

## WAGES IN LABOUR MARKET THEORIES

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### Abstract

Already classical economists took interest in the role of wages and wage formation mechanisms, as well as in their influence on other components of the labour market. This article aims to systematise contemporary approaches to wages as one of the labour market components that have been developed within major economic theories. The systemization will serve as a basis for identifying main interactions between wages and other labour market components, such as labour supply and demand and labour market disequilibrium. The article presents major concepts formulated within neo-classical and Keynesian theories, labour market segmentation theories, efficiency wage theory, rent-sharing and rent-extraction theories, theory of job search, and search-and-matching models. One of the conclusions arising from the discussion is that the evolution of contemporary labour markets is a challenge for researchers seeking wage formation models adequately describing the real-life circumstances.

**Keywords:** labour market, wages, labour supply, labour demand

**JEL classification:** J40, E23, J23, J22

## **Introduction**

Economists have always been intrigued by the role of wages and wage formation mechanisms. First deliberations on this subject can be found in the works by Adam Smith and David Ricardo. According to Adam Smith, the ultimate measure of the value of any possessed item is the quantity of labour it can be traded for (Smith, 1954, p. 40). This implies that economic growth is driven by the accumulation of capital consisting of saved profits, the source of which is labour. Expanding capital resources steadily increase the demand for labour that the producers must pay for from their capital, thus providing workers with means of subsistence. The real (market) wage arises from the confrontation between labour supply and labour demand, i.e. the same mechanism as that defining the prices of all other goods. Wages are employers' cost so they try to reduce their level. For workers, wages are a source of income so make efforts to increase them. At the same time, two types of competition can be observed in the labour market: some workers may accept lower wages if this is the way to get a job and employers may try to attract workers by offering them higher wages than other firms offer. The amount of market wage may differ from the natural wage that is equal to the minimum subsistence costs of the workers, so it allows them to have families and children. Referring to T. Malthus theory, D. Ricardo went as far as saying that the natural wage should allow workers „to sustain their species” without increasing or decreasing their population. Let us note that the level of the natural wage was determined based not only on the quality and quantity of worker's output but also with regard to the number of basic articles the wage could buy. This implies that increasing prices of such articles may increase the amount of the natural wage (Ricardo, 1957). Even the main points of these concepts show how little they differ from the approaches that were created many years later.

The article discusses major concepts developed within neo-classical and Keynesian theories, labour market segmentation theories, efficiency wage theory, rent-sharing and rent-extraction theories, theory of job search and search-and-matching models. Against this background, the usefulness of these concepts for describing mechanisms occurring in contemporary labour markets is evaluated.

## 1. The wage formation mechanism and the significance of wages – a theoretical approach

Contemporary concepts explaining the formation of wages are underpinned, to a greater or lesser degree, by three basic theories: the neoclassical theory, the Keynesian theory, and the labour market segmentation theory.

In the **neoclassical theory**, wages are considered to play the key role in the labour market that is treated as homogeneous, and where the allocation of labour is regulated by a price mechanism. Labour supply and labour demand are determined by the rates of real wages. Workers' earnings depend on the relation between the supply and demand for certain types of workers. Labour demand is determined by the tendency of the real wage to reach the level of marginal productivity of labour. Because, according to the law of diminishing returns, the latter decreases as employment expands, labour demand actually arises from the level of the real wage. A rising real wage stimulates labour supply, but restricts labour demand; when it decreases, labour demand expands, but its supply declines. When labour supply is growing but the demand for it does not change or decreases, unemployed persons bring down their wage expectations to a level that makes it economically viable for employers to recruit them. If labour demand exceeds labour supply, employers will offer higher wages to attract workers. Therefore, wages tend towards a level where labour supply and labour demand will be equal to each other, setting the equilibrium point for the labour market and clearing it. This means that wages should be flexible and any measures restricting their adjustments are plainly harmful. According to the competitive labour market model, the same jobs cannot be paid differently in the long term and workers exposed to unfavourable working conditions are due to receive appropriately higher wages (a compensation rule).

