

U4 Expert Answer



Exploring the Relationships between Corruption and Tax Revenue

Query:

Has any work been done that suggests a correlation between the level of tax revenue gathered (as a % of GDP) and levels of corruption in country? Both are means of extracting money from the economy - one formal, one informal. Is it the case, for example, that the economy can only bear so much extraction and that therefore if corruption levels rise, tax revenue falls (or vice versa)?

Purpose:

To find out if existing empirical research establishes a negative correlation between levels of corruption in an economy and tax revenue collected.

Content:

1. Effects of Corruption on Tax Revenue
2. Effects of Taxation on Corruption
3. Further Reading

Summary:

A review of literature indicates that corruption has a significant negative impact on the levels of tax revenue collected in a country. The current understanding of the correlation between corruption and tax revenue however is incomplete since there is insufficient information available on the impact of taxation on corruption.

Corruption not only lowers the tax-GDP ratio but also causes long-term damage to the economy by detaching investment, increasing the size of the informal economy, distorting tax structures and corroding the tax morality of taxpayers. All of these in turn further reduce the long term revenue generating potential of the economy.

The impact of taxation on corruption is less explored in the existing research literature. The little information that was found indicates that higher tax rates can induce more corruption in an economy by incentivising tax evasion. Some scholars argue that corruption can

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mitigate the burdens of excessive taxation on the economy through enabling better allocation of resources and enabling investment. However, the underlying assumptions of these findings have been challenged by other researchers. It is recommended that more empirical research is carried out to better understand the impacts of taxation on corruption.

1 Effects of Corruption on Tax Revenue

There is wide agreement among researchers that corruption has a significant negative impact on tax revenues. Studies in developing countries indicate that often more than half of the taxes that should be collected cannot be traced by government treasuries due to corruption and tax evasion. While some corruption researchers have proposed that corruption can be an efficiency-enhancing force in tax revenue collection by motivating tax officers to work harder and dis-incentivising tax evasion, other experts have pointed out that presence of corruption reduces tax revenues in the long run. (Fjeldstad; Tungodden 2001)

Corruption as an Extractive Force from the Economy

A 1998 study done in 39 sub-Saharan African countries by the International Monetary Fund (IMF) found strong statistical evidence that an increase in the level of corruption lowers the tax-revenue-GDP ratio. This finding led the IMF to conclude that efforts to lower corruption would increase tax revenues significantly. (Ghura 1998)

These findings were later reinforced by Tanzi and Davoodi who investigated the relationship between levels of corruption (measured by corruption perception indices) and GDP in a sample of 97 countries. They found that a one-point increase in the Corruption Perception's Index is associated with a 1.5 percentage point decline in revenue-GDP ratio, 2.7 percentage point decline in tax-GDP ratio and 1.3 percentage increase in non-tax revenue¹-GDP ratio. This shows

¹ Non-tax revenue is defined as all revenue other than taxes accruing to government through its ministries, departments and agencies (MDAs) from their operations, either through the use of government assets/facilities to provide services to stakeholders or through the enforcement of regulations that require stipulated payments to be made to government through its MDAs.

that higher corruption is consistent with lower revenues of all types with the exception of non-tax revenues. The latter finding is consistent with the fact that, at least for developing countries, non-tax revenues are dominated by revenues from natural resources. On the other hand, studies have shown that natural resource abundance is an important determinant of corruption. (Tanzi; Davoodi 2000)

Tanzi and Davoodi also examined the correlation between corruption and different categories of taxes, mainly income tax, Value Added Tax (VAT) and trade tax. They found that, corruption has a statistically significant negative correlation with individual income taxes - a one point increase in corruption was found to be associated with a 0.63 percent GDP decline in income taxes received.

Higher corruption is also associated with lower taxes collected from VAT, sales tax and turnover tax. Losses in VAT were calculated using a VAT efficiency ratio: the ratio of VAT revenues received to GDP divided by the standard VAT rate. This ratio is bounded between 1 and 0. The higher the ratio, the more productive the VAT system, the lower the ratio, the more widespread the extent of exemptions, zero rating, tax evasion, or weak tax administration. Using this simple association between corruption and the VAT efficiency ratio for a sample of 83 countries, Tanzi and Davoodi found that countries with high perception of corruption tend to have low VAT efficiency ratios. The correlation coefficient is -0.34 which is statistically significant at the 1 percent level.

In spite of the presence of high levels of corruption in customs systems, no statistically significant correlation was found between corruption and trade taxes.

