Risk factors for unemployment: social security taxes

Panzaru, Ciprian

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

Risk Factors for Unemployment: Social Security Taxes

Ciprian Pânzaru*

Abstract: *The paper investigates the relationship between social security and the unemployment in Romania. Social security includes all collective measures established by legislation to maintain individual or family income, to ensure an income when some or all sources of income have been lost or exhausted, or in situations where the individual must cope with increased expenses. In this approach, the unemployed, as active population but unemployed and therefore with no source of income, represent a specific vulnerable group. This is why it is important to know the causes that generate unemployment. The paper aims to verify the connection between social security contributions paid by employers and unemployment. The premise of the study takes into account the fact that an increase in social security contributions leads to an increase in the cost of labour, and this leads to a decrease in investments which in turn lead to higher unemployment rates.*

Keywords: unemployment, labour market, social security, vulnerable group

Introduction

Social Security states its specificity as a basic concept that encompasses all the collective measures established by legislation to maintain individual or family income or to provide income when some or all sources of income were lost or exhausted, or in situations which must be coped with increased expenses. In other words, the state, through its institutions, must care about ensuring the welfare necessary for a healthy development of the individual and of the community he/she is being part of. Any imbalance, occurring on this component, degrades the quality of life, induces on individual and social level economical discomfort which leads to instability and discontent. Having as main role the prevention of social risks, social security applies to very diverse areas, influencing their development strategy. Social security becomes especially valuable by the fact that it is a form of protection used by the State in order to secure its nationals from the risks induced by various social adversities. Every person and every family needs protection from the risks and uncertainties resulting from everyday activities. When this need is not satisfied for the individual and his family, the effects generated have a significant negative impact on the individual's comfort, on the motivation to work and, especially, on the sustainability and functionality of economic systems. Developing an adequate social security system, configuration and acceptance of a coherent legal framework, available internationally, is an investment in "human infrastructure" no less important than the investment in physical infrastructure.

In the context of the speech regarding the "international human rights" (The Universal Declaration of Human Rights, adopted by the United Nations' General Assembly on 10 September 1948), developed since the formation of the United Nations, and especially the basic rights and freedoms to which all people have the right, the idea of social security has been explicitly recognized as a fundamental human right and is enshrined as such in international legal instruments (International Labour Organisation). The recognition of the

* West University of Timisoara, Faculty of Sociology and Psychology, No. 4 Parvan Blvd., 300223, Timisoara, Romania, E-mail: cpanzaru@socio.uvt.ro

right to social security has been defined by the universal instruments negotiated and accepted by the countries all over the world, which state social security as a basic social right to which every human being is entitled to. In this way, the right to social security is reflected in the declaration on human rights adopted by the United Nations and is explicitly stated as such in the legal framework, which stipulates the fundamental human rights, namely the Universal Declaration of Human Rights and International Covenant on Economic, Social and Cultural Rights (ICESCR). Specifically, Article 22 of the Universal Declaration of Human Rights, which contains the essence of the idea of social security, states that "all men, as members of society have the right to social security and especially entitled to realization", being actually a continuation of Article 1 of the Universal Declaration of Human Rights, which states that "all human beings are born free and equal in dignity and rights". The substance of these ideas is also emphasized in Article 25 of the Universal Declaration of Human Rights which states that "Everyone has the right to a standard of living adequate for health and welfare, both for himself and his family, including food, clothing, housing, medical care and necessary social services and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control".

The basic concept related to the idea of social security is the Welfare State model. The concept of social security is based on this model, including political, economic and administrative dimensions.

Theoretical Background

The essential aim of social policy in the twentieth century is to ensure the welfare of citizens (Marshall, 1950). In other words, it is the governmental guarantee of minimum standards in terms of income, nutrition, health, education and housing, ensured to every citizen with social rights (Wilensky, 1974).

