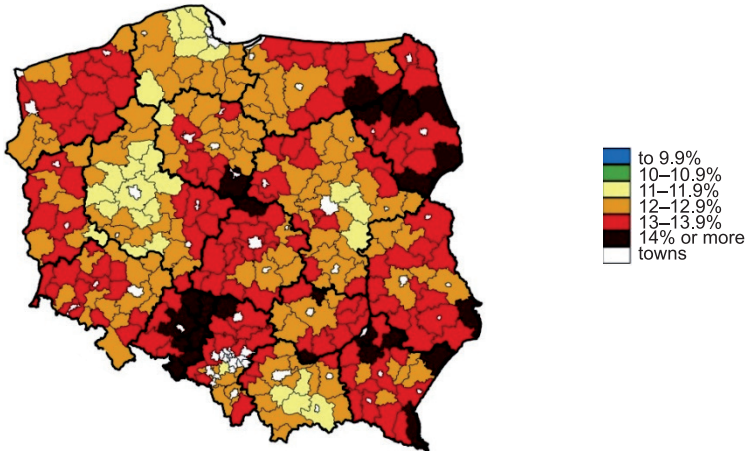


Fig. 13. Population aged 55–64 years in counties' rural areas 2030 [%]

Source: GUS, developed by the authors.

Between 2002 and 2016, the percentage of people aged 55–64 years increased in the rural areas of all counties, because of sizeable birth cohorts of baby boomers born in the 1950s reaching this age group. The largest increases (exceeding 200%) took place in the western part of Poland, being the highest in Lwówecki, Świdnicki, Lubański, Kamiennogórski, Jeleniogórski and Złotoryjski counties (Dolnośląskie), and in Świdwiński and Kamieński (Zachodniopomorskie) in the latter ranging from 125 to 135% (see Fig. 14). According to estimates, between

2016 and 2030 the percentage of this subpopulation will increase in the central, eastern and southern parts of Poland by 20–35%, the most in counties such as Siemiatycki and Kolneński in Podlaskie and Dębicki, Mielecki and Kolbuszowski in Podkarpackie. In the other rural areas decreases will take place, the largest (33%) in Kłodzki and Lwówecki counties in Dolnośląskie and Kamieński in Zachodniopomorskie (Fig. 15).

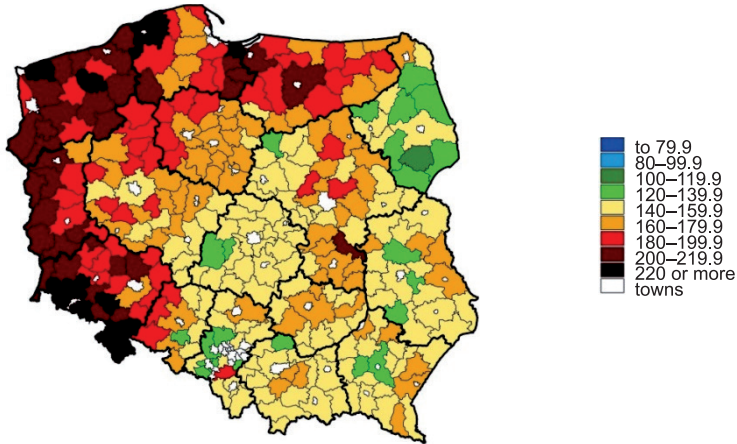


Fig. 14. Changes in the percentage of population aged 55–64 years in counties' rural areas, 2002–2016 (2002=100)

Source: GUS, developed by the authors.

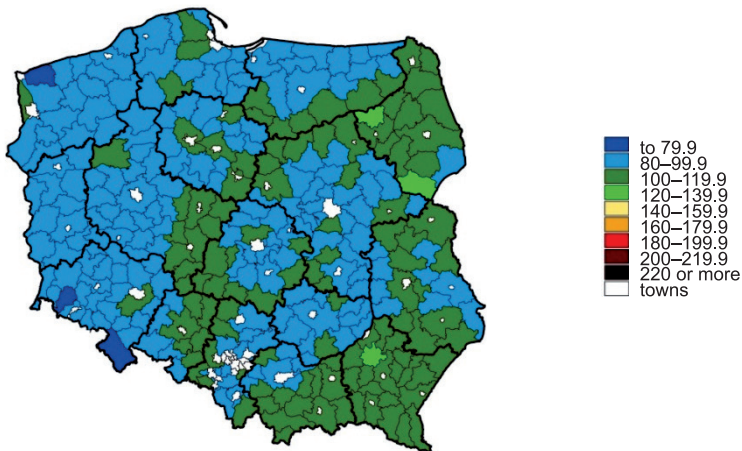


Fig. 15. Changes in the percentage of population aged 55–64 years in counties' rural areas, 2016–2030 (2016=100)

Source: GUS, developed by the authors.

Economic consequences of the changing age structure of the potential labour force in Poland

A decreasing potential labour force and a lack of improvement in the economic activity of the population have many, mostly negative, consequences for the economy. Because Poland has a primarily redistributive pension system (funded from the working population's premiums), the situation is a threat to its stability. However, an advantage of this system is that a smaller supply of labour may still sufficiently meet the demand, resulting in a relatively low rate of unemployment or even its absence.

Labour replacement ratios (a quotient between the number of people aged 15–24 years and the number of people aged 55–64 years) show that in the early 21st c. the number of people at the early-working age still considerably exceeded the number of people leaving the labour force in all Polish voivodeships (in urban as well as rural areas). After a decade, it was the subpopulation aged 55–64 years that dominated countrywide and in most voivodeships (see Tab. 3).

Table 3

Population aged 15–24 and 55–64 years and labour replacement ratios (L_{15-24}/L_{55-64}) in Poland, years 2002, 2016, 2020 and 2030

Year	TOTAL			URBAN			RURAL		
	15–24	55–64	L_{15-24}/L_{55-64}	15–24	55–64	L_{15-24}/L_{55-64}	15–24	55–64	L_{15-24}/L_{55-64}
2002	16.8	9.1	1.86	17.0	9.7	1.75	16.6	8.1	2.06
2016	11.0	14.3	0.77	9.7	15.1	0.64	12.9	13.1	0.99
2020	9.9	13.2	0.75	8.8	13.4	0.66	11.4	12.8	0.89
2030	10.5	12.7	0.83	9.9	12.5	0.79	11.3	12.9	0.88

Source: GUS, developed by the authors.

In rural areas, the 2002 ratio between the early-working age population (15–24 years) and the pre-retirement age population (55–64 years) was 206 to 100 (in all voivodeships the younger subpopulation was in the majority). By 2016, the ratio dropped to only 99 to 100 (the younger subpopulation predominated in 8 voivodeships only; the largest percentages were noted in Pomorskie and Małopolskie). The trend shows that in 2030 the ratio will be 88 to 100 (see Tab. 3 and 4).

The county labour replacement ratios changed as well. In 2002, people aged 15–24 years predominated over those aged 55–64 years in the rural areas of all counties (Fig. 16). The difference was still observed in 2016 (but much smaller than in 2002). In 128 counties, mainly Limanowski, Nowosądecki and Nowotarski in Małopolskie, Kolneński in Podlaskie, and Kartuski and Wejherowski in Pomorskie, the ratio between people aged 15–24 years and 55–64 years was 130–147 to 100.

Table 4

Labour replacement ratios (L_{15-24}/L_{55-64}) in rural areas in Poland,
years 2002, 2016, 2020 and 2030

Specification	2002	2016	2020	2030
Poland	2.06	0.99	0.89	0.88
Dolnośląskie	2.38	0.82	0.80	0.85
Kujawsko-Pomorskie	2.22	0.99	0.91	0.91
Lubelskie	1.79	1.01	0.89	0.83
Lubuskie	2.41	0.88	0.83	0.87
Łódzkie	1.66	0.92	0.85	0.83
Małopolskie	2.13	1.11	0.97	0.92
Mazowieckie	1.99	1.00	0.92	0.91
Opolskie	1.94	0.82	0.69	0.70
Podkarpackie	2.05	1.12	0.95	0.82
Podlaskie	1.66	1.05	0.86	0.76
Pomorskie	2.75	1.10	1.02	1.06
Śląskie	1.78	0.85	0.77	0.83
Świętokrzyskie	1.86	0.92	0.83	0.79
Warmińsko-Mazurskie	2.43	1.02	0.88	0.89
Wielkopolskie	2.27	1.01	0.95	0.98
Zachodniopomorskie	2.46	0.89	0.83	0.87

Source: GUS, developed by the authors.

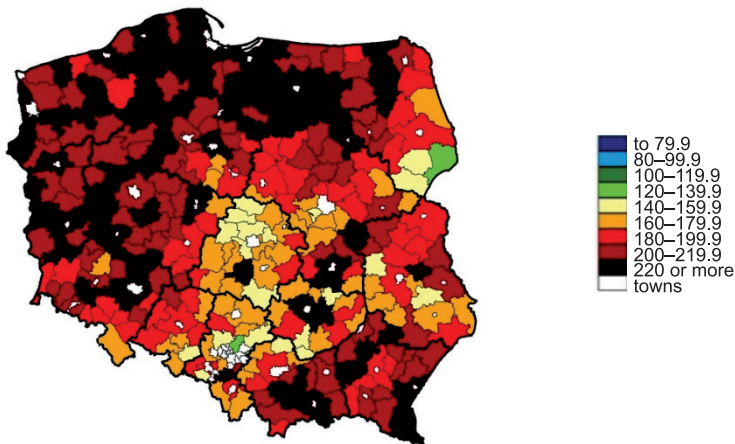


Fig. 16. Labour replacement ratios in counties' rural areas in 2002

Source: GUS, developed by the authors.

The lowest ratios (63–72 to 100) caused by the largest predominance of the older subpopulation were noted in counties such as Będziński in Śląskie and Hajnowski in Podlaskie, as well as in Kłodzki, Jeleniogórski, Wałbrzyski and Dzierżonowski in Dolnośląskie (Fig. 17).

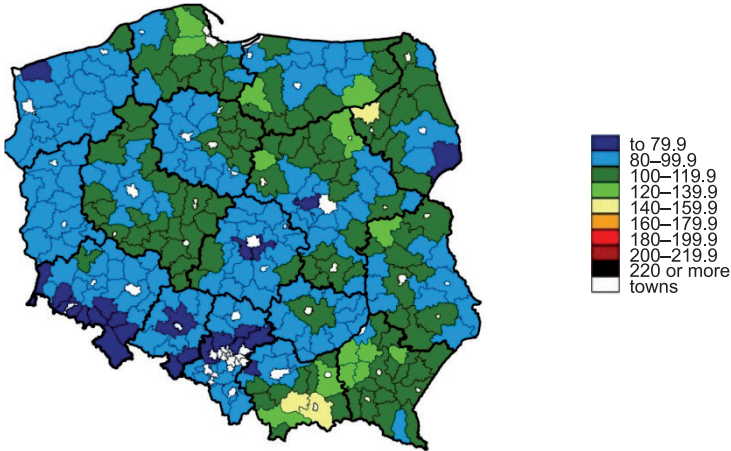


Fig. 17. Labour replacement ratios in counties' rural areas in 2016

Source: GUS, developed by the authors.

In the next several to ten-to-twenty years, most counties will have labour replacement ratios in rural areas below 1. The 2030 ratios (53–65 to 100) will be the lowest in Hajnowski and Siemiatycki in Podlaskie and Głubczycki and Kędzierzyńsko-Kozielski in Opolskie (Fig. 18–19). In only 38 counties the ratios will be

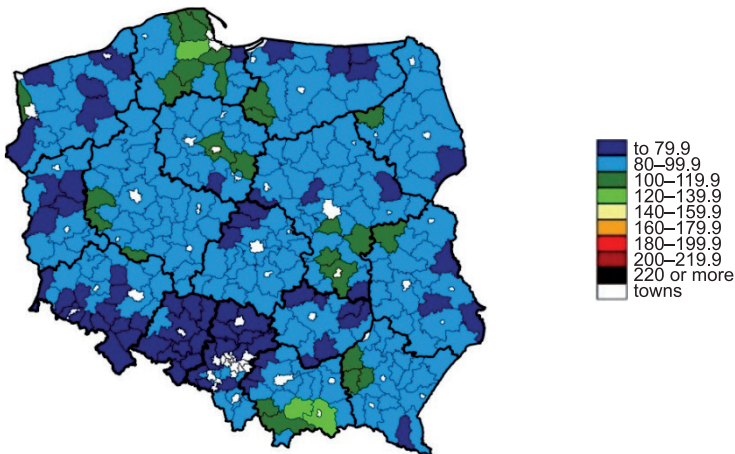


Fig. 18. Labour replacement ratios in counties' rural areas in 2020

Source: GUS, developed by the authors.

at least 1:1, meaning that the inflow of the younger birth cohorts will at least compensate for the outflow of the older ones. The highest ratios (110–126 to 100) will be noted in counties such as Kartuski and Wejherowski in Pomorskie and in Poznański, Gnieźnieński and Nowotomyski in Wielkopolskie (Fig. 19).

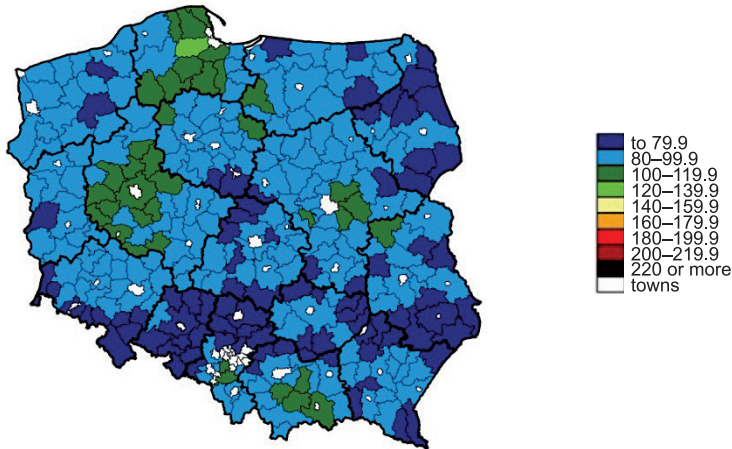


Fig. 19. Labour replacement ratios in counties' rural areas in 2030

Source: GUS, developed by the authors.

Socio-economic aspects of changes in rural labour force

Populations living in rural areas are generally less educated than the residents of towns, because „the educational environment in rural areas is definitely worse than in towns and the average teaching quality tends to be lower. Educational opportunities available to rural children are affected by frequent inefficiencies in the functioning of the rural system of education, such as insufficient number of kindergartens, less qualified teachers and lower quality of secondary schooling. Frequently faced with financial problems, rural families seek secondary or tertiary schools in the vicinity to avoid the cost of renting a room” (PRUS 2008, p. 136). Still, many young people choose to leave rural areas and move to towns to pursue their educational and/or career plans. In most cases their new place of residence turns into a permanent home.

