PRODUCTION ‑ AN OPPORTUNITY TO BALANCE THE EMPLOYMENT LEVEL IN ROMANIA

Cristiana MATEI[1]

Abstract. *The paper points out that production, as a complex economic activity, implies a balanced mix of production factors, especially labour and natural factors, which are abundant in Romania, but so far not fully exploited. There are also opportunities for major investment in equipment and machinery as well as for the horizontal development of industries, among which the food industry is the most visible one. We also deal with zones supposed to witness increasing employment, while competition could be an engine of economic growth for Romania.*

The contribution of the productive sector is very necessary for economic equilibrium, as social employment of the people benefits them both by the working time and by the incomes earned, as they help to increase to consumption of economic goods in a balanced way.

Keywords: Production, Labour, Economic Growth, Sustainability

JEL Classification: M11, M12, O0, O1, O4, J4, J53

Introduction

Labour – a prime production factor – is the specific intellectual and/or manual (physical) activity by which people make use of their aptitudes, knowledge and experience by means of proper tools in order to produce goods for their urgent and future needs.

Labour has always been and still is an active and determinant factor; it helps to involve the other production factors and ensure their perfect combination and utilisation.

People, by means of their aptitudes and abilities, experience and knowledge, are the producers of all economic goods. Adam Smith – the

---

[1] Ph. D. in Economics, e-mail: crismatei2002@yahoo.com

father of political economics – shows that labour is the source of the entire wealth of the society and of the nations.

Considering the role of labour in the entire economic life, J. M. Keynes pointed out the following: "That is why I agree with classical opinion that labour produces everything, helped by what was earlier called *craftsmanships* and today *technique*[2]". To assess the role of labour at present, we should consider, of course, some obvious processes such as: relative diminution of working time, quick replacement of labour with capital, prevalance of the intellectual creative effort and replacement of more manual activities with automation, robotisation and computerisation of production. The long-term trends in the labour factor evolution can be revealed by analysing it quantitatively, qualitatively and structurally. That is why we should work well and earnestly.

Earnestness also implies aspects concerning the visibility of work performed by people during activities made in the economy. It is earnestness because the present we face difficulties in dealing with the employment level. Since labour contributes – owing to the organisation and development mode – to the individual welfare and the global (national, international) welfare, it seems to be permanently visible. Therefore, either the individuals or the activities within which they work face increasing non-declaration. This phenomenon are aggregated in a sector called informal, which produces results disseminated throughout the economy, *i.e.* it is distributed and involves people who work, earn and consume.

The size of the informal sector is important since it affects budgetary incomes and restrains the governments' capacity to provide social services, thus causing tax distortions and wakening the government authority and law observance.

The production of the informal sector is not recorded and, usually, not included in indicators measuring the population's development level and welfare.

1. Theoretical and conceptual approach to labour

Employment is a growing concern of any responsible government, as the employment level is an important indicator of any economy. This

---

[2] J. M. Keynes – 1970, *Teoria generală a folosirii mâinii de lucru, a dobânzii şi a banilor*, Bucureşti, Editura Ştiinţifică, op. cit., p. 229 (translation from English).

indicator provides us with a general view of the quantity and quality of labour in an economy, impacting on economic growth.

An important concept related to employment, especially to the period following the 1929-1933 world crisis, regards the full employment. By full employment, we understand an economic situation implying the full utilisation of production factors – first of all, labour – and being characterized by the employed population/active population relation = 1 [Manea, Popescu, 2004]. This case is a rather theoretical one, especially because of the labour mobility (so-called frictional unemployment[3]).

Lord Beveridge[4] [Beveridge, 1954], the father of social protection in the United Kingdom, points out that full employment "does not mean that unemployment is automatically excluded, that every man and woman able to work is productively employed in every day of his/her life". For him, full employment can be ensured when 3 percent of the active population is unemployed.