Wilensky complements this definition further by showing that most of these guarantees, often summarized as social security, took the form of a social insurance against basic risks of industrial life: occupational accidents, occupational diseases, unemployment, old age (Wilensky, 1985), considering that the above-mentioned minimum social standards cannot be jeopardized unless in case of loss of income, therefore in the case of unemployed people.

Before the industrial revolution, social protection was assumed by the church and was implemented primarily through charitable acts of the church (Fierens, 1992).

In England, the practice of social security was caused by the conflict between the royalty and the church that led the state to assume this charitable role in 1601, by the poverty law, which provided assistance to the sick and disabled.

First social security system was created by Bismarck between 1883 and 1889, although some German states had initiated the establishment of funds for sickness to which workers could contribute since 1850. Sickness insurance, which started in 1883 and was led by existing mutual aid funds, was the first step. Occupational accident insurance operated by employers associations emerged in 1884, and invalidity and old age insurance under local administration were established in 1889. Already the three social partners – workers, employers and the state – had a role, rights and obligations in managing the system as a whole. Social security, as indicated by its name, was funded by contributions. It was mandatory for the employees for which it was created, whether qualified or not, young or old, male or female, and regardless of health status. The principle of solidarity manifested

by regular contributions paid by employees to make possible the bearing of socio-economic and health difficulties when they affected some people, on the one hand, and, on the other hand, by the interests of employers in financing the system whose results were positive for both labour force and production. Germany's example was followed by other countries in Europe and other continents, so social security spread to Latin America, USA, and Canada in the '30s, and in some African and Asian countries after World War II.

A quantum leap in the evolution of social security and which led to a somewhat different system than the German one was the system implemented in England after World War II, whose author was William Beveridge. In fact, in Europe, back in the '30s, authors such as John Maynard Keynes and William Henry Beveridge combine economic and social rationales to justify an expansion of state functions on the same idea of welfare state. These authors advocate for interventionist government policies (allocation, stabilization and redistribution), whereby the government would use fiscal and monetary measures to mitigate the adverse economic and social effects of economic recession.

The term social security was first used in the U.S. (Social Security Act, August 14, 1935). According to Roosevelt, the architect of this approach, social security was an effort to meet en bloc society needs and find for them a set of coordinated solutions. The law was the result of a series of measures designed to pull the U.S. out of the recession that began in 1929. In this act, the term social security refers mainly to income support systems (relating to old age, death, occupational injury, unemployment), public health, social assistance and social compensation (for veterans and other victims of adverse government measures).

On the coordinates of this research, it should be noted that there are a number of studies that treat the relationship between unemployment and social security. This topic is treated in research undertaken by international or European bodies such as the OECD (1994, 2004, 2006) European Commission (2006); World Bank Staff (2006). Also authors such as Esping-Andersen (2000), Heckman (2000), Breen (2005), Addison and Texeira (2003) have dealt with this issue. More applied studies have been conducted on the relationship between social security and labour market or on the relationship between social security, unemployment and economic growth. Also Lingens' (2003) study invoking unemployment as an effect of wage taxes and of economic increase/decrease is worth mentioning, along with Qiong Zhang's (2009) research on the relationship between social security and labour market in Germany, Bräuninger (2004) who studied the relationship between social security, unemployment and economic growth, or Saint-Paul (1992) with studies on pensions and economic growth. However, we must emphasize that there is limited research that directly emphasizes the direct relationship between unemployment and social security. The study by Corneo and Marquardt (2000) addresses the role of social security in shaping unemployment, but in their case, too, the emphasis was more on the relationship between unemployment and economic growth. But unlike Bräuninger, Corneo and Marquardt believe that there is no relationship between unemployment and economic growth.

