

Eva Rievajová
Andrej Prívvara

WS-PS MODEL AS A THEORETICAL BASIS FOR FLEXICURITY POLICY¹

***Abstract:** The unfavourable performance of the EU labour markets in the 1990's was generally blamed on their high rigidity. International organisations (particularly OECD) nowadays bring employment-related recommendations which are based on WS-PS Model. The authors of the paper argue that since this model provides various solutions to reduce the unemployment rate, and since it focuses on institutional factors of the labour market, it remains relevant also in the present period of flexicurity policy implementation.*

***Keywords:** WS-PS model, rigidity of the labour market, flexicurity, institutional factors, EU labour markets*

JEL: C 32, E 24

Introduction

The term “flexicurity” has been used in economic literature since the second half of the 1990's. It has become widely used particularly in connection with the “Flexibility and Security Act” which was passed in the Netherlands in 1999. This act aims to moderate the level of legal protection of employment in case of contracts of indeterminate duration ([9], p. 1). At that time flexicurity was regarded as a reaction to weak performance of the EU labour markets in the 1990's. Flexicurity, or strategy focused on increasing flexibility as well as security to the benefit of both contractual parties in the employment relationship, was recognised as one of the key targets for improving the EU labour markets under the EU employment strategy and the Lisbon strategy. Adaptation to changing conditions requires a flexible labour market combined with a certain degree of security which suits both employers and employees. A model for implementing flexicurity policy is Denmark with its “golden triangle” consisting of the following three pillars: weak employment protection, high unemployment benefits and active employment policy. The European Commission

¹ This article was written as part of VEGA project No. 1/0103/12 and the project under the Science and Research Operational Programme entitled “Creation of an excellence centre for economic research to tackle civilisation challenges in the 21st century” (ITMS 26240120032). We support research activities in Slovakia. The project is co-funded from the EU funds.

and also OECD later regard flexicurity as a new social model which enables us to combine a high degree of flexibility as well as income protection and social security. The term “flexicurity” thus gets a broader meaning: it does not only apply to a certain employment policy aimed at reducing rigidity in the labour market and tackling so-called “eurosclerosis”, but it also comprises a new type of social model which other EU countries should try to implement as well. At the same time it becomes very important to grasp the opportunities brought by the present stage of globalisation in relation to the new economy. Theoretical basis of flexicurity policy is WS-PS model. This article aims to highlight the fact that although the WS-PS model was created in the late 1990’s as a proposed solution for the unfavourable situation in the EU labour markets, it remains very topical even in today’s period of implementing flexicurity policy. Besides that, we have constructed, based on data from Danish economy, an economic model which is supplementing our qualitative analysis.

1 Evolution of the Labour Market Situation in EU-15

The EU-15 labour markets in the 1990’s were characterised by high unemployment. The term “flexicurity” became very frequent in recent period. Table 1 below shows that unemployment rate in EU-15 was constantly rising and reached a significantly higher level than in the USA. Similar figures can be found also in the evolution of employment rate.²

Table 1

Performance of the Labour Markets in EU-15 and in the USA

	1970	1980	1990	2000
U (%) EU-15	2.3	5.6	7.8	10.1
U (%) USA	5.0	7.2	5.6	4.2
E (%) EU-15	64.8	62.9	61.7	60.0
E (%) USA	61.9	65.9	72.2	74.3

Source: www.oecd-library.org/employment.

Figures in Table 1 show that in the period of 1990-2000 unemployment rate in EU-15 increased from 8% to 10.1%, which reflects a weak economic performance in EU-15 as a whole. There are, however, remarkable differences between the individual countries. Some countries (Denmark, Ireland, and the Netherlands)

² With this indicator we can monitor two different trends, provided that the countries have comparable unemployment: (1) employment creation and (2) decrease in economically active population. Employment rate is thus a complementary indicator to unemployment rate.

managed to reduce their unemployment in the 1990's.³ On the other hand, unemployment in some other countries increased (Finland, Sweden, Greece, Italy, and Germany). Between these two limits there are a number of countries where the evolution of unemployment reached the EU-15 average (see Table 2).

