

# Can Reducing the Black Economy be an Alternative Solution for Solving Poverty in Turkey\*

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## Abstract

*Government is fighting with the black economy particularly in the relatively underdeveloped regions of our country. In this regard, the searches for a solution to the black economy in the underdeveloped regions have been used for both maintaining inter regional income distribution equity and also reducing the poverty. In this study, the monetary ratio will be used in order to estimate the black economy and Republic of Turkey Central Bank database will be used in this regard. And in the appraisals with regards to the poverty the parameters of interregional income distribution and some kind of social development parameters obtained from TurkStat (Turkish Statistical Institute) and SPO (State Planning Organization). As a summary this study is aiming to put forth that whether the solution searches to the black economy may bring a solution to the poverty in the long run as well.*

**Keywords:** Poverty, Black Economy, Inter-Regional Income Distribution, Turkey.

**JEL Classification:** D63, E26, I32.

## 1. Introduction

Impoverished in the lexical meaning is the person who does not have enough money or who is deprived of the required means to sustain a living. The word poverty defines the situation in which it is deprived of the opportunities that life has brought. The deprivation in question is being related with the required phenomenons for life or for sustaining a life. Because of the fact that the phenomenons required to be able to sustain a living would change according to the persons, to the society lived in, environment and situations, thus the poverty concept brings into question the comparison of the standard situation with the observed situation.

Essentially the poverty concept bases upon the humanitarian needs concept. Humanitarian needs can be divided into two main groups as needs that are satiable basically according to the economical conditions (needs are of material quality and related with the conditions) and the needs not related with the economical conditions (spiritual sort of needs and needs that are specific to the individual). In this regard, the poverty concept should include not only meeting the humanitarian needs adequately according to the social conditions lived in but also the satiation of these needs during an entire life (Aktan and Vural, 2002: 1-3).

The poverty phenomenon and the measures in order to mitigate poverty are within the top priority agenda items of underdeveloped and developing nations as much as in the studies of the international institutions. Such that, in order for the global and regional development objectives to be fully met, the development in question to be balanced and sustainable and besides to be realistically planned, in order the policy suggestions to be projected for the future, the fight with the black economy is of very high concern which with regards to poverty may mislead the decision mechanisms and may time to time invalidate the policy proposals.

International development objectives have been oriented to the strongest feeling of the human desires to be away from the poverty and the misery that is fed from it. It is utmost important to develop a global more intense and corporate collaboration for the sake of the success in the fight with poverty. Because it is seen that, no real success could be attained with giving aid and debts.

From now it is now essential that the corporate infrastructure is maintained by developing collaboration options in international investments, trade, and immigration, together with financial trends cultural and political matters.

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Certainly for the success in all of these areas the ultimate responsibility falls on the developed nations and the multinational institutions under the control of these nations (Uzun, 2003:169).

When we look at the efforts of the international institutions with regards to the poverty and development we see the report named “A Better World for Everybody” prepared by the United Nations, International Monetary Fund, Organization for Economic Cooperation and Development and the World Bank. In this report, 7 qualitative basic objectives have been determined in order to reduce poverty and accelerate the development and to maintain the income distribution equity that is the supportive element of these. We could list down these objectives as follows:

1. To reduce the percentage of people living in absolute poverty between the years of 1990 and 2015 by half,
2. To provide primary schooling of all of the children by 2015.
3. Abolishing the gender inequality in the primary and the secondary education and providing the gender equality and empowerment of women (It is observed that this remained very much of the target) by the 2015
4. Reducing infant and child mortality by two thirds between 1990 and 2015
5. Reducing maternal mortality by three fourths between 1990 and 2015,
6. Providing access of everybody needing the reproduction health care services to these services by the year 2015.
7. By reversing the loss of the environmental resources by the year 2015 for the development of sustainable development until 2015 national strategies should be employed ([www.paris21.org/betterworld](http://www.paris21.org/betterworld)).

## **2. Poverty and Income Distribution in Turkey**

Interregional socio-economical development differences are observed in our country as well as in the other countries. The regional structure show differences as every region show properties peculiar to itself in Turkey and interregional development differences show up because of various factors. Natural, economical, demographical, social, structural and historical factors can be discussed for the arisen reasons of the interregional development differences in Turkey. We could include the globalization phenomenon into these as a factor to accelerate the interregional development differences (Erkan, 2000:60).

When various indicators are examined with regards to the income distribution that has been corrupt for long years, we can not say that it has improved in a significant level recently. In this domain there are still a lot of measures to take and a lot of policies to be applied. Economical development and efforts to increase the national income per capita have been kept on successfully.

As the high development rates and the concerning stability are important, the improvements in these areas are encouraging for the future. That is for sure that, in order for the lower income groups to obtain relatively more share from the income increases obtained from the high and economical development, special policy measures should be taken (SPO, 1994:119).

According to the data of the Republic of Turkey Statistical Institution, in connection with the equivalent household usable income, 16.7% of the population lives under the poverty line. Using the equivalent household usable income various relative poverty lines are (according to the 40%, 50%, 60% or 70% of the equivalent household usable median income) calculated. According to the poverty line calculated 50% of the equivalent household usable median income the 16.7% of the population is under the risk of poverty. According to the poverty lines calculated separately for the urban and rural areas whereas this ratio is 15.2% in urban areas it is 14.2% in the rural areas.

