Impacts of tax capacity on development outcomes

Brian Lucas
University of Birmingham
11.03.2017

Question

Where has reformed tax policy had the most impact in terms of broader developmental goals?

Contents

1. Overview
2. Economic growth
3. Reducing aid and natural resource dependence
4. Statebuilding
5. Inequality and redistribution
6. References

1. Overview

There is increasing recognition that strong tax systems can have impacts on economic growth, the sustainability of revenues for expenditure, state-building, and inequality, although there are debates about the trade-offs to achieving these differing and sometimes incompatible objectives. Tax revenue appears to be more likely to be used to support broad development goals than revenue from grants (Gadenne, 2015) or from natural resources (Prichard et al., 2014). However, state capacity improvements and civil society engagement are important to help ensure that tax revenues improve development outcomes (Prichard, 2010). Mick Moore cautions that the developmental impacts of tax reform may be difficult to discern because “there are very few countries where revenue reform has been effective and sustained over long periods of time” (personal communication, 2017).

Evidence about the impact of tax reform on development outcomes includes:

- Economic growth: There is robust evidence in high- and middle-income countries, and emerging evidence in low-income countries, that personal income taxes can dampen
growth, and that a shift towards consumption and property taxes can in some cases be beneficial for growth. Such relationships are context-specific, modest in overall impact on growth, and depend on how tax policy is actually implemented. There is some evidence that increased effectiveness of tax systems is positively linked with GDP growth. The evidence available on tax incentives (exemptions) suggests that they fail to encourage investment and growth.

- **Sustainable revenue and reducing aid and natural resource dependence**: Tax (excluding revenue derived from natural resource rents) is arguably more sustainable, and has been more resilient during the 2008 financial crisis, than aid and natural resource rents in developing countries. Though past evidence has found a negative relationship between aid and tax revenue and effort, emerging evidence, with newer data, finds no relationship.

- **Statebuilding**: There is growing evidence showing that taxation has a positive impact on statebuilding by strengthening state administrative capacity, incentivising accountability, and providing revenue for state expenditure. Some local administrations that improved tax capacity have gone on to deliver better quality public services. Increases in taxes have been linked to improvements in services and with democratic reforms, and states which tax the poor tend to prioritise basic public services over property rights, whereas states that tax the rich do the reverse.

- **Inequality and redistribution**: Emerging evidence finds that reducing inequality can create improved and more sustainable economic growth in the longer term. However, income taxes have been found to be relatively ineffective on redistribution, politically challenging to implement, and potentially harmful to growth. The poorest countries have demonstrably insufficient resources to alleviate poverty through domestic income redistribution. Taxes, and in particular income and consumption taxes, can be a source of gender bias.

Excise taxes (such as so-called ‘sin taxes’) may also potentially have specific sectoral impacts, although we were unable to investigate these in detail in the time available for this report. There is evidence, for example, that taxing tobacco more heavily could lead to health benefits: the Center for Global Development calls tobacco taxes “the single most cost-effective way to save lives in developing countries” because of the prevalence of smoking-related diseases (Savedoff and Alwang 2015, p. 1).

### 2. Economic growth

The relationship between taxation and economic growth is complex and contentious. The relationship has been most rigorously studied empirically in high-income countries, especially the USA, where there is consensus that general tax increases have dampened growth in the past (McBride, 2012). The smaller body of empirical evidence on the relationship between tax and growth in developing countries is less conclusive, likely because of confounding factors such as weaker tax administration and tax enforcement (Acosta Ormaechea & Yoo 2012).

The impact of tax on growth is ultimately country-context-specific and mediated by the implementation of tax policy. A World Bank literature review in 2011 found evidence that “lowering corporate tax rates can increase investment, reduce tax evasion by formal firms, promote the creation of formal firms, and ultimately raise sales and GDP” (Bruhm 2011, p. 6). On the other hand, an observational study of Latin American countries finds that corporate income tax has a small negative effect on growth across all countries (Canavire-Bacarreza et al.
The same study finds that personal income tax has not undermined growth, probably due to poor collection levels, and reliance on consumption taxes has positive effects in most, but not all, countries (Canavire-Bacarreza et al. 2013). An IMF analysis of historical data across 139 countries finds a statistically significant ‘tipping point’ at a tax-to-GDP ratio of approximately 12.75%, and that raising the tax-to-GDP ratio above this level “adds about one percent to real annual GDP per capita growth for the next 10 to 15 years” (Gaspar et al. 2016, p. 22).

