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A dynamic assessment of the size of underground economy and tax evasion in Pakistan

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ABSTRACT

This Paper aims at the dynamic assessment of the size of underground economy and tax evasion in Pakistan with the help of time series data ranging from 1966-2010. Using modified version of monetary approach (modified in the sense that it involves application of ARDL approach), empirical findings do confirm presence of underground economic activities and tax evasion on a higher scale for the under consideration period of analysis. The underground economy being 43.97 per cent of GDP in the base year period 1966, observes an increasing trend till 1980 and then after wards owing to the introduction of structural reforms in the tax, social security costs and regulatory frameworks, underground economy witnesses a decreasing trend and reaches down to 41 per cent of the GDP in 2010. Tax Evasion following and upward growth reaches to its peak at 8 per cent of the GDP in 1980 and then afterwards, observing a sharp downfall stands at 3.5 per cent of the GDP in 2010. The policy-makers should take steps towards documentation of the economy and while taxing, there should be no sacred cow in the economy. It is the only way out for the Pakistani economy to settle the problem of fiscal deficits so that allocations in respect of development budget may be increased, instead of cutting down to keep the fiscal position of the country under control.

Keywords: Underground economy, tax evasion, Gross Domestic Product etc.

INTRODUCTION

Underground economy, being a quite serious problem, invites attention of the researchers around the world and Pakistan, where the size of underground economy is thought to be too bigger, has no exception to it. All those undocumented activities like smuggling, black-marketing, prostitution, and gambling, informal employment sector which do generate income but remain out of the tax net constitute Underground Economy. The existence of Underground in Pakistan, like any other economy in the world, is a universal truth. Underground economy, being present in the shape of undocumented activities, lead the national economy to suffer from the problem of fiscal deficit as tax revenues of govt. being too fragile remain quite inefficient to meet the mounting public expenditures. Cash transaction being life blood of the underground economy are resorted to in order to carry out undocumented activities in drug trafficking, smuggling, agriculture as well as construction and no record in the form of payment memos is either maintained or provided to the tax authorities. Underground economy is also known as black economy, shadow economy, informal economy, hidden economy and a lot of other economic terms. Smith (1994) defined underground economy in the form of those legal as well as illegal production of those market based goods and services which are not included in the official statistics concerning Gross Domestic Product of the economy. Schneider (1986) stated, while defining underground economy, that it mainly consists of all those economic activities that do make value addition in existing economic productive capacity of the nation but remain unrecorded by the national statistical system of the country.

It affects the economy both on the fiscal as well as on the monetary side. On the fiscal side, due to tax evasion, the tax base remains quite low and the government in order to finance its heavy expenditures, have no option than to levy tax on the essential items like, food, oil, electricity etc. which do affect badly the economic status of a common man. However, avoiding taxes and government regulatory mechanism do carry certain costs with them in the form of fine, confiscation of assets etc. The people involved in the activities which are related with the informal sector do face difficulties regarding their access to certain public sector services like police protection, copyrights, and assistance from the financial sector and insurance facility etc. On the other side, being in the formal sector is not so simple and without costs. Excessive taxation leads people to resort to such activities which brings for them higher incomes but low tax deductions

While on the monetary side, due to low tax base, it remains quite difficult for the monetary authorities to formulate an effective and adequate monetary policy. For example, in Pakistan, where tax base is too low, government relies on excessive issuance of new notes which is letting the economy to suffer from a double digit inflation. Therefore SBP, at that time when lowering the interest rates is the need of the day for accelerating the process of growth in the economy, maintains a strict monetary policy in order to check the inflationary pressures. Now, why people resort to underground activities and tax evasion is mainly due to leafier curve phenomenon which states that if govt. increases tax rate and social security

burdens, its tax receipts decrease. However, it is not the only reason as we have seen that government has increased the tax minimum limit for the last many years which means that underground economy should be declining in Pakistan but as it is not the case therefore suggesting the researchers to look for other determinants of underground economy as well. Unfortunately, our tax system, despite adopting advances practices incorporated in the Income Tax Ordinance 2001 and the restructuring of the Income Tax Service of Pakistan (now Inland Revenue Service) is not capable of collecting tax resources, whereas the potential of tax revenues is much greater, out of several reasons mainly the low compliance, tax exemptions, limited coverage and inefficient audit, enforcement and monitoring criteria etc. Even, in the FBR itself it is assumed that an amount of Rs. 500/- billions were embezzled in the year 2010-11 under the well-known head of "Corruption". In respect of low coverage, it can be shown that the services sector and the Agriculture sector despite generating 53% and 19% of the GDP are just generating 1% and 2% respectively of the total tax collection in Pakistan, presenting a quite deplorable picture of the tax potential and tax collection regime in Pakistan.

