

## MODEL OF CHOICES, INSTITUTIONS AND DIRECT DEMOCRACY QUASI-ECONOMIC FACTORS OF THE INFLUENCE OF UNDERGROUND ECONOMY

Corneliu-Sorin BAICU

*Stefan cel Mare University of Suceava, 720229, Romania*  
*baicu\_sorin@yahoo.com*

Cristian Valentin HAPENCIUC

*Stefan cel Mare University of Suceava, 720229, Romania*  
*valentinh@seap.usv.ro*

### Abstract

*Research in recent decades has shown that an analysis of underground economy from the limiting perspective of economic factors of influence is insufficient. Through an integrative approach it is opened the way to a multidisciplinary and multi causal understanding of all factors (economic, noneconomic, quasi economic) that influence the phenomenon of underground economy. The present work pleads for the analysis of the concept underground economy (multidimensional and composite) through the instruments of study: the choices, institutions and direct democracy. The model of choices express the decision of labor force to activate on the official labor market or to the illegal labor market in the context given by opportunities, preferences and constraints. Institutions defines the capacity of regulation and implementation of government policies with implications in stimulating or discouraging economic subjects to hide activities in the sphere of underground economy. Direct democracy through its institutions (referendums, legislative initiatives) provides the political framework for the active involvement of the taxpayer as a voter or elector to a healthy and sustainable economic development. The results of active involvement of citizens consist in a more effective implementation of strategies and tax policies and a reduction of incentives to escape in the sphere of economic informality.*

**Key words:** *direct democracy; informal sector; institutions; underground economy; model choice of labor force*

**JEL Classification:** *O17, O43, P16, H26*

### I. INTRODUCTION

The right to existence of the underground economy as a sub branch of economic science is the result of multiple attempts of conceptualizing and theorizing. Definition of the underground economy is based on illicit economic activities and is performed by various tools - analysis criteria such as: "official economy (-nonofficial economy), legal (-illegal), commercial (-noncommercial), monetary (-nonmonetary), declared (-undeclared), production (-transfer), economic-statistic, registered (-unregistered), exhaustive (-nonexhaustive), intention (-nonintention), reply (-nonreply), market economy (-domestic economy)" (Baicu, 2014, p.32). Through the underground economy we understand "all economic activities undeclared to institutions involved in the assessment of taxes and social contributions, which escapes statistical records and the national accounts" (Angelescu, Ciucur et al, 2001, p. 183).

An integrative perspective and a detailed analysis of the morphology of the underground economy cannot be done without analyzing all the factors that generate this phenomenon. Consideration of quasi economic factors such as elections, institutions and direct democracy is one of the ways most relevant to understand the size of the underground sector.

Understanding of the behaviour of the taxpayer in relation with the state, integrative and interdisciplinary approach constitutes a premise for understanding serious underground sector (Baicu and Hapenciuc, 2015). The perspective on the underground economy in the context of vector analysis: choices, institutions and direct democracy is the best pretext to analyze of this study

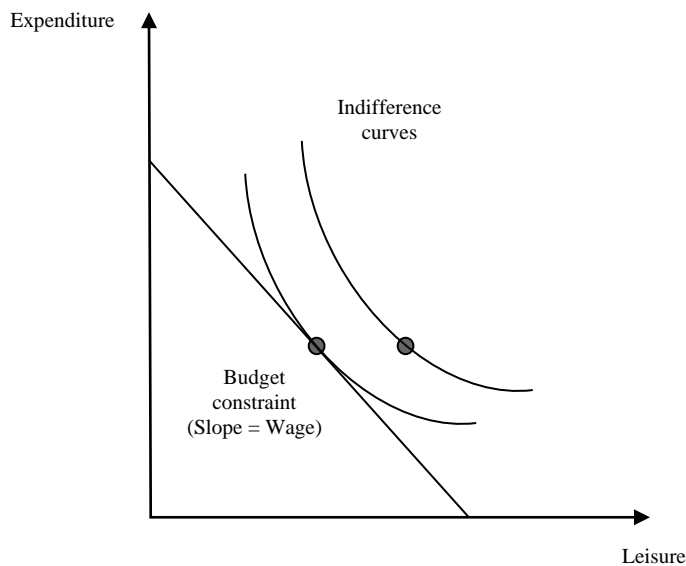
The present work falls into the category of conceptual research combining aspects of deductive nature with those of inductive deductive nature having as background the controversial relationship between quasi economic factors and underground economy. The paper is structured on three quasi economics factors: 1. choices factor stresses the importance of choices model and decisions of the supply of labour force to act in formal or informal sector; 2. The institutions factor express the role of strong institutions in discouraging underground activities; 3. The direct democracy factor shows the importance of taxpayer involvement in democratic decision-making process aimed at designing tax systems and transition strategies from informal to formal economy.

