PUBLIC FINANCE GOVERNANCE AND GROWTH

M. JELLAL

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Abstract

In this paper , we incorporate the social costs associated with implementing fiscal policy into the model of growth with government expenditures due to Barro (1990).We show that implementation costs in the context of a hierarchical model where three parties involved are the social planner , tax collector and taxpayers leads to a distortion stemming from the social planner's desire to avoid collusion between taxpayers and tax collectors .This distortion leads the social planner to reduce the level of public goods and thus the growth rate. Moreover ,the magnitude of the distortion, and thus its deleterious impact on growth is increasing in the ease with which bribery can be carried out .If indeed it is easy to bribe public official in LDC , it follows that the growth rates of such countries will be lower, *ceteris paribus* .

Key Words : Endogenous growth , bribery , collusion proof equilibrium , public goods.

JEL : 040 , 038

I. INTRODUCTION

A large strand of literature has shown that the services and infrastructure provided by the public sector play an important role in private production. Corruption distorts the purpose and functionality of the public sector. For that reason, corruption emerges as a significant factor determining the growth potential of the economy. Here we define corruption as an illicit rent-seeking activity of public agents using their public position. The rent-seeking capacity of bureaucracy stems from the scope and quality of the underlying institutions, so that the level of corruption also depends on the quality of institutions. Consequently, productivity of private production depends on the quality of the institutions and the level of corruption. Based on this rationale, this paper aims to study how corruption distorts the interactions between the private and public sectors; and how these distortions affect growth potential of the economy.

The distortions caused by corruption are well known in the literature. Nevertheless, the overall effect of these distortions on growth is yet not well understood. While some findings claim that corruption improves efficiency, others see it as the biggest obstacle in the way of development. The existing theoretical conclusions about the growth impact of corruption are conflicting. Thus, the issue is still far from being completely explored and explained.

To overcome the ambiguity in conclusions about the growth impact of corruption we need to view corruption from a broader perspective. Since corruption always involves the public sector, it is reasonable to suppose that corruption is just one possible feature of the public sector. We treat corruption simply as a side-effect of the public sector being supplied along with the public services. Corruption is driven by rent-seeking, but the rent-seeking capacity of the corrupt bureaucrats depends on the quality of the institutions. Corruption distorts the interactions between the public and private sectors and the inner functioning of the public sector. As we know these interactions take place in the form of taxation and public service provision. Therefore, we adopt a setting that incorporates corruption in the main public activities such as taxation and public service provision. This setting allows us to capture how corruption affects government's regulative burden and its productive input to private production in a broader way.

We consider a Ramsey-type growth model with an extension incorporating corruption in the public sector à la Barro (1990). In the model, the public sector is assumed to be engaged in two main activities: taxation and public good provision. Both activities are carried out by public servants, who are corruptible and rent-seeking that is manifested as:

- Corrupt tax inspectors conceal tax evasion for bribes paid by detected tax evaders. This type of corruption decreases tax revenue and limit the scope of public services available to the private sector. At the same time tax evasion reduces the tax burden on taxpayers.

- Corrupt public officials abuse the authority given to them by attaching excessive red tape to the public services they are supposed to

provide. It is assumed that excessive red tape is a set of unnecessary procedures that has no productive value for firms. The firms have to incur the burden of excessive red tape in order to obtain the essential public services. The corrupt officials can rescind the excessive red tape for bribes paid by the firms. As a result, the corrupt officials capture a part of firms' profits as rent. This income redistribution from the firms to the corrupt officials effectively imposes an illegal tax on the firms. In addition, the rent-seeking wastes a part of public funds reducing the amount of public goods provided by the government.

This work contributes to the literature in the following ways:

• We combine the literature on growth, tax evasion and corruption within one framework.

• We develop a general model that incorporates both income redistribution and inefficiency in public good provision caused by corruption. The model represents main effects of corruption. Namely, the corruption leads to income redistribution and inefficiency in public good provision. The former distorts the saving and investment decisions, the latter changes the relative burden of the public sector and reduces productive public input provision.