Labour force quality is primarily determined by the educational attainments of its members. The share of people with tertiary education should not be applied as the only measure of labour force quality, because for some jobs vocational education is appropriate and sufficient.

In 2016, 31.8% of urban residents and 15.6% of rural residents aged 15–64 years had tertiary education, but the rates varied regionally. The highest rates in the rural areas were noted in Śląskie (18.2%) and Mazowieckie (16.9%), and the

lowest in Warmińsko-Mazurskie (12.2%) and Lubuskie (13.1%). Rural areas had larger percentages of residents with basic vocational education than towns (32.2% versus 20.6%), as well as larger percentages of people with completed elementary and junior secondary education (19.6% and 11.2%).

The quality of the potential and actual labour force is determined not only by the level of education and vocational training but also by human health. Studies (e.g. those conducted in 2004) have not shown rural and urban adults to significantly differ in the self-assessment of health. However, some health and mortality indicators (e.g. further life expectancy, mortality from malignant tumours, circulatory diseases, respiratory diseases, external causes) show that the male adults in rural areas are disadvantaged compared with their urban peers (WOJTYNIAK et al. 2016, p. 52–54).

The level of socio-economic development and the distance from urban centres are important factors influencing the residential appeal of rural areas. STANNY (2012a, p. 110, 111) showed rural areas in Western Poland and around large cities to have attained a relatively higher level of socio-economic development.

Polish rural areas have been marked by the years of political transition, the onset of which coincided with an increase in potential labour force. One consequence of the transition that was particularly painful in the rural areas was the emergence of open unemployment. The demand-side factors that contributed to it included economic restructuring, the liquidation of socialized agriculture, and decreasing hidden unemployment outside agriculture; on the supply side, the considerable increase in the labour force played an important role (STANNY 2010, p. 57).

According to KOŁODZIEJCZAK and WYSOCKI (2015, p. 98), „the traditional model of individual farming in Poland, with its fragmentation of arable land, small farms, mostly unspecialised production and labour-intensive work proved economically inefficient (...). In this situation (...), the only way to improve the economic status of rural population is to provide its members with jobs outside agriculture”.

The working-age rural population unengaged in agriculture can be a major resource for the labour force making up for its shortages in urban areas. STANNY (2012b, p. 4) argues, however, that finding methods for relocating rural labour resources will not be easy. The process requires flexible solutions for rural and urban labour markets, orientation and educational measures, and support for circular migrations.

Final remarks

Because of higher percentages of children and of the working-age population, the current age structure of Poland's rural population is more favourable than in towns. At the same, strong interregional variations in the percentages are

observed. The largest percentages of both these age groups are noted in the rural areas of northern and western Poland and the smallest in central and eastern Poland and in the Opolskie voivodeship. This geographical pattern will change in the next ten-to-twenty years: the highest rates of the potential labour force (in relative terms) will be noted in municipalities surrounding large cities.

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THE WARMIA-MAZURY SPECIAL ECONOMIC ZONE AS A REASON FOR A REVIVAL OF THE LOCAL LABOUR MARKET

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Key words: Special Economic Zone, labour market, unemployment rate.

Abstract

This article presents the results of studies of the impact of the Special Economic Zone on the situation in the labour market in the Warmińsko-Mazurskie voivodeship. Changes in the number of employees employed by economic entities operating in the Zone as well as changes in the indicators of economic activity of the population in the poviats of the voivodeship were analysed. Data collected during the empirical research showed no impact of the Zone on the improvement of the situation in the local (powiat) labour market.

WARMIŃSKO-MAZURSKA SPECJALNA STREFA EKONOMICZNA JAKO ŹRÓDŁO OŻYWIENIA NA LOKALNYM RYNKU PRACY

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Słowa kluczowe: specjalna strefa ekonomiczna, rynek pracy, stopa bezrobocia.

Abstrakt

W artykule przedstawiono rezultaty badań dotyczących oceny wpływu specjalnej strefy ekonomicznej na sytuację na rynku pracy w województwie warmińsko-mazurskim. Analizy prowadzono pod kątem zmian liczby pracowników zatrudnianych w podmiotach gospodarczych działających na terenie strefy oraz zmian wskaźników aktywności ekonomicznej ludności w powiatach województwa. Na podstawie zgromadzonego w postępowaniu badawczym materiału empirycznego wykazano brak oddziaływania strefy na poprawę sytuacji na lokalnym (powiatowym) rynku pracy.

Introduction

The notion of a “Special Economic Zone” (SEZ) has no single definition in the literature of the subject. It is most frequently associated with a separate administrative area with economic operators operating under more preferential conditions than those applicable to entities operating outside it (GRUBEL 1982, p. 40, *Specjalne strefy...* 2000, p. 17, LIZIŃSKA, KISIEL 2008, p. 11, AMBROZIAK 2009, pp. 66, 67, FAROLE 2011, p. 23). Such preferential conditions for the operation of those entities include, i.e. public aid in various forms, e.g. through tax exemptions or relief. Therefore, they can be considered a form of state intervention in the principle of free competition.

Special Economic Zones are present in developing countries and in countries at a relatively high level of development. In both of those types of countries, SEZs are supposed to contribute to resolving specific economic and social problems. In developing countries, it is usually about reviving a local economy by, among other things, attracting investors (including direct foreign investments), introducing new technologies, creating new jobs and increasing the employment rate. Whereas in countries even with a strong economic position, Special Economic Zones are created in order to eliminate regulatory restrictions and barriers to trade, to get rid of an inefficient administration and to “revive selected urban or rural areas”. All of the above-mentioned reasons are done for potential investors (*Specjalne strefy...* 2011, p. 30).

The operation of Special Economic Zones in Poland is governed by Article 3 of the Act of 1994 (Act of 20 October 1994 on Special Economic Zones...) which stipulates that “a Special Economic Zone may be created in order to accelerate the economic growth of part of the country, in particular, by:

- developing specific areas of economic activity;
- developing new technical and technological solutions and their application in national economies;
- developing exports;
- increasing the competitiveness of products manufactured and services rendered;
- using the existing industrial assets and economic infrastructure adequately;

– creating new jobs;
– using unexploited natural resources adequately and in a sustainable manner.”

When Poland was preparing to join the EU, the said act was subjected to amendment in order to eliminate discrepancies between domestic regulations and EU regulations. It was chiefly about eliminating unclear criteria for “geographical allocation of public aid for entrepreneurs and rules for the operation of Polish Special Economic Zones, and particularly the following: limits of permissible public aid, conditions for providing operating aid, problems related to aid for sensitive sectors, and the possibility to provide export assistance (CIEŚLEWICZ 2009, p. 318). Those issues were addressed by introducing two new laws in June and November 2000 (Act of 30 June 2000 on Conditions..., Act of 16 November 2000 amending the Act on Special Economic Zones...).

From a methodical perspective, analysing the efficiency of Special Economic Zones brings about numerous problems which need to be resolved prior to formulating research assumptions. Those problems arise from the interdisciplinary nature of the notion under analysis, thus from its various definitions. In economic theory, this notion is accurately defined and correctly interpreted by researchers, but in reality there is no such accuracy. It is often the case that efficiency is presented interchangeably or synonymously with effectiveness, performance or the economy of action.

Further explanation is needed as to which type of efficiency is being described. For example, making it clear whether the evaluation is about economic efficiency (evaluating i.e. greater budget inflows), technical efficiency (evaluating i.e. the introduction of new technologies in the region), praxeological efficiency (evaluating i.e. the efficiency of action) or about social efficiency reflected by, for instance, a decrease in unemployment by creating new jobs and increasing the employment rate.

There are positive and negative aspects in the literature of the subject. For example, ENGMAN et al. (2007, pp. 22–34), SIUDAK and WĄTOREK (2011, pp. 151–169) perform a balance of benefits and costs. PASTUSIAK et al. (2014, p. 4) also draw attention to economic benefits. The benefits in the form of export development and the transfer of new technologies are indicated by BLADOCHA (2008, p. 122) and AMBROZIAK (2009b, p. 395). GRYZKA (2009, p. 32), AMBROZIAK (2009b, p. 378–382, 395) and TYPA (2016, p. 23–37), however, notice an increase in foreign investment and in cooperative relations with suppliers from European Union countries. The positive impact of SEZ on employment growth and the reduction of unemployment rates are indicated by CICHA-NAZARCZUK and NAZARCZUK (2017, pp. 173–185).

The source of critical opinions about the functioning of special economic zones are mainly inequalities in the competition of business entities, loss of revenue due to tax exemptions and the regional stratification resulting from locating zones in areas which have a relatively high development level. Among others,

these issues are highlighted by GRYCZKA (2009, p. 32), AMBROZIAK (2009b, p. 417), PRZYBYŁA (2010, p. 255), NELEC and PRUSEK (2006, p. 29) and WARZAŁA (2013, p. 3).

In addition to selectively quoted positive and critical opinions, in the Polish literature on the subject there are also studies of comprehensive assessments of the operational effectiveness of the special economic zones. Among others, in recent years such studies have been presented by CIŻKOWICZ et al. (2014, pp. 17–29), PAWLISZCZY (2015, pp. 253–266), ŻMINDA and others (2016, pp. 54–69), PASTUSIAK et al. (2016, pp. 97–136) and LICHOTA (2016, pp. 99–130).

Research Assumptions

The subject of research on the effectiveness of the operation of Special Economic Zones is determined by the evaluation criteria adopted, for example, the following may be evaluated: the number of permits granted to conduct economic activities in the Zone, the capital expenditures spent by entrepreneurs for development activities, the amount of revenues earned by individual entities, the utilisation (exploitation) of the land area of the Zone, the quantity of public aid provided to entrepreneurs operating in the Zone or even the number of jobs and the employment rate.

As far as employability is concerned, a number of variables can be evaluated in terms of efficiency; these include e.g. the number of created and retained jobs, the number of employees, the number of jobs created as part of foreign direct investments (FDI), the costs of creating and/or retaining 1 new job in the Zone, the ratio of actual employment to employment specified in the permit, the number of employees in the Zone and the unemployment rate, the number of employees in the Zone and GDP per capita in the regions and sub-regions (poviats/municipalities) or the number of jobs created outside the Zone in connection with the launch of 1 job in the Zone. In the context of this last evaluation parameter, individual researchers use different conversion factors resulting from the so-called multiplier effect. In the Polish literature on the subject, the following conversion factors are given: 1.348¹ (DOMAŃSKI et al. 2005, p. 129), 1.5 (AMBROZIAK 2009b, p. 326), 0.5 (NAHOTKO 2003, p. 183), and 1.05–1.10 (HNATYSZYN-DZIKOWSKA 2005, pp. 35, 36, AMBROZIAK 2009b, pp. 352, 353).

In this article, an attempt was made to evaluate social efficiency (which also translates into economic efficiency) using the criterion of employability. Thus, the aim was to evaluate the efficiency of the operation of the Warmia-Mazury Special Economic Zone in terms of its impact on the local labour market reflected by the number of employees and the values of the basic measures

¹ e.g. conversion factor 1.348 means that every 1000 jobs in the zone generate about 348 further jobs in cooperating entities operating outside the given zone.

of the labour market, i.e. the activity rate, employment rate and unemployment rate. The subject of the research was therefore unemployment rates in the sub-regions of the Zone as well as employment in entities operating in the Warmia-Mazury Special Economic Zone in 2010–2015.

Research problems were formulated as a general question: “does the operation of economic operators in the Warmia-Mazury SEZ result in increasing the number of employees?” and the following specific questions:

- what did employment in the SEZ in 2010–2015 look like?
- how much capital expenditures were spent in the SEZ in 2010–2015?
- did investments made by entrepreneurs operating in Special Economic Zones contribute to increased employment?
- did the operation of entities affect the situation on the labour market?

To achieve the aim of the research and answer the specific questions, the following hypothesis was put forward: the operation of the Special Economic Zone has had a positive effect on the labour market in the Warmińsko-Mazurskie voivodeship, which is reflected by increased employment and lower unemployment rates in the individual sub-zones.

The analyses performed were secondary studies based on the information contained in *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych*, published in the reports of the Ministry of Economy (for 2010–2014) and the Ministry of Development (for 2015).

Research Results

The starting point of analytical studies on the number of employees employed by economic operators operating in Special Economic Zones is comparisons of retained jobs and new jobs. Table 1 presents the number of such jobs in the Warmia-Mazury Special Economic Zone over the period of time from 2010 to 2015.

Table 1

Jobs in the Warmia-Mazury SEZ

Type of job	Years					
	2010	2011	2012	2013	2014	2015
Retained jobs	4,963	4,896	4,392	5,022	6,703	7,890
New jobs	5,595	7,239	8,224	8,041	8,292	9,465
Total	10,558	12,135	12,616	13,063	14,995	17,355
Dynamics of changes (previous year=100%)	100.0	114.9	104.0	103.5	114.8	115.7

Source: own study on the basis of *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia: 2010, 2011, 2012, 2013, 2014* (Ministerstwo Gospodarki 2011, 2012, 2013, 2014, 2015), and *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia 2015* (Ministerstwo Rozwoju 2016).

The information presented in the table shows that from 2010 to 2015 in the Warmia-Mazury SEZ there were 6,797 jobs created in total (almost 3,000 so-called retained jobs and almost 3,900 new ones). It is assumed statistically that such a number of people were employed, but it does not need to reflect reality; for instance, at a manufacturing facility working two or three shifts, two or three people (not just one person) could be at the same post.

Economic operators operating in the Zone invest in new undertakings which bring new jobs over time. When assessing efficiency in terms of employment, comparisons of capital expenditures and the number of employees could be of interest. Detailed changes in both of those variables in 2010–2015 are presented in Figure 1.