J. M. Keynes thinks that full employment is a "case when the global amount of employment stays inelastic to growth in effective demand for the corresponding production". He criticizes the classic theory that "supply creates its own demand" and formulates a theory on employment, consisting basically of the following:

- Labour utilisation is not only determined by the market but it interferes with the interests of the entrepreneurs in the market economy. So, "when the condition of the technique, of resources and of the factor cost per one employment unit is given, then the employment amount depends – both in every enterprise or branch and as a whole – on the collected amounts which entrepreneurs seek to obtain by the employment through which they expect to maximize the difference exceeding the factor cost"[5].

---

[3] Frictional (intermittent) unemployment corresponds to the necessary period to pass from one job to another or to find the first job. Some authors think that frictional unemployment is permanent in dynamic economies implying high (industrial, geographic, occupational) mobility of labour.

[4] L. Beveridge – 1954, *Full Employment in Free Society*, 3rd edition, London, p. 18.

[5] J. M. Keynes – 1970, *Teoria generală a folosirii mâinii de lucru, a dobânzii şi a banilor*, Bucureşti, Editura Ştiinţifică, op. cit. , p. 61 (translation from English).

- The labour amount to be used by entrepreneurs depends on the effective demand (D) which is the sum of the community's expected expenditures on consumption and the expenditures on new investment. "The size of D at the point on the global demand curve where it intersects the global demand curve is called effective demand", as this is the point where the profits expected by entrepreneurs are maximized.
- Therefore, the unemployment amount in the equilibrium state depends, on one hand, on the global supply function and, on the other hand, on the propensity for consumption and investment. "This is – as Keynes said – the essence of the general theory of labour utilisation".

An important aspect of the economy is the macroeconomic equilibrium focused on the equilibrium of some aggregated measures: employment, production, savings, investments [Stiglitz, Walsh, 2002]. Within a competitive equilibrium with full employment, each of them is determined by making demand equal to supply. We can speak about full employment only after wage flexibilisation.

The general equilibrium model

It is possible to describe the general equilibrium level of the economy, the production level, the real wage and the real interest rate at which the labour, goods and capital markets are balanced.

As regards the labour market, the real wage[6] is adjusted to achieve equal labour demand and supply. It determines the equilibrium level of real wage and the level of full employment. On the goods market, the function of aggregated short-term production allows for the determination of the production level achieved by companies in conditions of full employment. This production level represents the potential GDP, the production level which the labour supply – by using the available capital stock – may reach when the economy reaches the full employment level. Within the capital

---

[6] The real wage is obtained by relating nominal wage to the price level w/P. The real wage provides an indication of the wage purchasing power. What counts for the workers in the real wage, *i.e.* the nominal wage corrected by the price changes. Also, the companies are interested in the real wage, because for them what counts is the labour cost (nominal wage) in relation to the prices collected by the companies for the production (price level).

market, we can achieve the equality of withdrawals and incomings of the circular income flow. The real interest rate is adjusted in order to ensure that savings are equal to investments at the production level corresponding to full employment. At the same time, this condition ensures that the aggregated demand is equal to the aggregated supply at the production level corresponding to full employment. The merchandise market is balanced.

The general equilibrium model utility

The general equilibrium model is very useful, since it enables us to understand the effects of several changes in the economy – the effects of the changes in a certain market and how they are felt on the other markets.

A case study

We deal now with the effects of the introduction of new equipment (machinery) on the economy. Since workers become more productive, the new equipment (machinery) cause an increase in the marginal product of the workers. This brings on an increase in the labour quantity required by the workforce at every level of the real wage, shifting the labour demand curve to the right.

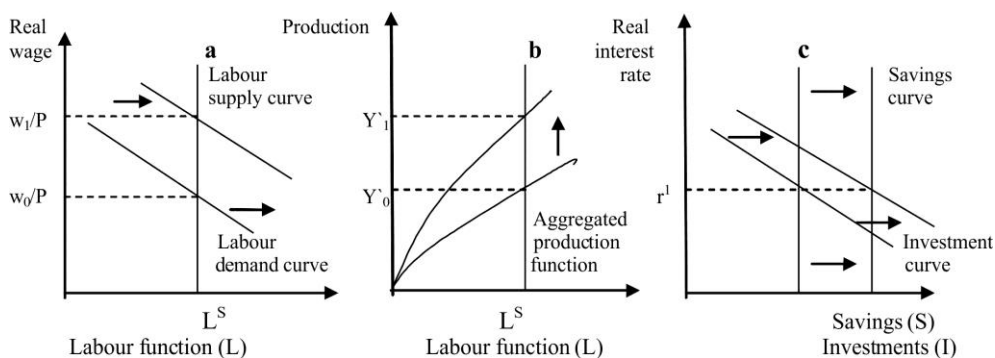The wage equilibrium level rises as shown in Chart 1, the first graph below:

Chart 1. Effects of the introduction of the new equipment (machinery) in the economy

Owing to the workers' higher productivity and the fixed labour supply, the production level corresponding to full employment rises, as

revealed by the short-term aggregated production function shown in Graph 1, second chart (b).

The equilibrium of the goods market can be maintained only if the aggregated demand increases so that companies can sell the higher production level attained.

As shown above, it may happen only if the real interest rate is adjusted to maintain the equality between savings and investment on the capital market. At every level of the real interest rate, investments may increase since companies want to take advantage of the opportunities for profit offered after the utilisation of new equipment (machinery). At the same time, the income rise corresponding to full employment brings about an increase at every level of the real interest rate both of consumption and savings. The increase at every level of the interest rates of savings and investments is shown as a shift of the savings and investments curves to the right in Graph 1, chart (c).

If in equilibrium, the real equilibrium rate could rise, fall or stay, depending on the shifting amplitude. Irrespective of the impact on the real interest rate, the equilibrium level of investments rises.

So far we have dealt with the current effects of the above changes, but there are also are long-term effects. ON long term, there will be more factories and equipment owing to increasing investments. The future capacity of the economy will rise and further contribute to economic growth.

Besides the employment level, we should also deal with the undeclared labour level, which, according to some estimates for certain countries, accounts for half or even more of the GDP equivalent.

For a scientific approach it is necessary to identify the causes of its occurrence from a historical und theoretical point of view as regards the informal economy and employment.

2. Employment in Romania between formal and informal

In the last decades, there have been debates on the origin, structure and role of the informal and its contribution to the development of the national economy. Some authors think that it may vanish when economic growth takes place, but reality did not confirm this assumption.

The term "informal sector" was first used by the English economist Keith Hart in his paper on "Informal Income Opportunities and Urban

Employment in Ghana"[7]. He said that the informal sector consists of economic activities carried out by low income labour segments in Accra, which made up the urban underproletariat, consisting mostly of illiterate and unskilled migrants.

Some authors [Portes, Centeno, 2003] reveal that internationally the concept of informal sector was adopted by the International Labour Office, which decided that informality is related to the low productivity and accumulation capacity as well as to poverty."[8]

Other experts who studied this phenomenon in developing countries, especially in Latin America, had a different vision of that. We mention here Hernando de Soto[9], an economist from Peru, who reformulated Hart's original theme that informal activities are a sign of popular entrepreneurial dynamism and urged to study this matter.

Another author, Edgar L. Feige [Feige, 1990][10] depicted four types of economic activities in the shadow area: illegal, undeclared, unrecorded and informal, which have different significance for various economic matters.

In Europe, the term "undeclared work" was suggested in the late 1990s by the European Commission. As detailed in the EC

---

[7] Keith Hart, 1973 – "Informal Income Opportunities and Urban Employment in Ghana", *The Journal of Modern African Studies*, Vol. 11, No. 1 (Mar., 1973), pp. 61-89, Published by: Cambridge University Press Stable URL: http://www.jstor.org/stable/159873, Page Count: 29.

[8] Centeno, M. A., & Portes, A. (2003). *The Informal Economy in The Shadow of the State*. Princeton University CMD Working Paper 03-06 February.

[9] Hernando de Soto Polar (or Hernando de Soto; born 1941) is a Peruvian economist known for his work on the informal economy and on the importance of business and property rights. He is the president of the Institute for Liberty and Democracy (ILD), located in Lima, Peru.

