VAT & Governance:
Evidence from Countries around the World

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Abstract: The importance of governance indicators and institutional factors in growth and economic development needs to be reconsidered. In another word, tax reform, tax system and introduction of VAT play an important role in creating new revenues for government. In recent years many countries have implemented this tax. Therefore, this study will examine the impact of introducing VAT on governance indicators. We will use the recent data available for governance indicators up to 2008 for all countries around the world which have access to the relevant statistical data. Our findings based on comparing the mean of governance indicators before and after implementing VAT using SPSS package show a better governance in most countries under considerations.

Key words: VAT; Governance Indicators; SPSS.

INTRODUCTION

Today unlike the past, the main factors of production are no longer the traditional factors such as labor, land and capital. On the contrary, nowadays the in addition to new and modern factors of production such as social capital and governance indicators also known as institutional factors play a more important role in economic state of the countries around the World. Recently the World Bank has published six important indices concerning government intervention, its relationship with people, its role and its function. These indicators include [see Kaufman. D & A. Kraay & M. Mastruzzi, (2009)]:
1. Voice and accountability
2. Political stability
3. Regulatory quality
4. Rule of law
5. Governance efficiency
6. Control of corruption

The domain of indices of the factors above is between 1 and 100. The more closer the indicators are to100, the better the performance of the country is in that field. On the other hand, tax reform and implementation of VAT has macro-level economic effects. According to the studies conducted until early 2009, VAT was introduced and implemented in 138 countries. There are different arguments about the effects of this tax. VAT improves structures and governance indicators and finally promotes development by providing a sufficient source of income to improve the performance, to control the accounts, to improve rules, transparency, to reduce corruption and tax evasion and to improve transaction with people. In this article, after implementation of VAT, the effect of the change in governance indicators on the countries around the world is considered.

2. Empirical Relationship between VAT & Governance:
In their study, Chong & Gradstein (2007) expressed that the poor countries have lower tax revenues than the rich countries and their economic performance is less. They have shown that the optimal tax rate is directly related to the improvement of the quality of the institutions by using a simple model. After introduction of taxes, Moor & Simpson (2007), in their study titled "How Tax Affects Governance", expressed that governments are required to increase their relationship with the citizens in order to promote the efficiency and success of the tax system. So, by improving the accountability of their needs increase their incentive for tax
payments. In their study titled "Can Tax Challenge Bad Governance?", Mc Doland & Jumu (2008) expressed that good governance has led to financial development and that strong links with citizens will increase tax resources. They also have shown that in comparison to other revenue sources such as natural resources an increase in government's revenues through tax revenue can result in improved governance indicators.

**How Tax Affects Governance?:**

In the field of development policies, the debate over tax has mostly been conducted by economists who are concerned with fiscal stability, equity or economic efficiency. There is a growing literature in the connections between tax and governance, and a debate is starting to emerge about its relevance to the policy. Governance, or the way that states acquire and use their power and authority is shaped by the ways that citizens are taxed. In short, the consensus holds that governments should focus above all on revenues (with a role also for redistribution and re-pricing). What is missing is this: the system government itself is one of the most important outcomes of tax. In other words, healthy political representations lead citizens to hold governments to account. Better governance comes from making states respond better to the needs of their citizens; first, which requires them to answer and be accountable to their citizens; and second, from the capability of the state, determining what the needs are, or managing competing interests. While most states rely on broad taxation to raise revenue, some states rely instead on other: notably from natural resources or foreign aid. States relying on these alternative forms of taxation tend to feel less need to negotiate with, or be accountable to, their citizens, or to build their capacity to raise and administer tax. By contrast, states that rely on broad taxation have greater incentives to practice better governance, for three main reasons. First, broad taxation affects the state itself, which focuses more on obtaining revenue by taxing citizens. Second, tax affects citizens: it engages them politically. Third, through taxation states and citizens begin to interact, and to bargain over revenues. Citizens pay tax in exchange for being able to influence the level and form of taxation and the uses of revenue. Better accountability tends to follow.

**Poor Countries and the Politics of Tax:**

Coercive, arbitrary taxation can affect the relationships between citizens and governments. Even though, the links between tax and governance are complex. In poor countries nowadays, the politics of taxation are much more complex. Complex tax systems, with large numbers of exemptions, often encourage taxpayers to make individual bargains with government instead of taking collective action on behalf of taxpayers generally. In such countries, tax collection can be arbitrary, unfair or brutal, and it can even undermine constructive political engagement between government and taxpayers.