• We provide a new mechanism collusion proof that explains the deviation of the optimal tax rate from the degree of public sector externality by incorporating corruption into the dynamic general-equilibrium framework.

• We demonstrate that corruption can never be growth enhancing if considered holistically.

The paper is structured as follows: first we present a literature review, followed by Section 3, where we present the assumptions of the model and consider a household's optimization problem in choosing inter temporal consumption level . Further in Section4 we examine the government growth optimization, by choosing the tax collusion proof rate. Section 5 concludes the paper.

2. LITERATURE REVIEW

The role of the public sector in determining the productive capacity of the private sector has attracted much interested in the growth theory literature. The seminal papers Barro (1990) and Barro and Sala-i-Martin (1992) propose that government services can be treated as a productive input. The efficient supply of government services can increase returns on private capital offsetting the adverse effect of taxation. Therefore, it is logical to pose the question whether corruption affects growth by impeding the provision of public services. In developing and transitional economies, government operations are often entangled with corruption. The issue is initially considered by Leff (1964), who suggests that corruption that decreases red tape still can be beneficial for economic growth. Similar views are shared by Huntington (1968) and Lui (1996; 1985). They find corruption as an optimal response to market distortions that lessens the burden of regulations that improves efficiency. The

results obtained by Mauro (1995) and Barreto (2000) show that the effect of corruption on growth is indeed controversial and multi-pronged. Therefore, the existing explanations about the growth effects of corruption are inconclusive.

With few exceptions, the dependence between corruption and red tape has largely been overlooked in the literature. In general, it is accepted that corruption might decrease the regulatory burden and red tape. On the other hand, we also need to take into account the relationship between corruption and the regulatory burden. Excessive red tape can be created by corrupt bureaucrats in order to create rents. Therefore, the perceived decrease in red tape by corruption is in fact just mere reduction of the intentionally created excessive red tape. On the contrary, corruption should result in higher public sector burden. The reason is that excessive red tape can be surmounted by paying bribes, while the legitimate red tape usually is not reduced by corruption. For example, Kaufman and Wei (1999) reject the hypothesis that bribery decreases the delays by bureaucratic red tape. Similarly, Guriev (2004) analyses red tape and corruption, and shows that when the bureaucracy is corrupt the level of red tape is above the social optimum. However, our definition of red tape differs from Guriev's. His red tape is a type of the public service that produces useful information about the private agents. We assume that red tape is just an unproductive hurdle created by corrupt officials. It is assumed that all other useful properties of the public sector are embodied in the public goods they provide. In other words, our red tape is only the excessive red tape induced by the corrupt officials for rent creation.

A number of papers recognize to a greater extent that corruption has a substantial adverse effect on economic growth by creating a tremendous burden on the private sector (Aleshina (2005), Ali (2003), Tanzi (2000; 1998; 1997), Keefer and Knack (1997; 1995), Alam (1989), Aidt(2003), Abed and Gupta (2002)). When we take into account the red tape induced by corruption, its illegal nature and costs related to it, it is hardly possible that corruption improves allocative efficiency and supports capital accumulation (Shleifer and Vishny (1993), Aidt (2003)). There is no doubt that corruption is quite complex in its involvement in the economic system. The idea that corruption may affects the economy via different mechanisms is formalized by Shleifer and Vishny (1993). They propose that the officials providing public goods can sell the public good with a mark up (no theft case) or sell it at prices that are lower than the production cost (theft case). So the main driving force of corruption is the rents extracted by the corrupt officials either by decreasing or increasing the burden of regulations on the private agents. The bureaucrats are able to exercise monopolist behaviour in provision of public services and goods as they are bestowed with discretionary power. The illicit rent-seeking misallocates public resources from productive use, thus it is costly for the public sector itself, and certainly wasteful. Keefer and Knack (2002) find that rent-seeking in the form unproductive public investments increases as property rights become more insecure. They used their finding to explain why in countries with less secure property rights the public investments and growth have no or negative association. In our model we follow Keefer and Knack (2002) in terms of defining rent-seeking as diverting public funds to unproductive purposes. However, we assume that this rent-seeking is related to insecure property rights protection directly and used for extraction of income from the private agents. Hence, corrupt rent-seeking not only lowers

productive public input, but also redistributes private income from the private agents to the bureaucrats.