The Keynesian theory assumes that the real wage influences neither labour supply nor labour demand. Even though the situation in the labour market has effect on wage levels and wage changes (this particularly applies to the real wage), in modern economies wages are not the key factor. Considering the strength of trade unions and the workers' money illusion it is very unrealistic to expect that wages might be reduced. From the macroeconomic perspective, wage cuts would entail a decline in the global demand for products and consequently in the demand for labour. So in reality nominal wages neither are, nor should be flexible. The actual inflexibility of wages is considered the main cause of unemployment that is forced rather than voluntary as the neo-classicists would like to see it (Keynes, 1956).

According to the Keynesian theory, wages are strongly determined by factors unrelated to the labour market and the wage formation mechanism is incapable of bringing back equilibrium

to it. The real factor making labour supply and labour demand tend to equilibrium is not wages but changing availability of jobs, because employers respond to signals about rising or falling market demand for products by dismissing or recruiting labour. After the point of full employment is reached, wage increases entail expand the supply of labour and then the neoclassical rules apply.

**The labour market segmentation concepts** assume internal heterogeneity of the labour market. Differences between labour supply and labour demand lead to the formation of relatively homogenous segments of the labour market, which differ from each other because of the types and amounts of perquisites, but mainly in terms of remuneration for work. According to these concepts, wage differences do not show actual differences in workers' effort (related to the complexity, quality and productivity of their work). Workers in different market segments will earn different money for the same job, with the differences between segments being greater than the quality of workers' performance might imply. At the same time, different wage levels involve (rather than being compensated for) other aspects of employment, such as the risk of redundancy, promotion and skill-improving opportunities, onerousness, etc. High wages have a number of other advantages, whereas low wages are frequently accompanied by many inconveniences. Particular segments of the labour market can therefore be said to have 'good jobs' and 'bad jobs'.

In the dual labour market concept, the most widespread among the segmentation concepts, the labour market is divided into primary and secondary sectors (Doeringer, Piore, 1971) that differ regarding the wage formation process. In the primary sector, monitored and influenced by trade unions, wages are formed through collective bargaining. In the secondary sector, where workers' interests are not effectively represented, wages are negotiated between the employer and a worker. The two sectors are also different in the strength of institutional solutions regulating wage formation, for instance the level of the minimum wage or the scope of applicability of labour laws.

Wage formation mechanisms are investigated by the **efficiency wage theory**, one of the concepts created within the framework of so-called neo-Keynesian macroeconomics. Its assumptions have been derived from the 'economy of high wages' (Perlman, 1969). The theory directly refers to the Keynesian rigidity of wages defined as a very slow adjustment of wages to changes in labour supply and demand. Because of this rigidity, workers usually earn above the level that might induce employers into employing all people seeking jobs.

The mainstay assumption of this theory is that forced unemployment results from the wages' inability to reach the level of equilibrium. The reason why employers tend to pay

relatively high wages leading to their rigidity is attributed to remuneration rules benefitting both employers and workers. Above-equilibrium wages are mainly paid to improve firm's efficiency (Akerlof, Yellen, 1986). According to the efficiency wage theory, higher wages should be paid when the workers are independent and difficult to control, in the case of diverse workforce, when the recruitment process might be burdensome, and when the replacement of workers would involve considerable costs (Shapiro, Stiglitz, 1984; Weiss, 1990).

The efficiency wage theory holds that worker's productivity depends not only on their qualifications and the type of job, but also on the level of their earnings, because high wages are conducive to good discipline of work, protect firm's investments in its workforce, and help avoid the phenomenon of "negative selection" (Dickens, Lang, 1993, pp. 147–148; Sapsford, Tzannatos, 1993, pp. 407–409). The last argument in support of paying workers high wages points to the non-measurable, subjective factors related to the worker's perception of the employer and the organisation. A worker may, or may not, consider their pay to be a fair equivalent of the quantity and quality of their work. The „fair“ treatment of the workers may foster their sense of loyalty towards the organisation and consequently improve its financial situation. As an element of the general reputation of the firm, the balance of positive and negative opinions may also be important for the firm's competitive position. Higher wages entail side effects that single employers tend to disregard.