Table 2

Unemployment Rate in EU-15 (1990-2000)

	1990	2000	Difference
Germany	6.2	10.7	4.5
Austria	4.7	6.3	1.6
Belgium	8.8	11.1	2.3
Denmark	9.4	5.7	-3.7
Spain	15.7	17.4	1.7
Finland	3.5	10.6	7.1
France	8.9	11.3	2.4
Greece	7.0	10.2	3.2
Ireland	12.9	6.4	-6.5
Italy	9.1	12.1	3.0
Netherlands	6.0	4.0	-2.0
Portugal	4.7	5.0	0.3
United Kingdom	6.9	6.7	-0.2
Luxemburg	5.8	5.3	-0.5
Sweden	1.6	5.6	4.0
EU-15	8.0	10.1	2.1

Source: www.oecd-ilibrary.org/chômage.

³ Causes of unemployment rate decrease in these countries are various. In Denmark it is besides so-called “golden triangle” also tradition of social dialogue and high level of population qualification. We can observe a considerable increase in economic activity, mostly of women in Ireland and in Holland; this development results from an increased tendency of work duties for a limited period.

Empirical studies on the evolution of unemployment in Europe see the reason of high unemployment rate in the existence of institutions which hamper the labour market flexibility [23]; [12]. Blanchard and Wolfers [4] argue that heterogeneity of labour markets across EU countries stems from differences in their institutional factors. This can be clearly seen in Germany where the increase in unemployment rate between 1990-2000 was the highest among OECD countries. Blanchard and Wolfers explain this phenomenon as a result of merely institutional factors; in this case weak incentives to get people back to work, which leads to increase in long-term unemployment and the hysteresis effect.

As regards OECD's stance on the weak performance of the EU labour markets, this international organisation in its publications on employment recommends that the EU countries tackle unemployment through structural rather than upswing economic and political measures. These recommendations are based upon the WS-PS model ([15], p. 48). In the present global economic crisis governments' interventions into economy are much more intense, which is justified by the need to maintain employment.

2 The Original Version of the WS-PS Model

When we study balanced unemployment rate, there are two approaches which come to different conclusions:

- According to the Phillips curve, which is macroeconomic and draws upon empirical data, long-term balanced unemployment rate (NAIRU) is affected only by the evolution of labour productivity. It is relatively stable and economic policy can reduce it only slightly.
- According to new unemployment theories, which are microeconomic and theoretical, balanced unemployment rate (defined by the intersection of WS and PS curves) depends on all the variables which affect pricing and wages. It is therefore influenced by economic policy and it changes in time.

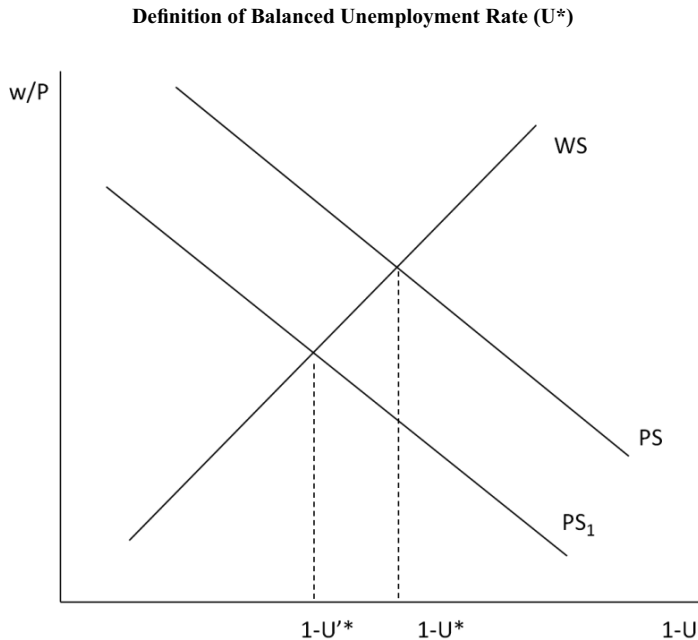
It was the criticism of the Phillips curve which resulted in creation of new unemployment theories [13]; [2]; [5]. These theories are based upon general economic balance with imperfect competition in product and labour markets. Thus they try to find microeconomic causes of ongoing mass unemployment in Europe.

Based on the mentioned assumptions WS-PS model was created. It first appeared in 1986 in works of Layard & Nickell, as well as Johnson & Layard. At that time it was, however, incomplete, since it did not include the relation to price setting (PS). The complete WS-PS model including empirical analysis of unemployment in major OECD countries was only published by Layard, Nickell & Jackman five years later (1991). This version is considered to be the original version of WS-PS model.

