

The Reasons of Underground Economy, Its Results, Methods and the Turkish Case

Assist. Prof. Dr. Zeynep Erdiñ
Anadolu University
FEAS, Department of Economics
Eskisehir/Turkey

Abstract

There are no agreements on the definition of the underground economy and on its measurement approaches as it has many different names. Using false or illegal documents to pass laws and actions through government bodies is deceptive and misleading the government i.e Underground economy. Its activities are caused by financial, economic and political problems. It has positive, negative and many effects on the economy and society. Therefore, Studies about recording the unrecorded economy is the most important aim of our leaders in our country. It is impossible to estimate the exact rate of informal economy, however some measurement methods have been improved. In this study, first the definition of underground economy will be given, second positive and negative effects will be explained. At the last part, the works to measure it and the dimension of underground economy on Turkey will be mentioned.

Keywords: Underground Economy, Effects of the Underground Economy, Measurement Methods of Underground.

JEL Classifications: E26, E20, C52.

1. Introduction

The underground economy, which consists of all commerce on which applicable taxes are being evaded, leads to misleading macroeconomic indicators and thus the application of irrational economic policies. During the 1960's, the underground economy began to be discussed as an important economic and social issue in western economies and in the U.S.A. In the 1980's it became a problem discussed in all economies worldwide. (Erdiñ, 2012)

During the last few years there has been growing concern about the phenomenon of the hidden (or shadow) economy among the public, politicians and social scientists. A useful and commonly used working definition of the underground economy is: All economic activities that contribute to value added and should be included in national income in terms of national accounting conventions but are presently not registered by national measurement agencies (Schneider, 1986).

In this study, first the definition of underground economy will be given, second positive and negative effects will be explained. At the last part, the works to measure underground economy and the dimension of underground economy on Turkey will be mentioned.

2. Defining the Underground Economy

The phenomenon of informal economy is defined under various names in the literature, indicating various aspects of it: underground economy, informal economy, unobserved economy, shadow economy, second economy, parallel economy, hidden economy, illegal economy, unrecorded economy, marginal economy, unreported economy, unofficial economy, dual economy etc. This variation makes it difficult to develop a common definition. In academic studies the term "underground economy" is considered as the most comprehensive definition, as it includes the illegality. (Kök and Şapçı, 2006).

Informal economy refers to all economic transactions and activities that are entered in official records, cannot be documented through legal documents and are not taken into account in calculations of Gross Domestic Product (GDP). (Ay, Sugözü & Erdoğan, 2014)

When the literature for underground economy is analyzed, some basic definitions are observed. According to Schneider (1986), informal economy consists of all the economic activities that cannot be measured due to the absence of any official statistics, although they contribute to the value addition and, therefore, must be considered within the national income calculation. Tanzi (1982) and Smith (1994) define informal economy as market based goods and service production, being legal or illegal, that cannot be included within official GDP calculations. Bagachwa (1995) thinks that underground economy can be classified under three groups: Informal sector, parallel economy and black market economy.

They are informal in the sense that they are mostly unregistered, unrecorded in official statistics; and participants have little or no access to organized markets, to credit institutions, to formal education and training or to many public services (ILO, 1991). Parallel market activities are alternative of legal market activities. It includes illegal production and trade of goods and services that are legal in their nature. Finally, black market activities consist of production and/or distribution of market and non-market goods that are forbidden by government. So different definitions of these three concepts reveal that using aforementioned names of underground economy interchangeably is misleading. (Öğünç & Yılmaz, 2000)

The shadow economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following four reasons:

- To avoid payment of income, value added or other taxes,
- to avoid payment of social security contributions,
- to avoid having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc.,
- to avoid complying with certain administrative obligations, such as completing statistical questionnaires or other administrative forms.

Thus, I will not deal with typically illegal underground economic activities that fit the characteristics of classical crimes like burglary, robbery, drug dealing.etc. I also exclude the informal household economy which consists of all household services and production. (Schneider, 2014)

It is thought that Table.1: A Taxonomy of Types of Underground Economic Activities can be very useful and helpful in understanding of what is underground economy and what kind of economic activities can be classified as underground economy.

