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INFLUENCE OF A MINIMUM WAGE ON INCOMES OF POPULATION AND THE AMOUNT OF REMUNERATION IN FREE MARKET ECONOMY

1. Introduction

The labour market is a very specific and uncharacteristic market. First of all due to the fact that human labour is not an ordinary good. For most households it is the only production factor, so it is the only source of income [Forlicz, Jasiński 2000, p. 259]. Labour as a factor of production linked directly and inseparably with human requires protection, special legal articles and very detailed legal regulation from state. Therefore a wage as a price of work may not be treated in the same way as a price of any other good. Famous American professor of economy P.A. Samuelson writes about wage that “it is the most important of all prices” [Samuelson, Nordhaus 1996, p. 85].

The purpose of this paper is to determine an influence of a top-down established minimum wage on real incomes of households and on the level of real remuneration in free market economy. “Level of remuneration” is understood as an average monthly salary on the national scale. The subject of the analysis will be mainly a change in general level of remuneration in national economy, not the change of individual remuneration.

2. The notion of minimum wage

Minimal wage in Poland is the lowest permissible remuneration for work of a full-time employee; it is determined as a result of negotiations within Tripartite Commission for Socio-Economic Issues which includes representatives of employees, employers and public state administration. Admittedly the amount of the lowest

wage may be regulated by resolutions of collective labour agreements or wage regulations, but those resolutions may not be less profitable for the employee than resolutions of the Tripartite Commission [Roszewska 2000, p. 21]. Till the end of 2002 the minimum wage was established by the ordinance of a minister responsible for labour issues. Since 1st January 2003 a new regulation of 10th October 2002 on minimum wage entered into force (*Dziennik Ustaw* No. 200, Item 1679). It established amount of minimum monthly salary to 800 złotych (gross) since 1st January 2003 and determined rules of establishing amount of this salary in subsequent years (Tripartite Commission negotiations). It has to be said that to establish amount of remuneration of an employee, all elements of the remuneration are assumed, which were paid in a given month as well as other services resulting from employment relationship recognized as a part of personal remuneration according to the rules of employment and wage statistics determined by Central Statistical Office [The Act of 10th October 2002...]. The minimum monthly rate of pay in Poland is uniform for the entire country and all occupational groups,¹ although the regulation allows exceptionally to establish the remuneration of a new worker below the value of the minimum wage by the employer, but only in the first year of his or her work. Such remuneration cannot be lower than 80% of minimal wage. The act guarantees also annual growth of minimal wage, equal or higher than increase of prices for both commodities and consumer services predicted for current year. At the same time, if in the first quarter of the year in which the negotiations are undertaken the value of minimum wage is lower than half of an average wage in the national economy, this guarantee is increased additionally by $\frac{2}{3}$ of predicted rate of real growth of gross domestic product [www.mpips.gov.pl]. The purpose of this is to amend relation of the minimum wage to the average wage in Polish economy in future. In comparison to most of European countries which ratified European Social Charter (it defines an equitable wage on the level of 68% of an average wage), the relation of the lowest wage to the average in the Polish economy is highly unsatisfactory, especially if one takes into account the costs of living and their increase in recent years. Admittedly in the above-mentioned countries the relation is lower (ca. 50%) than the one defined in European Social Charter, but still much higher than in Poland. Table 1 presents the relation of a monthly minimum pay to the average one in Poland in 2003-2008. It may be observed that the way of increasing a minimum wage adopted in the act is insufficient, since it practically does not influence the relation of a minimum wage

¹ In some countries there are different minimum wage rates for different regions of a particular country (if there are differences in living costs among regions; it usually concerns urban and rural areas) or for different industries (due to variation in the degree of difficulty and complexity of work in industries), The category of the lowest pay does not comprise adolescent workers who have lower rates. It is due to the fact that young people's needs are smaller as they do not have families to support and not enough experience so their work efficiency is lower.

to an average wage. Just in 2008 there is an improvement in that relation to the benefit of the minimum wage, though it is still far behind standards of developed European countries.