[10] Edgar L. Feige (born 19 September 1937, Berlin) is an emeritus professor of economics at the University of Wisconsin–Madison. A graduate of Columbia University (BA. 1958) and the University of Chicago (Ph. D., 1963) he has taught at Yale University ; The University of Essex; Erasmus University and held the Cleveringa Chair at the University of Leiden in 1981-82. He has published widely on such topics as underground and shadow economies; tax evasion; transition economics; financial transaction taxes the Automated Payment Transaction tax (APT tax); and monetary theory and policy. He has consulted with various US and international government agencies.

Communication[11] on undeclared work, it consists of "paid activities that are legal as regards their nature, but not reported to the public authorities, considering the differences among the regulations of the member states".

The OECD suggested a similar definition, using the term "hidden employment" for the work or activity" which, although not illegal itself, had not to be reported to one or several administrative authorities."[12]

The term "informal economy" seems to be more comprehensive than "informal sector" since informal workers and activities do not pertain to one sector but to several sectors. Informal economy includes "all economic activities carried out by workers and economic units which by law or in practice are not regulated or are not sufficiently regulated through formal agreements". Informal employment is a larger concept including informal employment in formal enterprises, as well as the self-employed in informal enterprises and households.

The cause of the increasing weight of informal employment in developing countries is a question largely debated in literature. To find answers for adequate policies it is necessary to know the factors that stimulate informality. Literature[13] provides a set of explanations:

- Informality may be considered to be mostly the result of a development model unable to produce enough good/decent jobs. This phenomenon was worsened by the poor capacity of the public and private sectors to cope with rapid growth of population and labour force as well as by the discrimination of women and several social group and occupations in the labour market.
- Subcontracting stimulation by globalisation and economic liberalisation caused a diversification of formal employment forms.
- The formal sector regulations were destined to support large enterprises, often unable to satisfy the needs and requirements of the SMEs.
- Employers informalized the jobs, previously formal, for diminishing the labour cost and coping with the competition.

---

[11] COM (98) – 219 final, Communication from the Commission on undeclared work, 7 April 1998.
[12] OECD Employment Outlook, 2004.
[13] OECD, 2009, "Promoting Pro-Poor Growth Employment", https://www.oecd.org/dac/povertyreduction/43514554.pdf

- Following the study of the specific bibliography, we feel that when analysing the informal phenomenon we should consider the following issues:
- Within enterprises: some activities are formal and others are informal: which shows that there is underdeclaration of the activities and, consequently, of expenditures, incomes and results.
- Within the relationship among enterprises: cooperation among formal enterprises, when all activities and workforce are formal and enterprises are informal.
- Within the relation between formal workers and informal workers, by ignoring the type of enterprise and the sector.

Knowing the forms taken on, the causes and effects of informal employment is very important because it allows us to understand the connections in the labour market and its impact, *i.e.* economic, financial and social blockages as well as the deterioration of the social protection for the workforce.

In 2013, the informal economy in Romania reached 28.4% of the GBD, slightly diminishing as against 2012 (29.1% of GDP), as shown by some independent international assessments, such as "Size and Development of the Shadow Economies of Portugal and 35 other OECD Countries from 2003 to 2013: Some New Facts" by Friedrich Schneider[14].

The author used internationally recognized methods[15] for estimating the informal economy level, as shown in Annex 1.

The analysis of the 2013 data, Romania (28.1) faces a high level of underground economy as percentage in the GDP, and is ranked above Estonia (27.6), Poland (23.8), Greece (23.6), Slovenia (23.1), and Hungary (22.1). Bulgaria (31.2) is above Romania in this respect.

---

[14] Prof. Dr. Dr. H. C. mult. Friedrich Schneider, Department of Economics, Johannes Kepler University, Altenbergerst. 69, A-4040 Linz, Austria.

[15] The calculation of the size and development of the shadow economy is done with the MIMIC (Multiple Indicators and Multiple Courses) estimation procedure. Using the MIMIC estimation procedure one gets only relative values and one needs other methods like the currency demand approach, to calibrate the MIMIC values into absolute ones. For a detailed explanation see Friedrich Schneider, editor, *Handbook on the Shadow Economy,* Cheltenham (UK): Edward Elgar Publishing Company, 2011.