Table 1: A Taxonomy of Types of Underground Economic Activities

Type of Activity	Monetary Transactions		NonMonetary Transactions	
Illegal Activities	Trade with stolen goods; drug dealing and manufacturing; prostitution; gambling; smuggling; fraud; etc.		Barter of drugs, stolen goods, smuggling etc. Produce or growing drugs for own use.The fit for own use.	
	TaxEvasion	TaxAvoidance	TaxEvasion	TaxAvoidance
Legal Activities	Unreported income from self-employment; Wages, salaries and assets from unreported work related to legal services and goods	Employee discounts, fringe benefits	Barter of legal services and goods	All do-it-yourself work and neighbor help

Source: Rolf Mirus and Roger S. Smith (1997, p.5) and with additional remarks by Schneider and Enste (2000)

3. Methods to Estimate the Size of the Underground Economy

Although the issue of the shadow economy has been investigated for a long time, the discussion regarding the “appropriate” methodology to assess its scope has not come to an end yet. There are three methods of assessment (Schneider, 2014)

- Direct procedures using the micro level and aiming at determining the size of the shadow economy. An example of this method are surveys.
- Indirect procedures that make use of macroeconomic indicators proxying the development of the shadow economy over time.
- Statistical models that use statistical tools to estimate the shadow economy as an “unobserved” or “latent” variable; e.g. the MIMIC (Multiple Indicator, Multiple Causes) Method.

4. The Main Causes of Underground Economy

In the economic literature, the most important causes of underground economy are increase of the tax burden and social security contributions, increased regulation in the official economy especially in labor markets, forced reduction of weekly working hours, earlier retirement and the declining of tax morale. The increase of tax burden and social security contributions is the most important factor behind the increasing underground economic activities. As it is known, taxes affect labor-leisure choices of economic agents and also encourage labor supply towards to underground or untaxed sector of economy. As the difference between total cost of labor for employers in the official economy and after tax earnings of labor increases, we expect increasing underground economic activities. (Öğünç and Yılmaz, 2000)

The intensity of regulations is also cause of underground economy. The increase of the numbers of laws, regulations and licenses requirements are evidence of increase of the intensity of regulations and decrease of freedom of choice of economic agents. Generally, the regulations can increase legal burden of employers and employers can transfer their burden onto employees’ wages and so it can create an incentive for employees to work in the underground economy. High regulation can also cause employers to stay in the underground part of economy to avoid higher and nontransferable legal burden. Many studies in the literature reveal positive relation among underground economy and intensity of regulation.(Johnson, Kaufmann and Shleifer, 1997)

The principal causes behind the existence of informal economy can be summarized as follows: (Saraç and Başar, 2014)

- Economic causes (unjust distribution of income, inflation, tax system,unemployment)
- Fiscal causes (high tax rates, deficiency in auditing, insufficient accounting services)
- Legal causes (complicated and unclear laws, frequent change in regulation, degeneration in unitary structure)
- Administrative causes (organization of tax authority, technical structure, personnel profile and auditing mechanism)
- Social and psychological causes (tax ethics, taxpayer psychology and historical causes)
- Political causes

5. Effects of Underground Economy

There are both positive and negative effects that an underground economy has on the official or registered economy. Primarily underground economies have a negative effect in the process of economic policymaking. Due to large underground economies, the measured macroeconomic aggregates, such as the unemployment rate or income level, become unreliable. As a result economic policy based on this data is likely to be ineffective.

Underground economies, on the microeconomic side, have significant advantages over official firms and creates unfair competitive conditions. Underground economy firms follow no legal regulations and are more free to set a competitive price than registered firms. Those firms can increase their sale volumes and profit levels by providing their products and services at a price lower than the general market.

Social security institutions are also affected by an underground economy and may suffer a deteriorating financial situation. Firms operating in the underground economy decrease tax revenue and do not contribute to the overall social welfare distribution. Following a decrease in welfare distribution, communities may have an increase in social tension as individuals on low-income will have an decreased living standard.