**Governance Indicators:**

Good public governance also underpins good corporate governance. Governance indicators assess and compare the institutional quality of countries and can assist in research and policymaking. These indicators were used in evaluating the performance of the public sector and to evaluate decisions about conditional development assistance. It would be an impossible exercise to try to aggregate all indicators and come up with an index. But there are useful indicators that can be extracted from organizations’ data–bases such as governance indicators.

- Voice and accountability (V.A): is the availability and clarity of information provided to the general public about government activity. A lack of transparency creates opportunities for government corruption and reduces public sector efficiency. Linked with transparency is the issue of Accountability. Accountability rests on the establishment of criteria for evaluating the performance of public sector institutions. This includes economic and financial accountability brought about by efficiency in resource use, expenditure control, and internal and external audits. Transparency and participation are essential ingredients in establishing accountability.
- Political Stability (P.S): perceptions that the government will be destabilized or overthrown by unconstitutional or violent means. War, social chaos, political violence and international disputes, to effect people's political future. The government should shift to an institution to make impact and transfer a policy of regular.
- Regulatory of quality (R.Q): good governance runs taxes that based on transparent rules written and does not lead frequent contact between tax officials and tax payers.
- Rule of law (R.L): contracts must be guaranteed and be effective judicial.
- Government effectiveness (G.E): quality of public service provision, of bureaucracy, competence of civil servants, independence of civil service from politicians
Control of corruption (C.C): frequent contacts between tax officials and tax payers for the determination of tax liability and tax payment cause the corruption. The corruption of performance of some tax officials is hidden and is not detected easily and when it is discovered there’s no punishment or an appropriate punishment. Administrative procedures such as the selection of the inspectors and tax payers should be transparent and the supervision of the tax office should be strong.

The Tax Consensus Has Failed:
The Consensus also emphasizes that redistribution should happen, if at all, via spending, not via taxation. Tax consensus is telling poor countries to avoid direct taxation, and to reduce revenues, again with potentially very negative results on the strength of governance and the quality of institutions. Taxes raise money to pay for health, roads and education, or for more indirect things like good regulation and administration. Most people are familiar with, and accept, this function. Another financial performance is redistribution. Taxation can help reduce poverty and inequality, and spread the benefits of development more widely. Different taxes have different effects. Other role of tax is re-pricing. Taxes can be used to change behavior: taxing tobacco, pollution or carbon-based energy, for example, is accepted by many people as a way to curb potentially harmful activities. But most of all Taxation strengthens and protects channels of political representation: when citizens are taxed, they demand representation in return from their governors. In developing countries tax is neutral. In these countries a tax system should not distort production or consumption decisions, because it is argued that this would reduce economic efficiency. The governments in poor countries have been stripped of the essential tools for redistribution – frequently with the effect of worsening inequality, hence often damaging political stability. The consensus undercuts revenues. When the share of tax revenues in government spending is higher and when government rely most on tax channels of representation these are systematically strengthened.

3. Model, Data, and Estimation Methodology:
This article divides the world countries into two groups.
- Countries that haven't implemented VAT system yet
- Countries that have implemented VAT system

In this study, the population includes 212 countries. The statistical data is related to 2008. In this method, we compare and test the means of governance indicators before and after the implementation of VAT.

By using the data of 2008 and the SPSS software, the averages of each indicator for the two groups of countries are obtained.

| Table 1: The mean of governance indicators for countries that have implemented VAT |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Mean                            |42.0244 |50.6190 |33.1463 |43.4286 |37.1628 |40.8537 |
| N                               |4       |1       |4       |24      |14      |24      |
| Std. Deviation                  |32.25096|31.95496|31.65009|31.46438|30.89300|30.26596|
| Total Mean                      |42.0244 |50.6190 |33.1463 |43.4286 |37.1628 |40.8537 |
| N                               |4       |1       |4       |24      |14      |24      |
| Std. Deviation                  |32.25096|31.95496|31.65009|31.46438|30.89300|30.26596|

Source: authors' analysis on data from World Bank

| Table 2: The average of governance indicators for countries that haven't implemented VAT |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Mean                            |51.9281 |49.8263 |54.0542 |51.6886 |53.2976 |52.2952 |
| N                               |167     |167     |166     |167     |168     |166     |
| Total Mean                      |51.9281 |49.8263 |54.0542 |51.6886 |53.2976 |52.2952 |
| N                               |167     |167     |166     |167     |168     |166     |

