The Informal Economy and Corruption in Developing Asian Countries

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ABSTRACT: This paper analyses how corruption, affect the formal economy and informal economy, using an Asian country data. The literature strongly emphasizes the quantifiable importance of these factors to understand the changes of informal economy. However, the limited number of researches uses cross-sectional country data with a relatively few number of observations, and hardly any paper has investigated corruption and provides evidence using within country data. We use 30 proxies that measure government indices and political behavior. Research result shows increase in governance indices leads to a smaller informal economy. Furthermore, an increase in government stability increases the size of the informal economy.

Keywords: Corruption, Government Effectiveness, Government Spending, Government Size, GMM Analysis.

INTRODUCTION

Some argue that the Informal economy is not a problem since it exists in all nations or that it recycles incomes within the country and generates employment. It can be verified that since the Informal economy is the only main cause of all the overall and micro problems the economy has confronted (Kumar, 1999).

Shadow Economic activities occur and extent of these activities is vital for building a good effective and efficient decision regarding allocation of resources in this area. Moreover the Informal economy called the underground, Black, parallel economy, or, includes illegal activities and unreported income from the production of permissible goods and services, either from monetary or barter transactions. The expansion of the Informal economy can cause a destructive cycle. Transactions in the Informal economy run away taxation, thus keeping tax incomes lower than they otherwise would be. A raising Informal economy may give strong incentives to be a focus for domestic and foreign employees away from the official economy.

For instance, Árvay (1993), Schneider (2007), and many others apply various methodologies and provide an insight into informal economy activities in developing countries. They, as well as other studies (e.g. (Johnson et al., 1999), (Schneider and Enste, 2002), have identified high tax burdens, corruption, administrative barriers, and nonexistent or deficient rule of law as the main causes of the existence and development of the informal economy.

Thus, for proper comparison a common methodological approach needs to be considered. One such attempt is from Schneider (2004), with a data update used in the econometric part for the period 2000–2005. At first glance, the results on the size of the informal economy are surprising in their magnitude and trend. The latter in particular is of relatively very low intensity. We follow this line of thought by using Schneider's (2007) latent-variable and currency-demand-method estimates of the informal economy in the countries studied and in the time frame analyzed.

The Informal economy: Appearance and Expansion Reasons: From the outlook of micro economy we must search the proper answer in the way and producer of rational decision-making by individuals and institutes as well. Within such a frame, individuals compare this illegal method with legal method and costs and other expenses in order to get some benefits. If the former is preferred compared with the latter, naturally partnership in secret and illegal production will be selected. A number of researchers made efforts to analyze human behavior in this domain, especially the tendency to avoid paying tax to government. For instance Alm et al. (1998) show that more lack of needed trust and rejection and avoidance of law regulations are increasing.

Researches related to a suitable approach to macro economy to study and analyze the informal economy have mostly been aimed to test statistic correlation between macro variables (which chiefly demonstrate the presence of government in economic scene) related to the procedure in this phenomenon.

"Frey and Weck-Hunneman1984 mention the imposed burden by government sector to individuals (including tax burden, lawmaking burden, and law limitations) unemployment, level of development at a low level as factors responsible for the appearance of hidden economy and add other factors such as tax bad-temperedness in the industrial countries in the experiment. Giles, et al. (1999) mentions burden of taxes, inflation, additional incomes, decline in standards of morality and ethics and claims that these

factors support the idea. Giles (1998) emphasizes the government role in the development of informal economy by public tax burden, combination of taxes and imposing more comprehensive regulations on job markets and productions as factors increasing this phenomenon in a variety of countries in the world.

Also in this connection Giles et al. (2002) have measured the amount of reaction due to synchronism of informal economy proportional to effective tax rate, fluctuation of rate and has concluded that no significant difference is observable in these reactions. The only way out for the latter firm to exist and continue its activity to survive is to reduce the transaction costs and avoid tax regulations and the laws governing the organizations.