By paying wages above the market equilibrium wage, an employer induces a similar reaction among a number of other employers that want to attract the best workers to their firms. When many firms being willing to pay higher wages while keeping smaller workforce, the number of jobs available in the economy will decrease and unemployment will appear. Figure 1 illustrates the emergence of unemployment according to the efficiency wage theory.

In the framework of this theory, a concept has been created to explain the formation and existence of the mutuality of interests between employers and employees. Both parties show equally strong interest in the stability of employment relations. The concept holds that wage cuts in the segments of the economy that suffer from lower market demand would make their workforce less productive (assuming immobility of labour) and their firms less competitive. As a result, an even deeper fall can be expected in labour demand caused by declining demand for goods (the labour demand curve would be a parabola). To avoid it, firms want to maintain stable wage structure in the short term, which leads to the inflexibility of wages. The reason for unemployment to appear is employers' refusal to recruit unemployed for lower wages and their deliberate strategies of paying higher wages than competitors, which are meant to provide them with a greater number of job applicants.

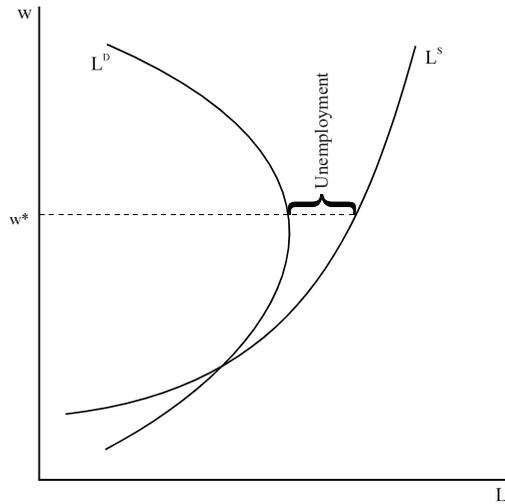


Figure 1. The emergence of unemployment in the efficiency wage theory

Source: Sapsford, Tzannatos (1994), p. 411.

The emergence and consolidation of market segments using different rules to reward workers and paying different wages that causes forced unemployment is also explained by the rent-sharing and rent-extraction theories (Dickens, Lang, 1993, pp. 147–149; Barth, Zweimüller, 1992, pp. 23–24; Layard, Nickell, Jackman, 1991, pp. 161). Both theories describe how the high-wage areas form in the economy in the economy. The basic difference between the theories and the efficiency wage theory lies in the treatment of the role of employer's financial condition (profitability). The efficiency wage theory holds that workers' satisfaction depends only on wage relations in the organisation, so it excludes the influence of its financial potential. In the rent-sharing theory, workers' efforts and involvement depend on their assessment of the relation between their wages and firm's receipts. If the organisation is struggling to survive workers may accept lower wages, but if it is successful, they expect to have a share in higher profits. Workers' organisations concentrate their efforts on ensuring the best (from their perspective) relation between workers' wages and the revenues generated by the firm. The rent-extraction theory explains how strong workers' organisations contribute to the formation of high-wage areas in the economy. According to the theory, rent-extraction takes place when workers are strong enough to take over some of the firm's economic rent under threat of collective action.

A high-wage segment formed by wage strategies and/or distribution of profits is relatively isolated from the remainder of the labour market in the sense that it has fewer jobs than workers seeking employment with its firms would wish it to have. The most important conclusion from

the discussion on wage formation mechanisms specific to particular market segments is that the “efficiency” wages do not clear the market, but create a queue of job-seekers. The market-clearing function is performed by wages in the low-wage segment. The queue of people seeking jobs in the primary sector formed by the division of the labour market is described as ‘wait unemployment’ (Burda, 1988; Klundert van de, 1990; Layard, Nickell, Jackman, 1991). Job offers available in the low-wage segment can neither eliminate nor reduce unemployment consisting of people who seek employment opportunities in the high-wage segment. From their perspective, the time spent waiting for better jobs is a sort of investment. Its cost is the wages that they might earn if they decided to take a job outside the high-wage segment. The expected reward is a well-paying job. Naturally, in estimating whether the investment is worth its cost job-seekers take into consideration many more elements than just the difference between wages in the two segments. The key factor is the amount of unemployment benefit and the period over which it will be paid. The “waiting unemployed” ignore job opportunities that they know of, preferring to wait for jobs that are not available yet. This mechanism is graphically illustrated in Figure 2.