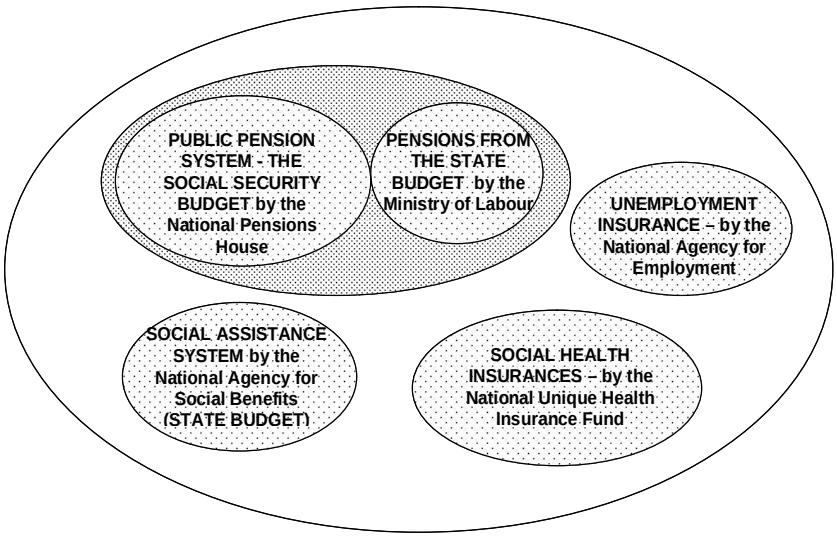
Khan (2004) conducted a panel analysis to study the relationship between macroeconomic conditions (including unemployment rate) and social security expenditures. The study conducted on a panel of 13 OECD countries showed that certain social security expenditures are influenced by macroeconomic conditions. Aaron H. J. (1982) talks about the importance of social security and the fact that, due to difficulties to maintain an economically effective social security system (with a surplus of receipts to

ensure adequate benefits for all contributors), taxes are getting higher and higher. Their effect is reflected on other dimensions, such as the level of net income and saving.

Data and Methods

This paper aims to verify the relationship between the social security contributions paid by employers and unemployment by affecting labour costs and investment. The premise of the research was: the greater the level of social security contributions, the greater the cost of labour; the greater the cost of labour, the more investments decrease; the decrease in investment leads to an increase in unemployment.

Social insurance contributions represent amounts that economic agents have to transfer to finance the social security system. In Romania, the social security system consists of the pension component (integrated in the public pension system through a separate budget, i.e. the social security budget), plus a set of pensions paid from the state budget (such as the guaranteed minimum social pension), the component that includes unemployment insurance, the health insurance component, and the social assistance component (child benefits, aids, allowances etc., paid from the state budget). Schematically, the social security system in Romania is highlighted below:



Source: Authors' elaboration

Figure 1. *The Romanian Social Security System*

The components of the social security system in Romania are supported by employer contributions, employee contributions and allocations from the state budget.

Consistent with the objectives of this study, the analysis has focused, from the assembly of all social security expenditures, only on social security expenditures paid by the employer. The evolution of the contribution rates paid by employers for the period 2000-2009 is shown in the table below:

Table 1. *Social security contribution rates (%) incurred by the employer and the employee in Romania between 2000 and 2009*

Year	Social security contribution rates incurred by the		
	Employer	Employee	Total
2000	30.00	5	35
2001	23.33	11.67	35
2002	23.33	11.67	35
2003	24.5	9.5	34
2004	22	9.5	31.5
2005	22	9.5	31.5
2006	19,75	9.5	29.25
2007	19.75	9.5	29.25
2008	18	9.5	27.5
2009	20.8	10.5	31.3

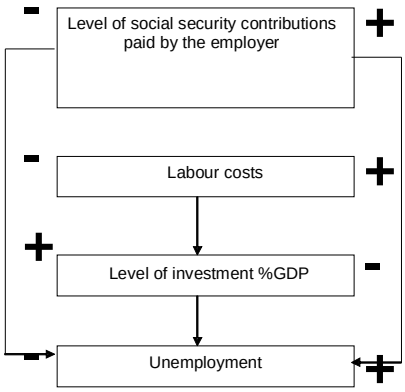
Source: Ministry of Labor, Family and Social Protection

Under the premise of this research, unemployment is directly influenced by the level of social contributions paid by the employer. Unemployment was treated according to the standard definition and refers to persons aged 15 and over who, during the reference period, do not work, are available to start work immediately, are looking for a job.