Considering the emphasis of the present research on the criteria of illegality in definition of informal economy it is clear that our concentration on formal restrictions is something made up of the total amount of institutions. Within this frame informal economy is due to "bureaucracy gambit" (over emphasizing the rules and regulations) by individuals and organization which in its own turn is due to restrictions or executive methods and supervision to operations. That is to say bureaucracy games have been designed in such a way that and are being put into operation and execution that tempt and direct both individuals and firms to get involved in illegal economic activities. From the demand side, a lack of transparency may distort the information flows, thus making difficult market competition and an efficient comparison of goods and services. So there are two views about the relationship between these two variables. One of these argues the relationship between shadow and official economy is negative and the other one emphasizes is positive.

The relationship between corruption and informal economy: Economist define financial corruption as an special relation of government-society and differentiate between "Political corruption" and "Administration corruption" and also "functional corruption" and "non-functional corruption" and have classified financial corruption as an approach "pressure from up" with "distribution to down". But because of companionship of power corruption and financial corruption, practically these two understanding are closer to each other and have created a non-separable condition. In addition of academic assemblies, government and international institutions also for achieving to a coherent definition and conception have made efforts. World Bank has defined financial corruption, to abuse of government power and authorities for providing personal resources. Including these definitions we can refer to cases bellow: Corruption, effort for gaining wealth and

power through illegal manner; private interest instead of public interest; and or to abuse of governmental power is for personal benefits and is considered an anti-social behavior which has awarded benefits out of rule and against moral and legal norms and is weakening strength of improvement of life condition of people. Governments' studies indicate that corruptions mainly are made in two levels: 1st Level, corruptions that mainly are related to political elites and high grade staffs and superiors of governments are involved in this type of corruption (Schneider, 2007).

Public division officials may have low motivation for performance of their work and may be the reason is official scales of worthless amount and low level of internal supervision in their organizations. They may create delays and other barriers in their works, therefore bribes can act as rewards motivating. Illegal economic activities often purchase corrupt benefits from government. In acute and excessive cases, illegal economic activities and chief of organized crimes through corruption and intimidation are dominant to disciplinary force and other government sections. Therefore bribes permit criminal activities (Schneider, 2007).

Financial corruption more is arose from government and market economy interaction and when the government itself has a section of market economy activity in itself, will find more appearance. We can consider financial corruption a multi-aspect and complex phenomenon, which embraces simple practice such as illegal payment to an official personnel to comprehensive non-efficiency of political and economic system changes from political elites abuse of superior staffs of their authorize to a simple bribery. In spite of this, financial corruption commonly is considered as personal beneficiary behavior by individuals who undertake representative of government and enjoy of governmental authorities and typically take action to abuse for goals and personal beneficiary (Dreher and Schneider, 2010).

Friedman et al. (2000) show empirically that countries with further corruption have a higher share of unofficial economy. In countries where corruption is systemic and the state's budget, lacks government effectiveness the obligation of paying taxes cannot be presume an accepted social rule. Institutional unsteadiness, lack of transparency and government stability weaken the willingness of aggravated citizens to be active in the formal economy. For control of corruption, economists recommend cases such as bellow which the government should do it:

Some of these recommendations that have introduced and calculated by Kuffman and World Bank and heritage foundation in practical results of this research have been used and their relation with

informal economy for Asian countries have been studied. Transparency can cause to reduction of corruption and informal economy which is focused in this research. Corruption in all its various type is influenced on informal economy, in developed countries operates as complementary and causes expansion of informal economy and developing countries; corruptions is accounted as substitute of informal economy and decrease it (Schneider, 2007).