The model is based on the idea that workers being consumers at the same time, have a certain influence on price level. They are labelled "price settlers" (PS). On the other hand, their purchasing power is determined by the wage they receive. Thus companies are "wage settlers" (WS). WS and PS are interrelated.

WS-PS model is represented by intersecting curves (see Figure 1).

Figure 1



Source: ([2], p. 128).

One curve (WS) reflects how the real wage demanded by workers increases when unemployment decreases. Some explain this relation in this way: wage is the opportunity cost of voluntary free time, which is the unemployment [8].

The other curve (PS) reflects companies' demand for work: this demand decreases when real wage increases, and thus triggers an increase in unemployment.

The intersection point of the curves defines the balanced level of real wage (w/P) and a balanced unemployment rate (U^*).

Balanced unemployment rate is a result of excessively high real wage. The latter is endogenous: it is caused by imperfect cooperation of economic entities, which, despite their rational behaviour, cannot reach the optimal state. The level of balanced rate of unemployment depends on the inclination of WS and PS curves, as well as on their mutual position. The inclination of the curves reflects the reaction (i.e. sensitivity, flexibility) of wages and prices to the situation in the labour market. As regards the mutual position of the two curves, it is determined by institutional context and structural changes in the economy (WS curve) and by economic context, notably by competition in the goods market (PS curve).

The abovementioned facts can be formally expressed as follows [13]:

WS equation:

$$W = P^a \cdot F(U \cdot Z)$$

Nominal wage W is a function, i.e. it depends on the expected price level P^a (if the price level is high, trade unions demand higher wages due to the wage indexation based on increased prices), unemployment rate U (the higher unemployment, the weaker position of trade unions when negotiating wages, and vice versa: in the context of low unemployment trade unions have more power to negotiate wages) and the complex of other, exogenous factors of the model (this includes institutions, e.g. unemployment insurance, trade unions, but also structural changes in the economy reflected as a change in labour productivity, for instance).

PS equation:

$$P = (1 + \mu) \cdot W$$

Price level P depends on production costs (in this case wages W) and profit margin in the goods market $(1 + \mu)$. In the case of market with perfect competition $\mu = 0$ and in the case of market with imperfect competition $\mu > 0$.

Since WS-PS model counts with imperfect competition (there can be oligopolistic situations or situations of monopolistic competition), companies can influence pricing (prices are no longer defined only by the market). Practically it is possible to increase costs by a certain margin (Mark-up rule). This margin varies depending on the degree of competition and prosperity. When the economy is in boom, competition is weaker, margins are higher, prices increase and real wages decrease. Thus, when economic activity is sound, companies take up more workers and unemployment tends to decrease. Decrease in real wages and decrease in unemployment go hand in hand. On the other hand, if the economic activity stagnates, competition is stronger in gaining market shares, both margins and prices start to decrease, which causes the rise in household purchasing power (the latter is defined by real wage). Unemployment and real wage increase.

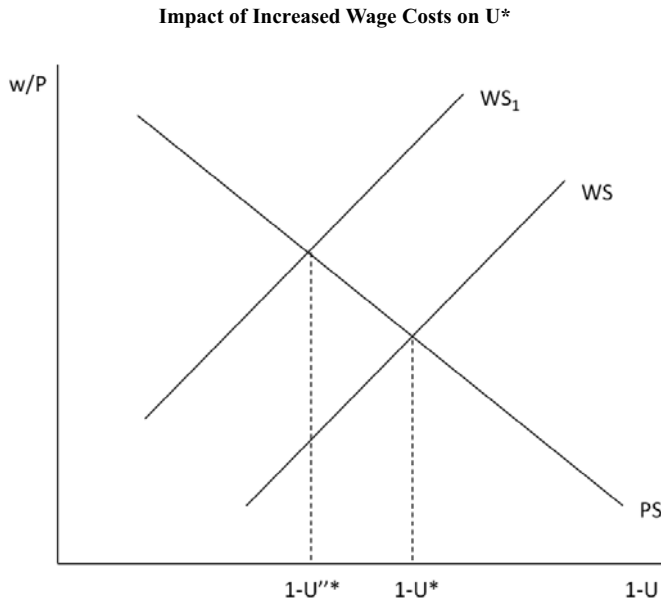
So the labour market is affected by two opposing powers: firstly, results from companies' pricing policy, secondly, results from the wage-setting policy. In the balanced state a certain level of wages corresponds to a certain level of balanced unemployment. If there are no changes in the method of setting prices and wages, unemployment rate is stable. By contrast to orthodox vision, there is no power which could change this state: the market mechanism cannot modify unemployment by influencing wages or prices. This is the case of involuntary unemployment (though not that of the Keynes type, since it is caused by insufficient competition in the markets) because it is a result of companies' policies and workers' demands.