It is notable that the key contributions to the analysis of corruption focus on investigating implications of the income redistribution due to corruption. However, less attention has been paid to the inefficiency in the public sector caused by corruption and how this inefficiency can be associated with income redistribution. For example, Ehrlich and Lui (1999) consider a balance between human capital accumulation and political capital accumulation, which is used for rent-seeking. An extraction of output from productive firms is considered in the model of Barelli and Pessôa (2003). Their production technology does not depend on public goods and government is not explicitly modelled. Rivera-Baitiz (2002) captures corruption by the introduction of officials that impose a tax on the profits made by firms engaged in innovation. As a consequence the rate of return to capital decreases. Mauro's (2002) model incorporates inefficiency of the public sector as misuse of public funds which leads to lower productive public inputs to aggregate production, although other effects of corruption has not been accounted for. A similar approach is adopted by Balckburn et al. (2002; 2005), where in the earlier paper corruption is modelled as bribe-taking from tax–evaders, while in the second paper corruption is manifested as embezzlement of public funds. To the best of our knowledge, only Barreto (2000) includes study of both resource misallocation and public sector inefficiency within unified setting. In his model corruption is tied to the accumulation of non-productive capital used for rent-seeking, and the inefficiency of the public sector is manifested as red tape.

The economic effect of corruption can also stem from the distortions in tax collection. A group of papers such as Chen(2003), Lin and Yang (2001) and others have laid good grounds for modelling tax evasion within a growth framework. Chen (2003) incorporates tax evasion into a standard AK- growth model with public capital. Lin and Yang (2001) and Eichhorn (2004) analyse the uncertainty created by tax evasion its economic growth implications. However, these models do not account for corruption. A richer model encompassing tax evasion with corruption has been developed by Acconcia and d'Amato (2003). Specifically, Acconcia and d'Amato (2006) consider a model of corruption explicitly focused on corrupt interactions between the private and public sectors. However, unlike our model they do not account for the effect of corruption through public good provision.

Summing up, the literature lacks a more general approach in explaining the growth effects of corruption. The existing models dealing with corruption are mainly constructed around its redistributive nature. Nonetheless, the distortions created in the functioning of the public sector should be taken into account. These distortions directly affect the amount and quality of the public inputs to private production. Our paper addresses this gap in the literature. It extends existing growth models by incorporating corruption in both government activities.

One common feature of the literature on government taxation and growth is that the administration costs associated with a given taxation regime are not taken into account , despite that fact that a number of empirical studies have shown that theses costs are far from negligible . Indeed Vaillancourt (1989) , for example , shows in the Canadian context that the administration costs amount to 7.1 % of collected revenues , whereas Sanford , Godwin and Hartwick (1989) report a level of 4.93 %

for UK (see also , Rebelo and Easterly , 1993) . The purpose of this paper is to integrate the administration costs of taxation (compliance and collection costs) into the basic framework for analysing government investment expenditures and endogenous growth introduced by Barro (1990) . In order to do so , it seems worthwhile to use a hierarchical model of incentives due to Laffont and Tirole (1993) .