Table 1. Relation of a monthly minimum pay to the average one in the Polish economy in 2003-2008

Year	Minimum wage (zlotys)	Average wage (zlotys)	Relation (%)
2003	800.00	2201.47	36.34
2004	824.00	2289.57	35.99
2005	849.00	2380.29	35.67
2006	899.10	2477.23	36.29
2007	936.00	2691.03	34.78
2008	1126.00	2943.88	38.25

Source: data from the Central Statistical Office [www.stat.gov.pl/cps/rde/xchg/gus].

The minimum wage plays a double role. First, as a social category it should supply a worker with the necessary means to support him. Second, it plays an economic role and defines the level of paying for simple work in relation to other, harder or more arduous works which are paid higher for. When determining a suitable amount of minimum remuneration in various states there are two main criteria used that are connected with the above-mentioned functions of the lowest pay. A widely used criterion of establishing level of the minimum wage is defining it in relation (ca. 50%) to the average pay on the national scale. This measure, recommended by the International Labour Organisation (ILO), accomplishes an economic function, since it defines a relation between remuneration for the simplest and average-complex work. It also binds the lowest pay with the average pay, which means an indirect bond with country's economic growth. In that case it is not just about a wage which allows to satisfy basic needs of a worker and his family, but about binding it with a wage truly achieved in the country in which the employees live and work. According to those assumptions minimum wage should not be significantly off average incomes *per capita* in the given country. Second criterion of establishing the level of minimum wages is the measure of costs of living connected with a social role. The basis of top-down establishing amount of the lowest pay is the calculation of the cost of living, which means setting and pricing a basket of goods, which is a social minimum (or minimum of existence). In some countries both of those criteria are used at the same time. Obviously both measures must be connected with economic situation of the particular country and solvency of enterprises [Jacukowicz 2000, pp. 110-113].

The problem of minimum wages in international law is reflected by regulations of three conventions of the International Labour Organisation (ILO) and judicature of the Committee of Independent Experts of the Council of Europe. Convention

No. 131 of 1970 determines the requirements in the most precise way. Similarly as in case of European Social Charter in the context of an equitable wage, the Convention No. 131 states above else that while establishing a minimum wage basic needs of an employee and his family (food, dwelling, cloths, basic education, culture, entertainment) should be taken into consideration, which should be analysed in the context of a general level of pays in a given country, costs of living and a range of service of social security. The provisions of that convention state that a minimum wage performs a protective function and first of all should provide all full-time employees with a decent standard of living. ILO Convention No. 131 permits a possibility to establish several levels of a minimum wage (system of wages) for different employee groups which have to be protected. In European countries the amount of minimum wage is established unilaterally by government on the national level (in Poland till the end of 2002), or as a result of negotiations in tripartite commissions (in Poland since 2003). The mechanisms of establishing the amount of the lowest pay in developed European countries are varied and depend on the needs of the employee and his family as well as financial and economic situation in the given country, particularly on: the level and prediction of growth of national product, work efficiency, unemployment rate, scope and availability of social services. Additionally in Poland, apart from the above-mentioned macroeconomic quantities, while establishing the level of a minimum wage the results of research on household budgets of the lowest income workers' families are taken into consideration.

3. Controversies and disputes over a minimum wage

The amount of a minimum wage is dependent on and at the same time influences many macro- and microeconomic factors. Establishing it on too low a level (below the equilibrium pay established by the market itself) may cause that it will not have any use in the economy, since there may be no one willing to perform the simplest, poorly paid work. If the relation of a minimum wage to social benefits is unsatisfactory, it may be more profitable to receive an unemployment benefit and work occasionally on the black market. Establishing a minimum wage on too low a level may then decrease vocational activity of the population. Employers, who are unable to find employees at the lowest price will be forced to set higher rates for the simplest work. In this situation actual minimum remuneration on the market will be greater than a minimum wage (defunct category). On the other hand, too high amount of a minimum wage may increase unemployment, since the businesses whose financial condition is poor will probably have problems with respecting a minimal wage and maintaining the employment level (especially small enterprises). It causes often avoiding minimum wage requirements by hiring workers on non-employee conditions and on black market (minimum wage becomes a fictional

category). A high minimum wage may also disturb a proper relation and a hierarchy of wages within an enterprise [Sekuła 2003, pp. 27-28].