The main problem associated with the Informal economy and tax evasion in Pakistan is that once a person becomes part of such underground economic activities, then it becomes quite difficult for him to abandon such activities out of several reasons mainly their income from such underground activities, being undeclared, cannot be brought under the tax net as the efforts aimed at the documentation of the economy in the form of Reformed General Sales Tax have been failed to be implemented in the economy. Contrary to it, being documented, every economic activity in the formal sector is taxed.

LITERATURE REVIEW

Shabsigh (1995), while making minor amendments in the Tanzi's approach, estimated size of underground economy for the period from 1975 to 1991 in Pakistan. While taking real interest rate, banking services (per capita), average taxation costs on imports, average tax pressures on the domestic activities and real per capita income as explanatory variables, ratio of currency in circulation (cc) to demand deposits (dd) was taken as independent variables. In spite of including lagged dependent variable as independent variable to do away with the problem of auto-correlation, ARIMA specification was applied in his study. It was assumed that formal economy as well as black markets observed same velocity of money. Results revealed that size of shadow economy observed an almost stagnant rate of growth being 20.74 in 1975 to 23.56 per cent of GDP in 1990.

Ahmed and Ahmed (1995) also employed Tanzi's methodology to estimate the growth proportions of underground economy and tax evasion in Pakistan from 1960 to 1990. They estimated size of shadow economic activities and tax evasion with the help of two models involving different dependent as well as the same independent variables. The first model includes CC/M2 as the dependent variable whereas the other model included currency in circulation plus bearer bond as dependent variable.

Results showed that underground economy observed a decline throughout the periodic range of the study from 51.96 per cent of GDP in 1960 to 35.07 per cent of GDP in 1990. However, tax evasion observed a growth although slow over the periodic range of the study from 4.32 per cent of GDP in 1960 to 5.18 per cent of GDP in 1990.

Iqbal, Qureshi and Mahmood (1998) also used currency demand approach devised by Tanzi to get estimated the size and development of informal economy and tax evasion in Pakistan. The variables like real interest rate, per capita income growth (real), rate of taxes as percentage to GDP, taxes levied on imports as percentage to GDP, per capita banking services and a dummy variable covering the periodic range of 1988 -1996 to arrest the effects of structural adjustment program (SAP).

Bushra Yasmin and Hina Rauf (2004) conducted a study on the assessment of Underground Economy and Tax Evasion in Pakistan with the time series data stretching from 1974-2002. The study revealed that informal sector not only existed in the economy but was also growing rapidly, being a matter of serious attention of the policy makers and the concerned quarters. Results show that Gross Domestic Product of the economy is quite inversely related with the increase in Underground Economy and Tax evasion. The results reveal that informal sector observed a sharp growth in the 90s which a period excessive taxation and strict regulations exercised by the government. The authors while applying an OLS technique on the model found that like growth in informal economy, a 1% increase in TE leads to .005% reduction in the growth rate of Pakistan.

Kemal (2007) undertook a study to not only estimate size of the shadow economy and tax evasion but also to explore linkages between underground economy and the formal one. Kemal using Tanzi's methodology, included three equations to check robustness of the estimates measured. Results revealed that during 2005, informal sector flourished in the range of Rs. 2.91 trillion to Rs. 3.34 trillion (54.6 percent of GDP to 62.8 percent of GDP respectively), whereas, tax evasion remained in the range of Rs. 302 billion to Rs. 347 billion (5.7 percent of GDP to 6.5 percent of GDP respectively) during the same year. Empirical findings of the study also established positive relationship between underground economy and the formal one over the longer period of time.