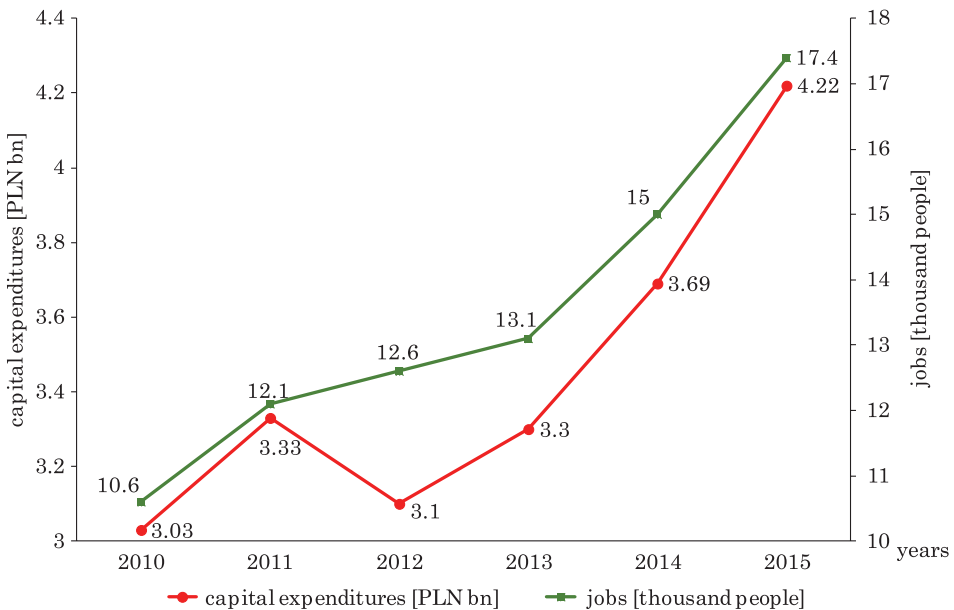


Fig. 1. Capital expenditures and jobs in the Warmia-Mazury SEZ

Source: own study on the basis of *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia 2010, 2011, 2012, 2013, 2014* (Ministerstwo Gospodarki 2011, 2012, 2013, 2014, 2015) and *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia 2015* (Ministerstwo Rozwoju 2016).

Based on the data shown, it may be concluded that over the period of time under analysis, almost PLN 21 billion was invested in the Warmia-Mazury SEZ. When comparing years, one may note that, except for 2012, in each subsequent year entrepreneurs contributed more funds to the development of their businesses. Synchronously, increases in capital expenditures resulted in increases in the number of employees.

During the studies, it was also attempted to determine the impact of the Zone on basic measures of the labour market. It is not an easy task since Special Economic Zones do not work exclusively in such an administrative area as a voivodeship. It is also the case in the Warmia-Mazury SEZ, where entities located in the poviats of Mława, Ostrołęka, and Płońsk as well as in the municipalities of Ciechanów, Pomiechówek, and Zakroczym (which administratively are part of the Mazowieckie voivodeship) also operate. Therefore, the possible impact of a given zone cannot be analysed and the results are assigned solely to one administrative area – a voivodeship. When evaluating the situation in the Warmińsko-Mazurskie voivodeship, the values of indicators of economic activity of the population in the poviats of the voivodeships where the entities registered in the Zone operate were compared with the values of analogous indicators in the poviats where there are no entities operating in the Zone. The obtained results are summarised in Tables 2, 3 and 4.

Table 2
Rate of unemployment in the poviats of the Warmińsko-Mazurskie voivodeship

Powiat	Years						2010–2015
	2010	2011	2012	2013	2014	2015	
Bartoszycki	31.0	29.0	29.8	30.2	27.7	24.4	6.6
Braniewski	30.9	29.6	31.5	32.8	29.0	27.2	3.7
Działdowski	23.8	23.4	26.0	26.2	23.3	20.8	3.0
Elbląski	25.4	23.3	28.2	28.9	26.0	22.9	2.5
Ełcki	24.5	22.8	26.9	26.0	22.3	19.1	5.4
Giżycki	18.9	13.8	18.8	19.6	17.2	16.0	2.9
Gołdapski	22.0	21.2	25.2	24.6	20.9	19.1	2.9
Iławski	11.2	10.8	13.2	12.2	8.9	7.3	3.9
Kętrzyński	28.3	27.1	30.2	31.1	30.1	27.4	0.9
Lidzbarski	26.1	25.0	25.1	27.5	24.8	22.2	3.9
Mra̧owski	22.1	17.3	23.3	22.9	19.6	17.5	4.6
Nidzicki	19.5	18.2	23.0	22.2	17.7	14.8	4.7
Nowomiejski	20.0	19.4	22.4	23.6	19.3	14.6	5.4
Olecki	21.1	19.8	23.1	23.2	20.7	18.5	2.6
Olsztyński	20.3	18.7	22.0	22.8	19.9	17.5	2.8
Ostródzki	21.8	20.6	23.8	24.3	20.4	16.4	5.4
Piski	31.5	30.3	30.9	33.6	29.2	26.8	4.7
Szczygieński	26.3	23.3	26.0	25.3	22.2	17.3	9.0
Węgorzewski	26.9	23.3	30.3	30.6	27.7	24.6	2.3

poviats where there are no entities registered in the Warmia-Mazury SEZ

poviats where there are entities registered in the Warmia-Mazury SEZ

Source: *Rate of unemployment in the poviats of the Warmińsko-Mazurskie voivodeship*,

<http://olsztyn.stat.gov.pl/statystyczne-vademecum-samorzadawca> (access: 3.05.2017).

Table 3

The activity rate in the poviats of the Warmińsko-Mazurskie voivodeship

Powiat	Years						2010–2015
	2010	2011	2012	2013	2014	2015	
Bartoszycki	39.9	39.8	39.2	38.0	37.3	37.4	2.5
Braniewski	34.4	36.2	36.1	37.0	35.3	35.2	−0.8
Działdowski	40.6	41.3	41.7	42.4	40.7	40.8	−0.2
Elbląski	37.5	36.0	36.4	39.4	37.1	37.9	−0.4
Ełcki	40.2	40.9	41.3	40.9	40.0	40.1	0.1
Giżycki	35.6	34.4	34.7	34.2	32.1	33.0	2.6
Goldapski	34.7	36.3	36.4	37.2	36.1	36.1	1.4
Iławski	41.2	42.2	41.8	41.5	40.4	40.3	0.9
Kętrzyński	38.3	38.7	38.6	38.3	36.4	37.4	0.9
Lidzbarski	37.9	37.5	38.1	38.6	36.4	37.2	0.7
Mrańkowski	35.5	36.0	36.1	35.6	34.5	35.1	0.4
Nidzicki	34.6	35.2	35.4	35.9	34.3	34.8	−0.2
Nowomiejski	32.7	33.4	33.2	34.9	33.0	33.6	−0.9
Olecki	42.3	43.0	43.6	44.7	43.2	43.5	−1.2
Olsztyński	31.9	31.7	33.4	33.9	32.8	33.2	−1.3
Ostródzki	39.6	40.1	40.7	41.3	39.1	39.4	0.2
Piski	38.0	37.7	37.3	37.4	35.5	36.8	1.2
Szczygieński	38.8	37.9	38.1	38.2	36.5	37.3	1.5
Węgorzewski	32.7	32.8	33.1	33.5	32.3	32.6	0.1

poviats where there are no entities registered in the Warmia-Mazury SEZ

poviats where there are entities registered in the Warmia-Mazury SEZ

Source: *The activity rate*, <http://www.polskawliczbach.pl/Powiaty> (access: 9.05.2018).

For many years, the Warmińsko-Mazurskie voivodeship has been one of the regions with the highest unemployment rates. Between 2010 and 2015, a substantial decrease in the unemployment rates in all the poviats of the voivodeship was noted. The largest decrease was noted in the powiat of Szczytno, which does not belong to the Warmia-Mazury SEZ. The next three places, with decreases by 5.4–6.6 pp, are occupied by three poviats (Bartoszyce, Nowe Miasto Lubawskie, and Ostróda), where entities registered in the Zone operate, and by one powiat outside of the Zone (Ełk). Two other poviats (Nidzica and Pisz) with a significant decrease in the unemployment rates (by 4.7 pp) are also not registered in the Zone. When generalising about the changes in the unemployment rates, one may note that over the period of time under analysis, the average decreases are

at a similar level, i.e. 4.0 pp for the poviats registered in the Zone and 4.12 pp for other poviats.

Table 4
The employment rate in the poviats of the Warmińsko-Mazurskie voivodeship

Powiat	Lata						2010–2015
	2010	2011	2012	2013	2014	2015	
Bartoszycki	22.1	22.1	21.7	22.0	21.4	21.4	0.7
Braniewski	18.5	20.3	19.3	19.3	20.0	20.2	-1.7
Działdowski	26.7	27.5	26.4	26.8	27.1	26.8	-0.1
Elbląski	22.9	21.8	21.2	23.0	22.9	22.9	0.0
Ełcki	26.8	27.2	26.6	26.7	28.0	28.1	-1.3
Giżycki	25.3	25.5	24.8	23.9	23.5	24.0	1.3
Gołdapski	22.9	23.7	22.6	23.4	24.6	24.1	-1.2
Hański	34.5	34.6	33.9	34.2	35.1	35.3	-0.8
Kętrzyński	23.7	23.3	22.7	22.1	21.3	21.8	1.9
Lidzbarski	23.2	23.1	24.0	22.9	23.0	23.2	0.0
Mrańkowski	25.9	26.6	25.8	25.7	26.5	26.5	-0.6
Nidzicki	24.7	24.8	23.8	24.5	25.5	24.8	-0.1
Nowomiejski	21.2	20.7	20.2	20.7	21.7	21.6	-0.4
Olecki	28.8	29.2	29.0	29.7	30.3	30.5	-1.7
Olsztyński	56.7	57.2	55.7	56.9	57.7	57.9	-1.2
Ostródzki	27.9	27.8	27.4	27.7	28.0	28.4	-0.5
Piski	21.4	20.4	21.5	20.2	21.0	21.0	0.4
Szczygieński	24.3	23.7	23.9	24.2	24.6	24.3	0.0
Węgorzewski	18.4	18.1	17.5	17.4	18.1	18.6	-0.2

poviats where there are no entities registered in the Warmia-Mazury SEZ

poviats where there are entities registered in the Warmia-Mazury SEZ

Source: *The employment rate*, <http://www.polskawliczbach.pl/Powiaty> (access: 9.05.2018).

The activity rate was changing at a similar level in “zonal” poviats (one increased by 0.8 pp and another decreased by 0.7 pp) and in those poviats which are not in the zone (increases of 1.2 pp and decreases of 0.6 pp). Similar dependencies occurred in the values of the employment rate. In poviats operating in the zone, increases of 1.3 pp and decreases of 0.7 pp were recorded. In poviats not covered by the zone area, increases of 1.05 pp, and decreases of 0.9 pp were recorded, respectively.

Conclusions

On the basis of the analyses carried out and the empirical data gathered during the research, it may be concluded that the hypothesis is disproven. In addition, it can be concluded that in 2010–2015 there was a regular increase in the number of retained jobs and new jobs, which translated into an increase in the number of new employees. Simultaneously, the following pattern was noted: increased capital expenditures resulted in a greater number of retained jobs and new jobs. It was also concluded that the unemployment rates fell in all poviats of the Warmińsko-Mazurskie voivodeship, though the average decline was nearly identical (about 4 pp) in the poviats registered in the Zone and in other poviats. This situation may suggest that the “presence” of the Special Economic Zone affects the situation in the labour market neither positively nor negatively. This is reflected by the values of the activity rate, employment rate and unemployment rate in the region (cities, poviats, and municipalities in the Warmińsko-Mazurskie voivodeship).

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IS THE POLISH LABOUR MARKET HEADING TOWARDS POLARISATION?*

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Key words: Skill-biased Technical Change, Routinisation-Biased Technical Change, labour market polarisation.

Abstract

The paper discusses the nature of technical change in the Polish labour market, referring to two dominant hypotheses: Skill-Biased Technical Change and Routinisation-Biased Technical Change. The goal of the study is to test the hypothesis of the polarisation of the Polish labour market. The empirical analysis revealed that the Polish labour market does not follow the typical polarisation path identified in developed countries. It appeared that the biggest decline in labour demand has not been observed in the middle of skills/wage distribution. Technical change has led to skills upgrading, however, employment and wages in the group of low-skilled workers have not deteriorated much. Moreover, major changes in the task content of jobs have occurred in Poland. These changes are consistent with patterns of the developed countries with the exception of routine cognitive tasks, for which demand has increased in the last decade. The results of the analysis are ambiguous – shifts in the structure of employment and wages in Poland seem to be stuck between scenarios offered by SBTC and RBTC hypotheses.

CZY POLSKI RYNEK PRACY ZMIERZA KU POLARYZACJI?

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Słowa kluczowe: zmiana technologiczna faworyzująca wysokie kwalifikacje, postęp techniczny ukierunkowany na rutynizację, polaryzacja rynku pracy.

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Abstrakt

W artykule podjęto problematykę charakteru zmiany technologicznej na polskim rynku pracy, skupiając się na dwóch dominujących obecnie w literaturze przedmiotu koncepcjach: zmiany technologicznej faworyzującej wysokie kwalifikacje (SBTC) i postępu technicznego ukierunkowanego na rutynizację (RBTC). Celem była weryfikacja hipotezy o polaryzacji polskiego rynku pracy. W przedstawionej w artykule analizie empirycznej wykazano, że zmiany na polskim rynku pracy odbiegają od ścieżki polaryzacji charakterystycznej dla krajów rozwiniętych. Okazuje się bowiem, że największy spadek popytu na pracę nie wystąpił w grupach zawodów zlokalizowanych w środkowej części rozkładu kwalifikacji/płac. Zmiana technologiczna spowodowała ogólny wzrost zapotrzebowania na wysokie kwalifikacje, jednocześnie zatrudnienie i płace w grupie pracowników o niskich kwalifikacjach istotnie się nie pogorszyły. Doszło również do znacznych zmian w strukturze zadań wykonywanych na poszczególnych stanowiskach pracy. Kierunek tych zmian jest podobny do trendów zidentyfikowanych w krajach rozwiniętych, z wyjątkiem popytu na rutynowe zadania kognitywne, na które w Polsce w ciągu ostatniej dekady zapotrzebowanie wzrosło. Wyniki analizy są niejednoznaczne – zmiany w strukturze zatrudnienia i wynagrodzeń w Polsce lokują się między scenariuszami wynikającymi z hipotez SBTC i RBTC.

Introduction

Labour markets in the developed economies have recently witnessed profound changes in occupational structure and wage distribution, manifested by growing disparities between skilled and unskilled workers. The conceptual model to explain these changes is usually based on the supply-demand-institution approach proposed by FREEMAN and KATZ (1994), and KATZ and AUTOR (1999). The supply-side drivers include changes in educational attainment, training schemes, skill obsolescence and migrations. The institutional setting usually encompasses unionization, minimum wage regulations and flexibility of the labour market. Finally, demand-driven factors are related to technological changes and international trade. While the impact of supply-side and institutional factors is prevalent in the short to medium run, there is a consensus that technology is a main driver of occupational change in the long run. However, both theory and empirical studies have not yet provided a clear answer to the question concerning the direction of this change. Two points of view are dominant: skill upgrading and labour market polarisation. They are described theoretically by two hypotheses: Skill-biased Technical Change (SBTC) and Routinisation-Biased Technical Change (RBTC).