3. THE MODEL

We consider a simple Ramsey-type model similar to Barro (1990). Economy in our model is characterized by the decisions of the representative household-producer under the given government policies. Indeed, consider the model of the public sector introduced by Barro (1990). In this model the public sector provides services which enter as a factor input into the private sector's production technology . Let the production function of each "yeoman farmer be given by

$$y = \Phi(k,g) = A.k^{1-\alpha} g^{\alpha}$$

where k is the stock of capital per capita and g is the level of public expenditures per capita . There is no depreciation in the capital stock and the population is assumed to be constant. The optimization problem faced by each "yeoman farmer" is then given by :

$$\text{Max} \int_0^{\infty} \frac{c(t)^{1-\sigma}-1}{1-\sigma} e^{-\rho t} dt$$

c(t)

s.c :

.

$$\tau y(t) = g(t)$$

$$\dot{k}(t) = y(t) - c(t) - g(t)$$
$$\dot{k}(t) = y(t)(1-\tau) - c(t)$$

We can then state Barro' main result as follows:

PROPOSITION I (BARRO 1990)

(i) The centralized solution to the above problem leads to the following growth rate :

$$\gamma = \frac{1}{\sigma}\left[A^{\frac{1}{1-\alpha}} (1-\tau) \tau^{\frac{\alpha}{1-\alpha}} - \rho \right]$$

(ii) the optimal ax rate which maximizes the growth rate is given by :

$$\alpha = \tau^{*} = Arg\max \gamma \ (\tau)$$

4. CORRUPTION PROOF GROWTH

While fiscal policy may be an important determinant of growth performance , it is clear , especially in LDC context , that it is the implementation of these policies which constitutes the crucial difference among countries . moreover , it is clear that informational issues may lie at the base of the problems associated with the implementation of fiscal policies . Indeed , the structure of taxation is largely a function of the implementation of fiscal policies .Indeed , the structure of taxation is mainly a function of the information obtainable on variables which are inherently non-observable , and which economic agents subject to taxation, have an interest in dissimulating . Obtaining this information is likely to be costly .

The existence of informational costs associated with the implementation of fiscal leads us to modify the government budget constraint used by Barro (1990) in the most simple manner consistent with the application of a hierarchical model of tax collection More specifically, we include on the expenditure side of the government constraint , the wage bill associated with providing a level of remuneration of government tax collectors sufficient to prevent them from engaging in collusive games with the taxpayers they are supposed to monitor . We thus write the government budget constraint as :

$$\tau y(t) = g(t) + S(t)$$

where S(t) is the wage bill associated with " Efficiency wages " for tax collectors of sufficient magnitude to prevent bribery taking place .I assume that *the tax collectors do not pay tax* (if not who police the

police ?) for analytical convenience .If one assume that collusion between taxpayers and tax collectors obtain through a bribe , denoted by B(t) such that :

$$B(t)(1+\lambda) \leq \tau y(t)$$

Where λ is the cost of bribery (see Laffont and Tirole 1993 and Jellal for endogenous cost 1991) , then the government wage bill must satisfy the following constraint :

$$S(t) \geq B(t)$$

This inequality constitutes the " Collusion Proof " constraint on the social planner's optimization program , which may now written as :

$$\text{Max} \int_0^{\infty} \frac{c(t)^{1-\sigma}-1}{1-\sigma} e^{-\rho t} dt$$

s.c :

.

$$\dot{k}(t) = y(t) - c(t) - g(t)$$

$$\tau y(t) = g(t) + S(t)$$

$$B(t)(1+\lambda) \leq \tau y(t)$$

$$S(t) \geq B(t)$$

k(0) given

We can now announce our main result given by the following proposition

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PROPOSITION 2

(i) The centralized , collusion proof solution to the social planner's optimization problem leads to the following growth rate :

$$\gamma_{\lambda} = \frac{1}{\sigma}\left[A^{\frac{1}{1-\alpha}}(1-\frac{\lambda}{1+\lambda}\tau)(\frac{\lambda}{1+\lambda}\tau)^{\frac{\alpha}{1-\alpha}} - \rho \right]$$