When we consider the living conditions indicators of the non-institutional population; of the non institutional population;

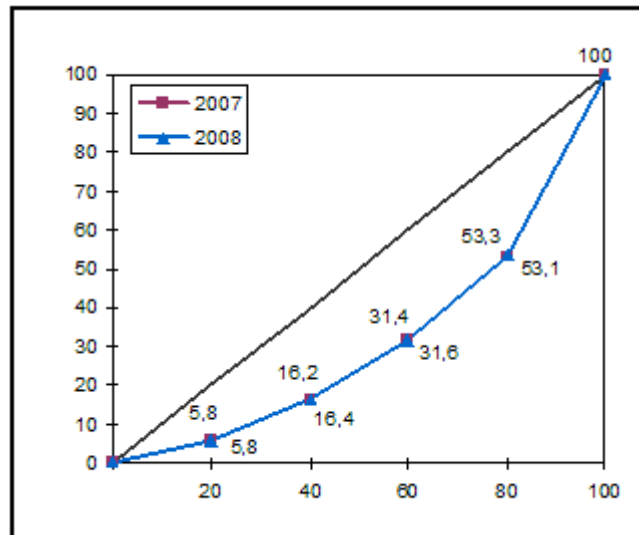
- 61.0% live in residences belonging to themselves.
- 39% of the residences such problems of “leaking roof, damp walls, rotten window frame” are of concern.
- 38.5% of the residences they dwell is faced with the “heating problem due to insulation”
- 57.7% have installment payments and debts (except domicile purchase or domicile expenses) and this dept repays bring extra burden to the house hold of 25.0% of them.
- Due to economical reasons 88,8 % of them cannot afford “one week’s holyday away from home”, 71,1% of them can not afford “unexpected expenditures” and 82,6% can not afford “renewing their outworn furniture”.

The Gini Coefficient obtained from the presentation of the Lorenz Curve, provide the comparisons of various income distributions, defining the income distribution inequity level with just one number. The Gini Coefficient is defined as the ratio of area left between the line of equality and the Lorenz Curve to the area of the triangle left under the line of equality. The area of the triangle is 0.5 as per its definition. Gini Coefficient becomes 0 (0/0.5) in perfect equality, and becomes 1 (0.5/0.5) in perfect inequality. The coefficient approaching to 1 indicates an increase in the inequality whereas it approaches to 0 indicates a decrease of it. The statistical presentation of the Gini Coefficient is dependent on the average of the differences of the income pairs ( $Y_i - Y_j$ ) regardless of their signs (the number of differences is as much as the square of observation number). When the average known as the average difference is divided with the arithmetical average of the 3 distributions ( $\mu$ ) it gives out the “relative average difference”. Gini Coefficient is as much as half of the relative average difference (Bozdog and Bozdog, 2009:3).

According to the data of the Republic of Turkey Statistical Institution, one of the criteria of income inequity, the Gini Coefficient has been calculated as 0.41 in year 2008 just as it has been in 2007 thus indicated no change with regards to the 2007 research results. The coefficient has been calculated as 0.40 for the urban areas and as 0.38 for the rural areas. Lorenz Curve as the graphical illustration of the income inequity distribution in the population displayed that there has been no change in the income distribution according to the 2007 and 2008 research results since the curves overlap (Figure 1).

In the 20 % groups formed according to the equivalent usable income by the households while the ones having the highest income in the last group takes 53.1% share out of the total income, the first group having the lowest income takes 5.8% share out of the total income. According to this the share of last 20% group out of the total income is 9.15 times more compared to the first 20 % group ([www.tuik.gov.tr](http://www.tuik.gov.tr)).

**Figure 1. Lorenz Curve of the Equivalent Household Usable Incomes**



Source: ([www.tuik.gov.tr](http://www.tuik.gov.tr)).

$$G = \frac{1}{2n^2 \mu} \sum_{i=1}^n \sum_{j=1}^n |Y_i - Y_j| \tag{1}$$

$Y_i$  : ith household income

$Y_j$  : jth household income

**Table 1. Sequential Groups of 20% According to the Equivalent Household Useable Income**

Individual Groups of %20	Turkey		Urban		Rural	
	2007	2008	2007	2008	2007	2008
Total	100,00	100,00	100,00	100,00	100,00	100,00
First % 20 **	5,80	5,80	6,20	6,10	6,40	6,50
Second % 20	10,60	10,60	11,00	10,70	11,10	10,80
Third % 20	15,20	15,20	15,30	15,30	16,00	15,60
Fourth % 20	21,50	21,50	21,20	21,90	22,30	22,50
Last % 20 **	46,90	46,90	46,20	46,00	44,20	44,50
Gini Coefficient	0,41	0,41	0,39	0,40	0,38	0,38
Last % 20 / First % 20 (P80/P20)	8,10	8,10	7,50	7,50	6,90	6,80

**Source:** (www.tuik.gov.tr).

### 3. Black Economy

Black economy is generally described as the undercover legal economical activity realized outside the knowledge of government. In other words the term unregistered contains all of the activities that is normally subject to taxation and other regulations and therefore except for the other activities that are apparently outlaw (World Bank, 2010:5).

According to Altug (1999), the black economy is a realized economic activity moved out of the registered (formal) economy either with no record or with a record having a content not reflecting the actual situation thus concealing from the government or from the other persons related within the business (Partners, creditors, workers that have a share in the revenue) (Altug, 1999:257). In other words, it can be defined as whole of the income generating activities that are unpredictable by using the calculations for obtaining the Gross Domestic Product and by the known statistical methods (Aydemir, 1995:8).