The state's interference into labour market in the form of establishing the level of a minimum wage is an issue that divides even the most eminent economists. Arguments of opponents (apart from some of the scientists they are mainly employers) against establishing any minimum wage are above else the above-mentioned disturbances and ineffectiveness in labour market, which means a possible increase of unemployment and a decrease of vocational activity of the population. These arguments have quite strong support in theory. Increasing a minimum wage above the equilibrium pay, which would have been established without the state's interference in a given branch of the labour market (meaning a pay for the simplest work performed by the unskilled workers for the lowest wages) will probably cause a decrease of employment (due to the higher cost of work, the demand for it will be lower) and an increase of unemployment (due to the increase of price of work, the supply will increase without any demand for it for such a price). As it was observed and researched, the demand for the low paid workers is inflexible (price elasticity is within a range 0.1-0.3), which causes a relatively low decrease of employment in comparison to the increase of a minimum wage (increase of minimum wage by 10% would decrease employment of low paid workers by ca. 1-3%) [Samuelson, Nordhaus 2004, pp. 130-132]. At the same time the increase of unemployment may be much higher due to a fast increase of work supply for a higher minimum wage. As the result of many diverse research and analyses performed at the end of the last century in OECD countries, an unfavourable influence of increase in the minimum wage (especially its too high relation to the average wage) on the unemployment rate concerns mainly young people (up to 24 years), and first of all junior workers (under 19 years). According to some economists the top-down raising the minimum wage, as incoherent with the rules of free market, leads to curbing enterprise (especially small one) due to payment barriers and an increase in unemployment, and finally to an increase of poverty and social inequality. Apart from the above-mentioned arguments also the unfavourable changes in employment structure caused by the increase to the minimum wage are mentioned. Such unfavourable changes may be caused by flattening payment structures and a decrease in motivation caused by lower attractiveness of the difference between higher and minimum wages. Such a situation threatens especially those companies which will not transfer the increase of a minimum wage to the remaining, higher rates of payment, due to poor financial condition. Additionally too high level of the obligatory minimum wage makes employers limit the off-payment services, including training, which reduces investments in human capital and makes harder or even impossible to raise competitiveness of workers [Borkowska (ed.) 1999, pp. 93-95].

On the other hand the supporters (apart from some of the scientists they are mainly workers, trade unions and pro-social politicians) of establishing a minimum wage on

the suitable level in relation to average remuneration on the national scale, although they notice some ineffectiveness of market resulting from such an action, think that potential losses bound with it (e.g. decrease of employment) are small in comparison to benefits resulting from a protective function of a minimum wage. According to supporters of a minimum wage it allows to protect people of the lowest qualifications (mainly unskilled workers, who do not belong to trade unions, employed in small businesses) from exploiting their weak bargaining position by some employers, who could hire such persons for much lower rates than real value of their work, which would not ensure decent living conditions. Apart from this using the category of the lowest pay and increasing its level according to the accepted rules relieves social tensions and limits number of strikes. An obligatory minimum wage also limits price competition between companies performed by a drastic decrease of wages. According to the supporters of administrative establishing of the lowest remuneration it allows legal protection of material safety of workers of the lowest income [Jacukowicz 1999, pp. 29-30]. The argument about limiting development of small business should not be used as well, since the small enterprises could have developed at the expense of workers by using too low wages which are not an equivalent pay for their work and do not ensure minimum means of support. Additionally, an inflexible demand for work of employees hired for the lowest pay causes that the increase of the level of a minimum wage, despite the fact it may slightly increase unemployment, it will in general increase incomes of those workers as a group. As it may be seen, the dispute over a minimum wage is focused on problems with interpretation, not differences in empirical evidence. Arguments of both sides contain elements of personal evaluative judgements, resulting from priorities accepted by particular economists.