**II. THE MODEL CHOICE**

The economy studies how individuals, businesses, government and other organizations in society make choices and how those choices determine the use of society's resources (Stiglitz and Walsh, 2005). The choices, according to Stiglitz and Walsh are analyzed in area described by these concepts: compromises, incentives, exchange, information and distribution. The economic analysis of any choices requires, for any rational people or company, identifying the set of opportunities. Defining the limits used by each actor of economic life is an important step in an exhaustive analysis of choices. The set of opportunities is defined by the relationship constraints-choices as meaning that constraints limit choices. The constraints that limit the choices of individuals and companies are time and money. The constraints of budget express the set of opportunities whose constraints are imposed by money. The time constraints express the set of opportunities whose constraints are imposed by time. Summarizing the above ideas can be argued that the money (incomes), and the activities are opportunities for both formal and informal activities.

Paradigm choices - set of opportunities - constraints (budget + time) indicates a valid mechanism of operating in the visible (official) economy, the same mechanism raises questions regarding the choice of informal economy and will be a pretext of analysis in this section. In the official economy or visible some researchers, in order to understand the motivation of the workforce, are using the basic model of choice (Stiglitz and Walsh, 2005) or the neoclassical model incomes - leisure (Schneider and Enste, 2013) where the time allocation for each person is a given objective. Both models use as analysis tools the constraint budget or budget line and indifference curves.

Within basic models, alternatives or extra time options or illicit work are ignored or not provided in the analysis. The starting points in analyzing the underlying models assume that the individual has only one occupation and is not working in the underground economy. Unfortunately these assumptions are not consistent with the reality of the labour market. From an economic perspective free time is defined as the time in which the individual could to work (in the official economy) to earn an income, but that is not spent working. As a result a person receives a higher income if is giving up to its free time. Individuals are willing to give up some free time for a revenue growth. Indifference curves (curves isoutility) express within basic models all combinations income (salary) - free time from the individual (actor, interpreter of both formal and informal economy roles) hopes to achieve the same level of satisfaction. In other words, preferences for income-leisure combinations are represented by indifference curves and answer the question "what the labor market actors want?". In the chart income-free time (figure 1), individual system of preferences is represented by a number of indifference curves, theoretically infinite. Budget line expresses achievable income when work or at leisure time varies depending on a given wage rate.



**Figure 1. Indifference curves and choices leisure-income**

Source (Joseph E. Stiglitz, Carl E. Walsh, 2005, p.191)

The problem on which the budget line is responding is constraint and it is characterised by the question "what can the labour market actors? ". The total of one man choices is defined by budgetary constraints. The equilibrium point of the labour market actor unveil election of optimal allocation of free time, default work time, and answer the question "what do the actors of labour market?". The slope of budget constraint is given by wage level. The slope of indifference curve is the marginal rate of substitution between leisure time and income

(wages) and measures the amount of income that the individual requires to compensate for giving up to another hour of free time.