Being a phenomenon that affects the economy in general, informal economy destabilizes economic and social balances, and harms macroeconomic indicators and monetary and fiscal policies. The negative consequences of informal economy can be summarized as follows: (Saraç and Başar, 2014)

- Underreported GNP and growth rates (real levels are usually much higher).
- Deceptive tax burden and therefore, tax injustice.
- Inadequately calculation of public sector volume.
- Budget deficit due to insufficient taxation
- Instability in economic balances due to high borrowing or issuing money
- Inadequate assessment of creditworthiness of firms due to inadequate financial reporting
- Overreported unemployment rates
- Overreported inflation rates
- Inadequate reporting in export, import and current balance indicators
- Inadequate reporting in productivity indicators Dollarization
- Deviation from economic policies
- Welfare loss
- Unjust income distribution
- Corruption in the society
- Inefficiency in the legal system
- Consumer damnification due to nonstandard, poor quality products
- Unjust competition

Despite the many negative effects, an underground economy does contribute to the registered economy in a positive way. Firms that operate in an underground economy have lower production costs, hence there is an increased labour demand when compared to the registered economy. As a result of this increased employment, dependancy on social welfare will decrease. As prior mentioned the firms operating in the underground economy can provide their goods and services at lower costs. This allows members of society on lower incomes to access goods and services that were previously inaccessible.

To list some of these positive contributions;

- It functions as a kind of “social relief valve” during crises by creating employment and income opportunities, causing increase in supply (Ilgin,1995).
 - Lower prices on the products due to low cost production, flexibility in working times and conditions (Carter, 1984).
 - Providing dynamism to the economy and causing capital accumulation and growth(Saraç and Başar,2014)
- Research into the positive and negative relationship between the growth of both underground and official economies has proved to be controversial. Some researchers found that an increasing activity of underground economies would negatively affect the economic growth rate of the country. They found that increased underground activity led to a decrease in tax revenue for the government. As a result the level of infrastructure investment, necessary for economic growth, would also decline. Among researchers a lack of consensus exists on the relationship between the economic activity and growth of both underground and official economies.

6. Estimating the Size of the Underground Economy in Turkey

Earlier studies present evidence to suggest that participation in the underground economy in Turkey became widespread in the 1970s and 1980s for several reasons. However, with the liberalization of the economy beginning in 1987, profits in the underground economy were eroded as controls on trade, foreign exchange, and prices were removed. The incentive to engage in underground activity should have been expected to reduce as the supply of commodities increased in official markets.

The size of black economy in Turkey is substantially larger in comparison with developed countries. Studies on estimation of underground economy of 21 advance countries between 1988-2000 period shows that these economies has shadow economy between % 14 and %21of their official gross domestic product (GDP) (Schneider and Enste, 2002).

On the other hand, the results of the different estimations for Turkey are usually changing between %20 and %40 for the same period. This is a sign for the government agencies that the country should deal with this problem. (Yıldız, 2013)

Many researchers, academics and policy makers are interested in underground economy and its measurement in Turkey. The measurement of the underground economy has been the subject of intense debate in the literature. Some authors have used the direct method to assess the underground economy while others have attempted an indirect method, known as the non-monetary approach and monetary approach, respectively. As the table shows, the estimated size of the shadow economy ranges from 3 percent to 178 percent depending on the time period investigated and the methodology used. Table 2 below summarizes the measurement efforts that have been conducted by various authors.

Table 2: The Size of the Underground Economy in Turkey from Various Studies

Author(s)	Period	Underground Economy as percent of 'Official' GDP	Methodology
<u>Kasnakoğlu (1993)</u>	1968-1990	4 - 35	Currency Ratio
<u>Temel et al. (1994)</u>	1975-1992	6 - 20	Currency Demand Approach
<u>Yavla(1995)</u>	1968-1993	0 - 42	Currency Demand Approach
<u>Oğünç-Yılmaz (2000)</u>	1971-1999	11 - 22	Currency Demand Approach
<u>Cetintas-Vergil (2003)</u>	1971-2000	17 - 31	Currency Demand Approach
<u>Savaşan (2003)</u>	1970-1998	10 - 45	MIMIC Randomized Response
<u>Us (2004)</u>	1987-2003	3 - 12	Currency Demand Approach
<u>Dorukkaya(2005)</u>	1998-2004	29 - 37	Tax Evasion Rate
<u>Baldemir et al. (2005)</u>	1980-2003	11 - 28	MIMIC Randomized Response
<u>Yılmaz (2006)</u>	1970-2004	0 - 178	Simple Currency Ratio
<u>Akalm - Kesikoğlu (2007)</u>	1975-2005	0 - 47	Monetary Approach
<u>Karanfil- Ozkaya (2007)</u>	1973-2003	12 - 30	Kalman Filter
<u>Savaşan-Altındemir (2007)</u>	1970-1998	10 - 45	MIMIC Model
<u>Savaşan - Schneider (2007)</u>	1999-2005	31	DYMIMIC Estimation Approach
<u>Davidyan (2008)</u>	2005	21	Expenditure-based Approach
<u>Karagöz-Erkus (2009)</u>	1970-2005	86 - 73	Tax Evasion Rate
<u>Erdinc(2012)</u>	2002-2010	51	Currency Demand Approach