4. Influence of a minimum wage on incomes of population, the structure and a general level of wages on the national scale

If a growth in the provisional minimum wage influences radically the level of an average wage on the national scale, one may expect dangerous economic phenomena, such as: an increase of unemployment and a decrease of employment, an increase of inflation (wage-price spiral) and as a consequence impairment of the country's economic growth. Introducing a category of minimum wage and a regular increase of its value may result in limiting poverty, but only to certain limits. If in a given state the rate of the lowest remuneration is combined and influences directly higher wages,² institutions responsible for shaping the level of a minimum wage will rather try to limit its fast increase. It is caused by the anxiety for a rapid increase of general level of wages, which may negatively influence inflation by

² In some states minimum wage is at the same time first rate of the lowest category of classifying and remains in certain constant relation to other, higher rates. Therefore, if its level increases, it requires an increase of all other wages.

winding up “wage-price spiral” (excessive increase of wages, which draws increase of prices). When a minimum wage is independent on the system of remunerations and does not influence the level of other wages directly, there is no particular need to limit its height. Of course the possible indirect influence of the lowest remuneration on the general level of wages in the country should be taken into account. It manifests itself when increasing the rate of a minimum wage is a reason of additional financial demands of other employees who work for higher wages, which causes bargaining and an increase of remaining wages [Jacukowicz 2000, pp. 116-119].

Some economists believe that the minimum wage established top-down, as an instrument of macroeconomic policy of the state, should be used to shape the entire structure of wages, regulation of growth in the national income and optimization of its distribution. It would require creation of many different rates of minimum wages for particular occupational categories and binding them with other higher remunerations, which would allow to adjust a general level of wages in the country through administrative change of rates of the lowest pay. Some researchers, however, oppose to setting separate rates of a minimum wage for particular industries, since, as they claim, only a uniform rate determined on the basis of costs of living appropriately plays its social role in reducing poverty and conflicts. However, a serious drawback of the lowest pay uniform on the national scale can be seen in the fact that levels of wages shaped by the labour market itself in different branches of economy are often very diverse. Therefore a uniform minimum wage in some industries may be lower than equilibrium wage and remain defunct category. In turn, in other branches of economic activity the same uniform rate of a minimum wage may be too high and it will not be obeyed by employers [Milkovich, Newman 1990, pp. 430-431].

The category of a minimum wage due to its importance and a social role has been raising many controversies till today. There was a number of research and experiments connected with setting the level of a minimum wage and its influence of the structure of household incomes (the poorest in particular) in many different countries all over the world. Although mainly the influence of minimum wage on limiting poverty in the society was examined, a sort of side effect of many observations was also a determining influence of amount of an obligatory minimum wage on the structure and a general level of remunerations in the economy. Researches done in developed countries in 1990s (namely OECD countries, mainly EU states and USA),³ despite diversity of methods used, lead to several common conclusions in this area. Firstly, the increase of a relation between a minimum and an average wage or median influences slightly a decrease of the wage differential in general, though that influence is much more visible in case of limitation of variability of relatively low wages (below median), and almost does not concern

³ This research is described in [Borkowska (ed.) 1999, pp. 95-133]. There are also enumerated source materials.

high wages. Secondly, the benefits from the increase of a minimum wage are mainly obtained by employees who belong to the occupational groups which have the highest frequency of occurrence of low wages (unskilled, juvenile workers, learners of a vocation, mainly in small businesses, women more often than men). Unfortunately it does not mean that the increased income of workers with low wages is directed to the poorest households, which is the main argument for introduction of a minimum wage category and a regular increase of its amount. It is due to the fact that determining an obligatory minimum wage may improve a material situation only in workers' households (with at least one person who works), whereas many of the poorest households are not such households (they comprise unemployed people, especially large families in rural areas). Secondly, as the results of research show, only a part of the benefits (ca. 20%) from the increase of a minimum wage reaches poor workers' households. It is due to the fact that most of the workers receiving low wages (ca. 80%) in almost all countries of "old" EU were from households of medium and high (over $\frac{2}{3}$ of wage median), so most of the benefits from the increase of a minimum wage reached workers who belonged to families of average and relatively high incomes. It means that the increase in the obligatory minimum wage is a highly ineffective tool of distribution of income in order to limit poverty and does not contribute to its reduction [Borkowska 1999, pp. 95-120].