To maximize the total utility, individuals will choose, at some point, the optimal combination that will satisfy their desires (preferences) and opportunities. From geometrically point of view, this will occur where preferences, described by indifference curves map, will meet the possibilities described by budget line. Junction point where it will perform is so called the equilibrium point. The equilibrium point is reached where one of indifference curves is tangent to the budget line. In point of contact both curves have the same slope, meaning that marginal rate of substitution is equalising the wage. According to Schneider and Enste, point of tangency expresses the optimal allocation of time, understanding by this an efficient allocation of work time and free time (Schneider and Enste, 2013). Isachsen and Strom tried to explain the underground economy by using the concept of optimizing of the time allocated together with theories of tax evasion (Isachsen and Strom, 1980). According to these authors: individuals divide their time into three segments, for official working time, informally working time and leisure; tax evasion is specific to unofficial working time; a higher marginal tax rate leads to a decrease of labour supply on the official market; marginal tax burden increases the underground economy.

Decision of labour to work or no work can be analysed and through paradigm {choices - set of opportunities - constraints (budget + time) - compromises}. As in the case of nonclasic model, the analysis tools are targeting binomial (leisure / official working time) - (income / salary). Entering into the equation of a third element, unofficial working time or illicit working time opens possibilities of combining of their analysis, thus illustrating the practical and real labour market. Possibilities of combining reflects, in our opinion, in another manner the mechanism choices - set of opportunities- constraints, adapted to conditions created by the illicit working time and by informal sector or underground economy.

### III. INSTITUTIONS

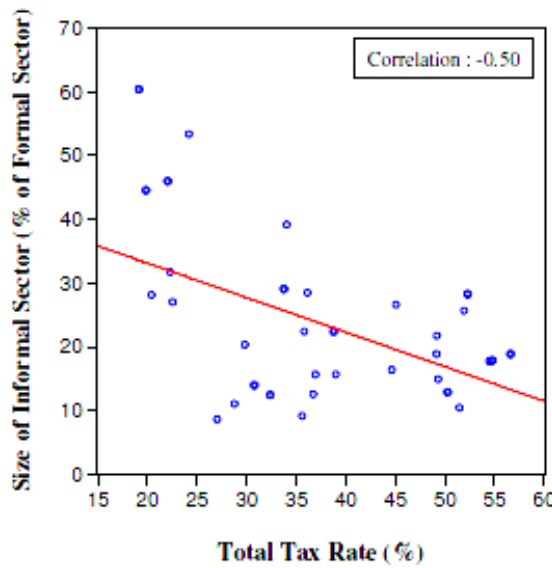
In some working papers are analyzed the etiological factors of the underground economy through the decisive role of institutions and rule of law. We see that companies facing with - onerous regulations, inconsistent application of the law and, especially, corruption - identifies an additional incentive to conceal their activities in the underground economy. Some empirical analysis suggests that institutions are a key determinant of the underground economy even more important than tax rates. Global growth of public protests against perceptions of poor governance and lack of sustainable growth is an opportunity for reflection on the need to develop strong institutions. The effects of a healthy consolidation of institutions are reflected in the extension of formal economy benefits, encourage of economic growth and increase of business opportunities. High underground savings raise problems on developing economic and social policies being the source which triggers a vicious circle, governments with informal economies or high underground levels can raise tax rates to earn, thus encouraging the extension, sometimes alarming, of the underground economy. This can erode the institutional capacity of government and the state seen on a global dimension. However there is a positive side, a large informal sector can be regarded as a "nursery" for future economic growth in the formal economy (Singh, Jain-Chandra et. al, 2012). This is particularly important when it is analyzed from a development perspective; we should not forget that poor countries and developing countries have much bigger share of the informal sector than rich countries. To the legitimate question - what is the connection between underdevelopment and the underground economy? - some researchers have introduced in response equation, the role of institutions. Thus, de soto links the issue of underdevelopment of institutional weakness claiming that much of the capital productive potential of poor countries is outside the formal system of property rights (de soto, 2000). In countries with mature systems of property rights, capital can be used as a lever for production activity. The same cannot be said of poor countries, where it is often very difficult to establish clear property rights and capital cannot be used as an effective tool for production activity. Therefore, the productive capacity of the economy is limited because of the institutional weaknesses, the formal economy is hampered to a natural development, encouraging the informalisation of the economy by enclavisation with a small number of beneficiaries (benefits) and many are left outside the official or regulated framework. As such, it requires the establishment of institutions that protect the property rights to unlock the growth potential included in the informal sector.