Table 1: Size of the Shadow Economy of European Countries over 2003-2013 (in % of off. GDP)

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bulgaria	35.9	35.3	34.4	34	32.7	32.1	32.5	32.6	32.3	31.9	31.2
Czech Republic	19.5	19.1	18.5	18.1	17	16.6	16.9	16.7	16.4	16.0	15.5
Estonia	30.7	30.8	30.2	29.6	29.5	29	29.6	29.3	28.6	28.2	27.6
France	14.7	14.3	13.8	12.4	11.8	11.1	11.6	11.3	11	10.8	9.9
Germany	17.1	16.1	15.4	15	14.7	14.2	14.6	13.9	13.7	13.3	13.0
Greece	28.2	28.1	27.6	26.2	25.1	24.3	25	25.4	24.3	24.0	23.6
Hungary	25	24.7	24.5	24.4	23.7	23	23.5	23.3	22.8	22.5	22.1
Latvia	30.4	30	29.5	29	27.5	26.5	27.1	27.3	26.5	26.1	25.5
Lithuania	32	31.7	31.1	30.6	29.7	29.1	29.6	29.7	29.0	28.5	28.0
Luxembourg	9.8	9.8	9.9	10	9.4	8.5	8.8	8.4	8.2	8.2	8.0
Poland	27.7	27.4	27.1	26.8	26	25.3	25.9	25.4	25	24.4	23.8
Romania	33.6	32.5	32.2	31.4	30.2	29.4	29.4	29.8	29.6	29.1	28.4
Slovenia	26.7	26.5	26	25.8	24.7	24	24.6	24.3	24.1	23.6	23.1
Slovakia	18.4	18.2	17.6	17.3	16.8	16	16.8	16.4	16	15.5	15.0
United Kingdom	12.2	12.3	12	11.1	10.6	10.1	10.9	10.7	10.5	10.1	9.7
27 EU-Countries / Average (unweighted)	22.3	21.9	21.5	20.8	19.9	19.2	19.8	19.6	19.2	18.9	18.4

Opposite to them there are countries with a level three times lower than that of Romania, such as France (9.9), the United Kingdom (9.8) or Luxembourg (8), as shown in Graph 2.

It is worth mentioning that the trend in the last years (2010-2013) in Romania shows that the informal economy is diminishing, but its level is still high.

Knowing the level of the informal economy enables us to analyse the way informal employment takes place as well as its causes and effects.

Also, it is very useful to analyse the main sectors affected by this phenomenon for further research and study for formulating public policies destined to diminish the size of informal economy.

Knowing the employment level and informal employment level is a must for any responsible government looking for ways of stimulation of employment in Romania.

This way we can rise the trust in economy, for sustainable development.
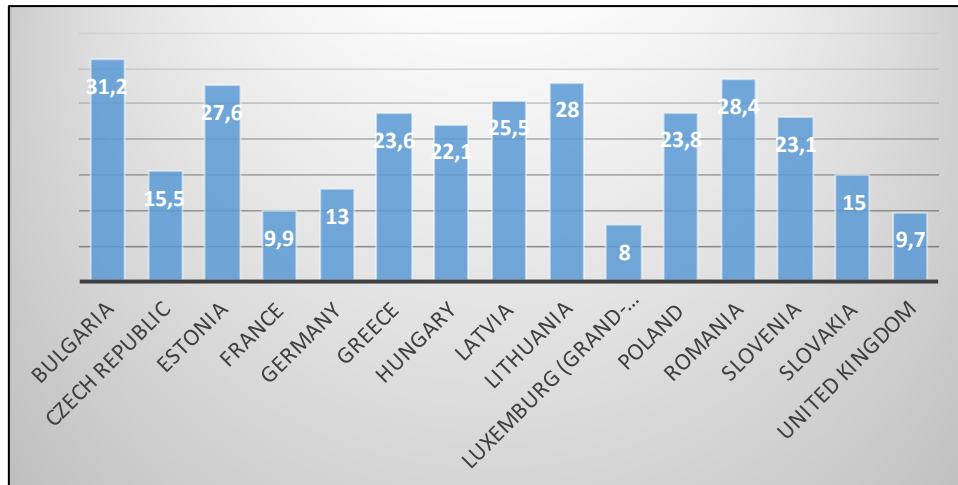
Graph 2 - Size of the Shadow Economy in 15 European Countries over 2013 (in % of off. GDP)

The data on the informal economy evolution from 2003 to 2013 shows a general lowering trend as percentage of the GDP; in 2013 the maximum level was 33.6 and in 2013 the minimum level was 28.4 as shown in Table 2.