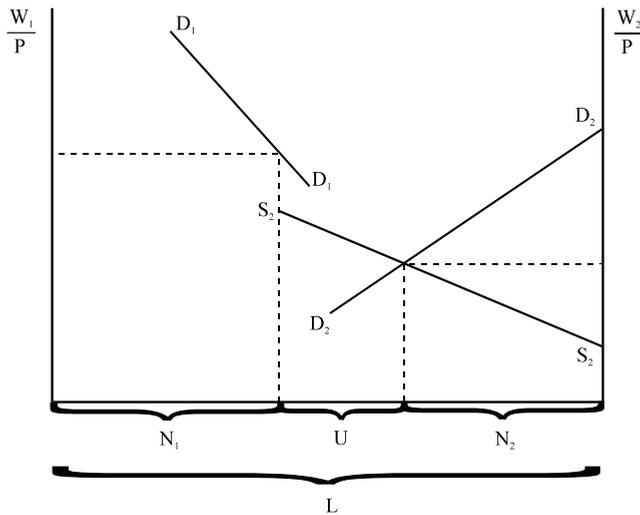


Figure 2. The emergence of unemployment in a segmented labour market

Source: Layard, Nickell, Jackman (1991), p. 43.

The horizontal axis represents the size of employment (from left to right for the high-wage segment and from right to left for the low-wage segment). In the first segment, wages are above

the equilibrium wage. The size of employment ( $N_1$ ) is decided by employers, because collective bargaining is practically unobserved. Among the people who do not have jobs in the high-wage segment only few work in the low-wage segment (this employment is denoted as  $N_2$ ); all the others, i.e.  $L - N_2 - N_1 = U$ , are unemployed who prefer benefits to low-paying jobs. Therefore, people outside the high-wage segment are labour supply in the low-wage segment (curve  $S_2$ ). Unemployment appears because not all of those who want to work in the high-wage segment can get jobs there and because not all jobless people want to work in the low-wage segment.

Associated with wait unemployment is the notion of reservation wage, i.e. the lowest wage an unemployed person would accept. Its level is not constant, because it is influenced by many factors, including the length of the job-seeking period: the longer it is, the lower the reservation wage (Hughes, Perlman, 1984, pp. 104–125). Reservation wage is investigated by the **job search theory** that has been developed in the framework of neoclassically-determined ‘new micro economics’. Among many factors, the theory points to the significance of the amount of wage paid for a job for the behaviour of unemployed persons in a labour market characterised by imperfect information. Because some people will always choose temporary unemployment to seek ‘optimal’ jobs the search unemployment arises, which in the world of incomplete information is a short-lived phenomenon. Why unemployed behave in this way can be easily explained in terms of marginal costing: the additional costs of seeking information (lost earnings minus unemployment benefit) will be paid until they become equal to the amount of additional incomes expected to be earned once a better job is found. A similar costing procedure can be performed by employers seeking workers. Seeking the optimal relation between the marginal costs of finding a worker with the desired characteristics and the expected benefits of finding them may bring about another type of disequilibrium in the labour market: a large number of vacancies (Mortensen, 1986).

The job-search theory strongly accentuates the role of wages in decision-making processes causing disequilibria in contemporary labour markets. The **search-and-matching models** (DMP) that derive from this theory (their graphical illustration is the Beveridge curve showing the relation between vacancies and the size of unemployment) consider wages less important, as they assume that in making decisions both employers and job-seekers take into account not only their preferences but also – in addition to wages – institutional and other factors related to the functioning of the labour market (Mortensen, Pissarides, 1994, pp. 397–415).