Kemal and Ahmed (2012) conducted a study with a quite new approach emphasizing on locating the discrepancy in the data on the national accounts of a country. Data on consumption expenditures (for the year 2007-08 has been collected from PSLM survey and data regarding under invoicing of exports as well as imports (both being the components of GDP) is taken from Mahmood (2012). Data on rest of the two components of GDP viz. a viz. investment and government expenditures is taken from Economic Survey of Pakistan. Study revealed that underground economy stood at 91.44 per cent of the formal

GDP at a time when only two components of the national GDP are adjusted for certain discrepancies being there in the data regarding them. Empirical findings of the study showed that during 2007-08, consumption expenditures were under-reported to the extent of 120.31 per cent of the GDP, on the other hand, Exports were over-reported and imports were under-reported to the extent of 1.13 per cent and 1.87 per cent respectively.

Freidrich and Enste (2002) in their working paper on the issue of shadow economy, have added that from a sample of 84 countries around the world and with the help of time series data on the concerning variables stretching from 1988-2000, estimates found through different estimation methodologies reflect that growth in the informal economy remained quite high. Researchers, after dividing the sample of 84 countries into further three sub-samples of Developing, Transitional and OECD Economies, found that informal sector remained 35-44%, 21-30% and 14-16% of the GDP of the concerned national economies in the concerned country groups respectively. Results showed that informal sector observed a sharp growth in the transitional as well as countries included in Organization for Economic Co-operation and Development (OECD), however, estimates regarding shadow economy from the developing countries remained quite unreliable owing to quite insufficient and unqualified official statistics. The authors further revealed in their study that Gross Domestic Product is quite inversely related with the rise in the informal economy. The authors further contested that countries having soft tax regimes and quite friendly state regulatory framework observe presence of a quite smaller informal economy. Whereas, excessive taxation and social security costs lead people to resort to tax evading activities and thereby become the key factors in letting the economy to face consequences of growing informal economy in the country. Main objective of the study is to estimate size of the underground economy and tax evasion using fresh data on the policy variables for the period 1966-2010 with a modified version of Monetary approach involving ARDL approach, an approach rarely resorted to, in case of Pakistan.

METHODOLOGY

In order to estimate the informal economy, time series annual data on all the concerned variables, whether they belong to economy, social indicators or the demography etc., stretching from 1960-2010 is used. Table below shows the definitions of the variables on which model is constructed, along with the sources from which data on these variables is taken.

Stationary Analysis

The stationary analysis is done to see that whether the series are stationary on levels or at 1st or 2nd difference. It is important to check the stationary condition, because to apply OLS without putting the series under stationary test may lead to suffer from Spurious Regression. The traditional ADF test is widely used to determine that whether the series are stationary on levels or on their 1st, 2nd difference.

Table 4

Variables	Atlevels			At Difference		
	No trend	**With trend**	**Result**	**No trend**	**With trend**	**Result**
CMt	-2.78*	-3.3*	Stationary	-----	-----	-----
Tt	-1.5	-1.6	Non Stationary	-6.9***	-7.3***	Stationary
FDt	-2.2	-2.7	Non Stationary	-5.4***	-5.2***	Stationary
Rt	-1.7	-1.7	Non Stationary	-5.8***	-5.0***	Stationary
INFt	-2.9**	-2.9	Stationary	-----	------	Stationary
RGWt	-5.3***	-5.4***	Stationary	-----	-----	------

(The values showing *,**and *** reveal that the series are stationary on 10%, 5% and 1% respectively based on the MacKinnon critical values.)

Estimation Methodology

The basic idea underlying estimation of the underground economy with the help of monetary approach (developed by the Cagan) is that heavy tax burdens induce people to resort to making cash transactions in an attempt to avoid tax net. Afterwards, Guttmann (1977), Feige (1979) and Tanzi (1988) further made valuable contributions in the initial work of the Cagan. Tanzi estimates the following model:

$$In\ (CM) = ao + a1\ in\ (1+TW) + a2\ In\ (WS/NI) + a3\ In\ (R) + a4\ In\ (PY) + \varepsilon \text{ ---- (1)}$$

Here, CM denotes ratio of currency in circulation to broad money, TW symbolizes weighted average tax burdens, WS/NI defines corresponding share of salaries and wages in the national product, R represents rate of interest on the time deposits and PY shows the real per capita income. However, two serious complications are involved in this model.