These findings led Tanzi and Davoodi to conclude that, given the higher level of corruption in developing countries, corruption has a larger impact on direct taxes in developing countries. It is also consistent with the high level of tax evasion in developing countries. They hypothesised that a 4 point reduction in corruption can increase direct taxes in developing countries, as a group, by 7.2 percent of GDP. (Tanzi; Davoodi 2000)

Corruption Erodes the Tax Revenue Base in the Long Run

Corruption not only reduces collection of tax revenue from the current economy, it also hinders economic growth, thereby impacting future tax revenue collection.

Corruption Corrodes the Tax Morality of Taxpayers

As mentioned previously, corruption affects the tax morality of taxpayers and distorts tax structure. The tax revenue collection processes involves several major stakeholders in society, which makes the opportunities for and motivations to engage in corruption both numerous and widespread. These stakeholders include the tax officials, politicians, patrimonial networks and the taxpayers themselves. Persistence of corruption in the tax collection process therefore helps to foster a culture of corruption among a wide range of actors, which in turn damages the possibility of establishing good governance and democratic accountability in the long run. Corruption in tax administration is a wide topic on its own and is beyond the scope of this Expert Answer.

Corruption Distorts Tax Structures

By worsening the distortions on the level of taxation and its structure, corruption reduces growth.

Political corruption and/or state capture leads to politicians abusing their entrusted powers by introducing tax regulations favourable to industries with entrenched powers. Corruption at this level can also lead to inefficient tax structure design which can create artificial barriers to private economic activities, which not only erodes the revenue base of the economy (and by extension, its tax-generating capacity), but it also creates greater opportunities for corruption at the bureaucratic level. (Attila 2008)

Corruption Increases the Size of the Shadow Economy

Countries with higher levels of corruption also tend to have larger unofficial or “shadow” economies. Since corruption undermines the quality of the bureaucracy and trust in the administration, it can discourage entrepreneurs from starting businesses in the official economy. As the size of the informal economy grows at the cost of the official economy, the government’s tax revenue base is further eroded. (Dreher; Herzfeld 2005)

Corruption Hampers Overall Growth of the Economy

Corruption affects the growth potential of the economy and thereby reduces the size of the future tax-base. By decreasing the resources available for public

authorities, corruption also reduces productive public investments in such areas as roads, health and education.

Axel Dreher and Thomas Herzfeld found that an increase in corruption by about one index point reduces GDP growth by 0.13 percentage points and GDP per capita by 425 USD. Corruption discourages investors, reduces productivity of public expenditures, distorts the allocation of public resources and thus lowers economic growth.

Using data from 71 countries, Dreher and Herzfeld found that corruption has a negative effect on human development variables such as life expectancy, school enrolment rates, etc. Empirical data indicates that increase of corruption by one point in the ICRG (International Country Risk Guide) index reduces school enrolment by almost 5 percentage points and life expectancy by about 2 ½ years. They also found that an increase in corruption by one point reduces government expenditures between 1.3 and 3 percentage points. (Dreher; Herzfeld 2005)

Paolo Mauro, in a 1995 study on Corruption and Growth, found that more corrupt countries experience significantly lower investment rates. He estimates the impact at a reduction of investment by 2.5 percentage points for one standard deviation increase in corruption. These results were confirmed by Pelligrini and Gerlach in 2004, who found that one standard deviation increase in corruption lowers investment by around 2.5 percentage points. (Mauro 1995 and Pellegrini; Gerlach 2004)

2 Effects of Taxation on Corruption

In contrast to corruption, taxation is a legitimate method of extracting resources from the economy. However, economists have argued that excessive taxation can lead to adverse effects on economic activities. While increases in public resources through taxation can help governments provide more public goods, both quantitatively and qualitatively, these benefits may be offset by negative effects on growth due to higher taxes.

A higher tax rate can potentially induce more corruption in an economy by incentivising tax evasion - individuals will have stronger incentives to accept and pay more bribes so as to diminish the tax burden. Gbewopo Attila hypothesises that, depending on the structure of the

economy, the effects of this can be either positive or negative for the economy as a whole. For example, if due to corruption the tax burden on the taxpayer (including the amount of bribe) is lessened then this will free up resources to invest it back into the economy or to increase savings/capital accumulation.