As regards the pricing mechanism, companies set prices of their production by adding profit margin to their expected unit labour costs, i.e. to the wage they are willing to pay to their workers, taking into account labour productivity.

Changes in the labour productivity affect also the position of the price curve (PS). For example, if the labour productivity decreases, PS curve slides downwards (see Figure 1). This results in higher balanced unemployment rate. In order to achieve balance between the wage offered by companies and the wage demanded by workers through trade unions, unemployment must increase. This will make workers more modest in their wage expectations.

WS-PS model can be also used to analyse the impact of increased wage costs on balanced unemployment rate (see Figure 2).

Figure 2



Source: *ibid.*, p. 130.

According to Layard, Nickell & Jackman wage costs increase, e.g. with the increase of social security contributions or with the growth of minimum wage, which is gradually reflected in all wages. This results in a situation where wage costs increase more than employers are willing to offer. The balance (U''^*) can be restored in this case again only with the growth of unemployment, which has a downward effect on wage expectations.

WS-PS model can be considered a useful tool for the analysis of employment policies. First of all, it helps to explain main tendencies in the evolution of unemployment in Western Europe [21].

Another advantage of WS-PS model is that we can draw certain economic-political recommendations to reduce unemployment. Layard, Nickell & Jackman think that economic policy and employment policies can be very effective in the reduction of unemployment.

As regards education policies or professional training policies, these are considered by authors of the WS-PS model as desirable. In their opinion, these policies should be aimed firstly at improving employability of workers with such professions which are no longer needed in the labour market. Training activities should be focused on those qualifications which are missing in the labour market. Wage expectations of workers with such qualifications may be a factor of increasing balanced unemployment rate.

3 Modifications of WS-PS Model and the Determinants of Balanced Unemployment

The static WS-PS model presented above is based on the assumption of homogeneous labour. Traditional determinants of price-setting, wage-setting and balanced unemployment can be deduced from it. Some economists [5]; [6]; [14] later tried to modify the original WS-PS model by introducing into it the assumption of heterogeneity of workers and dynamic aspects of price-setting.

The version of WS-PS model by Cahuc & Zylberberg [5] describes dynamic aspects of wage-setting as well as the role of those who negotiate wages. This model comes to the conclusion that balanced unemployment will increase in the short term if it was growing in the previous period (which is a result of existing relations insiders/outsiders), and it will decline if workers expect increase in wages (which happens when the rate of vanishing jobs declines). In the long term, balanced unemployment rate is an ascending function of interest rate, the tax rate of company profits and negotiating power of workers. It declines when productivity profits increase.

In the modified version of the model by Cahuc, Gianella & Zylberberg [6] balanced unemployment depends on the labour force growth rate, productivity profits, change in exchange relations, job loss risk, negotiating power of workers and trade unions, and sustaining ratio.

Another contribution to the original WS-PS model is the version which presupposes heterogeneity of workers [14]. Distinguishing various qualifications enables to consider the implications of a possible mismatch between the structure of qualifications offered and demanded.

The original WS-PS model and its modified versions show the dependence between price-setting on the one hand, and labour productivity, real interest rate, price elasticity of demand and the efficiency of labour as a production factor, on the other hand. Setting of real wages depends on the unemployment rate, negotiating power of trade unions, degree of competition in the goods market, workers' risk aversion, sustaining ratio and the mismatches in the labour market.

On the whole, in WS-PS model (in its original version as well as in the modified versions) balanced unemployment rate depends on a set of different factors which affect prices and wages. Thus it comprises a number of determinants, which is partly due to the fact that this model includes a wide scale of explicit variables. Most of them, however, somehow relate to the labour market institutions, so growth of the unemployment in Europe can be blamed on the imperfect operation of these institutions.