#### 3.1. Incidence Reasons of Black Economy

The main reasons of the black economy can be categorized in three different groups as financial, economical and political.

##### 3.1.1. Financial Reasons

It is understood that one of the most important reasons that cause the incidence of black economy is problems lived concerning the taxation. These are listed down in four headings within each other (Tosuner, 2000:65).

##### 3.1.1.1. The Elevated Tax Rates and Resistance Against Taxation

Existence of a direct relation can be discussed between the tax rates and the black economy. It is seen that the dimensions of the black economy are even larger than it is in the study conducted by Schneider in the developing countries where the tax rates are higher compared to the developed countries (Schneider, 1997: 42-48). Effects of tax rates in the economical activities have been proved with a lot of theoretical studies however the most popular among these is the one explaining the relation between taxation rates and the tax incomes the one constituting the most important anchor point of the supply side of the economy put forth by Arthur Lafer and brought in the economy literature as Lafer Curve. In this analysis it is stated that the tax revenues are positively affected when the tax rates are increased up to an optimum level and after this optimum level the tax revenues would start to drop. However when the tax rates start to increase there might not be a reduction in the economical activities as expressed in numbers and only because of the high tax rates a shift from the registered economy towards black economy may be of concern (Lafer; 2004:1-8).

##### 3.1.1.2. Indefiniteness of the Taxation Environment

Adam Smith who is known as the founder of the economy science has explained certain principles concerning taxation in his book "The Wealth of Nations". One of the principles was the definiteness in taxation.

\*\* When the individuals are listed down ascending according to the useable house hold incomes and have been divided in 5 groups with the "first 20% group" is the group with the least income whereas the "Last 20% group is the group with the highest income.

According to this principle there is the basis that the tax payer needs to know about the amount, the time and means of payment of tax, (<http://www2.hn.psu.edu/faculty/jmanis/adam-smith/Wealth-Nations.pdf>).

Briefly in order for the taxation laws to be definite they should not be retroacted. The remission of tax should be avoided as much as possible. Because of the fact that this situation causes the taxpayers behave resilient in paying tax debts. As a result the tax department should work so well that the tax payers should realize their operations in conformance with the current laws in a best way in the fear of control not in the expectation of remission of tax.

Apart from the negative effects of the remission of taxes stated above, such that the resilient behavior of the tax payers, another negative effect is observed in the justice principle of taxation. When the taxpayers who pay their taxes on time, see the other taxpayers who become subjected to fines and then subjected to remission, are looking ways to reduce the tax they should be paying in the coming taxation periods (Kirbas, 2000:12). Briefly the situation is knotting down at the specificity of taxes.

### **3.1.1.3. Insuficiency of the Accounting and Consultancy Services**

Accountants and the financial consultants, who serve as a bridge between the tax office and the tax payers, have a very important role in the prevention of tax loss. Therefore they serve in the prevention of tax evasion and provision of spurious bills in order to show the good expense higher and inflate the costs and expenses. With this regard the ones who serve as accountants or financial advisors should be made to act very sensitive, and heavy sanctions should be introduced for the ones who fail to act accordingly (Aydemir, 1995:67).

### **3.1.1.4. Reasons Arising from Control of the Tax Office**

Perhaps the most effective in preventing the black economy is the control issue. The tax payers will be as much as bold to evade taxes as much as they know that they would be less controlled. But the tax control rates remain ultimately low in our country. At the heart of this lays the reasons of insufficient number of tax control personnel and private sector making very tempting offers to the individuals having expertise in taxing and the public sector failing to present them possibilities in order to keep them in reserve. Besides the taxation auditing intensity is reduced as one of the groups of control personnel take part in the administrative auditing as well. These persons may be subjected to obligation of working at least for a particular period of time in the public sector, administrative aspect of the problem may easily be solved (Batirel, 2000:63).

### **3.1.2. Political Reasons**

One of the determinants that affect the behaviors of the taxpayers concerning the leakages and losses is the attitude of the political power. In countries where there is no stability political powers generally taking decisions inline with the desires of the pressure groups may back down from taxation for the sake of votes and may lay the burden of taxation on specific segments.

### **3.1.3. Economical Reasons**

One of the most important economical problems is the inflation in the countries where the black economy is intensively lived. Because the inflation causes the profit of the taxpayers be subjected to taxation. Especially in the countries where there is progressive income tax structure, because of a shift in the income bracket, although the real income of taxpayers remains unchanged they shift to an upper income bracket resulting in a rapid increase in their tax burden. One of the economical reasons of the black economy is that the unequal distribution of the national income among the individuals and the companies. In the developing countries particularly the rareness of the middle class and the intensity of the inferior and superior classes constitute one of the reasons of the black economy. This situation is seen especially in the small family businesses. Small firms in order to cope with the big companies are taking the advantage of the tax evasion when ever they find an opportunity. In these firms due to the fact that the control and documentation level remains relatively low compared to the big companies, the tendency for evasion indicates an increase (Özsoylu, 1998:68).

Sometimes the exemptions enabled for some companies constitute a valid reason of tax evasion for the ones who fail to benefit of these. For instance from the investment tax credit only the ones exceeding a particular investment amount can benefit. This situation may create a competitive advantage against the companies and the individuals who fail to reach these amounts.