(ii) $\exists \tilde{\lambda} \in [0,+\infty[$, such that the optimal fiscal policy is given by :

$$\tau^{*} = 1 \ \ if \ \lambda \in [0,\tilde{\lambda}] \ \text{ and } \ \tau^{*} = \alpha\left(1+\frac{1}{\lambda}\right) \ if \ \lambda \in]\tilde{\lambda},+\infty[$$

(iii) given the optimal rate of taxation , the growth rate of the economy is given by

$$\gamma_{\lambda} = \gamma_{-} = \frac{1}{\sigma}\left[\frac{A^{\frac{1}{1-\alpha}}}{1+\lambda}\left(\frac{\lambda}{1+\lambda}\right)^{\frac{\alpha}{1-\alpha}} - \rho \right] \text{ if } \tilde{\lambda} \leq \lambda \quad \text{and}$$

$$\gamma_{\lambda} = \gamma_{+} = \frac{1}{\sigma}\left[A^{\frac{1}{1-\alpha}}(1-\alpha)\alpha^{\frac{\alpha}{1-\alpha}} \right] \text{ if } \tilde{\lambda} > \lambda$$

(iv) the efficiency wages for tax collectors are given by :

$$S(t)=\frac{y(0)}{1+\lambda}e^{\gamma -t} \quad \text{if} \quad \tilde{\lambda}\leq\lambda \quad \text{and}$$

$$S(t)=\alpha\frac{y(0)}{\lambda}e^{\gamma+t} \quad \text{if} \quad \tilde{\lambda} \ >\lambda \quad .$$

Proof :

We see that (i) is immediate , (ii) is proved by noting that the taxation rate which maximizes the growth rate is given by :

$\tau^{*}=\text{argmax}\,\gamma_{\lambda}=\alpha\left(1+\frac{1}{\lambda}\right)$ hence the optimal value $\tau^{*}=\min(1,\alpha(1+\frac{1}{\lambda}))$

which implies the existence of $\tilde{\lambda} =\frac{\alpha}{1-\alpha}$ such that $\tau^{*}=1$ if $\tilde{\lambda}\leq\lambda$

and

$\tau^{*}=\alpha\,(1+\frac{1}{\lambda})$ *if* $\tilde{\lambda}>\lambda$, the result (iii) is proved by simply substituting the optimal taxation rate into the expression for the growth rate given by proposition 2 while (iv) is proved by noting that the wage bill is given by

$$S(t)=\frac{\tau^{*} \ y(t)}{1+\lambda}$$

Substituting the optimal tax rate then leads to announced result . Q.E.D

The result (i) of the proposition (2) shows that the case examined by Barro (1990) corresponds to a situation of infinite bribery costs , that is :

γ_{∞} .

The results given by (ii) , (iii) and (iv) prove the existence of two regimes which correspond to different levels of the cost of bribery , and thus the likelihood of corruption between taxpayers and tax collectors .

We denote these two regimes by :

$$\lambda \in \Omega_{-}(\alpha) = \left[0, \frac{\alpha}{1-\alpha}\right] \text{ and } \lambda \in \Omega_{+}(\alpha) = \left]\frac{\alpha}{1-\alpha}, +\infty\right[$$

.

Note that the relative likelihood of the two regimes depend upon the productivity of the government expenditures , parameterized by α . One of the main goals f the social planner is to thwart corruption between taxpayers and tax collectors , and she achieves this by reducing the rent created and split by both parties when collusion obtains It follows , for values of λ which result in the highly collusive environment i.e , $\lambda \in \Omega_{-}(\alpha) = \left[0, \frac{\alpha}{1-\alpha}\right]$, that the social planner implements a relatively low growth rate γ_{-} in order to ensure that bribery does not take place .

This collusion proof outcome , can only be achieved by reducing expenditures and results in a lower rate of growth .

Under the weak collusive regime ; $\lambda \in \Omega_{+}(\alpha) = \left]\frac{\alpha}{1-\alpha}, +\infty\right[$, on the other hand , growth rate is maximized and the efficiency wages for tax collectors are proportional to the productivity of the public sector .Moreover the wage bill is a decreasing function of the cost of collusion λ .