In the light of these facts, we can understand why in the present period of flexicurity policy implementation in EU countries WS-PS model still remains topical as a basis for recommendations of international organisations (in particular OECD). This can be seen also in the following extract from an OECD document from 2008 which stresses the need to implement flexicurity policy in the EU countries: "In the WS-PS model institutions interact in their impact on employment and global

unemployment. These interactions reflect two groups of mechanisms: policies and institutions which modify the elasticity of employment according to workers' demands (e. g. unemployment benefits, negotiating power of trade unions, goods market legislation) and the elasticity of labour force demand according to negotiated wage (e. g. employment legislation) interact with those policies and institutions which affect wage negotiations (e.g. unemployment benefits) and/or labour force demand (e.g. goods market legislation) [18].”

4 Flexicurity Policy as a Reaction to the Changed Economic Situation

Economic adaptation to the new situation in the globalized world requires a flexible labour market with a degree of certainty which corresponds to both employers' and employees' needs. In order to prevent social risks it is necessary to enhance long-term employability and increase qualification of EU citizens. In the context of the economic integration, new trends in information technologies and demographic evolution, citizens need more the guarantee of employability than the guarantee of their job position which is in the present situation probably limited in terms of duration, and the number of workers who stay in the same job all their lives decreases significantly. However, there is a slight increase in the age limit for leaving the labour market in the EU.

On the whole, partly due to globalisation⁴, there are growing tendencies to enhance the flexicurity of all workers in order to sustain the framework of social security. It is necessary to increase employment, job creation and innovation, which requires very flexible employment relationships. At the same time, it is important to make sure that people can find a job in every stage of their active life, and that they have a certain perspective of their career. High employment will produce enough resources for education and social frameworks [22].

In order to achieve targets of the renewed Lisbon strategy (focused primarily on creating new jobs and improving the quality of existing jobs as well as upgrading social security systems), a new policy has been created to deal with the labour market flexibility, employment relationships and social securities. This policy – flexicurity policy – should enable the EU citizens to find a job in every stage of their active life in an environment which provides opportunities for both employers and employees by creating conditions where flexibility and security go hand in hand.

Flexicurity is defined as an integrated strategy to simultaneously enhance flexibility and security in the labour market. It includes adequate unemployment benefits, but also equips people who lost their jobs with the skills which will help them find new jobs. According to the Council of the EU flexicurity is implemented across the following components ([20], p. 8):

⁴ Influence of new important factors can be seen in connection with globalization: decrease in wages of low qualified workers, creation of new forms of employment (work duty for limited period, shorter duty, agency employment). These factors increase doubts on the labour market.

- more flexible and reliable contractual arrangements from the perspective of the employer and the employee;
- comprehensive lifelong learning strategies to ensure the continual adaptability and employability of workers;
- effective active labour market policies that ease transitions to new jobs;
- modern effective social security systems providing adequate income support during the employment transitions.

Mobilising all the instruments which facilitate transitions to new jobs can help prevent the growth of unemployment and face the risks of social exclusion. Challenges brought by the financial crisis should be tackled by accurately targeted active labour market policies, by reaching the balance between rights and obligations of job applicants and by efficient investments into continuous training. Creating atypical, non-standard employment contracts, new flexible possibilities of labour conditions regulation and new categories of employees does not present a risk if the new institutes are regulated by the labour law. An indispensable precondition for their efficiency is, however, providing sufficient budget resources which will enable the implementation of flexicurity system, as well as establishing and functioning of public employment services ([1], p. 9).

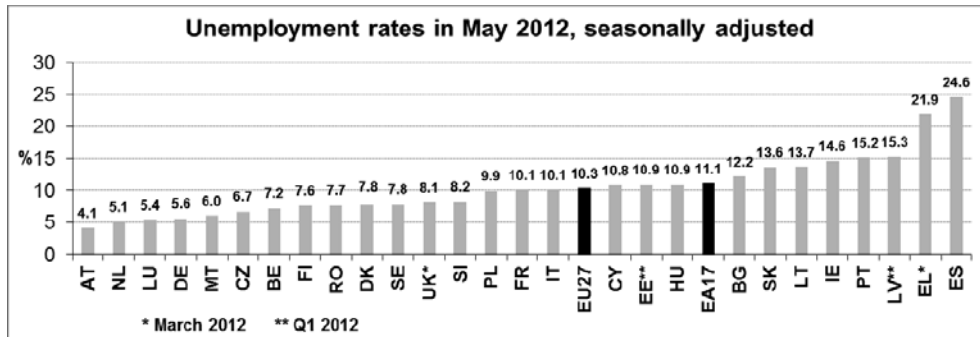
Although all EU labour markets are currently facing the same challenges, implementation of flexicurity must be tailored to every country and reflect their internal conditions. This means that flexicurity is not designed as a universal model, but rather as a set of common principles. It is up to the Member States to develop their own flexicurity strategy, taking into account their specificities and priorities. Individual EU Member States apply various forms of flexicurity, and the most successful of them share their know-how and inspiration with others. Integrated flexicurity policies are often applied in those countries where dialogue plays an important role, and especially where there is a trust among social partners as well as between social partners and public authorities. Experience shows that a partnership approach is most suitable to develop flexicurity policy ([22], p. 240).