The main purpose of the paper is the analysis of influence of the amount of a minimum income on the general level of remunerations on the basis of the Polish economy. In the equations which model how average wages are shaped (econometric models) usually as potential variables explaining pace of the increase of an average wage the following are assumed: unemployment rate, expected inflation and changes in productivity. In research procedures of OECD the influence of a change to a minimum wage on changes of an average wage is not taken into account. Interesting examples of modelling an average wage with the accounted amount of a minimum wage are presented in the book entitled *Wynagrodzenie godziwe. Koncepcja i pomiar* edited by S. Borkowska. On the basis of numerous attempts to estimate coefficients of an econometric model, an equation was presented which described shaping a real average pay in Poland depending on a real minimum wage and unemployment rate (annual data were used). The degree of explanation of 87% was achieved and coefficients at exogenous variables significantly differed from zero. A positive relation between changes of a minimum wage and an average wage was observed: the coefficient of regression equalled 0.56, which means that the increase of a minimum wage by 1% is accompanied by an increase of average wage by 0.56%. In case of using the exponential form of the equation, the coefficient of elasticity of an average wage to a minimum wage was assessed, which determined that the increase of the minimum wage by 10% caused on average during the trial an increase of an average wage by 3% with other factors unchanged. Also essential

assessments of coefficients were obtained in case of quarterly data, which determined that the increase of minimum wage by 1 zloty caused an increase of average wage by 1.1 zloty. However, it has to be added that in some other equations, which described shaping an average pay on the national scale, the influence of a minimum wage was not significant statistically. It seems that despite the changes of an obligatory minimum wage that play a certain role in shaping an average wage in Poland, the most important factor influencing the amount of average wage, as it is concluded from estimation of econometric model parameters, is the increase of productivity of labour (calculated as an increase of gross domestic product per 1 employee). The statistically relevant factors are also: unemployment rate, number of the unemployed per one vacancy and expected inflation rate [Suchecki 1999, pp. 160-166].

To complement the analysis, the results of empirical research on the influence of minimum wage on real incomes of population (a sum of incomes from various sources, but most of all from work and social service) should be presented. On the basis of estimations of different econometric models it was observed that the influence of changes of the amount of a real minimum wage on total incomes of households in Poland is significantly positive and results of some research indicated even more than a proportional increase of incomes of the population in relation to the growth of a minimum wage rate. On the other hand, empirical research confirmed hypotheses quoted before concerning a negative influence of too high relation between an obligatory minimum wage and an average pay on the national scale. The results showed that the increase of that relation by 10% may cause a decrease of real incomes of households by 7% [Suchecki 1999, pp. 176-166].

5. Conclusion

The results of research performed in developed OECD countries at the end of the 20th century show that the category of a minimum wage does not fulfil its basic social function, which means it does not contribute significantly to the reduction of poverty and improvement of material situation of the poorest households. Although it does increase incomes of those who work for low wages (if they do not lose their jobs in case of increase of the amount of minimum wage), it is not transferred to the improvement of living conditions of the poorest households. It is due to the fact that many poor families are households with no workers. Secondly, most of workers who receive low wages come from families of average and high incomes. As it may be observed, to fight poverty efficiently, other tools shaping decent income rather than a minimum wage should be used, for example social service.

Empirical research done in Poland has shown that the significant (in statistical sense) increase in the amount of a minimum wage increases a general level of wages in the country (average wage), so it may be claimed that economic role of the category of an obligatory minimum wage, in contrast to a social function, is

performed. Additionally it was observed that the income of a minimum wage is positively transferred to the increase of real total incomes of households. The threat, however, seems to be too fast growth of a minimum wage rate in relation to an average wage on the national scale. Therefore, it is not advisable to strive to increase this relation in order to achieve standards of better developed European countries, because it may result in a decrease of real incomes of population, increasing unemployment rates and slowing down the economic growth, especially in the situation when the increase of work efficiency does not keep up with the increase of a minimum wage.

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