5. CONCLUDING REMARKS

In this paper, we have incorporated the costs associated with implementing fiscal policy into the model of endogenous growth with government expenditures due to Barro (1990) . We have shown that incorporating these implementation costs in the form of a hierarchical model of collusion leads to a distortion stemming from the social planner's desire to avoid collusion between taxpayers and tax collectors . This distortion imposed by the government desire to achieve collusion proof outcome leads the social planner to reduce the level of government expenditures and thus the growth rate . Moreover , the magnitude of the distortion , and thus its deleterious impact on growth , is increasing in the ease with which bribery can be carried out . In the context of LDCs , where it is widely believed that the bribery is easy , the implication is that the " collusion proof " distortion is of greater magnitude than in DCs . The result is that , ceteris paribus , the growth rate of LDCs will be lower than that of DCs .

Indeed Murphy , Shleifer and Vishny (1992) argue that countries with easy corruption, poor law , and permissive legal systems (all leading to a low cost of engaging in bribery) are faced with high levels of rent seeking activity which will tend mainly to affect innovative activity , and thus to lower the growth rate .

Similarly , Shleifer and Vishny (1993) shows that the weakness of LDC central governments allows various government agencies to impose bribes on private agents , bribes which ultimately hamper productive

economic activity . In essence , the weakness of central government of Shleifer and Vishny (1993) is akin to the cost of engaging in bribing in the present paper . The upshot , both of the present paper and those by Murphy , Shleifer and Vishny , is that the poor protection of property rights in lDCs hampers economic growth .

REFERENCES

Abed, George T. and Sanjeev Gupta, eds (2002) *Governance, corruption, and economic performance.* Washington, D.C: International Monetary Fund.

Acconcia, A. and Martina R. d'Amato (2003) Corruption and Tax Evasion with Competitive Bribes. *CSEF Working Paper, ,* Naples: University of Naples.

Aidt, Toke S (2003) Economic Analysis of Corruption: a Survey. *the Economic Journal* 113 F632-F652.

Alam, Shahid (1989) Anatomy of Corruption: An Approach to the Political Economy of Underdevelopment. *American Journal of Economics and Sociology* 48, 441-456.

Alesina, A. and G. M. Angeletos (2005) Corruption, inequality, and fairness. *Journal of Monetary Economics* 52, 1227-1244.

Ali, Abdweli M. and Hodan Said Isse (2003) Determinants of Economic Corruption: A Cross-Country Comparison. *Cato Journal* 22, 449-466.

Barelli, Paulo and Samuel de Abreu Pessôa (2003) A model of Capital Accumulation and Rent seeking. *Penn CARESS Working Papers*.

Barreto, R. A. (2000) Endogenous corruption in a neoclassical growth model. *European Economic Review* 44, 35-60.

Barro, Robert J (1990) Government spending in a Simple Model of Endogenous Growth. *The Journal of Political Economy* 98, S103-S125.

Barro, Robert J. and Xavier Sala-i-Martin (1992) Public finance in Models of Economic Growth. *Review of Economic Studies* 59, 645-661.

Blackburn, Keith, Niloy Bose and M. Emranul Haque (2002) Endogenous Corruption in Economic Development. The University of Manchester, Centre for Growth and Business Cycle Research, DPS 022.

Blackburn, Keith, Niloy Bose and M. Emranul Haque (2005) Public Expenditures, Bureaucratic Corruption and Economic Development. The University of Manchester, Centre for Growth and Business Cycle Research, DPS 053.

Chen, Been-Lon (2003) Tax Evasion in a Model of Endogenous Growth. *The Review of Economic Dynamics* 6 318-403.

Ehrlich, Isaac and Francis T. Lui (1999) Bureaucratic Corruption and endogenous Economic Growth. *The Journal of Political Economy* 107, 270-S293.