Source: Compiled by Erdinc from various authors studies

In this study, our calculations Erdinc (2012) following the monetary approach, it shows that the ratio of the underground economy to nominal GDP changes from 30 percent to 70 percent with an average of 51 percent in the 2002-2010 periods. Empirical evidence strongly suggests that causality runs from the underground economy to recorded GDP and that the underground economy stimulates official activities in Turkey since income obtained from unrecorded activities is mostly spent on activities that have been included in the official part of the GDP. According to below table about Size of the Shadow Economy of 3 European Countries (Non EU-Members) over 2003-2015(in % of off. GDP)

Table 3: Size of the Shadow Economy of 3 European Countries (Non EU-Members) over 2003 – 2015 (in % of off. GDP)

Country / Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Norway	18.6	18.2	17.6	16.1	15.4	14.7	15.3	15.1	14.8	14.2	13.6	13.1	13.0
Switzerland	9.5	9.4	9.0	8.5	8.2	7.9	8.3	8.1	7.8	7.6	7.1	6.9	6.5
Turkey	32.2	31.5	30.7	30.4	29.1	28.4	28.9	28.3	27.7	27.2	26.5	27.2	27.8
3 Non EU-Countries / Average	20.1	19.7	19.1	18.3	17.6	17.0	17.5	17.2	16.8	16.3	15.7	15.7	15.8
Unweighted Average of all 31 European Countries	22.4	22.1	21.6	20.9	20.1	19.4	19.9	19.7	19.3	19.0	18.5	18.3	18.0

Source: Schneider, Size and Development of the Shadow Economy of 31 European and 5 other OECD Countries from 2003 to 2015: Different Developments, January 20, 2015

The average underground economy in Turkey is larger than both 3 non EU-Countries and the 31 EU Countries. Between 2003 and 2013, the average underground economy in Turkey is declining, since 2014, it is increasing.

Figure 1: Size of the Shadow Economy of 31 European Countries in 2015(in % of off. GDP)



Source: Schneider, Size and Development of the Shadow Economy of 31 European and 5 other OECD Countries from 2003 to 2015: Different Developments, January 20, 2015

According to Figure 1, Turkey’s underground economy is above 9.8 points from the average within 31 European Countries.

7. Conclusion

Since the late 1970s, an important concern for policymakers has been approaches to measuring the size of the underground economy. Growing and already large underground economies understates the size of the economy, signals the existence of market distortions and excessive regulations and raises governance issues. This results in inaccurate signals being sent about the state of the economy and leads to suboptimal policy recommendations and outcomes.

As a result of its high inflation rates and a couple of severe economic crises experienced, Turkey has been characterized by economic instability during the last thirty years. After the most harmful banking sector driven crises of 2001 with the almost 140 percent annual inflation rate and -12 percent annual economic growth rate, Turkey has carried out some structural reforms within a heterodox stabilization program. (Erdoğan, 2012)

Despite the many negative factors associated with an informal economy, a lack of consensus exists on whether informal economy affects economic growth positively or negatively. Although controversy exists, informal economies should be prevented by the development of new policies. These policies may include a reduction in interest rates, taxation reform, reduction of income and indirect taxes as a percentage of total tax revenue and preventing political instability. However, the above outlined government policies to reduce the underground economy, should mainly be carried out during a positive business cycle.

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