Because taking advantage of the investment tax credit, due to the fact that the natural and legal person reducing his/her costs will be able to sell his/her goods in the market at lower prices and in this situation creates a competitive advantage against the company which fails to take advantage of the investment tax credit. The legal regulations should be done elaborately in order to prevent the occurrence of such unintended results. Therefore, the legal regulations to create equal tax liabilities amongst the taxpayers may in return narrow down the dimensions of the black economy (Oyan, 1998:115).

### **3.2. Effects of the Black Economy**

Although there are positive and negative opinions in the effects of the black economy, among these the weight of negative effects increases day after day. Although some marginal sections support the idea that the black economy may positively contribute to the national economy in the short run, the negative effects on the country's economy are more on the foreground in the long run (Ogunc ve Yilmaz; 2000:5-6). The black economy has a number of negative effects. First of all the volume of the black economy plays an important role. Because all the tendencies experienced for the existence of black economy would melt down the registered economy resulting in a narrow down in the tax incomes of the government. Reduced incomes being talked about would lead to living distresses in financing the public expenditures of the government.

As a conclusion the reduced taxation incomes would cause imbalance in the public budget and resulting the economy to easily yield deficit. It is for sure that such a problem would lead the political decision taking mechanism to borrow money and lead the incomes obtained by the registered resources to be used in paying of the interest of borrowing that is occurred because of the black economy. Not just only that in order to maintain the budget balance of the public authority this will cause the tax collection from registered economy in much higher rates and this would stone wall the new investments thus preventing the possible employment opportunities.

One of the problems caused by the black economy in economical sense is related with competition. The units operating within the black economy because of the fact that they pay less or no tax at all compared to others they naturally have a competitive advantage and have a chance to broaden their businesses. This situation causes competitive inequality. More importantly the taxpayers who pay their taxes are forced to follow others in order to be able to compete (Ogunc ve Yilmaz, 2000:5-6). This increases the black economy day by day. Due to the fact that as the black economy enhances the number of people working uninsured rapidly increases thus the improvement of the social insurance system halts (Aydemir, 1995:112).

In this regard, unregistered economic activities mislead the political leaders and cause the measures of the future to be taken missing or faulty. It is obviously seen that; black economy is the greatest obstruction to growth, high welfare level, high standard public services, new investment possibilities, high employment and effectively operating perfect competition market. The economic units causing the black economy are jeopardizing not only the registered economy but also their own future as well. If we put it this way, an economy growing in imbalance and having lost the stability without perfect competition, in fact, is not growing on the other hand it is becoming disabled.

Apart from the negative effects of the black economy it is argued that it may also have certain positive effects. In this frame work as a result of keeping the economic activities out of taxation, the released tax burden may have been shifted to the new investments thus together with the new investments it is considered that the production, employment and income may have increased. In other words, it is argued with the consideration that the black economy may be preferable because of the fact that the obtained tax from the activity would have been spent ineffectively in case that it had been registered and the evaded tax would turn into investments if the same activity was unregistered. However as mentioned above, the imbalanced and instable growth outside the control of the public authority would in short term only prosper the units who cause the black economy and this would go on until the macro economical dimensions of the problem shows up.

When tax evasion is of concern the elevated level of GDP is based on two major reasons. First of them is with the supposition that the labor demand would have increased due to the fact that the flexibility of labor demand to the labor price is high since there will be no tax deductions in the wage payments, which means that the black economy would increase employment because of the fact that the employers would meet with lower labor costs and on the other hand the real earnings of the employees would increase. Whereas, as if just for the sake of saving the day, the futures of the unregistered working individuals are terminated, ruling out the problems that would arise in future in the unregistered employment experienced lacking the social insurance.

The Second and more importantly that the GDP would get affected from the consumption level alone and due to the multiplier effect of the consumption the GDP level would elevate (Yilmaz, 1998:486). However this situation is only a numerical illusion. There will never be a long term and lasting GDP increase as the income provided by the registered economy would be used in compensating for the destructions caused by the black economy. This is the greatest obstacle in front of the growth.

### **3.3. The Dimensions of the Black Economy in Turkey**

The black economy in Turkey is very widespread although different identifications are used and there has been a reduction lately in certain sectors of the economy. However when the income level is concerned the black economy is not extremely high. Although the unregistered business situation is not extensive (for example, on the contrary to many Latin–American country) it is more common to come across the under declaration of incomes and wages and the employees that are unregistered to the social security system.

The black economy has both economical and the social results as of development and under these conditions it is an issue of concern for the politicians. On the contrary the black economy may put a limit to the economical development directly by the use of low efficiency levels or indirectly by exterminating the scale economies because of the fact that the unregistered businesses keep their sizes small. The possible costs arise as the lost incomes of government and the economic social fragilities of the employees left outside the social insurance coverage (World Bank, 2010:1).

When we look at the study carried out 12 years ago from present time by Ciloglu, we will have a better opportunity in analyzing the improvements in the black economy in our country. When we consider that the agricultural activities, some of the activities in manufacturing industry and some service sector (district bazaars, pedlar's trade, car park business etc.), the volumes (the shares of these sectors within the GDP) of these sectors within the economy of Turkey show a variance of 60% to 80%. When it is taken into consideration that the number of small and medium size enterprises (SME) that are indicated as the addressee of the unregistered activities make up 99,5% of the businesses, and as of the added-value they constitute 57% of the country production, it is estimated that the unregistered economic activity has a value between 40% to 60% (Ciloglu, 1998:70).