## 2. New challenges and gaps in labour market theories

The way labour market theories of the 20th c. deal with the significance and role of wages does not fully correspond to the present-day circumstances, because of profound changes that took place in the labour market at the turn of the 21st c. The changes were induced by intensifying globalisation, i.e. the emergence of a uniform global economy prompted by the elimination of barriers dividing local, regional, national and finally continental markets. Higher mobility of goods and capital promotes the establishment of a worldwide market where (theoretically) all players in an economic game that is the same everywhere are subjected to the same rules. According to researchers, the present phase of globalisation is characterised by a crisis of a so-called social state and the explosion of the role of financial markets. The court on which revenues and influences are competed for is expanding and the world economy is increasingly integrated, with all advantages and disadvantages of this process (Osterhammel, Peterson 2005, Stiglitz, 2006).

The factors behind and the effects of globalisation exert powerful influence on today's labour markets. The dominant factor in their functioning is changes taking place in the economic models followed by developed countries, which transform the welfare state model into the model of economic growth founded on competitiveness and flexibility. Accordingly, a general tendency can be observed for making labour markets more flexible by reducing the role of trade unions and shaping the labour law into the needs of employers, etc. The process has a strong effect on wage formation mechanisms that are additionally influenced by new possibilities of minimising labour costs, which appeared with the tools brought by the information revolution (computers, robots, etc.). However, the most important of all globalization impacts on labour markets is relocation, i.e. a process consisting in complete or partial discontinuation of operations by a company in one country to carry them on through another establishment abroad or, in other words, the transition of all or part of production or service delivery processes from one country to another as foreign direct investments or under outsourcing arrangements (offshoring). Relocation is the most glaring symptom of a global change in manufacturing activity, leading to a new international division of labour in the sphere of manufacture. At the same time, relocation deprives the traditional determinants of pay levels described in economic theories of their previous significance, because the amount of wages paid in country A may strongly depend on labour costs in country B, even if the latter is thousands of kilometres away from it ...

It needs to be added that the flexibility of contemporary labour markets is determined not only by economic demands, i.e. by the need to follow changes taking place in and around

economies, but also, indirectly, by the behaviour of some groups comprising labour resources. In the last twenty five years, changes have been observed in the attitudes of some groups of workers (particularly among young persons). The established (almost traditional) career paths (with regular employment and successive promotions, preferably in the same workplace) are being replaced by boundaryless careers. In very broad terms, individuals choosing a boundaryless career emphasise multidirectional development during which they alternate periods of salaried work for different employers with periods of self-employment in order to diversify their professional experiences (Baltes et al., 2011, p. 197–225).

With transforming labour markets, the population of those who live off wages is decreasing, which was noted by Guy Standing who identified seven social groups (Standing, 2011, pp. 7–8):

- „elite”, consisting of a tiny number of absurdly rich global citizens,
- “salarariat”, still in stable full-time employment, concentrated in large corporations, government agencies and public administration, including the civil service,
- “proficians”, a term combining the traditional ideas of “professional” and “technician”, but covering those with bundles of skills that they can market, earning high incomes on contract as consultants or independent own-account workers,
- manual employees, the essence of the old “working class”,
- “precariat”, i.e. people without access to different forms of security associated with employment, including the security of income (for example, minimum wage machinery, wage indexation, comprehensive social security, progressive taxation to reduce inequality and to supplement low incomes),
- unemployed, and
- a detached group of socially ill misfits living off the dregs of society.

In the contemporary labour market, the groups of „salarariat” and „manual employees” are shrinking, while the social class called the precariat is expanding. Its members have uncertain jobs that they cannot identify with, and the way the jobs are paid for has not been reflected in labour market theories yet.

According to Urbański, the main factors expanding the group of workers with insecure jobs are instability of labour relations and the dictate of flexibility that enable the emergence of new forms of worker exploitation such as low and uncertain earned income and a lack of legal and institutional measures for protecting it (Urbański, 2014, pp. 15 and next pages).