Both hypotheses have been tested extensively in the developed countries, while studies on SBTC/RBTC in emerging economies, e.g. Poland, are rather scarce. We may assume that the Polish labour market may experience an upgrading or polarisation processes with some delay, as Poland is lagging behind developed economies in terms of technological advancements (which are clearly noticeable by various measures of an information society)¹. The paper refers

¹ Short-run deviations from the common trend may be explained by institutional differences between countries, while in the long-run we may expect convergence in technology leading to convergence in occupational trends.

to this issue – the main focus is put on technical change as the key driver of occupational shifts. The main goal of this study is to test the hypothesis of the polarisation of the Polish labour market. If the Polish labour market exhibits a typical trend of polarisation, we shall see a U-shaped pattern of changes in the occupational structure – with growing employment at both ends of the skills/wages distribution and shrinking employment in the medium-skilled occupations. The analysis is of a descriptive nature and is based on Labour Force Survey employment data, data on wages from the Survey on Structure of Earnings by Occupations data, and employment data available in the forecasting tool at www.prognozowaniezatrudnienia.pl.

Labour market polarisation – synthetic literature review

The most popular explanation of ICT-driven occupational changes is based on SBTC and RBTC hypotheses. SBTC argues that technical progress favours highly qualified labour and substitutes low-skilled workers. For many years it seemed the SBTC hypothesis was a good explanation for growing wage inequalities between skilled and low-skilled labour in the situation of long-lasting increases in the demand for skilled workers². Although the SBTC hypothesis focused mainly on skilled labour, the endogenous/directed SBTC hypothesis was convincing enough to explain even past technology-driven labour market developments favouring low-skilled labour (ACEMOGLU 2002)³. However, as WICKHAM (2011) argues, even nowadays in developed countries we may see an expansion of low-skilled manufacturing, which would lead to technological regression instead of progress. His argument is based on the observation that the companies' choice of technology is determined not only by the availability of the technology itself, but also by the supply of the labour force. When the low-skilled and relatively cheap labour force is in abundance, companies may switch to "simpler" technologies, and thus reduce the pressure on new technological innovations. This process may be strengthened by the inflow of low-skilled migrants⁴, who

² For empirical findings confirming SBTC in developed countries (mainly in the U.S.) (see: ACEMOGLU 2002, BLANKENAU, CASSOU 2011, CARD, DiNARDO 2002). However, RICHTER (2014) showed that if the assumption of equal capital shares (in the two-sector model) is removed, increase in the skill premium in the U.S. may be explained by reallocation of capital and neutral or unskilled-biased technical change, instead of SBTC hypothesis.

³ Acemoglu used endogenous SBTC hypothesis to explain changes in labour demand that took place in the Great Britain in 19th century, and was triggered by the industrial revolution that favoured low-skilled labour. However, GOOS and MANNING (2007) argued that SBTC hypothesis explains changes taking place only in the upper end of the wage distribution, while it is not capable to predict changes in the lower end.

⁴ This hypothesis was tested by OESCH and RODRIGUEZ MENES (2010), who showed that in case of Great Britain and Spain occupational change and wage distribution was influenced to some extent by inflow of low-skilled immigrants, who filled the jobs in the lower tail of occupational/wage distribution.

would fill the “lousy” jobs⁵ – a term coined by GOOS and MANNING (2007), who showed polarisation of the labour market towards lovely (in the upper end of skill distribution) and lousy (in the lower end of skill distribution) jobs in Great Britain. However, OESCH (2014) argued that even if we take into account the fact that Britain and, to a smaller extent, Switzerland recorded job losses in the medium part of occupational distribution (which may point to possible polarisation) between 1989 and 2008, the occupational structure in these countries (as well as in Denmark, Germany and Spain) did not polarise but rather upgraded.

Recently, the RBTC hypothesis has gained momentum. It refers to the seminal work of AUTOR et al. (2003), who argued ICT capital substitutes routine tasks and complements non-routine tasks (the so-called ALM hypothesis). Thus, the RBTC approach shifted the attention from skills to the tasks (routine vs. non-routine) performed by the workers. As routine tasks tend to be concentrated in the middle of the skills distribution (covering mainly clerical and manufacturing/assembly line jobs), we shall see a relatively high share of high- and low-paid jobs (high-skilled and elementary jobs) and the polarisation of the labour market.

AUTOR and DORN (2013) argued labour market polarisation may be driven by two factors: consumer preferences and biased technological change. In this approach, falling prices of ICT cause a complementary effect between ICT and non-routine abstract tasks performed by highly qualified workers, a substitution effect between ICT and low-skilled workers performing routine tasks in the production of goods, and an ambiguous effect as for the low-skilled service jobs which rely on manual tasks. As wages for low-skilled workers performing routine tasks fall relatively to these low-skilled workers performing manual tasks, low-skilled labour flows from the production to the service sector, while high-skilled professionals remain in the production sector⁶. ACCETTURO et al. (2014) showed that polarisation explains the urban effects of computerisation – demand for a highly qualified workforce performing managerial and professional jobs in cities tends to grow, at the same time this growing “professional” class creates demand for services provided by low-skilled workers. This leads to the emergence of “fat tails” in the upper and lower ends of the skill distribution. TUZEMEN and WILLIS (2013) argued that polarisation processes tended to accelerate during recessions (at least in the U.S.), and the response of the labour force to these changes is determined by gender and age. The increasing complexity of tasks within occupations in West Germany, especially the growing importance of non-routine cognitive tasks, and the decline of demand for manual and cognitive routine tasks was revealed by SPITZ-OENER (2006). The rising demand for high skills was recorded mostly within occupations

⁵ In general, Wickham’s argument is consistent with endogenous SBTC hypothesis.

⁶ AUTOR and DORN (2013) argue this model explains developments on the U.S. labour market in 1980–2005, when the growth of share of hours worked by non-college workers in the service occupations coincided with high increase of real wages in these jobs, which exceeded significantly wage growth in other low-skilled occupations. Similar results were reported by MANDELMAN (2013).

affected to a large extent by the development of ICT, and at the lower end of the skill distribution, while a significant fall in employment was identified in the third decile of skill distribution (encompassing such occupations as office clerks or machine operators). GREEN and SAND (2015) showed that the Canadian labour market followed the pattern of the U.S. and European (mainly UK) labour markets in terms of employment structure, revealing the polarisation. However, they argued that while technical progress may explain changes in the middle and upper end of the skill distribution in Canada, other factors – e.g. the upward supply shift – drove changes in the lower-end-jobs. ASPLUND et al. (2011) tested the RBTC hypothesis in the Nordic countries (Finland, Norway and Sweden), arguing these countries moved from the SBTC to the RBTC, or even to a combination of these two phenomena, and this process was not hampered by compressed wage structures, typical of the Nordic countries.

Different dimensions of structural change in the Polish labour market

There is no doubt that development of Information and Communication Technologies⁷, along with other drivers (globalisation and offshoring processes, migrations, changes in the institutional milieu) has played an important role in the processes of occupational change in Poland.

Employment structure and demand for skills

A popular approach of analysing the employment structure by skill level is based on the methodology proposed by the International Labour Organisation. This methodology defines four skill levels within the ISCO-08 classification (these levels are linked to major occupational groups⁸), consistent with respective levels of educational attainment (ISCED-2011 classification). If we aggregate occupational Polish data (historical as well as forecasted) according to the ILO approach, we shall notice that employment in the occupations at skill level 1

⁷ In 2004–2016 the average growth of ICT-capital in Poland amounted to 14.0% (compared to 11.5% in the EU-15), and the contribution of ICT-capital to economic growth was estimated at 0.45p.p. (compared to 0.36 p.p. in the EU-15).

⁸ According to the ILO (2012) methodology, the first skill level includes “Elementary Occupations” (9); the second skill level: “Clerical Support Workers” (4), “Service and Sales Workers” (5), “Skilled Agricultural, Forestry and Fishery Workers” (6), “Craft and Related Trades Workers” (7), and “Plant Machine Operators, and Assemblers” (8); the third skill level: “Technicians and Associate Professionals” (3) and “Hospitality, Retail and Other Services Managers” (14); while the fourth skill level encompasses “Professionals” (2) and “Managers” (1), excluding “Hospitality, Retail and Other Services Managers” (14). The major group “Armed Forces Occupations” was excluded from the analysis.

has been relatively stable – it declined by 1% between 1995 and 2015, and this stance should be maintained until 2022. The number of people working in occupations classified at skill level 2 has dropped significantly (by 8.8% in 1995–2015, and according to the forecast by 13.7% in 1995–2022). At the same time employment has risen in occupations at skill level 3, and especially at skill level 4 (between 1995 and 2015 by 26.2% and 73.9% respectively). Moreover, it is forecasted that employment at the 4 skill level will continuously grow until 2022 – it is going to be two times higher in 2022 compared with 1995. It should also be noted that during the last economic slowdown in Poland (2008–2012/13), employment decreased in this period, except at the 4th skill level. This points to the fact that even during an unfavourable economic situation, demand for highly skilled employees is stable, or growing.

This analysis shows that the employment structure has been biased towards the skilled labour force – the growing share of employees at the 3rd and 4th skill level has coincided with a falling share of people performing medium-skilled jobs, while the drop in the share of elementary jobs accounted for only 0.7 percentage points (Fig. 1).

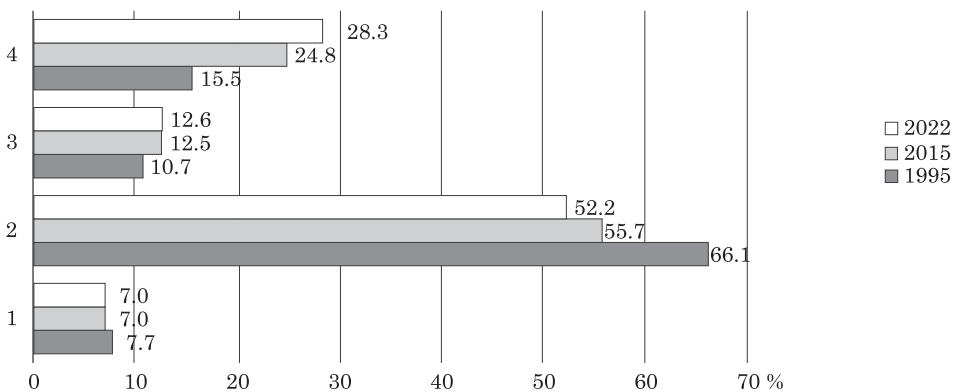


Fig. 1. Employment structure by skill levels in Poland in 1995, 2015 and 2022 (historical data for 1995 and 2015, forecast for 2022)

Source: own elaboration based on data retrieved from Prognozowanie zatrudnienia (online, <http://np.prognozowaniezatrudnienia.pl/>).

These patterns provide rather ambiguous conclusions as to the nature of occupational change in the Polish labour market. It is evident that demand is growing at the high end of the skill distribution and decreasing in the medium-skill jobs, while employment decline at the low end of the skill distribution is rather negligible.

Task content of jobs

An analysis of the task content of jobs, usually used to test the polarisation hypothesis, also does not bring a clear picture. In a recent study HARDY et al. (2016) combined methodology presented by ACEMOGLU and AUTOR (2011) with EU-LFS and O-NET data to analyse the evolution of the task content of jobs in Central and Eastern European countries⁹. Interestingly, their results revealed that in six CEE countries (including Poland¹⁰) demand for routine cognitive tasks has been growing, especially since 2006, as a joint effect of changes in the employment structure (between-occupation effect) and changes in task content intensities over time (within-occupation effect). Research studies which analyse the task content of jobs in developed economies provide opposite results (see e.g. AUTOR and PRICE (2013)). The reasons why the Polish labour market has not followed a typical polarisation path in terms of changes in the task content of jobs may be attributed to both demand and supply-driven factors.

Explanations related to the demand-side factors focus mainly on the structural change triggered by the transition from a centrally-planned economy to a market economy. A relatively high share of workers and farmers, and a low share of clerical jobs in the employment structure in Poland, caused technical progress displacing routine cognitive tasks to only have a limited impact on changes in employment by occupation (*Zatrudnienie w Polsce 2013... 2014*). The sectoral structure of employment seems to be of great importance in this case. HARDY et al. (2016) revealed that CEE countries which recorded a high share of employment in agriculture at the beginning of the 1990s, and then witnessed a substantial decline of this share, experienced higher increases in demand for routine cognitive tasks.

However, it should be emphasised that demand-side drivers are related to a large extent to Poland's accession to the European Union in 2004. Becoming a part of the European Single Market and taking advantage of the free movement of goods, capital, services and labour has helped to reduce excess labour in a period of relatively high unemployment though increased migration flows, but at the same time it has created some tensions in the Polish labour market¹¹. Membership in the EU has enhanced GDP growth in Poland in recent years and played an important role in the stabilisation of the Polish economy during

⁹ The analysis covered the 10 CEE countries: Czech Republic, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.

¹⁰ For detailed analysis of changes in the task content of jobs in Poland between 1996 and 2014 see HARDY et al. (2015).

¹¹ Significant migration flows of Polish labour within the European Union (especially to Great Britain) after accession, which has been estimated at ca. 2 million people, has had a positive effect on unemployment in the macro scale, however it has also led to labour supply shortages in some segments of the labour market (e.g. construction workers, healthcare specialist, bus and lorry drivers).

the last world economic crisis¹². As a result of greater openness in the Polish economy to EU partners, Poland has become one of the top destinations for offshoring business in the CEE region (KEARNEY 2016). There is a wide range of offshoring centres in Poland – relatively small centres focus on low complexity services (Olsztyn, Lublin, Bydgoszcz, Szczecin, Tricity), while the consolidated and maturing ones (Warsaw, Krakow, Wroclaw, Lodz, Katowice) provide mid to high complex services¹³. Still, many tasks performed by employees (clerical jobs) in 1st–4th generation offshoring centres are of a routine cognitive nature.

Upskilling and the age structure of the labour force are two dominant supply-side factors influencing the distribution of task content of jobs. The massification of higher education, since the early 1990s, has led to a dynamic growth of labour force competences (at least formally), and resulted in a decreasing share of employees with primary education and an increasing share of university graduates in the employment structure. As more educated employees usually perform jobs with a lower intensity of routine tasks, upskilling in Poland (and other CEE countries) “compressed routine cognitive tasks” (HARDY et al. 2016). On the other hand, jobs which are routine-intensive are ageing faster than non-routine intensive – younger employees have switched to more intensive non-routine cognitive tasks much faster than older workers (LEWANDOWSKI et al. 2017). This “accumulation” of routine cognitive tasks in older age groups may cause challenges in the coming years, as technical change will arguably move on, and routine jobs will be more and more substituted by these non-routine intensive jobs.