In Table 2 the structure of the taxational incomes are investigated that are given as the percentage of the GDP between years of 1990 to 2006. When a general evaluation is made in the triad of EU, OECD and Turkey; Turkey has the least percentage ratios when the overall tax income, social insurance contribution shares, total taxes (except the social insurance contribution shares), income taxes, corporate taxes, property taxes, and the taxes on goods are taken into consideration.

Particularly when we examine year 2006 which has the latest data, we see that overall tax incomes occupy the portion of 24.5% within the GDP. This ratio is 39.8% in European Union and 35.9% in OECD. Moreover Turkey is falling behind European Union and OECD with the portions of 5.5% in social insurance share, 19% in total taxes where the social insurance contribution share is excluded, 3.8% in income taxes, 3.8% in corporate taxes 0.9% in property taxes; 11.9% in the taxes on the goods and services. These figures clearly display the existence of the black economy in Turkey.



**Table 2. The Structure of Taxes as the Percentage of GDP**

	1990	1995	2000	2005	2006
<b>Overall Tax Income</b>					
<b>Turkey</b>	<b>14,9</b>	<b>16,8</b>	<b>24,2</b>	<b>24,3</b>	<b>24,5</b>
AB	38,2	39,0	40,6	39,7	39,8
OECD	33,8	34,8	36,1	35,8	35,9
<b>Social Insurance Contribution Shares</b>					
<b>Turkey</b>	<b>2,9</b>	<b>2,0</b>	<b>4,5</b>	<b>5,4</b>	<b>5,5</b>
AB	10,7	11,4	11,2	11,1	11,1
OECD	7,8	8,9	9,0	9,1	9,1
<b>Total Taxes (Except The Social Insurance Contribution Shares)</b>					
<b>Tukey</b>	<b>12,0</b>	<b>14,8</b>	<b>19,6</b>	<b>18,8</b>	<b>19,0</b>
AB	27,4	27,6	29,5	28,6	28,8
OECD	26,0	25,8	27,1	26,7	26,8
<b>Income Taxes</b>					
<b>Turkey</b>	<b>4,0</b>	<b>3,6</b>	<b>5,4</b>	<b>3,6</b>	<b>3,8</b>
AB	10,7	10,5	10,6	10,2	10,3
OECD	10,4	9,7	9,7	9,2	9,2
<b>Corporate Taxes</b>					
<b>Turkey</b>	<b>1,0</b>	<b>1,1</b>	<b>1,8</b>	<b>1,7</b>	<b>1,5</b>
AB	2,5	2,7	3,5	3,2	3,4
OECD	2,6	2,7	3,6	3,7	3,9
<b>Property Taxes</b>					
<b>Turkey</b>	<b>0,3</b>	<b>0,5</b>	<b>0,8</b>	<b>0,8</b>	<b>0,9</b>
AB	1,7	1,7	2,0	2,1	2,2
OECD	1,9	1,8	1,9	1,9	2,0
<b>Taxes on Goods and Services</b>					
<b>Turkey</b>	<b>4,2</b>	<b>6,3</b>	<b>10,1</b>	<b>12,0</b>	<b>11,9</b>
AB	11,8	11,9	12,0	11,9	11,8
OECD	10,5	11,0	11,2	11,3	11,1

**Source:** (www.oecd.org.tr) Income Statistics.

The black economy in Turkey is because of partially deep structural and institutional factors. First of all, the agricultural sector having a relatively high share in Turkey mostly has an unregistered mechanism (87% of the workers working in agricultural sector are not contained within the social insurance system) and this situation lifts the general ratio of the black economy upwards (43.5% as of 2008 year end). Secondly, early retirement opportunity encourages the unregistered employment of the old employees after the retirement (keeping on benefiting from the retirement rights). On the contrary to extensive perception, the tax rates and “the tax burden on the employment” are no more inconsistent with the international benchmarks thank to the lately realized reforms of tax and workforce market.

However, the ratio of assigned personnel for control and law enforcement is low compared to the international standards and audits have not been structured in order to aim to reveal the unregistered employment alone. Moreover the legislation of protecting employment in Turkey remains to be one of the strictest of all OECD countries. Ruling out that the problem would grow much larger making it unrepairable than what is today, quite a lot of businesses, in order to protect the employment flexibility, employing people without recording.

Last of all it creates inequity among the registered and unregistered businesses and the employees spoiling balances in competition. As a result it may lead way to social trust erosion and even more cause the laws and regulations be neglected (World Bank, 2010:1).



#### **4. Ways of Estimating the Black Economy**

One of the first studies carried out with regards to the black economy is the one that Cagan has tried to estimate the undeclared incomes of the United States during the Second World War using “Basic Monetary Ratio” method (1958). Feige (1989) has developed a method to contain the unregistered economic activity performed by the payment instruments such as bank accounts and cheques. Tanzi (1983) has explained the available cash demand presumed to be intensive within the black economy with various explanatory variables such as the income per capita, current interest rate, the share of salary and wages within the national income. Norman (1982), Klovland (1984) and Bhattacharyya (1990) have estimated the black economy using econometric methods. Gutman (1979) and Petersen (1974) using “National Income Differences” method; Langfeldt (1980) and Tucker (1979) using “Monetary Ratio” method has estimated the black economy (SPO, 2001). Various studies have been carried out in order to estimate the black economy in Turkey. First of all Hakioglu (1984) and Derdiyok (1984) have used the Monetary Approach. Apart from these Kasnakoglu (1990) and Özsoylu (1993) have tried to estimate the black economy in Turkey using this method. Derdiyok (1991) and Temel, Simsek, Yazici(1991) have used the “Tax Approach” in their studies. Apart from these studies Altug (1990) using the “Unregistered Salary Approach”, Özsoylu (1990) and (1993) using the “GDP and Transaction Approach”, Ilgin (2002) using the “Fixed Ratio Approach”, Ogunc and Yilmaz (2000) using the “Econometrical Approach” and last of all Akalin and Kesikoglu (2005) using the “Extended Ratio Method” have tried to rate of black economy in Turkey (Yurdakul; 2008:205-221).