Now turning towards the Pakistani perspective, numerous studies have been undertaken to estimate the size and growth pattern of informal economy mainly through this monetary approach using the OLS Technique. Long-run estimates of the shadow economy are calculated while taking currency ratio being the dependent variable (although in a number of studies, the same variable is used with certain variations). Almost all of the studies undertaken, quite neglected the impact of stationery problem in their estimation procedure, making their results too unreliable to be used for economic analysis.

In this study, owing to the complications involved with OLS technique, Auto-Regressive Distributed Model technique devised by Pesaran and Shin (1999) and Pesaran et al. (2001) is applied on the model which is too estimated primarily through the monetary approach. This approach is not used widely used in case of Pakistan to get estimated the size of underground economy and tax evasion. Moreover, an attempt has also been made to find out the determinants of underground economy in Pakistan, which would definitely be a fresh and new addition to the literature already available on the subject. An ARDL expression of this relationship is provided as under:

$$\Delta CC/Mt = \alpha 0 + \alpha 1 CMt\text{-}1 + \alpha 2 Tt\text{-}1 + \alpha 3 BSt\text{-}1 + \alpha 4 Rt\text{-}1 + \alpha 5 Pt\text{-}1 + \sum\Delta \alpha 1i CMt\text{-}1 + \sum\Delta \alpha 2i Tt\text{-}i + \sum\Delta \alpha 3i BSt\text{-}i + \sum\Delta \alpha 4i Rt\text{-}i + \sum\Delta \alpha 5i Pt\text{-}i + \epsilon t \text{ ---- (2)}$$

Here, we would apply Wald test to determine that whether

there exists a long-run relationship among these variables or not. But before testing the ARDL equation for the presence of long-run relationship, we have to choose an optimal lag based on either Akaike or Schwartz criterion.

Selection of an Optimal Lag Length

Selection of an optimal lag length is quite important in the econometric analysis. Mainly two criteria namely AIC and SIC are widely used in the selection of an optimal lag order.

Table 5

LAG	AIC	SIC
0	-4.10	-3.81
1	**-4.39**	**-3.94**
2	-4.23	-3.45

As the values of both of the criteria viz. a viz. Aakaike Info. Criterion and Schwarz Criterion are the lowest at lag order 01, therefore we estimate our ARDL model having a lag order (01) as suggested by the above-said criteria.

Predicted values of tax-induced currency-ratio (CMt) and currency-ratio excluding the effect of taxation cost (CM)wt. in respect of each year, are calculated by estimating the ARDL equation(2). After that, the level of illegal or black economy for each respective year is measured by multiplying the difference between the afore-said two terms with M2. In respect of velocity of money in the underground economy, it is assumed to be the same as of the velocity of money in the official economy. Lastly, the size of tax evasion in the economy for each of the respective year is got by multiplying the size of underground economy with the respective tax to GDP ratio.

The procedure of measuring the size of underground economy is given below:

Illegal Money (IM) = [(CM) t - (CM) wt.]* M2 ... ... (3)

Legal Money (LM) = $M1 - IM$ … …..... (4)

Velocity of Money (VM) = GDP/M2..... ... ... (5)

Underground Economy (UE) = IM *VM … … … (6)

Tax Evasion (TE) = UE*[Taxes/GDP]..... (7)

DISCUSSIONS

We have used E-views software to estimate ARDL Equation having 1st lag of CM (currency demand) its dependent variable and financial development (FDt), Taxation costs(TXt), weighted average rate of return(Rt), Inflation(INFt), Real Growth Rate (RGWt) and lagged dependent variable[CM(-1)] have been used as explanatory variables. ARDL technique with General-to-Specific Methodology is used to get the desired results