It seems therefore important for researchers exploring pay issues to identify the population of precarious workers, i.e. persons whose pay status is not sufficiently explained by labour market theories yet. The problem is, though, that the traditional public statistics does not offer

data necessary to describe this group more in detail. Researchers use to this end indicators such as „job tenure” referring to „job stability” or „income risk” reflecting the variability of earnings.<sup>1</sup> Many studies are based on the analyses of „contingent workers”. This group of workers is defined in different ways, but most definitions point to a short-term (casual)\_employment relationship (uncertainty of employment) and the lack of legal and institutional regulations of pay (uncertainty of earning income). The „contingent workers” are part-time workers, workers with fixed-term employment contracts, on-call workers and borrowed and contract workers (including self-employed) (Horn, Williamson, Herman, 2005, p. 1.1–1.6).

As far as Poland is concerned, it is practically impossible to use public statistics to identify populations paid through mechanisms insufficiently covered by labour market theories. Some source of information on the populations is special surveys, particularly those carried out under the „*Social Diagnosis*”<sup>2</sup> project. In the post-crisis years 2011–2015 (when the condition of the Polish economy and the labour market situation were gradually improving), most workers had indefinite employment contracts, but their proportion declined from 55.7% to 55.3% (by 0.4 percentage point). At the same time, the importance of fixed-term employment contracts and short-term employment arrangements clearly increased: their total share rose from 20.5% to 22.3%. This growth was accompanied by a decreasing share of self-employed persons working outside agriculture and persons employed under civil law contracts and without a formal written contract (Table 1).

Table 1. The structure of employment in the Polish economy by main type of contract in the year of the survey

Type of contract	2011	2015
Permanent employment contract	55.7	55.3
Fixed-term employment contract	18.1	18.8
Self-employment outside agriculture	6.7	6.2
Employment on a private farm in agriculture	9.4	9.6
A civil-law contract	1.8	1.5
Work rendered without a formal written contract	2.8	2.6
Other short-term contracts	2.4	3.5
Own firm employing workers	3.1	2.5

Source: Diagnosis (2015), p. 130.

<sup>1</sup> The research is discussed in Szarfenberg (2015), p. 4–6.

<sup>2</sup> The „*Social Diagnosis*” project has been continued since 2000. Its findings enhance the diagnosis based on institutional indicators with comprehensive data on Polish households.

The data show that the proportion of workers meeting the criteria of „contingent workers” has increased in Poland in recent years in spite of improving situation in the economy and the labour market, and this trend is likely to continue in the foreseeable future.

The labour market theories discussed do not seem very useful in describing the pay mechanisms operated in the contemporary labour market, with one exception of segmentation theories. Because of the deepening labour market divisions and increasingly distinct differences between „good jobs” and „bad jobs”, the theories should be developed and enhanced. In order to do this, the causes of divisions in contemporary labour markets must be identified and addressed. Research is also necessary into processes underlying the formation and functioning of groups of workers that are the most severely affected by the divisions.

## **Conclusions**

The above concepts represent only some of those that the researchers exploring wage formation mechanisms and the influence of wages on other labour market components have created. The synthetic review of the basic concepts presented in this article allows four conclusions to be formulated. Firstly, the segments of the polarised, contemporary labour market differ in terms of wage formation mechanisms. Secondly, there are interactions between the levels and changes of wages and labour market disequilibrium that the theoretical concepts find multidirectional and resistant to simple generalisation (the same holds true for the interactions between the levels and changes of wages and labour demand and labour supply). The third conclusion concerns the very nature of research into wages, which has become more utilitarian today, but still draws on traditional theories. New paradigms are not created, one reason for which may be problems with quantifying the aggregate impact of various factors and with forming it into a single, logically structured and coherent theory. There is no doubt that there are still many question marks about the body of wage mechanisms operating in contemporary labour markets. And this takes us to the last conclusion – the way the markets develop is a challenge for researchers seeking wage formation models adequately describing the real-life circumstances. Researchers should make sure that analyses are conducted according to the labour market segmentation concepts, which, however, should take account of new causes and consequences of deep divisions in contemporary labour markets.

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