It is presumed that the payment instrument in the black economy is cash and cash flow rate is the same in the registered and the unregistered economies. In this method considering the major reason of the black economy as the elevated tax rates, available cash demands are separately calculated for the situations where taxes are applied and not applied and the difference between these numbers show the level of the available cash demand of the black economy. The extent of the black economy is determined including the cash flow rate in to the analysis (Akalin and Kesikoglu, 2007:73).

##### **4.1. The Measurement Problem of the Black Economy**

There are a lot of studies carried out both in our country and abroad with regards to the measurement of black economy. Essentially none of these studies are capable enough to be able to precisely measure the black economy. Because of the fact that, the black economy does not have any section that could be continuously controlled. Unregistered activities could take place in any time and in any medium. But not to attempt to measure black economy using these as an excuse would be a big mistake. In this regard generally three methods have been using in measuring the black economy. These can be categorized as the direct and indirect measurement methods.

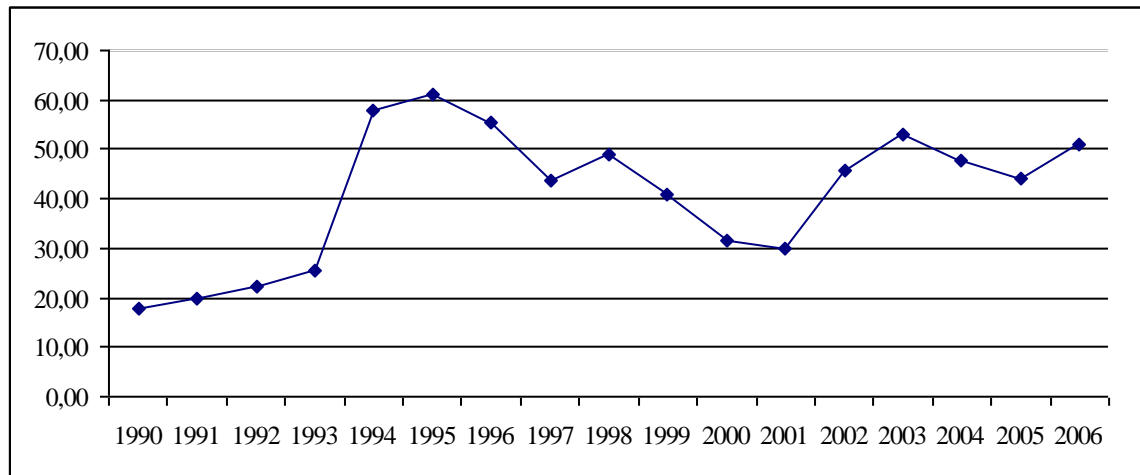
Usually questionnaires are used among the direct measurement methods. Indirect measurement methods are analyzed under three different sub headings as GDP, employment and monetary ratio. Monetary ratio is the most used method among these. Therefore other methods have not been contained in our study.

##### **4.1.1. Monetary Approach**

According to this method usage of cheque and cash could give information to the related parties. According to the monetary approach most of the payments made in the black economy are made in cash in order not to make the controls possible in this regard. The cash movements are monitored in order to measure the dimensions of the black economy. In this approach, increase of the ratio of money in circulation to the money on deposit shows the demand for money is increasing and therefore indicates that the black economy is enhancing (Altug, 1998:3421). Using the monetary ratio method, extend of the black economy in Turkey in Table 3 is estimated using the ratios which are obtained by various calculations. According to this, C shows the money in circulation, D shows the drawing account, Co shows the multiplication of the minimum of C/D ratio with the drawing account, Yo shows the nominal GDP, Vo shows the circulation speed of money and Yu indicates the approximate amount of the black economy (Yurdakul; 2008:205-221).

As can be seen from the Table 3 the ratio of the calculated unregistered GDP to the registered GDP (Yu/Y0) varies between 17.97% and 61.28%. This situation can be clearly observed in the graph illustrated in Figure 2.

**Figure 2. Variation of the Black Economy in Turkey as of Years (1990 – 2006)  
Calculated with Simple Monetary Ratio Method\*\*\***



\*\*\*have been prepared by using the data of RTCB and TurkStat.