MATERIALS AND METHODS

GMM models are used for resolving OLS panel data defect. The OLS estimates may account unobserved country-specific heterogeneity. This method has fixed cross effects; and autocorrelation and heteroskedasticity in individuals will be controlled. GMM has a dynamic variable, and explanatory variables are correlated with past and probably current error. GMM is appropriate estimators for designed models with few time periods (7 years) and many individuals (30 countries) panels with a linear relationship. GMM is done with panel data that present a problem collaborated with panel dynamic system for 30 countries. These dynamic relationships are considered by a lagged dependent variable among the estimating include causality variables, x and y:

$$y_{it} = \alpha + \delta_i y_{i,t-1} + \beta_i \sum X_{i,t-1} + \gamma_i \sum Z_{i,t-1} + u_{it}$$
$$i = 1, \ldots, N; \ t = 1, \ldots, T$$

Here Y is shadow economy, X is a vector of variables and Z is a vector of control variables. u_{it} shows a one-way error component model.

$$u_{it} = \mu_i + v_{it}$$

That $\mu_i \sim \text{IID}(0, \sigma^2_\mu)$ and $v_{it} \sim \text{IID}(0, \sigma^2_v)$ are independent of each other. Arellano and Bond (1991) established a GMM estimator to resolve these problems. With first differencing, individual effects (v_i) will be removed and with instrumental variables becomes estimate-able.

GMM Models for Corruption and Informal economy in Asian Countries: The estimates of relationship between government indices and informal economy present about 30 Asian countries. Variables used in these models are extracted from valid statistical resources and is resulted to different expressions. We pay to GMM models in table 1.

One of the issues in its related study there is specific consideration, is subject of applicability and efficiency of government. Whatever the government is more effective? It can practice more effectiveness against bureaucratic non-efficiency and informal economy. Government Effectiveness (GE) variable has been meaningful in three models and confirm this subject. Corruption is one of the key variables in government studies about informal economy that could be resulted in good governance. In two models this variable is consonant with theoretical bases, that there is in another two model co-efficient of this variable has been negative. Two models indicate that government stability causes expansion of informal economy. GDP growth also cause limitation of informal economy and this variable has been meaningful in two models. In the following we pay to table 3 which investigate Two Step Dynamic Panel GMM models.

To experientially test the relationship between government indices and informal economy, a two-way interaction model is considered. These models are explored using two step GMM method with t-values and analysis statistics.

Table 1. Component of the Shadow (Informal) Economy in Asian countries (GMM Modes)

Depended Variable: Shadow Economy*	GMM Model (1)	GMM Model (2)
SE_{t-1}	0.9(11.5)***	0.48(16.54)***
Government Stability	0.22(2.24)***	0.10(8.58)***
Government Effectiveness	-0.95(-3)***	-0.50(-4.42)***
GDP Growth	-0.08(-5.4)***	-0.06(-14.2)***
Log GDP Per Capita	-1.66(-5.3)***	-3.06(-7.70)***
Government spending	-0.01(-1.7)*	
Corruption		-0.06(-1.95)**
Total panel observations	210	210
Sargan statistic	0.85	0.74
Jarque-bera	0.00	0.00
Arellano-Bond test AR(1)	0.00	0.86
Arellano-Bond test AR(2)	39.8***	13.52***

In both specifications, the coefficients of interaction term between shadow economy and government effectiveness and also shadow economy and government size, are positive and statistically significant at 1% level. The equations for Asian countries fit the data well as indicated by the regression statistics in this specifications, due AR (1) and AR (2) statistics. Two types of test are used for the empirical models. The first test is proposed by Arellano and Bond (1991), which examines the hypothesis that the residual

from the estimated regressions is first-order correlated but not second order correlated.

The first test examines the statistics (AR (1) and AR (2)) for presence of serial correlation in the first differenced residuals of first and second order, reported as the asymptotically standard normal distribution values. The p-values of the Arellano and Bond statistics are significant at 1% level. Second, the Sargan test of identifying restrictions under the null hypothesis of the validity of the instruments. The results of the Sargan test in system GMM estimator are reported in table 1. Statistical resources of variables used in above models and some of their statistical characteristics would be investigated in Appendix 1.