Labour cost expresses the wage cost for a company (economy) to produce a unit of product.

Investments represent expenditures for construction, installation and assembly works, for purchasing equipment, transportation means, other expenses for creating new assets for the development, modernization, and reconstruction of existing ones, and the value of services related to the transfer of ownership of existing assets and land (notary fees, commissions, transport, loading and unloading fees etc.).

The data were taken from the Eurostat database. The relationship between the analyzed variables is expressed in the figure below:

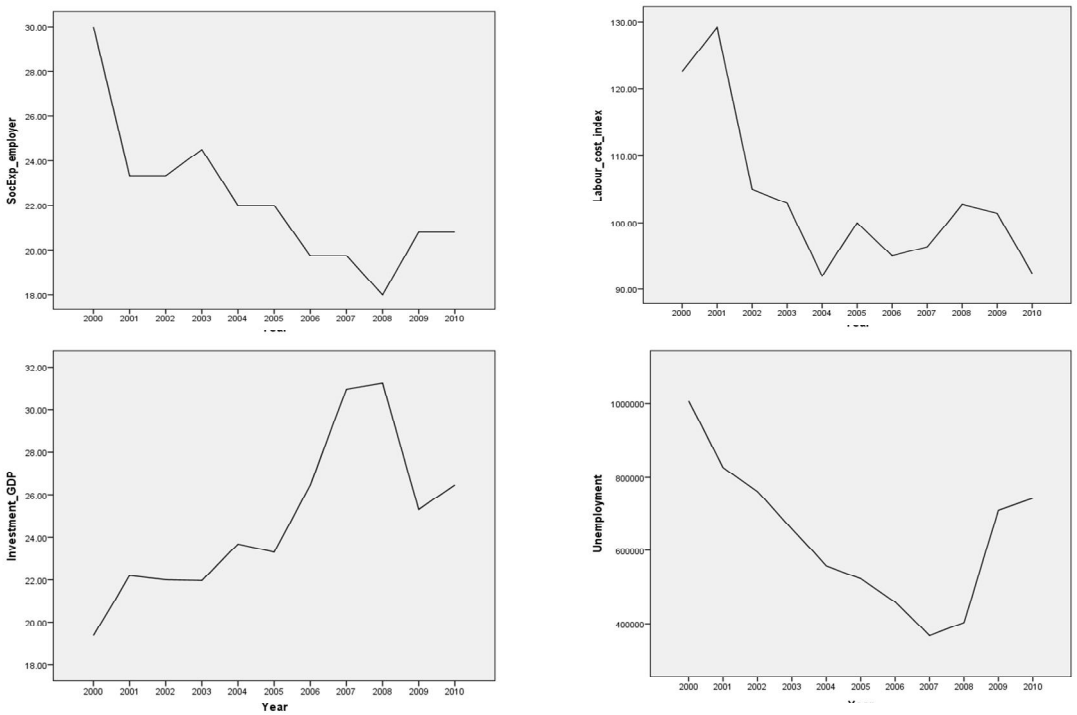


Source: Authors' elaboration

Figure 2. *The relationship between labour cost, investment, social security contributions paid by employers and unemployment*

To verify this relationship we used the regression calculation. Variables analyzed were:

- The level of social security contributions paid by the employer for the period 2000-2009 – (SocExp_Employer);
- Labour cost index for the period 2000-2009 – (LCI);
- The level of investment as a percentage of GDP for the period 2000-2009 – (Investment_%GDP);
- The level of unemployment for the period 2000-2009 – (Unemployment);
- The graphical representation of the four variables analyzed is shown below:



Source: Authors' calculation through SPSS: 20 from EUROSTAT data set

Figure 3. *Series 2000-2010 SocExp_Employer, LCI, Investement_GDP and Unemployment*

The descriptive statistics of the four variables is shown in Table 2.