Table 6

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.149006	0.055664	2.676904	0.0116
FD(-1)	-0.052579	0.030573	-1.719812	0.0951
TX(-1)	-0.017693	0.006342	-2.789737	0.0088
R(-1)	0.016283	0.003836	4.244472	0.0002
INF(-1)	0.001457	0.000858	1.698720	0.0991
RGW(-1)	0.013427	0.003025	4.439048	0.0001
CM(-1)	-0.366975	0.096721	-3.794175	0.0006
D(FD(-1))	0.033901	0.054792	0.618717	0.5405
D(TX(-1))	0.013502	0.007072	1.909083	0.0653
D(RGW(-1))	-0.008286	0.002138	-3.875601	0.0005
D(CM(-1))	-0.217486	0.123206	-1.765227	0.0871

R-squared	0.590499	Mean dependent var	-0.003837
Adjusted R-squared	0.462530	S.D. dependent var	0.032932
S.E. of regression	0.024143	Akaike info criterion	-4.393445
Sum squared resid	0.018653	Schwarz criterion	-3.942906
Log likelihood	105.4591	F-statistic	4.614393
Durbin-Watson stat	2.032700	Prob(F-statistic)	0.000436

The findings of ARDL model are reported in the above table. The model is estimated for k=1 to 3 and lag 1 is selected on the basis of minimum Aikaike as well as Schwarz Information Criteria. The above results show that model is a good fit one, having overall F-statistic being statistically significant at 1% critical region. The value of Adjusted R^2 is 0.463 which states that 46% of the variations occurring in the dependent variable (currency-demand) are explained by the variations occurring in the independent variables owing to the fact that currency demand is affected by other variables too not included in this study. The value of Durbin-Watson statistics 2.03 denotes that our model is quite free from Auto-correlation.

Now in order to find out that whether there exists any long-run relationship among the dependent and the independent variables, we apply Wald-Co-efficient Restriction Test having Null-hypothesis and Alternate-hypothesis as:

H0:α1=α2=α3=α4=α5=0

H1:αi≠0 (i=1-5), the results of which are as under:

Table 7

Wald Test:

Test Statistic	Value	df	Probability
F-statistic	6.335814	(6, 32)	0.0002
Chi-square	38.01488	6	0.0000

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(2)	-0.052579	0.030573
C(3)	-0.017693	0.006342
C(4)	0.016283	0.003836
C(5)	0.001457	0.000858
C(6)	0.013427	0.003025
C(7)	-0.366975	0.096721

Restrictions are linear in coefficients.

Results of Wald-test indicate that the value of F-statistic 6.34 is significant on 5% of critical region as well as higher than the Upper Bound Value which stands at 4.0, which implies that we reject our H0 in favor of H1. Hence we conclude that there exists long-run relationship between dependent and independent variables.

Here is the table showing independent variables with their expected signs. This Table presents before us a picture about the expected signs of the variables involved in our model.

Table 8

Variable	Impact on the Dependent Variable
Tax(t)	Positive
Inflation(inf)	Positive
Financial Development	Negative
Real Growth Rate (Rgw)	Negative
Lagged Dependent Variable(cm-1)	Positive
Weighted Average rate of returns on Ba	Negative

The Table below is showing our long-run co-efficient in respect of our each independent variable with their respective probabilities.

Table 9

Long-run Co-efficient

Sr. No.	Variable	Co-efficient	T-statistic	Prob.
1	Intercept (c)	-0.406	2.68	0.012
2	Financial development	0.143	-1.72	0.0099
3	Tx(t)	.048	-2.79	0.009
4	Rt	-0.044	4.24	0.0002
5	Inflation(inf)	-0.004	1.70	0.099
6	Real Growth Rate (rgv	-0.0366	4.44	0.0001

Hence the Long-run relationship showing dependence of currency-ratio of the independent variables is deduced to be such that:

CMt = -0.406+0.143fdt + 0.048txt -0.044rt - 0.004inft - 0.0366rgwt + Et

Stability Analysis of the Model

Two well-known tests CUSUM AND CUSUM SQUARE (based on the OLS criteria) are used to determine that whether the model under consideration is a stable one or not. In the current study, both of the tests show that the economic model quietly conforms the stability criteria at 5 per cent significance level.