Wages

Technical change will also manifest in changes in wages and wage structure. Representative data on wages in Poland, collected by the Polish Central Statistical Office within the Survey on the Structure of Earnings by Occupation, shows that the highest growth of real wages was recorded in high-skilled occupations at the 3rd and 4th skill level – Technicians and Associate Professionals (by 43.6%), Professionals (by 40.2%), and Managers (by 33.7%) (see Tab. 1), as well as in the Elementary Occupations (by 37%), which are at the low end of the skills distribution. At the same time, the growth of real wages in occupations grouped within the 2nd skill level was rather modest (29% on average), ranging from 26.5% in Service and Sales Worker occupations, to 31.9% in the case of Craft and Related Trade Workers.

¹² Despite this economic success, Poland and other CEE countries are still on the EU periphery, maintaining their initial position as low-price suppliers, and building their competitive advantage mainly on relative low labour costs (GHINARARU 2017).

¹³ Warsaw and Krakow was classified as 6th generation offshoring centres, Wroclaw as 5th generation, Lodz and Katowice as 4th generation, and Olsztyn, Lublin, Bydgoszcz, Szczecin, Tricity as 1–3rd generation centres.

Table 1
Average monthly gross earnings by major occupational groups in October (constant prices 1999)

Major occupational group/ Year	Managers (1)	Professionals (2)	Technicians and Associate Professionals (3)	Clerical Support Workers (4)	Services and Sales Workers (5)	Skilled Agricultural, Forestry and Fishery Workers (6)	Craft and Related Trades Workers (7)	Plant and Machine Operators, and Assemblers (8)	Elementary Occupations (9)
1999	3,975.0	2,293.5	1,831.4	1,635.5	1,217.7	1,283.8	1,585.7	1,673.6	1,110.6
2001	4,216.9	2,470.1	1,933.4	1,710.3	1,270.4	1,244.6	1,631.2	1,706.1	1,127.9
2002	4,386.2	2,511.2	1,922.7	1,683.4	1,139.2	1,258.5	1,579.8	1,675.6	1,102.7
2004	4,439.5	2,575.5	1,897.0	1,636.7	1,102.5	1,307.8	1,494.4	1,622.0	1,095.5
2006	4,646.9	2,604.7	2,198.8	1,702.8	1,162.3	1,398.7	1,710.4	1,748.9	1,197.2
2008	5,308.2	2,925.7	2,457.0	1,995.1	1,365.4	1,455.5	1,965.8	2,001.5	1,394.0
2010	5,085.0	2,996.2	2,529.2	2,062.5	1,459.1	1,525.6	1,919.7	2,081.6	1,436.2
2012	5,213.0	3,054.3	2,489.5	2,046.8	1,451.2	1,684.6	1,989.9	2,069.9	1,434.8
2014	5,315.9	3,215.3	2,630.2	2,079.5	1,540.4	1,689.3	2,090.8	2,143.9	1,521.1
Change 1999–2014 (in %)	33.7	40.2	43.6	27.2	26.5	31.6	31.9	28.1	37.0

Source: own elaboration based on Structure of Wages and Salaries data.

We may say, from this brief analysis, that changes in real wages in Poland seem to follow the U-shaped pattern – high dynamics were recorded at both ends of the skill distribution, while medium-skilled jobs witnessed relatively low wage increases. Such distribution of wage growth is in line with the RBTC hypothesis, and may support the argument that the Polish labour market is heading towards polarisation.

Labour market polarisation – an integrated approach

To test the hypothesis of polarisation of the Polish labour market, data on employment and wages was combined in line with the methodology presented by OESCH (2014). Individual Labour Force Survey data on employment (1995–2014 period) was linked to individual data from the 2014 wave of the Survey on Structure of Earnings by Occupations at the 3-digit code level (minor occupational ISCO-08 groups). Data was sorted from low to high-wage minor occupational groups, and then quintile ranking was developed for the employment structure

in 1995, and treated as a point of reference. The first quintile was dominated by Elementary Occupations and Services and Sales Workers. The second quintile covered mostly Skilled Agricultural, Forestry and Fishery Workers, and Elementary Occupations. The third quintile encompassed mainly occupations classified within ILO's 2nd skill level, however there were also such occupations as Nursing and midwifery professionals, Medical and pharmaceutical technicians, Other health associate professionals, Legal, social and religious associate professionals, Sports and fitness workers, and Artistic, cultural and culinary associate professionals, which are classified within, respectively, the 4th and 3rd ILO skill level groups. This means that some jobs requiring a high level of qualifications fall into the medium range of the wage distribution. The fourth quintile covered a mix of occupations from almost all occupational groups (excluding Elementary Occupations, Services and Sales Workers, and Skilled Agricultural, Forestry and Fishery Workers), and was dominated by Professionals and Technicians and Associate Professionals. Finally, in the fifth, highly-paid quintile, we found mainly Managers, Professionals, some minor occupational groups from the "Technicians and Associate Professionals" major group, but also Mining and Mineral Processing Plant Operators, and Locomotive engine drivers and related workers (the major group "Plant and Machine Operators, and Assemblers").

In the next step, the 1995 quintile-reference employment structure was applied to the dataset covering the years 1995–2014. Thus, it was possible to study occupational changes controlled by wages. The analysis revealed, that employment in Poland is biased towards higher-paid occupations (8.0% employment growth in the fifth quintile), however also in the third quintile (medium-paid occupations) employment growth was noticeable (4.9%). Employment in the first and fourth quintile fell by, respectively, 0.8 and 2.7%, while the second quintile witnessed

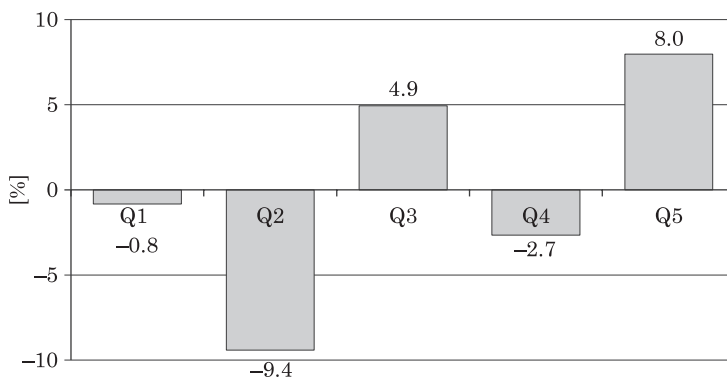


Fig. 2. Change in the quintile share of total employment between 1995 and 2014 (in %) – Scenario 1

Source: own elaboration.

significant employment downsizing (Fig. 2). This picture is surely not in line with the U-shaped pattern suggested within the standard RBTC hypothesis of labour market polarisation. It is also not consistent with the SBTC hypothesis, especially because of the growing demand for employees in the third quintile, and falling demand in the fourth quintile.

These inconsistencies may be attributed to a relatively high intensity of routine cognitive tasks in the Polish economy, pointed out by HARDY et al. (2015, 2016), and other possible explanations such as supply and demand-driven factors influencing changes in the distribution of task content in Poland, already presented in the paper. However, having in mind that countries which have had a relatively high share of employment in agriculture at the beginning of the economic transition experienced a higher growth of demand for routine cognitive tasks, it was decided to test whether results would be different if agricultural workers would be excluded from the analysis. When the major occupational group Skilled Agricultural, Forestry and Fishery Workers was extracted from the database, the entire procedure was replicated, bringing “Scenario 2” results (Fig. 3).

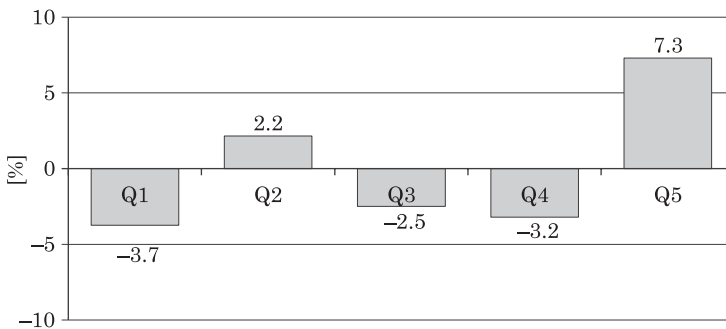


Fig. 3. Change in the quintile share of employment between 1995 and 2014 (in %) – Scenario 2 (excluding agricultural workers)

Source: own elaboration.

Even though this scenario portrays a much different picture, especially in the middle of the skill/wage distribution, still, this pattern is consistent with neither the RBTC nor the SBTC hypotheses. Employment decline in the third quintile was higher than in the fourth one, which means that even in Scenario 2 the demand for routine cognitive tasks is relatively high (these tasks are usually concentrated in the 3rd quintile) while non-routine tasks are performed mainly by highly qualified and highly paid employees from the fifth quintile. It also seems that the “professional” class in Poland is not yet wealthy enough to generate demand for services provided by low-skilled workers, sufficient to trigger employment growth in the first quintile, as ACCETTURO et al. (2014) suggested in their model.

Conclusions

Noticeable shifts in employment structure have occurred in Poland within the last two decades. These shifts were driven, to a large extent, by technical progress embodied in more productive utilisation of Information and Communication Technologies. Technical change in the Polish labour market has led to skills upgrading – labour demand shifted towards highly skilled workers. This process has been enhanced by a massive educational upgrading in Poland taking place since the beginning of the transition period. At the same time, employment and wages in the group of low-skilled people have not deteriorated much.

In the last 20 years major changes in the task content of jobs has taken place in Poland, following to a large extent the patterns of higher developed countries. HARDY et al. (2015, 2016) reported an increasing intensity of non-routine and routine cognitive tasks, as well as a declining intensity of routine and non-routine manual tasks. The only, but important difference between Poland and developed economies is related to routine cognitive skills, for which demand has increased in Poland during the last decade. Moreover, a perceptible growth in labour demand has been observed in the third quintile of occupational-wage distribution (in the Scenario 1). Interestingly, this quintile includes many occupational groups which require relatively high formal qualifications. This shows that a high level of skills is not always linked to high wages, as theory predicts. Even in the Scenario 2, in which agricultural workers are excluded from the analysis, the revealed trend does not portray a U-shaped pattern.

These observations do not provide a clear answer to the question on the nature of technical change in the Polish labour market. The results of the analysis presented in the paper are ambiguous with regards to both hypotheses: Skill-Biased Technical Change and Routinisation-Biased Technical Change. As VIVARELLI (2014) noted, changes in the structure of employment and wages coinciding with the SBTC hypothesis were “transferred” from developed economies to middle income countries, while low-income countries (e.g. Poland), due to lower absorption capacity may not yet have experienced a technical change that favours high skills. Following this line of argumentation, we can potentially expect an acceleration of the polarisation processes in the Polish labour market. Forthcoming shifts may drive down the role of medium-skilled jobs, with growing demand at both ends of the skill and wage distribution, which would lead to a standard U-shaped pattern of occupational change. With a relatively high intensity of routine cognitive tasks in the job distribution, Poland is vulnerable to RBTC and polarisation in the coming years. However, AUTOR (2015) predicts that the labour market polarisation should not continue in the future. His prediction is based on the assumption that many jobs in the middle of the skill distribution require a wide mix of skills to maintain the quality of service provided, thus they are not susceptible to automation. Even the jobs that are mainly routine-based contain many non-routine tasks in which a human being

is still performing better than a machine. As a result we shall see a growth of demand for “new middle skill jobs” instead of increasing polarisation, which seems to be the case in the Polish labour market. There is no doubt this issue requires further thorough elaboration.

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THE QUALITY OF WORKING CONDITIONS IN RURAL AREAS IN THE OPINION OF WORKERS AND THEIR SUPERIORS USING THE EXAMPLE WOOD PROCESSING PLANTS (CASE STUDY)

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Key words: working conditions, wood processing, rural areas.

Abstract

The article attempts to characterize working conditions in wood processing plants located in the rural areas of the Opole region, taking into account the opinion of employees and their supervisors. The analysis of working conditions was made on the basis of key factors. Particular attention was paid to organizational and technical as well as to economic working conditions. The first area is focused on the factors of the work environment and work organization, while the second area is focused on employment conditions.

JAKOŚĆ WARUNKÓW PRACY NA OBSZARACH WIEJSKICH W OPINII PRACOWNIKÓW I ICH PRZEŁOŻONYCH NA PRZYKŁADZIE ZAKŁADÓW PRZEROBU DREWNA (STUDIUM PRZYPADKU)

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Słowa kluczowe: warunki pracy, tartacznictwo, obszary wiejskie.

Abstrakt

W artykule podjęto próbę scharakteryzowania jakości warunków pracy w zakładach przerobu drewna usytuowanych na obszarach wiejskich w województwie opolskim, z uwzględnieniem opinii pracowników i ich przełożonych. Warunki pracy przeanalizowano na podstawie najważniejszych elementów o tym decydujących. Szczególną uwagę poświęcono warunkom organizacyjno-technicznym oraz ekonomicznym. W pierwszym obszarze skupiono uwagę na czynnikach środowiska pracy oraz organizacji pracy, w drugim natomiast na warunkach zatrudnienia.

Introduction

Working in a wood processing industry is characterized by a relatively high occupational risk. Threats to life and the health of workers in the wood processing plant are triggered mainly by strenuous physical working conditions including excessive pollution, insufficient light intensity, excessive mechanical vibrations, unsuitable microclimate, noise exceeding the legal limit, contact with dangerous equipment and machines (woodworking machines), and the necessity of using dangerous hand tools and sharp objects. In addition, inaccurate work organization, a lack of full mechanization for machining operations and the presence of harmful impregnating agents, preservatives and retardants are difficulties often reported in the sawmill industry. At the same time, due to the lack of adequate financial resources, the employees of wood processing plants frequently work on obsolete machines in a depleted machinery park, which affects the overall assessment of working conditions. This profession is mentioned among the occupations characterized by a comparatively high level of accidents amongst all sectors of the national economy.

The article's aim is to characterize the working conditions in the wood processing plants located in the rural areas of the Opole region based on the example of a selected medium-sized plant. When examining the working conditions, the focus was primarily put on the factors that determine the material working environment and the employer activities in the area of proper organization of the workplace.

The essence of the quality of working conditions

The term “working conditions”, applied in both scientific literature and in the practice of economic life, has not been precisely defined yet. Most writers do not define the term “working conditions” at all, which may be due to the ambiguity of the term “condition” in the Polish language.

It is generally accepted that the term “working conditions” is defined as “all physical and psychosocial factors having their source in the work environment and affecting people performing work” (POCZTOWSKI 2008, p. 377). Therefore, often the term “working conditions” is identified with the term “work environment” (GAJDZIK 2014, p. 68). This is reflected in the detailed classification of working conditions, which include organizational and technical, economic and social elements (Fig. 1). It should be borne in mind that working conditions play a superior role here (OLSZEWSKI 1997, p. 68–70).