Table 2. *Descriptive statistics*

	SocExp_employer	Unemployment	Investment_GDP	LCI
Minimum	18.00	367838	2.70	40.90
Maximum	30.00	1007131	6.60	45.20
Mean	22.2055	637939.09	4.5000	43.1182
Std. Deviation	3.19888	195562.273	1.43457	1.31059
Skewness	1.415	.330	.259	.103
Kurtosis	3.039	-.434	-1.819	-.558

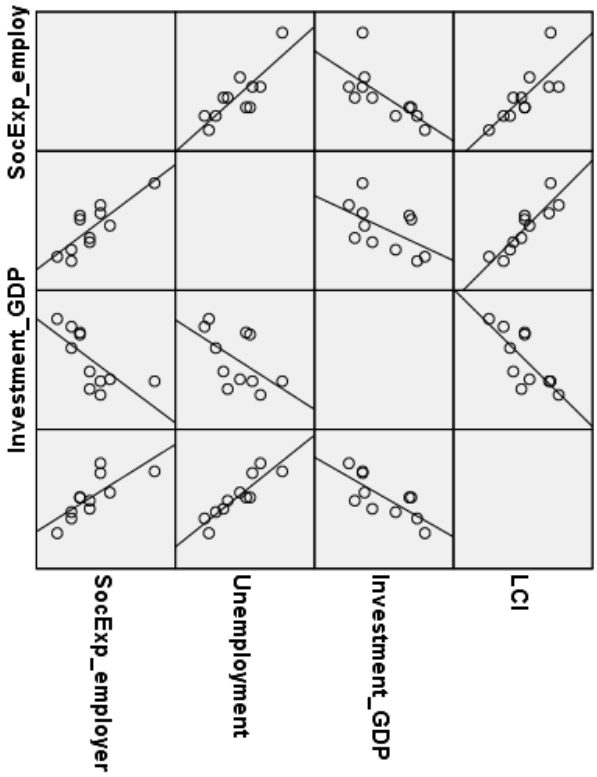
Source: Authors' calculation through SPSS: 20

To achieve the intended purpose, we took the example of a multifactor linear model on the data that calculate unemployment as an effect of the level of social security

contributions, labour costs and investment. The model describes a dependence between unemployment and other mentioned variables:

Unemployment = f (SocExp_employer, LCI, Investment_%GDP)

The graphical representation reflects the linearity of the relationship between the variables analyzed, as can be seen in Figure 4.



Source: Authors' calculation through SPSS: 20

Figure 4. *Graphical representation of the linearity between variables*

Using this type of association between variables, we can consider the model a linear multiple one. Therefore, it can be expressed as:

$Y = a_i+b_1*X1+b_2*X_2+b_3*X_3+.....+b_n*X_n$

or

Unemployment = a_i+b_1*SocExp_employer+b_2*LCI+b_3*Investment_GDP

The results obtained from running the regression are presented in Table 3:

Table 3. *Regression results*

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
.960[a]	.923	.889	65060.600	1.746	
	Sum of Squares	df	Mean Square	F	Sig.
Regression	352815853.871	3	117605284.624	27.784	.000[b]
Residual	29630172.038	7	4232881.291		
Total	382446025.909	10			
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-5816439.698	1155738.740		-5.033	.002
SocExp_ employer	27809.268	10412.559	.455	2.671	.032
Investment_ GDP	57443.629	22713.306	.421	2.529	.039
LCI	129373.846	27662.369	.867	4.677	.002