Estimation of the Underground Economy and Tax Evasion

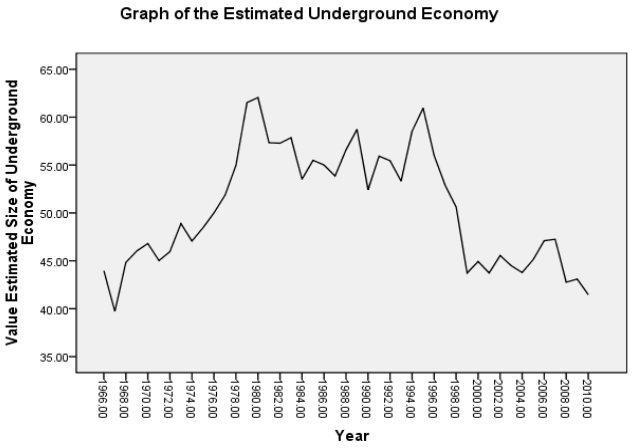
On the basis of the estimated long-run co-efficient and the estimation methodological framework, we first estimate the size of the underground economy and tax evasion for the whole of our time series. These estimates does not report the accurate size of the shadow economic activities in the country, being too responsive to the values of the estimated variable co-efficient, however, they do show a trend of growth in the unofficial economic sector.

Estimates of Underground Economy and Tax Evasion in Pakistan

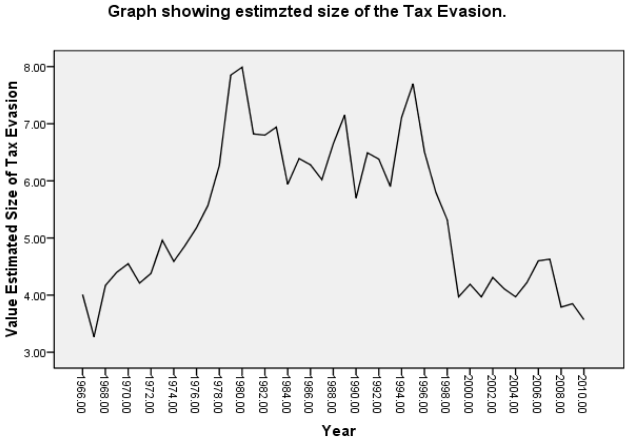
The estimates of underground economy and tax evasion are reported in the above table. These estimates show that underground economy is 43.97 per cent of GDP in 1966 (the base year). It increased to 50 per cent in 1976 and observing positive growth reached to 60 per cent in 1995 and then decreasing to 47.25 per cent in 2007.

Graph of the Under-ground Economy and Tax Evasion:

Here are the two pictures displaying graphs of the estimated size of underground economy and tax evasion in Pakistan. The graph of underground economy shows that the informal sector observes an upward growth from 1966 onwards to 1980 and a downfall in the post-80's period owing to the introduction of tax reforms in the country.



The graph of Tax Evasion confirms a strong positive correlation between underground economic activities and tax evasion in Pakistan. Tax Evasion being at the highest level at about 8 per cent of the Gross Domestic Product (GDP) in 1980, observes a decreasing trend afterwards and remains at 3.57 per cent of the GDP in 2010.



Consequence of the Underground Economy and Tax Evasion in Pakistan

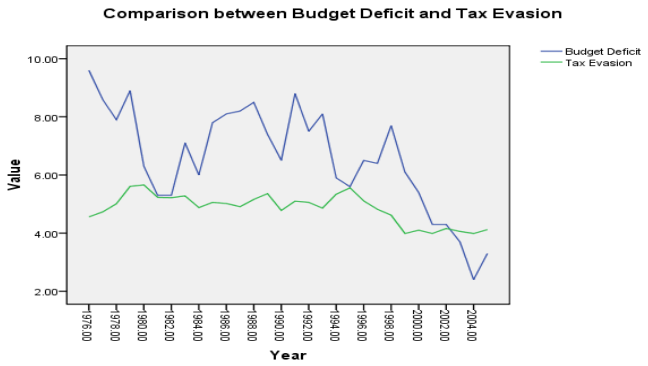
Rise in Underground Economy is associated with decrease in state revenues, which in turn definitely affects provision of services which are responsibility of the state concerned. This revenue-expenditure gap is then filled through either deficit financing which creates inflationary pressures or increasing tax rate. To deal with the problems created by inflation, the government then adopts strict monetary policy through which rate of interest is increased in order to limit credit creation and resultantly the level of investment.