Since the publication of Andre Sapir's report (An Agenda for a Growing Europe, 2003) various EU documents have been stressing the fact that if the EU countries are to face global challenges and at the same time maintain the European social model, they must improve the flexibility of the labour market and provide better social protection to workers, i.e. implement the flexicurity policy. Flexicurity as well as security comprises a number of elements. Combinations of flexibility and security are even more numerous, but some of them may work in a certain institutional context and fail in a different context [25]; [24]. Flexicurity does not represent a single model. There is no solution that would work in all EU countries. However, based on examples of successful flexicurity models implemented by several Member States, we can draw some universal principles. Results of flexicurity policy in EU countries can be documented by means of data about unemployment published by Eurostat (see Figure 3). In other words, flexicurity does not mean a single model. A solution valid for all the EU countries does not exist. Each country must look for its own

specific forms of flexicurity. Data in chart shows different level when implementing this policy.

Figure 3

Unemployment Rates in May 2012, Seasonally Adjusted



Source: Eurostat: euroindicators 101/2012 – 2 July 2012.

Based on theoretical model WS-PS it is possible to create an econometric model. For example, the following original simultaneous model of earnings, prices and unemployment developed from the Danish macroeconomic indicators. Table 3 gives data on the indexes of average hourly earnings (earn), price level (prices) and unemployment (unempl) for Denmark for the period 1994 to 2011. All indexes are with base 2005 = 100.

Table 3

Development of the Selected Macroeconomic Indicators, Denmark 1994 – 2011

Year	earn	Prices	unempl
1994	66,21	79,28	160,42
1995	68,66	80,93	141,67
1996	71,27	82,65	131,25
1997	74,07	84,46	108,33
1998	77,27	86,02	102,08
1999	80,52	88,16	106,25
2000	83,45	90,72	89,58
2001	86,97	92,86	93,75

2002	90,34	95,11	95,83
2003	93,71	97,10	112,50
2004	96,58	98,22	114,58
2005	100,00	100,00	100,00
2006	103,08	101,89	81,25
2007	107,02	103,64	79,17
2008	111,75	107,16	70,83
2009	115,18	108,58	127,08
2010	117,81	111,08	156,25
2011	120,00	114,14	158,33

Source: Eurostat statistics, April 2012.

http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Using the data given in Table 3 and EVIEWS software package the following simultaneous regression model is obtained in a general form:

$$\text{earn}_t = c_1 + \alpha \text{prices}_t + \text{unempl}_t + \gamma \text{earn}_{t-1} + u_1$$

$$\text{prices}_t = c_2 + \lambda \text{earn}_t + \varepsilon \text{prices}_{t-1} + u_2$$

and subsequently in a particular form:

$$\text{earn}_t = -20,466 + 0,396 \text{prices}_t + 0,018 \text{unempl}_t + 0,765 \text{earn}_{t-1} + u_1$$

$$\text{prices}_t = 24,45 + 0,369 \text{earn}_t + 0,379 \text{prices}_{t-1} + u_2$$

where c_1 , c_2 are the constants; α , β , γ , λ , ε are the regression coefficients; earn_t is the index of average annual earnings for the year t ; earn_{t-1} is the index of average annual earnings for the previous year $t-1$; prices_t is the index of price level for the year t ; prices_{t-1} is the index of price level for the previous year $t-1$; unempl_t is the index of unemployment for the year t and u_1 , u_2 are the random components. Complete regression characteristics generated by three-stage least square method are shown in Table 4.