Eichhorn, Christoph (2004) Tax Evasion and Economic Growth. Swiss Society of Economics and Statistics.

GAROUPA ,N and JELLAL ,M. (2007) " Corruption and Law Enforcement" " European Journal of Law and Economics .

Guriev, Sergei (2004) Red tape and corruption. *Journal of Development Economics* 73, 489-504.

Huntington, Samuel P. (1968) *Political Order in Changing Societies.* New Haven, CT: Yale University Press.

Jellal,M (2007) “ Psychological Cost of Corruption ” mimeo .

Jellal , M (2007) “ Taxation and Bribery ” mimeo .

Kaufmann, D., Wei, S.J. (1999) Does 'grease money'' speed up the wheels of commerce? *NBER Working Paper Series 7093*: NBER.

Keefer, Philip and Stephen Knack (1997) Why don't poor countries catch up? A cross-national test of instutitional explanation. *Economic Inquiry* 35, 590-602.

Keefer, Philip and Stephen Knack (2002) Rent-seeking and Policy Distortions when Property Rights are Insecure. The World Bank, WPS 2910

Knack, Stephen and Philip Keefer (1995) Institutions and economic performance: cross-country test using alternative institutional measures. *Economics and Politics* 7, 207-227.

LAFFONT , J.-J and Tirole , J.(1993) *A Theory of Incentives in Regulation and Procurement (* Cambridge , MA : MIT Press) .

Leff, Nathaniel (1964) Economic Development through Bureaucratic Corruption. *American Behavioral Scientist* 8 8-14.

Lin, Wen-Zhung and Cheng-Chen Yang (2001) A dynamic portfolio choice model of tax evasion: Comparative statics of tax rates and its implication for economic growth. *Journal of Economic Dynamics and Control* 25, 1827-1184.

Lui, F. T (1985) An Equilibrium Queuing Model of Bribery. *Journal of Political Economy*, 760-781.

Lui, F. T. (1996) Three aspects of corruption. *Contemporary Economic Policy* 14, 26-29.

Mauro, Paolo (1995) Corruption and Growth. *Quarterly Journal of Economics* 110, 681-712.
Mauro, Paolo (2002) *The persistence of corruption and slow economic growth.* Washington, D.C.: International Monetary Fund, Research Department.

Ng, Yew-Kwang (2000) *Efficiency, equality and public policy: With a case for higher public spending.* New York, London: St. Martin's Press; Macmillan Press.

Rivera-Baitiz, Francisco L (2002) Governance, and Economic Growth: Theory and Evidence. *Review of Development Economics* 6, 225-247.

SANDFORD,C .,GODWIN,M., and HARTWICK,P. *Administrative and Compliance Costs of Taxation* (London : Fiscal Publications .)

Shleifer, Andrei and Robert W Vishny (1993) Corruption. *The Quarterly Journal of Economics* 108, 599-617.

Tanzi, Vito and Hamid Davoodi (2000) Corruption, Public Investment and Growth. *Policies, institutions and the dark side of economics*, pp. 154-170. Cheltenham, U.K. and Northampton, Mass.: Elgar.

Tanzi, Vito and Hamid R. Davoodi (1998) *Roads to nowhere : how corruption in public investment hurts growth.* Washington, D.C.: International Monetary Fund.

Tanzi, Vito, Hamid Reza Davoodi and International Monetary Fund. Fiscal Affairs Dept. (1997) *Corruption, public investment, and growth.* Washington, D.C.: International Monetary Fund, Fiscal
Affairs Dept.

VAILLANCOURT ,F. (1986) *The Administrative and Compliance Costs of Personal Income Taxes and Payroll Taxes* (Canadian Tax Foundations).

VAILLANCOURT,F.(1987) " The Compliance Costs of Taxes on Business and Individuals : A Review of Evidence , " *Public Finance* 42 :395-414 .

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