**Table 3. Black Economy in Turkey calculated with Simple Monetary Ratio Method\*\*\***

Years	C Money in Circulation	D Drawing Account	C/D	Co=ko*Do ko=0.3029	Yo GSMH	Vo=Yo/ (Co+Do) Dolaşım Hızı	Yu=Yo* (C-ko*D)/ (ko+1)*D	Black Econo my
1990	14412	20020.4	0.568	6586.71	397177.54	12.64	71412.12	17.97
1991	20920	29344.1	0.504	9654.20	634431.097	16.3	126636.70	19.96
1992	31181	47952.2	0.633	15776.27	1130843.423	17.3	252805.23	22.35
1993	51517	77442	0.666	25478.41	1929249.992	18.7	489960.06	25.39
1994	104370	77498.73	1.1004	25497.08	3887903	23.80	2256691.11	58.04
1995	189542	144177.96	1.143	47434.54	7854887	25.41	4813967.31	61.28
1996	354901	259415.75	1.067	85347.78	14978067	27.92	8327185.82	55.59
1997	641707	569143.29	0.908	187248.14	29393262	27.06	12815120.10	43.59
1998	1106023	953401.09	0.983	313668.96	53518332	28.31	26311324.89	49.16
1999	2003483	1707086.20	0.074	561631.36	78282967	24.46	32117339.67	41.02
2000	3214550	3336058.3	0.748	1097563.18	125596129	21.53	39658911.77	31.57
2001	4801257	5352012.44	0.726	1760812.09	176483953	19.10	52737429.97	29.88
2002	7208863	6418713.50	0.034	2111756.73	275032366	22.15	125269018.8	45.54
2003	10128670	8632312.71	1.031	2840030.88	356680888	20.33	188657353.74	52.89
2004	12446299	12955240.26	0.965	4262274.04	428932343	16.84	205272132.55	47.85
2005	18276069	17525111.81	0.924	5765761.78	486401032	14.49	214260529.53	44.05
2006	24676425	21125339.29	1.008	6950236.62	575783962.1	13.56	294552133.99	51.15

\*\*\*have been prepared by using the data of RTCB and TurkStat.

## 5. Conclusion and Recommendations

We could list down the solution proposals in order to mitigate poverty in Turkey as follows:

1. The political and economical authority should have stability in order to maintain an effective and sustainable development. In case of an administration displaying frequent variability the economical structure would never gain stability and the sustainability of the policies would be a matter of discussion.

Especially in the global economic situations of our day where almost the entire world is interconnected, the financial markets could give out very rapid reactions. In order for the markets accelerate towards development and to maintain stability in this direction the political decision taking mechanism should also have stability.

2. Almost every section of the society should be able to benefit equally from the Public Services. Particularly, in the rural areas of our country complete provision of educational, healthcare, social and cultural services would strengthen the equitable sharing and the understanding of social state.

3. The social development must be put afore as the supportive element of the understanding of social state and the economical development. In this regard, the disadvantaged groups and regions that are able to get the least share out of national income should be fostered. This matter becomes more of an issue in order to realize the social justice and to prevent the income distribution inequity.

4. Mitigation of Black economy: In order to mitigate black economy adoption of an integrated policy approach would possibly be the most effective method. No policy measure alone would be sufficient to create a significant increase in having the economical activities registered. However, with the collaboration of these policies in question a new balance point may be moved to where the registered activities in the economy have increased. As stated in the World Bank's Report; in Turkey the public opinion needs to be effectively enlightened on the subjects of the costs of black economy and benefits of having the economy activities registered and it is needed to strengthen the control capacity, effectiveness and targeting, making the labor market regulations more flexible (particularly in the areas of employing and laying of fixed term or part time contracted workers).

There could be transition period costs -such as job losses- while realizing such registering policies and within the extent of the general "policy package" it should not be forgotten that the policies of balancing mechanism may require being included. Every type of black economy may have different types of results and significance. For instance, the under declaration of the salaries while making no impact in the short run on the social welfare of the employees, it makes a significant impact failing to register the employees. Likewise, it is possible for the black economy in the agricultural sector to yield different results with the black economy in the manufacturing sector in the urban areas (World Bank, 2010:6).

As of in order to attain the greatest acquisitions in having the economy registered, increasing the frequency of the tax controls and coordination and providing the labor regulations be more flexible is of the vital importance among the fundamental reasons of black economy (possible policy leverages). The tax policy, working life regulations, tax management, social benefits programs and social standards lay among the possible matters that the policies are to be focused on. Among these areas, yielding the best results when focused are the areas of tax management and working life regulations. This result is attained using the international comparisons and the consultations and the survey findings in Turkey. Moreover, the social standards that are of deep esteem and widespread economical implementations as well, joining with the above stated factors have a common share in the generation of an unrecorded economy parallel to all of the production chain. This matter bears a vital importance as of understanding the rooted nature of the unrecorded economy in Turkey (World Bank, 2010:63).

5. The incentive effects of social benefits programs lacking the premium contribution is considered to be the most important issues for strengthening the unrecorded economy. Notwithstanding, having the ties of social benefits programs with the employment status would possibly ameliorate the targeting and increase the effectiveness. In Turkey a lot of well targeted program (for instance: Green Card, health insurance plan without any premium and Conditional Cash Transfer) have specialties that would encourage the work force stay unregistered. The anticipated value of the social benefits in many incidents is not as big as to affect the preference of the employees. But again, splitting the social benefits from the employment status may in return mitigate the risks of similar effects to arise in the future (World Bank, 2010:63).

6. The measure package to regulate competition would bring the efficiency increase. Every kind of obstruction to limit the positive effect of competition in the markets would negatively affect the economy attain a potential efficiency and thus its potential growth. The phenomenon of being unregistered is just an obstruction of this kind. Black economy being evident prevents attaining positive results anticipated from the competitive system. As a result the economy shapes into a bilateral structure in the course of time. From one side firms operating under register and more efficient from the government view point, on the other hand firms operating unregistered and more inefficient as of the taxation. The permanent division prevents the economy attain a structure that is more efficient and producing more affluence. Thus, being unregistered (as have been mentioned in the section on the effects of unrecorded economy) preventing the economy attain its potential efficiency negatively affects the growth performance of that country (GIB, 2009:32).