Table 4

Estimation Output of Earnings, Prices and Unemployment Simultaneous Regression

System: SYS01_MODEL_WS_PS				
Estimation Method: Three-Stage Least Squares				
Sample: 1994 2010				
Included observations: 17				
Total system (balanced) observations 34				
Linear estimation after one-step weighting matrix				
C	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-20.46629	4.047725	-5.056244	0.0000
C(2)	0.396221	0.107883	3.672683	0.0010
C(3)	0.017517	0.002826	6.197904	0.0000
C(4)	0.764709	0.065061	11.75381	0.0000
C(5)	24.45288	7.093188	3.447375	0.0019
C(6)	0.369219	0.107531	3.433614	0.0019
C(7)	0.378716	0.174076	2.175585	0.0385
Determinant residual covariance		0.009808		
Equation: EARNs = C(1) + C(2)*PRICES + C(3)*UNEMPL + C(4) *EARNs_1				
Instruments: PRICES UNEMPL EARNs_1 C				
Observations: 17				
R-squared	0.999768	Mean dependent var	90.81679	
Adjusted R-squared	0.999714	S.D. dependent var	16.61551	
S.E. of regression	0.280948	Sum squared resid	1.026116	
Durbin-Watson stat	2.160436			
Equation: PRICES = C(5) + C(6)*EARNs + C(7)*PRICES_1				
Instruments: EARNs PRICES_1 C				
Observations: 17				
R-squared	0.998272	Mean dependent var	94.57952	
Adjusted R-squared	0.998025	S.D. dependent var	10.02669	
S.E. of regression	0.445614	Sum squared resid	2.780012	
Durbin-Watson stat	1.668303			

Source: Developed using EViews and Eurostat statistics, April 2012.

All the coefficients are significantly different from zero since their absolute t statistics are more than critical value of 2,160 tabulated for the first equation and 2,145 tabulated for the second one.

This simultaneous regression system also does not contain any autocorrelation because computed Durbin-Watson statistics 2,160 for the first equation and 1,668 for the second equation ideally fit to the intervals of acceptance $\langle 1,710; 2,290 \rangle$ and $\langle 1,536; 2,464 \rangle$ calculated from the statistical tables which are closed to sample size of 17 observations and 5% level of significance. The R^2 are particularly high. It confirms that earnings and prices have strong interactions and mutual influences on the labour market, holding other factor constant. As this model shows and accords with economic theory, average annual earnings are simultaneous positively related to price level. These feedback relationships among variables cause that if average annual earnings go up by 1 percent, the price level goes up about 0,369 percent and if price level goes up by 1 percent, average annual earnings go up about 0,396 percent, other things being equals. Moreover, if unemployment goes up by 1 percent, average annual earnings go up by 0,018 percent, notably because of increasing unemployment of low-earned employees in the economics downturn.

The model also confirms lower flexibility of earnings in comparison with flexibility of prices because influence of preceding year value is greater in the case of average annual earnings (by 0,765 percent) than in the case of price level (by 0,379 percent), *ceteris paribus*.

Conclusion

In late 1990's and the beginning of the 21st century is a period where the conception of the labour market is associated with the WS-PS model. This model is globally considered to be a useful tool for analysing employment policies. During this period international organisations have been trying to make the labour market and economic activity incentives more "flexible". At the Luxemburg Summit in 1997 the EU Member States set employment rate as the common priority axis of their labour market policies. In the same year OECD published a report entitled "Making Work Pay" [16] which underlines the need to increase the difference between labour incomes and unemployment allowances through the mechanisms that encourage citizens to be more active. Unemployment allowances frameworks are being reformed so that only those who are really seeking for a job can enjoy these allowances, while those who refuse to take a job are sanctioned more severely.

The original WS-PS model as well as its modified versions are still topical today when OECD and EU institutions stress the need to implement flexicurity policy across EU countries. This is mainly due to the fact that the WS-PS model comprises a number of variables which relate the reduction of balanced unemployment to the reduction of legal protection of employment and to "activation" of labour market policies and promotion of lifelong learning strategy, which are the elements of flexicurity. Quantitative analysis (economic model constructed on basis of Danish economy data) verifies results of our qualitative analysis.