From a detailed analysis of individual factors shaping the work environment (i.e. those that affect the employee in an indirect or a direct way), the following factors have been distinguished (POLEK-DURAJ 2007, p. 33–47): physical

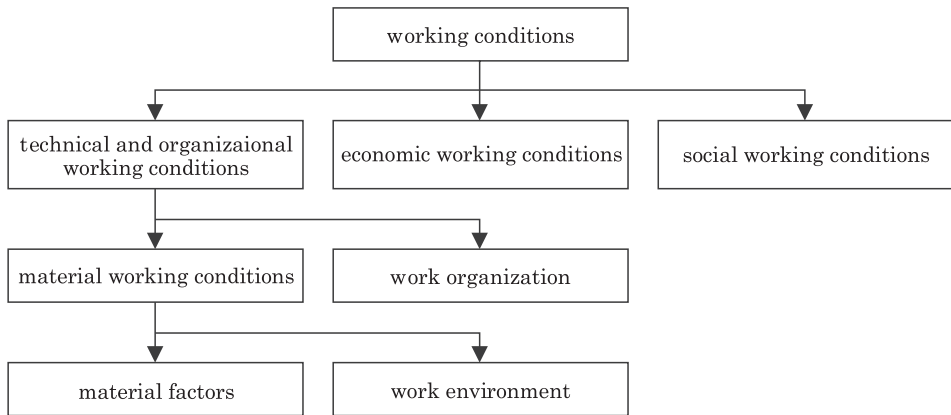


Fig. 1. Classification of working conditions

Source: own elaboration on the basis of OLSZEWSKI (1997, p. 69).

(including noise, lighting, mechanical vibrations, dustiness of the air), biological (i.e. the interaction of live microorganisms, among others, viruses, bacteria, fungi), chemical (e.g. contact with toxic substances), psychophysical (mainly arising as a result of performing work causing a physical or nervous load, e.g. long-lasting muscle tension). In addition, the literature on the subject distinguishes the aesthetic factors (e.g. interior architecture, furnishing rooms) sanitary and hygienic (e.g. a canteen), temporary (e.g. time spent in the workplace), the content of work (e.g. the scope of duties entrusted to employees) (GAJDZIK 2014, p. 68).

Among the factors shaping the working conditions, the article focuses primarily on physical factors and the organization of the workplace, which were considered an important element in shaping the quality of working conditions.

In order to supplement the essence of working conditions, it is also worth citing their classification in the sociological aspect, where it covers numerous, often diversified elements of the work environment. Analyzing the role of working conditions in influencing the social work organization of the enterprise, it is assumed that the working conditions are "... overall material and social elements of the plant, directly determining the situation of worker in the process of living and working in the plant" (PENC, SZWEMBERG 1975, p. 7). These elements define:

- material work environment (i.e. technical and physicochemical working conditions) that determines the employee’s physical strength;
- working time (i.e. length and intensity of work) including the employee’s exposure to the material and social conditions of work;
- social relations at the workplace (i.e. relationship, management styles, staff training circulation of information, etc.);
- social activities at the workplace (i.e. social facilities and benefits in kind or in cash granted to employees from the social fund).

Analyzing the quoted definitions of working conditions, it can be concluded that their quality at the workplace depends on many factors. Among these fundamental factors are the following: work environment, the machinery-park, work organization, remuneration, interpersonal relations, personal protective equipment and training of employees.

Objective, method and scope of the study

The main objective of the survey was to identify the employee and employer opinions from the wood processing plant located in the rural areas of Opole Voivodship concerning the quality of working conditions in the scope of health and safety activities, accident hazards, factors determining the quality of working conditions, the use of personal protective equipment, employment conditions and interpersonal relations. Focusing on these elements resulted from the fact that occupational safety and health activities are the basic factors that have a significant impact on the successful development of any business (GEMBALSKA-APRIL 2015, p. 75, 76) and shape the quality of working conditions.

The research was carried out in 12 companies engaged in the processing of wood in the Opole Voivodship. All companies were located in rural areas and their finished goods ranged from roof trusses, scantlings, battens, soffit panel floorboards, terrace boards, garden furniture and pine bark. Four of them additionally produced pallets and garden furniture. Employment in the analyzed plants did not exceed 50 employees. Average employment during the study amounted to 30 persons. Their products were on offer to both national and international markets. The surveyed companies were characterized as having a stable situation in the market in which they operate at an average of 8 years.

The questionnaire contained 25 questions. The research was conducted in January and February of 2017. In the survey, selected manual workers participated randomly (i.e. 120 people) and 30 persons holding managerial positions also participated.

Based on a widely accepted classification of working conditions, the questionnaire's questions comprised four basic issues. The first group of questions was related to motivation to undertake a job in the audited company and job characteristics. The issues from the second group included activities connected with safety regulations and their usefulness in the opinion of respondents. The third group of questions concerned issues related to the assessment of physical working conditions. Hence, the scope of these questions verified the knowledge and awareness of employees and employers regarding security against threats arising from working in harmful and onerous conditions. The fourth group of questions included the opinion of respondents toward the employment conditions and interpersonal relationships at the workplace. The main aim was to verify to

what extent employees are satisfied with working conditions in relation to the type of signed contract and remuneration. In addition, an attempt was made to determine interpersonal relations between the employees and supervisors. At the end of the survey, the respondents were asked how they assessed the working conditions in their facilities in terms of the issues examined.

Course, analysis of survey results

While analyzing the data obtained in the survey (Tab. 1), it can be noticed that the majority of respondents were men aged 41–50 years of age in the examined plants. They were mostly people with a basic education level.

Table 1

Structure of the surveyed employees depending on sex, age, education, work placement, place of residence

Information about respondents [%]	
Sex	
Woman	19.3
Man	80.7
Age	
Less than 20 years	3.3
21–30 years	14.6
31–40 years	18.3
41–50 years	44.6
51–60 years	17.9
More than 60 years	1.3
Education	
Primary school/junior high school	23.3
Vocational school	53.3
Secondary school	13.4
Higher education	10
Seniority	
Less than 5 years	53.3
6–10 years	15.4
11–20 years	20
21–30 l years	11.3
More than 30 years	–
Place of residence	
City	25
Village	75

Source: own calculations based on surveys.

The dominance of men in this particular branch of industry is primarily due to the specific nature of this branch, which is often not suitable or is too strenuous for women (e.g. milling operations). In terms of job seniority in the analyzed company, a significant percentage (53%) of respondents had relatively short job experience, i.e. less than 5 years. This shows a high rotation of workers, which can be caused by various factors both internal and external (e.g. low remuneration, lack of contracts of indefinite duration, poor working conditions, the ability to find work with similar conditions). Moreover, it is worth noting that 1/5 of the employees were persons with extensive professional experience (i.e. employees with job experience exceeding 10 years). 75% of employees were rural residents, which undoubtedly is connected to the fact that both plants were located in rural areas.

The workplace and its characteristics

One of the crucial elements affecting the quality of working conditions was the motives behind the decision to choose this particular job. When choosing a job, people are guided by different factors. The most fundamental are presented in the Table 2.

Table 2

Job selection motives in the surveyed enterprises declared by employees

Q1	Why did you undertake work at the woodworking industry?	Percentage of responses
a	it is compatible with my qualifications	20.6
b	it takes into account my education	24.0
c	this is the only plant near my place of residence	39.3
d	it gives me the opportunity to develop	16.6
e	it gives me the opportunity of employment	73.3
f	it gives an opportunity to achieve high wages	12.6
g	other reasons	6.6

Source: own calculations based on surveys. There was more than one answer, so the answers do not add up to 100%.

The decision to take up employment in the analyzed company was influenced mainly by the fact of having job (opinion of 85% of employees) and the proximity to the place of residence (more than half of all answers). Qualifications, education, development opportunities and financial benefits were definitely less important, on average every seventh employee believed so. Analyzing the acquired data,

it can be concluded that the respondents did not show much initiative in job searching. Undoubtedly, the reason for this may be that both plants are located in relatively small towns, where it is harder to find work than in urban or more industrialized areas.

In order to perform the job characteristics, an attempt has been made to determine the employee’s position in the system: man – tool or machine – processed material and work organization manner (Tab. 3). On this basis, it can be assumed that the respondents work both using the machinery (sawmill employee), as well as using simple and complex tools (pallet production). Employees from 10 companies worked solely in the single-shift system, with an exception of when the orders were higher than previously scheduled. Then, additional temporary workers were employed for a specific-task contract or a mandatory contract and the staff worked on two shifts, which happened on average twice a year. In the remaining 2 companies, work was carried out in two shifts. These were plants that produce both typical sawmill products and pallets for regular consumers.

Table 3

Type of activities performed, type of work and its characteristics

	Specification	Percentage of responses
Q2	What kind of work do you do in your position?	
a	in a manual system (man – tool – workpiece)	46.7
b	in a mechanized system (man – machine – workpiece)	53.9
c	in an automated system	–
Q3	Do you work in shifts?	
a	yes	21.3
b	no	78.7
Q4	Do you think that using machines and devices on which you work is complicated?	
a	yes	36.7
b	no	63.3
Q5	Please specify the nature of your work	
a	cumbersome and tiring work	53.3
b	monotonous work	30.1
c	light work	16.6
Q6	Please specify the requirements and the nature of your work. (There was more than one possible answer)	
a	physical exercise	52.0
b	mental effort	36.6
c	manual skill	46.6

Source: own calculations based on surveys.

2/3 of respondents believed that the degree of difficulty in the use of machinery and equipment is marginal (i.e. the service is not complicated, and does not cause problems). Moreover, during the analysis of surveys, it was noted that the job mainly requires physical effort, which was at the same time arduous and monotonous. It also required manual skill from the employees.

Activities in the field of occupational health and safety and their usefulness

In the analyzed company, employees and their supervisors accordingly confirmed that they had been provided with the induction training (Tab. 4). Unfortunately, in the field of periodic training, the situation was not so clear, since workers opinions did not coincide with the replies of supervisors, according to whom periodic trainings apply to all employees. Provided trainings were usually understandable, but mostly theoretical. While only half of the surveyed persons, who underwent periodic trainings regularly, declared that participation in them was not a waste of time, as it allowed them to keep up with the latest trends.

Table 4

Structure of introduction and periodic trainings in the opinion of workers and their supervisors

Type of training	Employees [%]	Supervisors [%]
Introductory training		
Yes	100	100
No	–	–
Periodic training		
Yes	58.3	100
No	41.7	–

Source: own calculations based on survey.

Moreover, based on questions relating to activities undertaken in the field of occupational health and safety and their usefulness, it could also be observed that according to the majority of respondents (the opinion of 93.3 % of supervisors and 75% of employees) OHS training can reduce the number of accidents at work. Unfortunately, every third employee confessed to violating health and safety rules. Supervisors noticed this problem as well, admitting a lack of consistent response in this matter. Interestingly, almost all respondents (100% superiors, 87.5% subordinates) believed that penalties should be imposed on employees who violate safety regulations, since their lack, as it occurred in this particular company, did not activate any change in behavior. The opinion of respondents concerning abiding working hours was a positive phenomenon for the majority

of respondents. Both employees and superiors declared compliance with working hours. Unfortunately, 2/3 of the surveyed companies did not have a safety and health department. This may be due to the owners' fear of increasing costs.

It was also attempted to establish the scope of the health and safety management system. In the analyzed companies it did not function, although most superiors (76.7%) recognized it and realized the benefits that could be achieved after its implementation. On the other hand, the awareness of the surveyed employees on this issue was negligible (only one out of every five had a general idea of the subject).

Accident threats, factors affecting poor quality of working conditions, and the use of personal protective equipment

Accident risks occurring in the timber industry are the source of factors affecting the level of working conditions. They arise from reasons both directly and indirectly dependent on the worker.

Analyzing the question concerning the reasons for the risk of accidents in the workplace, it can be concluded that the respondents mostly agree as to the causes of accident risk in the workplace. The most common answers were:

- negligence and irresponsibility of employees (opinion of 66.7% workers – 86.7% supervisors);
- inefficient machinery and equipment (opinion of 83.3% workers – 93.3% supervisors);
- overwork of employees (opinion 60% of workers and 50% supervisors);
- stress and family problems (opinion of 45.8% employees, 46.7% supervisors).

Respondents had significantly different judgments in terms of violating the health and safety regulations. All supervisors were unanimous that a breach of basic safety rules was reflected in the number of workplace accidents. However, the same opinion was shared only by 1/3 of the employees. The others believed that violating health and safety rules was insignificant and they did not pay much attention to this matter, as they will bear no further consequences. Other factors (e.g. work in the evening hours, employee inattention, strenuous working conditions) played a minor role in the opinion of all respondents.

It should be noted that the high rate of factors directly attributable to the employees was not contingent upon the size of the company. It consisted of many factors, among which one could list a fast pace of life and a lack of employees having a professional approach to their duties.

In the opinion of supervisors, the quality of working conditions in general is determined by all the factors identified above and in particular by a proper organization of the workplace, efficient machinery park, equipment and tools, and provision of personal protective equipment (Tab. 5). On the other hand,

employees believed that the level of remuneration and work environment are the priority. A high percentage of the respondents indicated the use of equipment that did not meet the requirements of health and safety regulations. This may indicate the low awareness of employees on the factors responsible for the quality of working conditions at a low level.

Table 5

The structure of factors affecting the quality of working conditions

Q15	In your opinion, what affects the poor quality of working conditions	Employees [%]	Supervisors [%]
a	work environment (such as excessive noise, the presence of additives)	59.1	86.7
b	work organization	37.5	80.0
c	machinery park	54.1	100.0
d	remuneration	83.3	60.0
e	interpersonal relationships between employee – superior	33.3	60.0
f	providing personal protection equipment	54.1	100.0
g	continuing training for employees	29.1	60.0

Source: own calculations based on surveys. It was possible to choose more than one answer.

Taking into account the answers obtained from the questions, which was supposed to determine the factors influencing the low quality of working conditions in the analyzed plants (Tab. 6), it can be concluded that according to superiors it is primarily related to the specific work environment in the wood processing

Table 6

The structure of factors affecting poor working conditions occurring in the surveyed company

Q16	In your opinion, what affects poor working conditions in your workplace?	Employees [%]	Supervisors [%]
a	material work environment (such as excessive noise, pollution, presence of additives)	60.8	80.0
b	inaccurate work organization	25.0	3.3
c	machinery park contravening the requirements of safety rules	33.3	–
d	too low remuneration	75.0	33.3
e	inappropriate interpersonal relationships between employee – superior	33.3	16.7
f	not providing personal protective equipment	–	–
g	lack of possibilities for employee training	29.1	26.7

Source: own calculations based on surveys. It was possible to choose more than one answer.

plants. Every third pointed to low salaries, and one in four indicated a lack of ability to improve their qualifications. On the other hand, other factors were at an appropriate level or slightly diverged from generally accepted standards. Workers' opinions were 100% identical to the supervisors' opinions only with regard to the provision of personal protective equipment by the employer. None of the respondents indicated its absence. The respondents had a similar opinion concerning the material work environment. In the case of employees, a higher percentage believed that the remuneration was too low, which had a significant impact on the quality of working conditions. In addition, 1/3 believed that the machines and tools did not comply with occupational safety regulations. The same percentage of respondents had pointed to improper relations with superiors. Other factors, though to a lesser extent, appeared as well in the surveyed plants.