Table 2: Size of the Shadow Economy in Romania over 2003-2013 (in % of off. GDP)

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Romania	33.6	32.5	32.2	31.4	30.2	29.4	29.4	29.8	29.6	29.1	28.4
27 EU-Countries	22.3	21.9	21.5	20.8	19.9	19.2	19.8	19.6	19.2	18.9	18.4

As for the EU 27 average, between 2003-2013, there was a general lowering trend in informal economy, according to Chart 3.
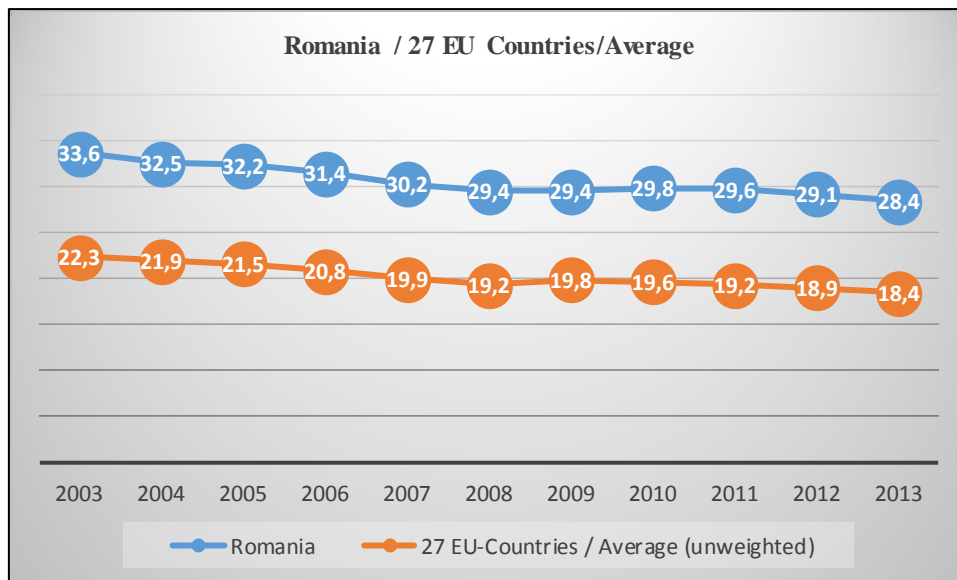
Graph 3 - Size of the Shadow Economy in Romania/27 European Countries over 2003-2013 (in % of off. GDP)

3. Production – An opportunity to balance the employment in Romania

For formulating and implementing firm and effective policies for reducing the informal economy it is necessary to identify the sectors inclined to become informal and the vulnerable categories in the labour market.

In Romania the sectors affected by the failure to declare expenditures, incomes and outcome are the following:

- Economic agents pertaining to the informal sector as a whole.
- Units pertaining to the formal sector but partially declaring the expenditures, incomes and outcome.
- Individual householders mainly in agriculture, housekeeping, elderly care services.

For example, we found out that some activities are based on labour contracts stipulating minimum wages to avoid high taxes, but in fact the amounts paid are much larger. This practice is mostly found in constructions, agriculture, processing industry, hotels and restauration, etc.

Another form is non-declaration or false declaration of working hours; in fact the effective working time is much longer. This is mostly found in consultancy and expertise, because it is difficult to assess the service length. Since production is a complex activity requiring processing flows and varied and complex technologies that need workforce besides the other production factors; strategies are required for some important sectors like constructions, agriculture and processing industry.

The above strategies should be worked out so that they attract funds, the employment should be consistent and informal employment should diminish.

