

MINIMUM WAGE IMPACT ON THE POLISH ECONOMY

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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 plac 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.