The provision of personal protective equipment by the employer and at the same time its proper use by the employees plays a crucial role, since it significantly reduces the risk of accidents at work. Unfortunately, the analysis of responses clearly indicates that a considerable percentage of respondents were not aware of the necessity of using personal protective equipment – every fourth worker indicated “I do not know” as an answer to the question “Is it necessary to use personal protective equipment at your workplace?”. This may indicate a lack of information on this subject provided by the management team or an unprofessional approach to the workplace by the workers, who often undergo appropriate training; however, they disregard it and do not pay much attention.

This is also confirmed by the answers to the questions shown in Table 7. Analyzing them, it can be said that 1/5 of employees were not aware whether their employer provides the necessary personal protective equipment, and every third employee used them only from time to time. What is even more interesting is the fact that every three out of five supervisors were unaware whether their subordinates were working in accordance with binding occupational safety rules.

Table 7

The frequency of applicability of PPE by employees

Does the employer provide adequate personal protective equipment?						
Employees [%]			supervisors [%]			
Yes	No	I do not know	Yes	No	I do not know	
70.0%	10.0%	20.0%	100.0%	–	–	
Do you use personal protective equipment?			Do employees use personal protective equipment?			
Yes. always	Yes. sometimes	No. I do not	Yes. always	Yes. sometimes	No. they do not	I do not know
62.5%	31.7%	5.8%	20.0%	10.0%	10.0%	60.0%

Source: own calculations based on surveys.

This attitude undoubtedly fosters the misconduct of employees. Therefore, it can be concluded that the level of use of personal protective equipment, as well as management awareness of this subject is low, which in turn is reflected in the growth of occupational risk.

Conditions of employment, interpersonal relations

The types of employment contract and remuneration issues are strongly influenced by the level of economic working conditions and thus they affect the assessment of working conditions in general. In the analyzed companies more than half of all employees were dissatisfied with the type of contract they had signed (Tab. 8). This probably resulted from the fact that they are employed on fixed-term or indefinite but not full-time contracts (e.g. 1/2 or 3/4 time). Even more people were dissatisfied with the amount of their remuneration, which was slightly higher than the minimum wage. The opinion of supervisors was quite different in this regard. According to them, the employees received adequate remuneration, consistent with their educational level, qualifications and skills; although 1/3 of them also complained about the amount of their salary.

Table 8

The satisfaction structure of employment contract and the amount of received remuneration

Are you satisfied with the signed contract?	
Yes [%]	No [%]
41.7	58.3
Are you satisfied with the remuneration you receive?	
Yes [%]	No [%]
30.0	70.0
In which group would you place your remuneration?	
1,000 – 2,000 zł	16.6%
2,001 – 3,000 zł	75.1%
3,001 – 4,000 zł	8.3%
Above 4,000 zł	–

Source: own calculations based on surveys.

The aim of the subsequent question was to learn the respondents' opinion regarding interpersonal relations in the company (Tab. 9). The majority of the employees and supervisors identified them as positive (almost 80% of employees and 80% of supervisors). As to the first answer, the respondents were unanimous since no one indicated it. All employees had divergent opinions as to the

Table 9

The structure of interpersonal relations between the employee and superior

Specification	Employees [%]	Supervisors [%]
Excellent	–	–
Very good	16.7	20
Good	31.6	60
Satisfactory	31.6	20
Bad	20.1	–

Source: own calculations based on surveys.

answer concerning a low level of interpersonal relations. Every fifth employee expressed such an opinion, whereas supervisors did not notice any irregularities in this regard.

The last question in the questionnaire was supposed to assess the overall evaluation of working conditions. By analyzing the data, it can be concluded that the opinion of employees is far from the view of their supervisors, who evaluate it on a high level (Tab. 10). As many as a quarter of respondents who are physical workers consider the working conditions simply as being derogatory and undignified.

Table 10

Overall assessment of working conditions in the opinion of employees and their supervisors

Specification	Employees [%]	Supervisors [%]
Excellent	–	–
Very good	7.5	20
Good	33.3	60
Satisfactory	33.3	20
Bad	25.9	–

Source: own calculations based on surveys.

Summary

The research allowed the collection of relevant information on the basis of which the analysis and conclusions were formulated concerning the overall assessment of working conditions in selected wood processing plants located in the rural areas of the Opole region. The views presented in the surveys were mainly in terms of organizational and technical working conditions and the level of satisfaction with employment conditions and interpersonal relations clearly prove that the opinion of employees is significantly different from

the opinion of superiors, both in terms of OSH activities and factors shaping the working conditions. A point of concern is the fact that a significant percentage of respondents declared a lack of periodic training and frequent violations of OSH regulations. Additionally, the conducted analysis indicates that employees are characterized as having a low awareness of factors determining the quality of work environment and the need to use personal protective equipment. Unfortunately, it is also deepened by the lack of a proper response from superiors. Therefore, it can be concluded that the conditions in the analyzed industry are not satisfactory and deviate from EU standards.

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STATE POLICY ADDRESSING ILLEGAL FOREIGN EMPLOYMENT IN POLAND

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Abstract

Foreign employment in the informal sector in Poland has not been thoroughly researched to date, mainly due to the obstacles that are faced by researchers who are attempting to investigate the problem. This article focuses on the employment of foreigners in the informal sector in Poland, and it analyzes legal regulations and practices which aim to prevent illegal employment of foreign nationals. The implementation of a simplified procedure for the employment of foreign nationals was one of the most critical amendments to Poland's immigration policy in the last decade. This solution was met with considerable approval by Polish employers who submitted more than 780,000 and 1300,000 declarations of intent to employ a foreign worker in 2015 and 2016, respectively. However, the results of the inspections carried out by the National Labor Inspectorate give cause for concern. In 2014, nearly 70% of the foreigners named in the declarations of intent were granted a visa and entered Poland. It should be stressed that only 37% of them were employed by the company that issued the declaration.

POLITYKA PAŃSTWA WZGLĘDEM NIELEGALNEGO ZATRUDNIENIA CUDZOZIEMCÓW W POLSCE

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Słowa kluczowe: imigranci, cudzoziemcy, szara strefa, nielegalne zatrudnienia, popyt na pracę cudzoziemców.

Abstrakt

Praca cudzoziemców w szarej strefie w Polsce jest niedostatecznie zgłębnym tematem badawczym. Wynika to przede wszystkim z występowania znaczących utrudnień w podejmowaniu i realizacji jakichkolwiek inicjatyw badawczych nad tym zjawiskiem. W artykule zwrócono uwagę na zjawisko zatrudnienia i pracy cudzoziemców w szarej strefie w Polsce. Sprecyzowano i przeanalizowano ponadto działania, które mają na celu zapobieganie tego typu praktykom. Jedną z najistotniejszych korekt kształtu polskiej polityki imigracyjnej w ostatnim dziesięcioleciu było wprowadzenie możliwości zatrudniania cudzoziemców na podstawie tzw. procedury uproszczonej. Rozwiązanie to spotkało się z bardzo dużym zainteresowaniem ze strony pracodawców – w latach 2015 i 2016 złożyli oni odpowiednio ponad 780 tys. i ponad 1,3 mln oświadczeń o zamiarze powierzenia wykonywania pracy cudzoziemcowi. Niepokojące okazują się wyniki kontroli realizowanych przez Państwową Inspekcję Pracy. Kontrole z 2014 r. wykazały, że prawie 70% cudzoziemców wskazanych imiennie w oświadczeniach złożonych przez poddanych kontroli pracodawców uzyskało na tej podstawie wizę i wjechało na terytorium Polski. Co niezwykle istotne, tylko 37% z nich podjęło zatrudnienie u wystawcy oświadczenia.

Introduction

The demand for foreign labor is a part of the total demand for labor in the market. As an element of the global demand for labor, foreign employment is influenced by all of the factors influencing global demand. There are also a number of specific determinants which influence the demand for foreign employees, including:

- size of the native labor market¹;
- availability of native-born employees whose skills match market needs²;
- degree of labor market segmentation³;
- structural changes in the labor market (KWIATKOWSKA 2007);
- differences in the wage demands of native-born and foreign employees⁴;
- liberalization of policies towards foreign employment in the domestic market⁵.

The demand for foreign labor can also be analyzed from the point of view of business theory. In a monograph entitled “The demand for foreign employees. Poland and its neighbors”, BEDNARSKI (2004) argues that the decisions regarding foreign employment are made by prospective employers, and the reasons why domestic businesses choose to employ foreign workers over native-born workers can be inferred only by surveying Polish companies. The goals of entrepreneurial activity should also be taken into account in such analyses (GARCIA-PEREIRO, DILEO 2015).

¹ The significance of this factor was emphasized in the neoclassical theory of migration; cf. MASSEY et al. (1993).

² This factor was stressed by JOŃCZY and KUBICIEL (2010).

³ Refer to the dual labor market theory: DOERINGER, PIRE (1971), PIRE (1979).

⁴ One of the key determinants of migration in the neoclassical theory of migration.

⁵ The significance of this factor has been postulated by institutional economics.

Informal employment of foreigners in Poland has not been thoroughly researched yet. It is mainly because of the numerous obstacles that are faced by researchers who are attempting to investigate the problem. The Center for Migration Research at the University of Warsaw has made significant contributions to this area of research, including a part of the 1996 project entitled “Foreigners working in the informal sector in Poland”⁶.

This article focuses on the employment of foreigners in the informal sector in Poland. It analyzes legal regulations and practices which aim to prevent the illegal employment of foreign nationals.

The employment of foreign workers in the informal sector is determined by numerous factors. The key determinants are labor costs (wages and non-financial compensation) and the liberalization of policies towards foreign employment on the domestic market. This article focuses on state policies which address foreign employment in Poland. The main objective of the study was to answer a question as to whether the regulations which provide foreign nationals with greater access to the Polish labor market could affect the illegal employment of foreigners⁷.

The article presents basic information on the illegal employment of foreigners in Poland. It discusses state policy towards illegal foreign employment, with special emphasis on control procedures, their scale, range and the responsible authorities. The article ends with conclusions summarizing the analyzed information.

Legal regulations on foreign employment in Poland – basic information

Only foreigners who have a legal right to stay in Poland are eligible for employment in Poland⁸. The terms and conditions for employing foreigners in Poland are regulated by Ustawa z 20 kwietnia 2004 r. o promocji zatrudnienia i instytucjach rynku pracy (Dz.U. z 2004 r., nr 99, poz. 1001) as well as other normative acts, including:

- Rozporządzenie Ministra Pracy i Polityki Społecznej z 1 kwietnia 2015 r. w sprawie wydawania zezwolenia na pracę cudzoziemca (Dz.U. z 2015 r., poz. 543);
- Rozporządzenie Ministra Pracy i Polityki Społecznej z 21 kwietnia 2015 r. w sprawie przypadków, w których powierzanie wykonywania pracy cudzoziemcowi

⁶ The research project gave rise to the following publications: ANTONIEWSKI (1997), IGLICKA (1999, 2000).

⁷ The results of research investigating barriers to foreign employment in Poland have been discussed by: ORGANIŚCIAK-KRZYKOWSKA et al. (2013), PIOTROWSKI, ORGANIŚCIAK-KRZYKOWSKA (2014), KUBICIEL-ŁODZIŃSKA (2013).

⁸ Foreigners' right to stay in Poland is regulated by Ustawa z 12 grudnia 2013 r. o cudzoziemcach (Dz.U. z 2013 r., poz. 1650).

na terytorium Rzeczypospolitej Polskiej jest dopuszczalne bez konieczności uzyskania zezwolenia na pracę (Dz.U. z 2015 r., poz. 588);

– Rozporządzenie Ministra Pracy i Polityki Społecznej z 29 stycznia 2009 r. w sprawie przypadków, w których zezwolenie na pracę cudzoziemca jest wydawane bez względu na szczegółowe warunki wydawania zezwoleń na pracę cudzoziemców (Dz.U. z 2009 r., nr 16, poz. 85);

– Ustawa z 15 czerwca 2012 r. o skutkach powierzania wykonywania pracy cudzoziemcom przebywającym wbrew przepisom na terytorium Rzeczypospolitej Polskiej (Dz.U. z 2012 r., poz. 769).

In view of the provisions of the cited legal acts, the following categories of foreigners can be legally employed in Poland:

- foreigners with free access to the Polish labor market;
- foreigners who have been issued a work permit by the competent regional governors;
- foreigners who fall subject to the simplified employment procedure, if a prospective employer has submitted a declaration of intent to employ a foreign worker to a county labor office.

The groups of foreigners who can be employed legally in Poland without obtaining a work permit (the first category listed above) are specified in Art. 87, section 2, points 1–9 of the above act (Ustawa z 20 kwietnia 2004 r. o promocji zatrudnienia i instytucjach rynku pracy, Dz.U. z 2004 r., nr 99, poz. 1001) and Rozporządzenie Ministra Pracy i Polityki Społecznej z 21 kwietnia 2015 r. w sprawie przypadków, w których powierzanie wykonywania pracy cudzoziemcowi na terytorium Rzeczypospolitej Polskiej jest dopuszczalne bez konieczności uzyskania zezwolenia na pracę. The following groups of foreigners can be employed legally in Poland without a work permit:

- selected groups of foreigners who have been granted a temporary residence permit in the Republic of Poland;
- foreigners who are spouses of Polish citizens and foreigners in difficult circumstances indicated by the act;
- foreigners who hold a valid Polish Card;
- foreigners applying for immigrant status and spouses on whose behalf an application has been submitted (subject to detailed requirements specified in the act);
- foreigners who have the right to stay and work on the territory of the European Economic Area and the Swiss Confederation;
- foreign language teachers, academic teachers, trainers and instructors;
- foreign media correspondents;
- university students in the circumstances detailed in the regulation;
- athletes and personnel employed during organized sports events;
- providers of art services;
- members of the clergy performing work in connection with the held religious functions;

- members of the armed forces and civilian personnel employed in international military organizations on the territory of the Republic of Poland;
- employees delegated to work on the territory of the Republic of Poland for a maximum period of 3 months;
- personnel working for European Parliament deputies.