For implementing these strategies it is necessary to formulate policies and take measures against informal economy and informal employment.

The policies should be oriented towards prevention and sanctioning.

Conclusions and proposals
Knowing the size of the informal sector may help us draw out strategies for sectoral development, policies and measures for reducing this phenomenon in order to increase the trust in economy, to increase the government capacity to provide social services and to abide by the law.

The negative effect is that the production of the informal sector is not recorded and, usually, not included in the indicators measuring the population's development level and welfare.

On long term, we should stimulate by laws (for prevention and sanctioning) the productive activities in constructions, agriculture and related domains, factories and equipment, owing to increasing investment.

Bibliography
1. Adair, P., & Neef, R. (2007) – "Ce este economia informală din România?" in R. Neef, M. S. Stănculescu, & P. Adair, *Economia informală şi transformare socială în România* (pg.13-19). Bucureşti: Editura Paideia.
2. Adler-Lomnitz, Larissa. (1998a) – "Komaság" Kölcsönös szívességek rendszere a chilei városi középosztályban", *Replika 29.*, 139-149.

3. Adler-Lomnitz, L. (1998b) – "Informal Exchange Networks in Formal Systems: A Theoretical Model", *American Antropologist, vol. 90, issue 1*, 42-55.

4. Adler-Lomnitz, L., & Scheinbaum, D. (2004) – "Trust, Social Networks and the Informal Economy: A Comparative Analysis", *Review of Sociologyof the Hungarian Sociological Association, vol 10, number 1, 11 June* , 15-26.

5. Anghel, R. (2004) – "Economia informală în comunism şi post-comunism: mere şi ţuică într-un sat din Maramureş", in L. Chelcea & O. Mateescu, *Economia informală în România. Pieţe, practici sociale şi transformări ale satului după 1989.* (pg. 263-287), Bucureşti, Editura Paideia.

6. Benton, L. A. (1989) – "Industrial Subcontracting and the Informal Sector: The Politics of Restructuring in the Madrid Electronics Industry", in A. Portes, M. Castells, & L. A. Benton, *The Informal Economy. Studies in Advanced and Less Developed Countries.* (pg. 228-244). Baltimore-London: The Johns Hopkins University Press.

7. Beveridge, L. (1954) – *Full Employment in Free Society*, 3rd edition, London.

8. Bhattacharya, S. (2007) – *Informal Sector Dynamics and its Role in the Capital Accumulation Process: The Contrasting Cases of India and South Africa.* 05. 11., 2011, http://www.policyinnovations.org/ideas/policy_library/data/informal_sector_dynamics/_res/id=sa_File1/PAPER.pdf

9. Breman, J. (2007) – *The Informal Sector Economy: from Problem to Solution.* 05.11.2011., d http://www.cee-recherche.fr/colloque_tepp/eco_informelle/pdf/Breman.pdf

10. Busse, S. (2001). "Strategies of Daily Life: Social Capital and the informal economy in Russia", *Sociological Information*.

11. Castells, M., & Mollenkopf, J. (1992) – "Is New York Dual City?", in M. Castells, & J. Mollenkopf, *Dual City: Restructuring New York* (pg. 399-425). New York: Russel Sage Foundation.

12. Castells, M., & Portes, A. (1989) – "World Underneath: The Origins, Dynamics, and Effects of the Informal Economy", in A. Portes, M. Castells, & L. A. Benton, *The Informal Economy. Studies in Advanced and Less Developed Countries* (pg. 11-37), Baltimore - London: The John Hopkins University Press.