Source: author's analysis on data from World Bank

As it is clear, average of the indicators is almost higher in countries that have implemented VAT. In this part, in order to review indicators before and after implementation of VAT, the test of mean difference has been used. If \( \bar{X}_{1i} \) is average governance index before the implementation of VAT and \( \bar{X}_{2i} \) is average governance index after the implementation of VAT, governance indicators tests the following hypothesis.
\[
\begin{align*}
H_0 &: \mu_1 = \mu_2 \\
H_1 &: \mu_1 \neq \mu_2
\end{align*}
\]

As for the variance inequality for test hypothesis, we use following t test with degree of freedom as

\[n_1 + n_2 - 2\]

\[
t = \frac{(x_{1i} - x_{2i}) - 0}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}
\]

With considering significant level and as the freedom degree is \(n_1 + n_2 - 2\), fiscal t placed in critical area, in this case \(H_0\) hypothesis is rejected and \(H_1\) hypothesis is accepted. Results of mean difference test are shown in table 3:

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Test Value=0</th>
<th>Mean Difference</th>
<th>95%Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.A</td>
<td>8.344</td>
<td>40</td>
<td>0</td>
<td>42.02439</td>
<td>31.8447 - 52.204</td>
</tr>
<tr>
<td>V.A</td>
<td>10.266</td>
<td>167</td>
<td>0</td>
<td>50.61905</td>
<td>40.6612 - 60.5769</td>
</tr>
<tr>
<td>P.S</td>
<td>22.751</td>
<td>167</td>
<td>0</td>
<td>49.79762</td>
<td>45.4764 - 54.1189</td>
</tr>
<tr>
<td>R.Q</td>
<td>6.706</td>
<td>40</td>
<td>0</td>
<td>33.14634</td>
<td>23.1563 - 43.1363</td>
</tr>
<tr>
<td>R.Q</td>
<td>25.973</td>
<td>166</td>
<td>0</td>
<td>54.07186</td>
<td>49.9616 - 58.1822</td>
</tr>
<tr>
<td>R.L</td>
<td>8.945</td>
<td>41</td>
<td>0</td>
<td>43.42857</td>
<td>33.6236 - 53.2336</td>
</tr>
<tr>
<td>R.L</td>
<td>23.647</td>
<td>167</td>
<td>0</td>
<td>51.57738</td>
<td>47.2712 - 55.8835</td>
</tr>
<tr>
<td>G.E</td>
<td>7.888</td>
<td>42</td>
<td>0</td>
<td>37.16279</td>
<td>27.6553 - 46.6703</td>
</tr>
<tr>
<td>G.E</td>
<td>24.936</td>
<td>168</td>
<td>0</td>
<td>53.24852</td>
<td>49.0328 - 57.4642</td>
</tr>
<tr>
<td>C.C</td>
<td>8.643</td>
<td>40</td>
<td>0</td>
<td>40.85366</td>
<td>31.3005 - 50.4068</td>
</tr>
<tr>
<td>C.C</td>
<td>23.736</td>
<td>166</td>
<td>0</td>
<td>52.21557</td>
<td>47.8723 - 56.5588</td>
</tr>
</tbody>
</table>

D=0 before of implementation of VAT
D=1 after of implementation of VAT

4. Finding and Concluding Remarks:

Based on results in table 3, we consider that mean difference test is significant for all indicators. The end goal should be to let poorer countries finance development from tax revenues rather than by relying endlessly on foreign aid. The plight of poverty-stricken conflicted and corruption prone countries that depend on natural resources such as oil illustrates the problem: when states depend largely on taxing mineral extraction companies, they no longer have to bargain with the citizens they rule, and so feel less accountable to them. Building accountability through taxation needs two dimensions: first, strengthening domestic tax systems, and second, giving states more freedom to tax elites who would otherwise move their income and assets offshore. We are offer the following solutions:

- Stop focusing only on the scrutiny of public spending, and encourage more debate about the links between sources of revenue and the goals of public spending.
- Keep supporting professional networking of tax experts from developed and developing countries, to exchange views and experience on tax policy, and to enhance professionalism.
- Seriously consider ending tax exemptions for aid inflows. This would set a good example; it might reduce transaction costs for national revenue authorities; and it could narrow opportunities for fraud.

REFERENCES