In the presence of high level of underground ground, it becomes too difficult for the decision-making authorities to formulate fiscal as well as monetary policy. There remains a big challenge in front of the government agencies to reform the tax

as well as social security nets so that budget deficit can be checked without affecting welfare and prosperity of the general public. Increased tax rates and excessive regulatory framework cause an expansion in the size of underground economy which in turn puts an extra pressure on the national exchequer. To bear this extra pressure on the public finances, government has to levy higher taxation which provides an incentive to the masses to avoid it than they were engaged in evading earlier. Moreover, reduction in tax rate by the government might not prove fruitful as people do remain cautious in disclosing their true incomes to the government agencies.

In case of zero tax evasion, our budget deficit being a gap between government revenues and expenditures would definitely be lowered if not be completely done away with. The table below presents a comparison of budget deficit and tax evasion estimated above with our methodology. In each country, the role of fiscal as well as monetary policies aim at propelling the level of economic growth through investment as well as other macro-economic indicators. In case of monetary policy, Central Bank authorities would definitely found themselves to be in difficulty in determining as to how much credit creation is necessitated to achieve desired level of GDP growth rate, when the size of underground economy remains too high in the country. For example, we assume that 20 per cent of the money supply circulating in the national economy is utilized in carrying out underground activities then if 5 per cent increase in money supply is required to get a desired mark of GDP growth, then obviously this target would not be achieved as 1 per cent of money supply would be used to fund those activities which are not reported to the national statistical authorities. However, this problem can be overcome if the pace of expansion in underground economy remains constant. But in case of underground economy expanding with increasing rate, it would be too difficult for the monetary authorities to achieve a set target of GDP growth through the channel of money supply.

It is quite obvious from the below table that in case the menace of growing underground economy and resultantly tax evasion is curbed, Pakistan's budget could have been even surplus in 2000's instead of being deficit. The graph below amply defines the correlation between budget deficit and tax evasion. Owing to the overall decreasing trend in tax evasion, fiscal deficit also observes a declining trend over the period 1976-2005. Here, it can also be noted that fiscal deficit declines more sharply than the tax evasion, which indicates that a decline in tax evasion brings about greater downfall in the fiscal deficit of Pakistan.



CONCLUSIONS

In this study, size of underground economy and tax evasion is estimated using quite fresh data with the application of ARDL approach. Consequences of underground economy and tax evasion have also been described in this study. Results indicate that underground economy follows an increasing trend till 1980, then observes a decreasing trend till 1995. After the introduction of substantive tax reforms in 90's, underground economy follow a decreasing trend.

Tax evasion being a natural outcome of underground economy follows the same path of growth as it is followed by the shadow economy itself. Tax evasion remains highest in 1980 at 5.66 per cent of the GDP when the size of shadow economy to touches its maximum heights at 62.05 per cent of the GDP. Policymakers must take steps towards documentation of the economy, improvement in governance, reduction in the regulatory framework etc. so that tax evasion can be lowered to minimum possible levels. In the absence of tax evasion, government would have to borrow less from the internal as well as external financial sources to meet its expenditures. On the longer period of time, efforts should be made to inculcate tax morale in the masses and they may be educated with advantages of paying taxes to the state authorities. Heavy taxation costs and intensive regulations provide incentive for the people to engage in underground activities. Government should analyze Laffer curve phenomenon before increasing tax rate in order to expand the tax base in the economy. It should be tried to expand tax base through lessening burden of taxation costs as well as decreasing intensity of regulations than to increase tax rate, which would induce people to work in the unofficial economy.

RECOMMENDATIONS

Further research can also be made to see association between the official economy and the underground economy and the impact of shadow economic activities on the GDP of the economy as well. In addition to it, the strength of relationship between shadow economic activities and various sectors of GDP can also be analyzed in this regard.

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