13. Centeno, M. A., & Portes, A. (2003) – *The Informal Economy in The Shadow of the State,* Princeton University CMD Working Paper 03-06 February.
14. Chelcea, L., & Mateescu, O. (2004) – *Economia informală în România: Pieţe, practici sociale şi transformări ale statului după 1989,* Bucureşti, Editura Paideia.
15. Chen, M. A. (2008) – "Informalization of Labour Markets. Is Formalization the Answer?", in e. Shahra Razavi, *The Gendered Impacts of Liberalization. Towards „Embedded Liberalism"?* (pg. 191-218). New York - Abingdom: Routledge.
16. Feige, E. L. (1990) – "Defining and Estimating Underground and Informal Economies: The New Institutional Economic Approach", *World Development, Vol. 18., No. 7* , 989-1002.
17. Fernández-Kelly, M. P., & Garcia, A. M. (1989)v – "Informalization at the Core: Hispnic Women, Homework and the Advanced Capitalist State", in A. Portes, M. Castells, & L. A. Benton, *The Informal Economy. Studies in Advanced and Less Developed Countries.* (pg. 247-264), Baltimore-London: The Johns Hopkins University Press.
18. Hart, Keith (1973) – "Informal Income Opportunities and Urban Employment in Ghana", *The Journal of Modern African Studies,* Vol. 11, No. 1 (Mar., 1973), pp. 61-89, Published by: Cambridge University Press Stable URL: http://www.jstor.org/stable/159873.
19. Jula D., (2002) – *Modelare şi prognoză macroeconomică*, Bucureşti, Editura Estfalia,
20. Jula N., (1999) – *Teorii şi modele privind piaţa muncii. Piaţa muncii în România*, Bucureşti, Editura Brent.
21. Keynes, J. M. (1970) – *Teoria generală a folosirii mâinii de lucru, a dobânzii şi a banilor*, Bucureşti, Editura Ştiinţifică.
22. Manea, G., Popescu, I. (2004) – *Economie*, Bucureşti, Editura Cermaprint.
23. Schneider, Friedrich (2013) – "Size and Development of the Shadow Economies of Portugal and 35 other OECD Countries from 2003 to 2013: Some New Facts".
24. Stiglitz, J. E., Walsh, C. E. (2002) – *Economie*, Bucureşti, Editura Economică.

Annex 1 - Size and Development of the Shadow Economies of Portugal and 35 other OECD Countries from 2003 to 2013: Some New Facts by Friedrich Schneider

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Greece	28.2	28.1	27.6	26.2	25.1	24.3	25	25.4	24.3	24.0	23.6
Hungary	25	24.7	24.5	24.4	23.7	23	23.5	23.3	22.8	22.5	22.1
Ireland	15.4	15.2	14.8	13.4	12.7	12.2	13.1	13	12.8	12.7	12.2
Italy	26.1	25.2	24.4	23.2	22.3	21.4	22	21.8	21.2	21.6	21.1
Latvia	30.4	30	29.5	29	27.5	26.5	27.1	27.3	26.5	26.1	25.5
Lithuania	32	31.7	31.1	30.6	29.7	29.1	29.6	29.7	29.0	28.5	28.0
Luxembourg	9.8	9.8	9.9	10	9.4	8.5	8.8	8.4	8.2	8.2	8.0
Malta	26.7	26.7	26.9	27.2	26.4	25.8	25.9	26	25.8	25.3	24.3
Netherlands	12.7	12.5	12	10.9	10.1	9.6	10.2	10	9.8	9.5	9.1
Poland	27.7	27.4	27.1	26.8	26	25.3	25.9	25.4	25	24.4	23.8
Portugal	22.2	21.7	21.2	20.1	19.2	18.7	19.5	19.2	19.4	19.4	19.0
Romania	33.6	32.5	32.2	31.4	30.2	29.4	29.4	29.8	29.6	29.1	28.4
Slovenia	26.7	26.5	26	25.8	24.7	24	24.6	24.3	24.1	23.6	23.1
Spain	22.2	21.9	21.3	20.2	19.3	18.4	19.5	19.4	19.2	19.2	18.6
Slovakia	18.4	18.2	17.6	17.3	16.8	16	16.8	16.4	16	15.5	15.0
Sweden	18.6	18.1	17.5	16.2	15.6	14.9	15.4	15	14.7	14.3	13.9
United Kingdom	12.2	12.3	12	11.1	10.6	10.1	10.9	10.7	10.5	10.1	9.7
27 EU-Countries/Average (unweighted)	**22.3**	**21.9**	**21.5**	**20.8**	**19.9**	**19.2**	**19.8**	**19.6**	**19.2**	**18.9**	**18.4**

Source: Own Calculations, December 2012.