As a result, the existence of black economy causes significant amount of damages on the income distribution and the poverty in Turkey. In this study this subject is tried to be interpreted in the effects of the black economy section in a wide scale. In the light of the obtained data and comments made, we can say that the black economy creates a negative effects on the economy both in the short run and in the long run as well. With regards to mitigating poverty in Turkey the measures in mitigating black economy and maintaining the equity in income distribution are contained in the conclusion and recommendation section, being the 5th and the last section of our study.

Mitigating unrecorded economy would provide the balanced growth in our country in short, medium and long runs, prevent unfair competition, maintain the functionality of the perfect competition market in an effective way, pave the way for a balanced and sustainable development and this way would find a solution to poverty as laying the foundations of providing justice in the income distribution.

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### **ANNEX:**

**Annex Table 1. Poverty Ratios of Individuals per Method of Poverty Line in Turkey**

Methods	Individual Poverty Ratio (%)						
	2002	2003	2004	2005	2006	2007 *	2008
<b>Nutrition Poverty (starvation)</b>	1,35	1,29	1,29	0,87	0,74	0,48	0,54
<b>Poverty (Nutrition + Non-Nutrition)</b>	26,96	28,12	25,60	20,50	17,81	17,79	17,11
<b>Under \$1 level per capita<sup>1</sup></b>	0,20	0,01	0,02	0,01	0,00	0,00	0,00
<b>Under \$2.15 level per capita<sup>1</sup></b>	3,04	2,39	2,49	1,55	1,41	0,52	0,47
<b>Under \$4.3 level per capita<sup>1</sup></b>	30,30	23,75	20,89	16,36	13,33	8,41	6,83
<b>Poverty as of the Expenditure Based<sup>2</sup></b>	14,74	15,51	14,18	16,16	14,50	14,70	15,06

Resource: ([www.tuik.gov.tr](http://www.tuik.gov.tr)).

**Annex Table 2. Number of Impoverished Individuals per Method of Poverty Line in Turkey**

Methods	Number of Impoverished Individuals (in Thousands)	
	2007 *	2008
<b>Nutrition Poverty (starvation)</b>	328	374
<b>Poverty (Nutrition + Non-Nutrition)</b>	12.261	11.933
<b>Under \$1 level per capita<sup>3</sup></b>	0	0
<b>Under \$2.15 level per capita<sup>3</sup></b>	356	330
<b>Under \$4.3 level per capita<sup>3</sup></b>	5.796	4.759
<b>Poverty as of the Expenditure Based<sup>2</sup></b>	10.127	10.497

Resource: ([www.tuik.gov.tr](http://www.tuik.gov.tr)).

<sup>1</sup> As for the equivalent of the purchasing power (PP) of \$1 for 2002, 618,281 TL; for 2003; 732,480 TL; for 2004;780,121 TL, for 2005 ; 0.830 YTL, for 2006 ; 0.921 YTL; for 2007 ; 0.926 YTL ve for 2008 ; ise 0.983 YTL is taken.

<sup>2</sup> 50% of the median value of Equivalent consumption per capita is based upon.

<sup>3</sup> As for the equivalent of the purchasing power (PP) of \$1 for 2007 0.926 YTL and 2008 0.983 YTL is used.

\* Revised per the new population projections.

**Annex Table 3. The Consumer Tendency Statistics as of Years in Turkey**

Index	2005	2006	2007	2008	2009	2010
Consumer Confidence Index	105,17	99,45	92,04	93,89	69,9	78,79
Purchasing Power (Current Period)	92,71	87,48	82,48	82,66	64,9	72,49
Purchasing Power (Future Period)	97,45	91,75	86,71	88,13	68,14	77,62
General Economical Situation (Future Period)	104,74	94,82	87,25	90,12	62,19	73,01
Employment Opportunities (Future Period)	93,08	90,69	88,1	89,74	63,42	72,19
Convenience of the Current Period in order to Buy	137,85	132,53	115,67	118,81	90,84	98,64

Resource: (www.tuik.gov.tr).

**Annex Table 4. The Distribution of Monthly Consumption Expenditures per Expenditure Types**

Expenditure Types	Overall Expenditure of the Household (%)		Per Household Monthly Consumption Expenditure (TL)			
	2008	2009	2008		2009	
			Average	Median	Average	Median
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>1626</b>	<b>1341</b>	<b>1688</b>	<b>1402</b>
Food and Beverages	22,6	23,0	368	322	388	332
Alcoholic Drinks, Cigarettes and Tobacco	3,8	4,1	62	33	69	35
Clothes and Shoes	5,4	5,1	88	35	86	35
Residence and Rental	29,1	28,2	472	427	477	426
House Furniture	5,8	6,2	94	42	104	48
Health	1,9	1,9	31	2	32	4
Transportation	14,1	13,6	229	90	229	94
Telecommunication	4,4	4,2	71	51	71	48
Cultural, Entertainment	2,5	2,6	41	7	44	8
Educational Services	2	1,9	32	0	32	0
Hotel, Restaurants, Patisserie	4,4	5,2	71	34	87	44
Various Goods and Services	4,1	4,1	67	25	68	25

Resource: (www.tuik.gov.tr).