Accepting the presence of corruption, Attila proposes the following: Let us assume that there is an optimal tax rate of growth for an economy (not taking corruption into account) and an “optimal tax rate of corruption” – a tax rate at which the effect of corruption on optimal economic growth is zero. Through econometric analysis Attila shows that, if the tax rate of optimal growth is lower than the optimal tax rate of corruption, then corruption induces an economic growth below the optimal rate. Accordingly, any increase in the tax rate would have a direct negative effect on growth by itself. However, the effect of corruption in this case will mitigate the impact on growth. Conversely, any decrease in taxation will be beneficial to growth, this time implying an adverse effect of corruption.

If, however, the tax rate of optimal growth is higher than the optimal tax rate of corruption, the impact of taxation is more negative on growth since it significantly reduces the rate of growth. The positive direct impact or the indirect effect through corruption that taxes may have on growth is inhibited by the excessive negative effects.

Attila concludes that, all things being equal, economic growth in economies without corruption is higher than in corrupt economies. However any positive variation in the marginal rate of taxation from the optimum can induce a negative effect on growth which can be mitigated by corruption. (Attila 2008)

These findings, however, are based on the problematic assumption that corrupt officials will not adjust the amount of bribes to maximise their own intake rather than the amount of bribe that maximises efficiency in resource allocation in the economy. Another significant problem is that real resources are often wasted in order to keep corrupt deals secret. The cost of rent seeking is often significant, which undermines the equivalency of a corrupt exchange to a competitive allocation of resources. (Aidt 2003)

There is currently a great lack of empirical data and analysis examining the impact of taxation on corruption. More research needs to be done to better understand this relationship and to determine whether remedies to corruption can be found through taxation schemes.

3 Further Reading

Dreher, A.; Herzfeld, T. (2005). The Economic Costs of Corruption: A Survey and New Evidence. <http://econpapers.repec.org/paper/wpawuwpp/e/0506001.htm>

Mauro, P. (1996). The Effects of Corruption on Growth, Investment, and Government Expenditure. **IMF Working Paper** 96/98, International Monetary Fund. <http://ideas.repec.org/p/imf/imfwpa/96-98.html>

Li, H.; Xu, L. C.; Zou, H. (2000). Corruption, Income Distribution, and Growth. **Economics and Politics**, Blackwell Publishing, vol. 12(2), pages 155-182, 07 <http://ideas.repec.org/a/bla/ecopol/v12y2000i2/p155-182.html>

Attila, G. (2008). Corruption, Taxation and Economic Growth: Theory and Evidence. CERDI-CNRS Working Paper, 2008

Mauro, P. (1995). Corruption and Growth. *Quarterly Journal of Economics* 110 (1995) 3, 681 – 712 <http://ideas.repec.org/a/tpr/qjecon/v110y1995i3/p681-712.html>

Pellegrini, L.; Gerlagh, R. (2004). Corruption's Effect on Growth and its Transmission Channels. *Kyklos*, 57 (3); pp. 429 – 456, August 2004 http://papers.ssrn.com/sol3/papers.cfm?abstract_id=591558

Brockington, D. (2008). Corruption, Taxation and Natural Resource Management in Tanzania. *Journal of Development Studies*, Vol. 44, No. 1, 103–126, January 2008

Fisman, R.; Svensson, J. (2002). Are Corruption and Taxation Really Harmful to Growth? Firm Level Evidence. <http://people.su.se/~jsven/corrgrowth.pdf>

Richardson, G. (2006). Taxation determinants of fiscal corruption: evidence across countries. *Journal of Financial Crime*, Vol. 13 No. 3, 2006, pp. 323-338

van der Hoek, M. P. (2008). Enlarging the European Union: Taxation and Corruption in the New Member States. MPRA Paper No. 11546, November 2008

Fjeldstad, O-H.; Tungodden, B. (2001). Fiscal Corruption: A vice or a virtue?. CMI Working Paper, 2001:13

<http://www.cmi.no/publications/file/874-fiscal-corruption-a-vice-or-a-virtue.pdf>

Ghura, D. (1998). Tax Revenue in Sub-Saharan Africa: Effects of Economic Policies and Corruption. September 1998

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=882694

Tanzi, V.; Davoodi, H. (2000). Corruption, Growth and Public Finances. IMF Working Paper. <http://www.imf.org/external/pubs/ft/wp/2000/wp00182.pdf>

Aidt, T. (2003). Economic Analysis of Corruption: A Survey. The Economic Journal, 113 (2003) 491, 632-652
<http://ideas.repec.org/a/ecj/econjl/v113y2003i491pf632-f652.html>