a. Dependent Variable: Unemployment

b. Predictors: (Constant), LCI, Investment_GDP, SocExp_employer

Source: Authors' calculation through SPSS: 20

Results and Conclusions

Based on the previously described model, we were able to highlight the relationship between the variables analyzed. Firstly, based on the F test (27.784) and the level of significance of 0.000 (> 0.01), we can reject the null hypothesis and accept that investment (taken as % of GDP), the cost of labour and social security expenditures paid by the employer influence together with unemployment; in other words, it can be argued that the model is valid. In fact, the correlation between all these variables confirms the initial assumption, namely that the increase in social security contributions leads to an increase in labour costs, which decreases investment, decreased investments lead to an increase in unemployment (in all cases, the significance threshold was below 0.005). The correlation coefficient was R = 0.960, indicating a high correlation between social security contributions, labour costs, investment and unemployment. In other words, based on the value of R^2 (0.92), we can say that 92% of the variation of the unemployment variable is determined by predictor variables (the level of social insurance contributions, labour costs and investment). The Durbin-Watson test (1.746) indicates the absence of autocorrelation between variables. In addition, t test results indicate that all coefficients have values significantly different from 0; as such, we can consider that all variables taken into account (the level of social security contributions paid by the employer, labour costs and investment as a percentage of GDP) are important for estimating the unemployment variable. The multiple regression analysis sought to evaluate the extent to which unemployment is determined by the level of social security contributions paid by the employer, labour costs and investment. In conclusion, we can say that the relationship between these variables is linear and about 92% of the variation of the unemployment

variable can be explained by the three variables taken into account. As such, the model may be expressed by the following equation:

Unemployment = 0.455*SocExp_employer + 0.421*Investment_GDP+0.867*LCI

References

Aaron, H. J. (1982) E*conomic effects of social security* (Vol. 16). Brookings Institution Press.

Addison, J. T., Teixeira, P. (2003) The economics of employment protection. *Journal of Labor Research*, 24, 1, 85-129.

Bräuninger, M. (2005) Social security, unemployment, and growth. *International tax and public finance*, 12, 4, 423-434.

Breen, R. (2005) Explaining cross-national variation in youth unemployment market and institutional factors. *European Sociological Review*, 21, 2, 125-134.

Corneo, G., Marquardt, M. (2000) Public pensions, unemployment insurance, and growth. *Journal of Public Economics*, 75, 2, 293-311.

Fierens, J. (1992) Droit et pauvreté. Droits de l'Homme, sécurité sociale, aide sociale.

Esping-Andersen, G. (2000) Who is harmed by labour market regulations? Quantitative evidence. *Why deregulate labour markets*, 66-98.

European Commission (2001) *Living on the edge: An empirical analysis on long-term youth unemployment and social exclusion in Europe*. Opladen: Leske-Budrich.

Eurostat (n.d.). Retrieved September 13, 2013, from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.

Heckman, J. J. (2000) *The cost of job security regulation: evidence from Latin American labor markets* (No. w7773). National Bureau of Economic Research.

Khan, J., Gerdtham, U. G., Jansson, B. (2004) Effects of macroeconomic trends on social security spending due to sickness and disability. *American journal of public health*, 94, 11, 2004-2009.

Lingens, J. (2003) The impact of a unionised labour market in a Schumpeterian growth model. *Labour Economics*, 10, 1, 91-104.

Marshall, T. H. (1950) *Citizenship and social class: And other essays*. University Press.

Organisation for Economic Co-operation and Development (1994) *The OECD jobs study: Facts, analysis, strategies*. Paris: OECD.

Organisation for Economic Co-operation and Development (2004) *OECD Employment Outlook: 2004*. Paris.

Organisation for Economic Co-operation and Development (2006) *OECD employment outlook: Boosting jobs and incomes*. Paris: OECD.

Saint-Paul, G. (1992) Fiscal policy in an endogenous growth model. *The Quarterly Journal of Economics*, 107, 4, 1243-1259.

Wilensky, H. L. (1974) *The welfare state and equality: Structural and ideological roots of public expenditures* (Vol. 140). University of California Pr.

Wilensky, H. L. (1985) Nothing Fails Like Success: The Evaluation - Research Industry and Labor Market Policy. *Industrial Relations: A Journal of Economy and Society*, 24, 1, 1-19.

World Bank Staff (2006) *World Development Report 2007: Development and the Next Generation*. (World Bank e-Library.) Washington: World Bank Publications.

Zhang, Q. (2009) The Labour Market Effect of Social Security in Germany. *Canadian Social Science*, 5, 6, 131-134.