The empirical analysis concerns the relationship between economy and institutions carried out by anoop singh, sonali jain-chandra and adil mohammad for the imf - which uses data from about 100 countries and includes developed emerging and developing countries - led to the following interesting conclusions: a) it was observed that the underground economy is influenced mainly by the quality of institutions; b) it was found that the share of national income in underground economy is even greater as there is more corruption and rule of law is weak (singh, jain-chandra et. Al, 2012).

Better institutions are associated with a significantly smaller economy. In addition, social, political, economic institutions may, directly or indirectly, generate a conducive framework to the development of the informal sector. Regulatory burden faced by workers and firms is an important factor and determines the size of the underground economy. Regulatory burden (meaning excessive or ambiguous tax laws) include costs related to taxes, administration, work and increase costs for businesses and encourage the transition to the underground economy. A greater regulation is correlated with a larger shadow economy. An aggravation of the regulation

index (Heritage Foundation) with one point is associated with a 12 percent increase in the size of the underground economy (Friedman, Johnson et. al, 2000).

According to Aruoba, good institutions are associated with lower inflation, higher taxes and smaller informal sectors (Aruoba, 2010). Therefore, high taxes (coupled with higher inflation) are associated with large informal sectors (figure 2).



**Figure 2. Relationship informal sector – total tax rate (in the institutional context)**

Source (S. Boragan Aruoba, 2010, p. 46)

People engage themselves in underground economic activities for various reasons; the most important are government actions, especially in terms of taxation and regulation. Regarding institutions and government actions, some authors believe that it is possible, for highly developed countries, as a government not to have a strong interest in reducing the gray economy due to: “at least 2/3 of the income earned in the shadow economy is immediately spent in the official economy; as income earned in the shadow economy increases the standard of living of 1/3 of the working population; between 40 and 50% of shadow economy activities have a complementary character, which means that additional value added is created, and this increases the overall GDP with both components official and unofficial; people working in the shadow economy have less time for other things like going to demonstrations, strikes etc; Schneider (2010, p. 457).

Therefore, it is necessary to undertake effective measures to make work in the informal economy less attractive and equipping responsible public institutions to counterbalance effectively the populist and selfish actions of politicians.

#### IV. DIRECT DEMOCRACY

The development of the informal sector can be seen as a consequence of the failure of democracy in its various forms. To support an efficient market economy requires a strong democracy in order to provide optimal public goods and services to taxpayers, citizens or companies. This scenario of failure of democracy, generator of informality, takes shape when the government is wasteful, corrupt and exercise discretion in allocating resources. The citizens who feel burdened by the state will choose "exit option" from the the formal sector and decide to work in the informal sector in response to the precarious democratic and ineffective government. Institutions of direct democracy have the ability to endow citizens with "voice option" to impose performance achievement by the government. In other words, direct democracy is a way to get people out of social and economic isolation caused, most often, by the behaviour of politicians. Increasing of resistance to economic rules and regulations, to institutions that implement and politicians that concept them manifests itself by increasing the role of the nefarious hidden economy. Starting from the formal framework of direct democracy, underground phenomenon can be reduced by applying a strategy based on two pillars: a) less attractive, output option -exit options (exit of the underground economy); b) strengthening the voice option-voice option (voting and participation) (Enste, 2015). In this model instrument forms of direct democracy - such as referendums and legislative initiatives should be introduced to provide taxpayers with more leverage to participate in making decisions aimed at political, social or fiscal aspects.

Various forms of democratic participation can have as result: decrease the perception of imposition of restrictions on personal freedom, stimulating tax morality, civic consciousness, reducing the attractiveness of the informal economy.