Bibliography

- [1] *Analýza trhu práce SR z hľadiska integrovaného prístupu k stratégii flexiistoty – vybrané aspekty.* (Analysis of SR Labour Market in terms of Integrated Approach to Flexicurity Strategy – Selected Aspects). Institute for Labour and Family Research. Bratislava: December, 2008.
- [2] ARTUS, P. – MUET, P.A.: *Théories du chômage.* Paris: Economica, 1995.
- [3] AUER, P.: La sécurité du marché du travail: comment conjuguer flexibilité et sécurité pour l'emploi décent. Cahiers de l'économie et du marché du travail n° 2. Genève: Bureau international du Travail, 2008.
- [4] BLANCHARD, O. – WOLFERS, J.: The role of shocks and institutions in the crisis of European unemployment: the aggregate evidence. In: *The Economic Journal*, No. 110, 2008.
- [5] CAHUC, P. – ZYLBERBERG, A.: *Economie du travail.* Bruxelles: De Boeck, 1996.
- [6] CAHUC, P. – GIANELLA, C. – ZYLBERBERG, A.: Le modèle WS-PS explique-t-il le montée du chômage en France? Université de Paris 1: Cahiers Eco et Math No. 98, 1998.
- [7] ERHEL, Ch.: *Les politiques de l'emploi.* Paris : PUF, 2009.
- [8] GAUTIÉ, J.: *Les économistes contre la protection de l'emploi. De la dérégulation à la sécurité.* Paris: CEE, 1998.
- [9] GAUTIÉ, J.: La flexibilité: nouvel horizon du modèle social français? Cahiers Français No 330. La documentation française, 2006.
- [10] GÉRARD-PREVEILLE, L.: Déterminants du taux de chômage d'équilibre et ajustements sur le marché du travail: une analyse sur données françaises. La documentation française No. 159, 2003.
- [11] GUJARATI, D.: *Essentials of Econometrics.* New York: McGraw-Hill, 2006.
- [12] HOREHÁJOVÁ, M.: Le modèle social européen sous l'impact de la crise économique contemporaine. In: *La crise mondiale et les perspectives de reprise dans l'Union européenne.* Prague: Université d'Economie de Prague, 2010.
- [13] LAYARD, R. – NICKELL, S. : Unemployment in Britain. In: *Economica*, No 53, 1986.
- [14] LAYARD, R. – NICKELL, S. – JACKMAN, R.: *Unemployment, Macroeconomic Performance and the Labour Market.* Oxford: Oxford University Press, 1991.
- [15] L'HORTY, Y. – RAULT, Ch.: Les causes du chômage en France: une ré-estimation du modèle WS-PS. Paris: CEE, 1999.
- [16] OCDE: Perspectives de l'Emploi. Paris: OCDE, 1993.
- [17] OCDE: Making Work Pay. Paris: OCDE, 1997.
- [18] OCDE: Protection de l'emploi et performance du marché du travail. In: Perspectives de l'emploi. Paris: OCDE, 2004.
- [19] OCDE: Les déterminants du chômage dans les pays de l'OCDE: une réévaluation du rôle des politiques et des institutions. In: *Revue économique de l'OCDE*, No 44. Paris: OCDE, 2008.
- [20] OECD Employment Outlook, 2008.
- [21] Posilnenie otvorenej metódy koordinácie v oblasti sociálnej ochrany a sociálneho začleňovania. (Strengthening an Open Coordination Method in the Area of Social Protection and Social Inclusion.) Brussels: Council of the EU, November 2008.
- [22] REDOR, D.: *Economie du travail et de l'emploi.* Paris: Montchrestien, 2011.
- [23] RIEVAJOVÁ, E. – KAVEC, J.: Flexibilita trhu práce a ochrana zamestnanca. (Labour Market Flexibility and Employer Protection.) In: *Economic Review*, No. 2/2009, ISSN 0323-262X.
- [24] SCARPETTA, S.: Le rôle des politiques du marché du travail et des dispositions institutionnelles concernant le chômage: une comparaison internationale. In: *Revue économique de l'OCDE*, No 26. Paris: OCDE, 1996.
- [25] STANDING, G.: *Global labour flexibility. Seeking distributive justice.* Geneva: ILO, 1999. 443 p. ISBN 78 0 312225 254.
- [25] WILTHAGEN, T. – ROGOWSKI, R.: Legal regulation of transitional labour markets. In: SCHMID, G. – GAZIER, B.: *The dynamics of full employment: social integration through transitional labour markets.* Cheltenham: Edward Elgar, 2002, 449 p. ISBN 1-84064-281-5.