DISCUSSION

The empirical results of this study indicate that in Asian countries, increasing informal economy leads to decrease government effectiveness considering high value of government size. From a governance perspective a government may not have a strong interest to reduce the informal economy to a large extent due to the facts, that tax losses may be moderate as a large amount of the income earned in the informal economy is immediately spend in the official economy. Similarly, income earned in the informal economy increases the standard of living of a large portion of working population and the decline of the informal economy will increase the social welfare only if a larger part of production and labour is transferred into the official economy. However, the empirical results of this study show that only for developed countries, increases informal economy decreases poverty and for developing countries it government indices. In fact, as the results show, informal economy can decrease government effectiveness for Asian developing countries. Therefore:

1. In order to raise the necessary possessions for financing of key development tasks outlined in the Asian developing countries need to restrict informal economy.

2. The governance and corruption problems are in effect on informal economy in Asian developing countries and these should not be considered as a cause for moving into informal economy. It implicitly recommends that the size of government should be optimum.

Appendix 1. Sources and characteristics of sample data

Variables	Mean	SD	Min	Max	Data Sources
Shadow Economy	29.3	12.5	10.3	60	Schneider (2007)
GDP Grow	5.91	4.37	5.69	34.50	IMF
Corruption	2.28	0.79	1.00	4.50	ICRG
Government Spending	75.4	15.6	95.4	33.2	Heritage Foundation
Government Effectiveness	0.0	0.8	2.4	-1.4	World Bank
Government Stability	9.61	1.44	4.00	12.00	ICRG

REFERENCES

Alm, J., Bahl, R. & Murray, M.N. (1993). Audit selection and income tax underreporting in the tax compliance game. Journal of Development Economics, 42, 1–33.

Árvay, J. (1993). Methods of Measuring the Hidden Economy in the Transition Economies. Paris,

Committee of Public Accounts (2004). Tackling fraud against the Inland Revenue, London: The Stationery Office.

Dreher, A. & Schneider, F. (2010). Corruption and the shadow economy: an empirical analysis, Public Choice, 144, pp. 215–238.

Frey, B. S., &Weck-Hannemann, H. (1984). The hidden economy as an unobserved variable. European Economic Review, 26, 33–53.

Friedman, E., Johnson, S., Kaufmann, D. & Zoido-Labton, P. (2000). Dodging the grabbing hand: The determinants of unofficial activity in 69 countries. Journal of Public Economics. 76/4, 459-493.

Giles, D.E.A. (1998). Testing the asymmetry in the measured and underground business cycle in New Zealand. Economic Record, 71/1, 225-232.

Giles, D.E.A. (1999). Measuring the hidden economy: Implications for econometric modeling. Economic Journal, 109, 370–380.

Giles, D.E.A., Tedds, L.M. & Werkneh, G. (2002). The Canadian underground and measured economies. Applied Economics, 34/4, 2347-2352.

Johnson S, Kaufmann D, McMillan J, Woodruff C (1999). Why Do Firms Hide? Bribes and Unofficial Activity after Communism. http://web.hhs.se/site/Publications/workingpapers.

Kumar, A. (1999). The Underground Economy in India. New Delhi: Penguin, India.

Schneider, F. & Enste, D. (2002). The Shadow Economy. An International Survey. Cambridge: Cambridge University Press.

Schneider, F. (2002). Size and Measurement of the Informal Economy in 110 Countries around the World. http://rru.worldbank.org/Documents/PapersLinks/informal_economy.pdf [downloaded: 31.05.2006]

Schneider, F. (2004). The Size of the Shadow Economies of 145 Countries all over the World: First

Schneider, F. (2007). Shadow Economies and Corruption all over the World: New Estimates for145 Countries. Unpublished manuscript.

The Labour Approach. Eastern European Economics, 45: 29–58.

Thomas, J. (1999). Quantifying the black economy: 'Measurement without theory' yet again. The Economic Journal, 109, F381–F389.