The role of direct democracy in the evolution of the shadow economy can be seen through the concepts of constitutionality, democratic system and democratic participation. In this sense, Rivera-Batiz highlighted the

importance of the democratic system in that democracy promotes the formal economy, particularly in less corruption, and implicitly, contribute to the reduction of the underground economy on the other hand (Rivera-Batiz, 2002). Aragonès and Sanchez-Pages argue that a more consistent democratic participation could influence the economy, its impact downwards (Aragonès and Sanchez-Pages, 2009). They bring as argument the example of Porto Alegre City in Brazil where voters were actively involved in the processes of proposal, decision and implementation of public policy. Teobaldeli and Schneider described a model linking the direct democracy of the underground economy through fiscal policy choices made by elected politicians (Teobaldeli and Schneider, 2013). The model shows that more direct democracy favours the implementation of fiscal policies closer to citizens' preferences, thus reducing incentives of individuals to operate informally.

Institutions of direct democracy interact with another feature of the political system, such as the size of the electoral constituency. Direct democracy is expected to have a greater effect in reducing the underground economy, when the electoral system is characterized by a magnitude (when there are several legislators or elected representatives) of the higher constituency. Research in this area suggests that effects of direct democracy institutions on the underground economy is negative, nonlinear, and the results depend on the interaction between direct democracy and the size of the constituency (Teobaldeli and Schneider, 2013).

In literature the relationship direct democracy - economy (underground) is analyzed from the perspective of a set of control variables: direct democracy index (Fiorino and Ricciuti, 2007); magnitude / size of constituency (Persson and Tabellini 2002); democracy age (years of uninterrupted democratic governance); the quality of democracy; size of the country; federal structure (Dell'Anno and Teobaldelli, 2012); ethno-linguistic fractionation (Alesina, Devleeschauwer et. al, 2003); GDP per capita; index of regulatory burden; the size of government; composition of public spending.

If we should express synthetically, we can conclude that, direct democracy has a negative effect, importantly, on the level of activity of economy, this effect is nonlinear and depends also on the magnitude / size of the district /constituency (the number of legislators / deputies / counsellors elected in a constituency / district).

## V. CONCLUSIONS

To reveal the complexity of economic informality are needed multidimensional and pluricauzale approaches of underground economy that addresses both economic and non-economic issues.

The choices model shows that the mechanism of decision taking of labor supply offer and preferences to operate in the informal sector should take into account: a) segmentation of time in formally, informally working time and leisure and by parameters set of opportunities, constraints (budget + time) - compromise.

Recent research highlighted that institutions are one of the determinants of the shadow economy alongside the tax burden, tax morality and corruption. Better institutions are associated with the rule of law, clearer regulations, diminished corruption, lower inflation, higher incomes resulting from taxation and, not ultimately, reduced involvement in illicit activities.

Negative relationship between the degree of direct democracy and size of the underground economy suggests the need to involve taxpayers, politicians and specialists in lawmaking and making fiscal and socio-economic decisions.

Underground economy cannot be fully understood in the absence of complex connections with noneconomic or quasi-economic influencers. This study is intended to constitute a plea for reconsidering the role quasi-economic factors as influencing factors of underground economy.