The following category of foreigners can be employed under a work permit in the following circumstances:

- foreigners who are employed on the territory of the Republic of Poland pursuant to a work contract concluded with an entity whose registered seat, residential address, branch, plant or another form of organized activity is situated on the territory of the Republic of Poland;
- members of the management board of a legal entity listed in the business register or a limited company who are staying on the territory of the Republic of Poland for a combined period of more than 6 months in 12 consecutive months;
- employees of foreign companies who have been delegated to work in the employer's or an associate's branch on the territory of the Republic of Poland for more than 30 days in the calendar year, pursuant to the provisions of the Ustawa z 26 lipca 1991 r. o podatku dochodowym od osób fizycznych (Dz.U. z 1991 r., nr 80 poz. 350), relating to foreign employment;
- foreigners who are employed by a foreign company that does not operate a branch, plant or another form of organized activity on the territory of the Republic of Poland and foreigners who are delegated to perform temporary and occasional services (export services) on the territory of the Republic of Poland;
- foreigners who are employed by a foreign company and are delegated to the Republic of Poland for a different purpose than indicated in points 2–4 for less than 3 months in 6 consecutive months (Ustawa z 20 kwietnia 2004 r. o promocji zatrudnienia i instytucjach rynku pracy, Dz.U. z 2004 r., nr 99, poz. 1001).

The third group of foreigners who are eligible for employment (based on a declaration of intent to employ a foreign worker submitted by a potential employer) are the citizens of the Republic of Belarus, Georgia, the Republic of Moldova, the Russian Federation, the Ukraine and the Republic of Armenia who can be legally employed under a written work contract for up to 6 months over a period of 12 consecutive months, regardless of the number of employers, if the employer's declaration of intent to employ a foreign worker has been registered by a county labor office competent for the employer's residential address or registered seat before the beginning of employment (Rozporządzenie Ministra Pracy i Polityki Społecznej z 21 kwietnia 2015 r. w sprawie przypadków, w których powierzanie wykonywania pracy cudzoziemcowi na terytorium Rzeczypospolitej Polskiej jest dopuszczalne bez konieczności uzyskania zezwolenia na pracę, Dz.U. z 2015 r., poz. 588). The above procedure is referred to as a simplified procedure of foreign employment in Poland.

The implementation of the simplified procedure for the employment of foreign nationals was one of the most critical amendments to Poland's immigration

policy in the last decade. The first recommendations regarding more flexible employment options for foreigners were made in the Rozporządzenie Ministra Pracy i Polityki Społecznej z 30 sierpnia 2006 r. w sprawie wykonywania pracy przez cudzoziemców bez konieczności uzyskania zezwolenia na pracę (Dz.U. z 2006 r., nr 156, poz. 1116). The regulatory law introduced the option of employing citizens of neighboring countries for up to 3 months over a period of 6 successive months. The above solution covered only foreigners employed in section A, groups 01.1— 01.3 of the Polish Classification of Economic Activities pursuant to the provisions of the Rozporządzenie Rady Ministrów z 20 stycznia 2004 r. w sprawie Polskiej Klasyfikacji Działalności (PKD) (Dz.U. nr 33, poz. 289 i nr 165, poz. 1727). The introduced solution covered foreigners working in the following sectors:

- group 01.1 – production of agricultural crops; horticulture, including vegetable production;
- group 01.2 – animal breeding and husbandry;
- group 01.3 – production of agricultural crops combined with animal breeding and husbandry (mixed farming).

The terms of foreign employment under the simplified procedure have been amended by successive regulations by the minister competent for the labor market.

The Regulation of the Minister of Labor and Social Policy of 27 June 2007 amending the regulation on the employment of foreign workers without a work permit repealed the specification of PKD groups and introduced the employer's declaration of intent to employ a foreigner as the key document required for foreign employment under the simplified procedure (Rozporządzenie Ministra Pracy i Polityki Społecznej z 27 czerwca 2007 r. zmieniające rozporządzenie w sprawie wykonywania pracy przez cudzoziemców bez konieczności uzyskania zezwolenia na pracę, Dz.U. z 2007 r., nr 120, poz. 824).

The simplified procedure has been amended by successive legal acts. The maximum period of employment was extended to 6 months over a period of 12 consecutive months, and new countries whose citizens are eligible for employment under the simplified procedure were added to the list. At present, the simplified procedure for the employment of foreigners in Poland applies to the citizens of the Republic of Armenia, the Republic of Belarus, Georgia, the Republic of Moldova, the Russian Federation and the Ukraine.

The main rationale behind the simplified procedure and the relevant amendments thereto was to counteract illegal employment of foreign nationals. The legislators were hoping to broaden legal employment opportunities for at least some seasonal workers employed in the informal sector by introducing a more liberal option than the work permit. The simplified procedure has been implemented nearly ten years ago, and it played a significant role in shaping foreign employment in Poland, including in the informal sector.

Inspections monitoring the employment of foreigners in Poland

The National Labor Inspectorate has developed a list of practices which violate legal provisions regarding foreign employment in Poland. They include:

- employment of foreigners who do not have the right to stay in Poland (*Sprawozdanie z działalności... 2015*);
- employment of foreigners whose right to stay in Poland does not include the right to work (e.g. foreigners staying in Poland on a tourist visa);
- employment of foreigners without a work permit (applies to foreigners who are not eligible for employment without a work permit);
- employment of foreigners in other posts and on other terms than stipulated in the work permit;
- employment of foreigners without a work contract or a civil law contract.

Foreign employment in breach of the formal requirements of the simplified procedure (applies to foreigners who are eligible to work in Poland under the simplified procedure) should also be added to the above list.

Inspections monitoring the employment of foreign nationals in Poland are carried out by the National Labor Inspectorate (Legal Employment Department). The Inspectorate works with the following public agencies during the inspection process:

- regional governors;
- Polish Border Guard;
- Police;
- county governors;
- Polish Social Insurance Institution;
- revenue administration authorities;
- regional marshals.

The inspections are carried out to determine whether (*Procedury kontroli legalności... 2013*):

- foreign workers are employed legally;
- foreign workers have a valid work permit or whether the employer has submitted a declaration of intent to employ a foreign worker;
- foreign workers are employed in the posts and on the terms stipulated in the documents authorizing their employment;
- foreign workers are employed legally under a work contract or a civil law contract;
- work conditions comply with the provisions of a concluded civil law contract;
- foreign workers have been registered in the social security system;
- the employer pays Labor Fund premiums for every hired foreign worker;
- the employer complies with other requirements applicable to the employment of foreign nationals.

Selected results of the inspections carried out by the National Labor Inspectorate in 2014 to monitor the employment of foreign nationals are presented below.

In 2014, the National Labor Inspectorate inspected 2088 companies employing foreigners. A total of 15,700 foreign nationals employed by the inspected companies were controlled. The majority (60.8%) of the inspected foreign workers were Ukrainian citizens, followed by the citizens of Romania, Belarus, China and Bulgaria. A total of 873 workers were employed illegally in 193 companies. The following types of legal violations were most frequently reported:

- foreigners were employed without a work permit;
- foreigners were not employed in the posts and on the terms stipulated in the work permit;
- the employer did not conclude a work contract or a civil law contract with a foreign worker.

The highest number of labor law violations in companies employing foreign nationals was reported in the following sectors: business administration, industrial processing and construction (*Sprawozdanie z działalności... 2015*).

The results of inspections carried out in companies which had submitted declarations of intent to employ a foreigner to county labor offices produced interesting results. A total of 263 employers who had submitted declarations of intent to employ foreign workers under the simplified procedure had been controlled. Nearly 70% of the foreign nationals named in the declarations of intent were granted a visa and entered Poland. It should be stressed that only 37% of them were employed by the company that issued the declaration (*Sprawozdanie z działalności... 2015*).

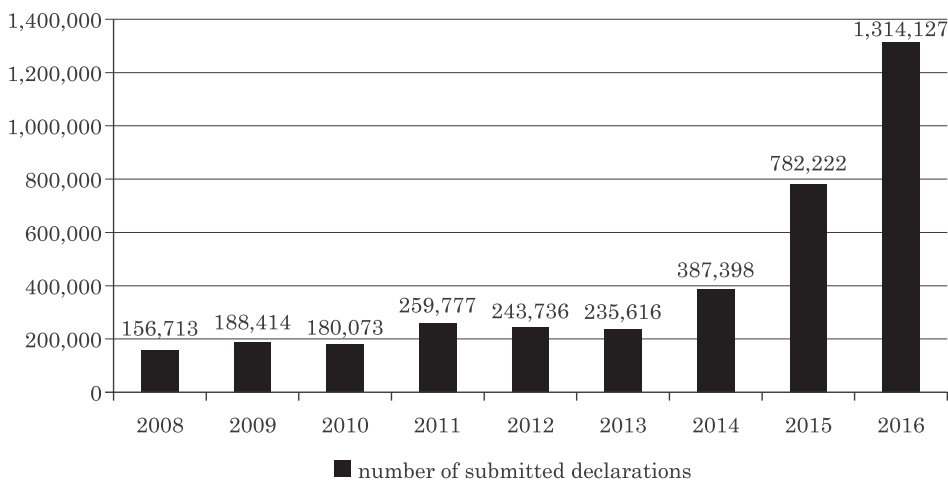


Fig. 1. Declarations of intent to employ a foreign worker submitted by Polish employers in 2008–2016

Source: *Cudzoziemcy pracujący w Polsce... (2017)*.

The results of the above inspections should be interpreted with caution, and they should not be generalized to the entire population of companies employing foreigners. However, the cited findings constitute valuable data for analyzing the employment of foreign nationals in Poland. The results concerning foreign employment under the simplified procedure give particular cause for concern. To illustrate the scale of the problem, the number of declarations of intent to employ a foreign worker submitted to county labor offices in recent years is presented in Figure 1.

The number of submitted declarations increased over eight times in the analyzed period. The observed increase was particularly high in 2016, which indicates that the discussed issue is not a marginal problem. The results of the inspections carried out by the National Labor Inspectorate are quite alarming, and they could suggest that the simplified procedure for employing foreign nationals has failed to achieve its intended purpose. The problem should be analyzed in greater detail to determine whether the liberalization of state policy towards foreign employment has contributed to an increase in the number of foreign nationals who are legally entering Poland based on the declarations of intent, but are not employed by the company that issued the declaration.

Conclusions

An analysis of the statistical data aggregated by the Ministry of Family, Labor and Social Policy in relation to the scale of the employment of foreign nationals has revealed several underlying problems that require a deeper reflection.

The simplified procedure has been introduced to create legal employment opportunities for foreign workers employed in the informal sector. The implemented solution liberalized the strict criteria for employment under work permits, and it provided foreign nationals with greater access to the Polish labor market. This legal instrument encouraged more Polish employers to submit declarations of intent to employ a foreign worker to county labor offices.

The simplified procedure could decrease illegal employment of foreigners; however, the analysis of statistical data indicates that declarations of intent were frequently abused by foreigners who regarded them as a mere instrument for legally entering the territory of the Republic of Poland. The results of the inspections carried out by the National Labor Inspectorate in 2014 revealed that nearly 70% of the foreigners named in the declarations of employment were granted a visa and entered Poland. It should be stressed that only 37% of them were employed by the company that issued the declaration.

The above observations indicate that changes in the legal procedures regarding foreign employment in Poland are imminent. The legislators should rely on the previous experiences to modify the existing procedures and tighten controls

on foreign workers entering the country. The simplified procedure has received criticism in recent years, and it could be repealed in the future. The discussed instrument should be replaced with a solution that provides foreigners with employment opportunities in Poland, but is less complex and time consuming than the work permit.

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- Ustawa z 12 grudnia 2013 r. o cudzoziemcach (Dz.U. z 2013 r., poz. 1650).

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The “Olsztyn Economic Journal” (ISSN 1897–2721) is a scientific journal, published in English by the Faculty of Economic Sciences of the University of Warmia and Mazury in Olsztyn. It publishes scientific papers of methodical, review and empirical nature in economic sciences. During the years 2007–2012 the journal was published semiannually and from 2013 is published quarterly. The “Olsztyn Economic Journal” is published by the University of Warmia and Mazury in Olsztyn Publishing House. The print edition is the primary version of the Journal. All numbers of the magazine are available in the electronic format on the website: <http://www.uwm.edu.pl/wne/olsztyn-economic-journal>, <http://wydawnictwo.uwm.edu.pl> (subpage Czytelnia).

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PUBLICATION PROCEDURE

Polish authors submit articles in Polish and in English. In order to ensure high quality of linguistic editing of the journal, the article should be verified by native English speaker(s). The costs of translating/verifying the article are borne by the Authors. Foreign authors submit articles in English. Additionally, the title, key words and abstract of the article should be submitted in Polish.

Articles should be submitted to the editorial board either via e-mail (oej@uwm.edu.pl) or snail mail, to the following address:

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Faculty of Economic Sciences
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Articles are subject to formal evaluation, initial evaluation by the editor-in-chief and associate editors, and then to evaluation by external reviewers and the statistical editor. The formal evaluation is made by the editorial secretary and refers, among other things, to: the length of the article, the inclusion of the title, abstract and key words (in Polish and English) and correctly formatted bibliography. Articles which do not meet the guidelines are sent back to Authors for revision. Articles which meet the guidelines are subject to evaluation by the editor-in-chief and associate editors, who assess its scientific character and relevance to the thematic scope of the journal. After a positive internal evaluation articles are submitted to the evaluation by external reviewers, who are appointed by the editor-in-chief.

The reviewing procedure:

1. At least two independent reviewers from research institutions other than the one with which the Author is affiliated are appointed to evaluate each article.
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- b) responses to reviews,
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Each article should have the following distinct sections:

- Introduction with a clearly formulated objective,
- Description of the research methodology,
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- Word (format doc.), use Times New Roman font, 12 pts, indentation 0,7 cm, line spacing 1,5, right margin – 3 cm, other margins – 2,5 cm, text justified;
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 - c) Internet sources (documents) including from Eurostat or GUS: title of the source (documents), date of publication, name of the portal, online address, date of access, e.g.:
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- description of reports, analyses, legal acts:
Informacja w sprawie zatrudnienia obywateli polskich w państwach Europejskiego Obszaru Gospodarczego i Szwajcarii oraz obywateli państw EOG w Polsce. 2011. Ministerstwo Pracy i Polityki Społecznej, Warszawa.
Ustawa z 20 kwietnia 2004 r. o promocji zatrudnienia i instytucjach rynku pracy, *Journal of Laws* of 2004, no 99, item 1001.
- description of unpublished works:
WIERZEJSKI T. 2010. *Makroekonomiczne determinanty internacjonalizacji sektora rolno-spożywczego w Polsce*. UWM w Olsztynie (doctoral thesis).

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