## VI. REFERENCES

1. Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., Wacziarg, R. (2003) *Fractionalization*. Journal of Economic Growth, 8, pp. 155-194.
2. Angelescu, C., Ciucur, D., Dinu, M. et.al. (2001), *Dicționar de Economie*, București, Editura Economică, p.183;
3. Aragonès, E., Sánchez-Pagés, S. (2009) *A theory of participatory democracy based on the real case of Porto Alegre*, European Economic Review, 53 (1), pp. 56-72.
4. Aruoba, S. B. (2010) *Informal Sector, Government Policy and Institutions, 2010 Meeting Papers* 324, Society for Economic Dynamics, <http://www.eief.it/files/2010/04/s-boragan-aruoba.pdf>, accessed October 12, 2015.
5. Baicu, C.S. (2014) *Anatomy of underground economy in a dichotomous perspective formal-informal*, Emerging Markets Economics and Business. Contributions of Young Researchers. Proceedings of the 5th Conference of Doctoral Students in Economic Sciences, Oradea University Press No.2 , December 2014, pp. 30-37.
6. Baicu, C.S., Hapenciuc, C.V. (2015) *The underground economy from the perspective of the triad economics, sociology, psychology*, The USV Annals of Economics and Public Administration Volume 15, Special Issue, 2015, Editura Universității "Ștefan cel Mare" din Suceava, pp. 45-54.
7. Dell'Anno, R., Teobaldelli, D. (2012) *Keeping both corruption and the shadow economy in check: the role of decentralization*. Working Papers Series in Economics, Mathematics and Statistics WP-EMS 2012/13.
8. De Soto, H. (2001) *The Mystery of Capital. Why Capitalism Triumphs in the West and Fails Everywhere*, A Black Swan edition published 2001, Reading, Berkshire, <https://yendieu.files.wordpress.com/2009/04/the-mystery-of-capital.pdf>, accessed September 19, 2015.
9. Enste, D., H. (2015) *The shadow economy in industrial countries*, IZA World of Labor 2015: 127, <http://wol.iza.org/articles/shadow-economy-in-industrial-countries>, accessed July, 20, 2015.
10. Fiorino, N., Ricciuti, R. (2007) *Determinants of direct democracy*, CESifo Working Paper No. 2035, June 2007, <http://www.econstor.eu/bitstream/10419/26080/1/538306009.PDF>, accessed September, 15, 2015.

11. Friedman, E., Johnson, S., Kaufmann, D., Zoido-Lobaton, P. (2000) *Dodging the Grabbing Hand: the Determinants of Unofficial Activity in 69 Countries*, Journal of Public Economics, Vol. 76, pp. 459–493.
12. Isachsen, A. J., Steinar S., (1980) *The Hidden Economy: The Labor Market and Tax Evasion*, Scandinavian Journal of Economics, Vol 82, 2, pp. 304-311.
13. Persson, T., Tabellini, G. (2002) *THE ECONOMIC EFFECTS OF CONSTITUTIONS What do the data say?*, [http://www.people.fas.harvard.edu/~iversen/PDFfiles/Persson% 26Tabellini 2003.pdf](http://www.people.fas.harvard.edu/~iversen/PDFfiles/Persson%20Tabellini%2003.pdf), accessed September, 15, 2015.
14. Rivera-Batiz, F. L. (2002), *Democracy, Governance, and Economic Growth: Theory and Evidence*, Review of Development Economics, 6 (2), pp. 225-247.
15. Schneider, F., (2010) *The Influence of Public Institutions on the Shadow Economy: An Empirical Investigation for OECD Countries*, [http://www.econ.jku.at/~members/ Schneider/files /publications/2011/RLE Influence PublicInstitutions ShadEc.pdf](http://www.econ.jku.at/~members/Schneider/files/publications/2011/RLE_Influence_PublicInstitutions_ShadEc.pdf), accessed, October 12, 2015.
16. Schneider, F., Enste, D. H. (2013) *The Shadow Economy. An International Survey*, Cambridge: Cambridge University Press., pp. 81-86
17. Singh, A., Jain-Chandra, S., Mohommad, A. ( 2012) *Inclusive Growth, Institutions , and the Underground Economy*, IMF Working Paper Asia and Pacific Department, <https://www.imf.org/external/pubs/ft/wp/2012/wp1247.pdf>, accessed May 14, 2015.
18. Stiglitz, J. E., Walsh, C. E. ( 2005) *Economie*, Editura Economică, București, pp.33-36; 191-193.
19. Teobaldelli, D., Schneider, F. (2013) *The Influence of Direct Democracy on the Shadow Economy*, *Public Choice*, December 2013, Volume 157, *Issue 3-4*, pp 543-567.
20. The Heritage Foundation in partnership with Wall Street Journal (2015) *2015 index of economic freedom*, [http://www.heritage.org/index /download](http://www.heritage.org/index/download), accessed August 17, 2015.