There are different impacts from the tax mix of progressive (e.g. corporate and personal income), proportional (e.g. property) and regressive (e.g. consumption, trade) taxes. Quantitative analyses of high- and middle-income country data suggest that income taxes tend to be more harmful to growth, and that a shift towards generally less harmful consumption and property taxes (while keeping overall tax revenue unchanged) can modestly increase growth (McBride, 2012; Acosta-Ormaechea & Yoo 2012). McBride (2012) suggests that progressive taxation may reduce returns and therefore incentives to work and invest, which in turn undermines growth. Most analyses have failed to find similar clear trends in low-income countries (McBride, 2012; Acosta-Ormaechea & Yoo 2012). A 2014 econometric analysis finds that a shift from trade and consumption taxes to personal income taxes, while keeping overall revenue unchanged, is harmful to low-income country growth but finds no evidence to support the contention that a shift towards consumption taxes has been good for growth (McNabb & LeMay-Boucher, 2014).

The limited developing country evidence on tax incentives (exemptions) does not find that they spur investment and growth, even though they can significantly reduce the overall tax collected (Curtis, 2014). Survey responses suggest such incentives do not affect investors’ decisions and nascent empirical analysis suggests they have no effect on total investment or economic growth (ActionAid, 2013).

Key readings


This meta-review by a conservative US think-tank examined 26 studies looking at the relationship between taxation and growth. 23 of those studies find a negative effect of taxes on growth and the last 3 find no overall effect. Corporate income taxes appeared to be the most harmful, followed by personal income taxes, consumption taxes and property taxes. Most studies were of OECD members, although some larger studies also included developing countries. The paper cites one 1997 study of developing countries, which found that tax-financed spending reduces growth in high-income countries but increases growth in developing countries. This seems to be because in developing countries, financing government expenditure through tax is more growth-enhancing than financing expenditures through debt.


This econometric analysis looked at the relation between changes in tax composition and long-run economic growth using a dataset covering 69 countries with a wide range of income levels. The paper finds that for middle- and high-income countries, higher income taxes (personal income tax and social security contributions) seem to undermine growth, whereas higher consumption taxes (value-added and sales taxes) seem to improve growth. Corporation tax does
not have a significant relationship with economic growth. In low-income countries there was no significant association between growth and any particular kind of tax, apart from trade taxes which seemed to worsen growth. The authors suggest that the lack of significant association between tax and growth in low-income countries is due to poorer quality of tax administration and tax enforcement.


Using econometric analysis and modelling, this paper estimates the effects on growth of rises in the main taxes in Argentina, Brazil, Mexico, and Chile. The paper finds that personal income has not had any significant negative effects on economic growth in these middle- and high-income countries. This can be explained by the low collection levels in the region. For corporate income tax, the effects are inconsistent, with negative, positive or no effect on different countries. Use of consumption taxes has generally been a source of economic growth in Latin American. The authors conclude that reducing tax evasion and improving collection rates may boost economic growth in the region as a whole.


This literature review and advocacy paper explores the use of tax exemptions as ‘tax incentives’ for investment and economic growth in developing countries. The paper provides an overview of types of incentives, the growth in the use of incentives and proposals for ending tax breaks. Based on investor survey data and empirical evidence the paper concludes that these tax exemptions fail to act as incentives, can ‘crowd out’ local investors, and reduce revenue for public services.

3. Reducing aid and natural resource dependence

Due to the volatility of aid and natural resource revenues, many experts argue that changing the revenue mix from these sources towards greater domestic non-resource taxation revenue would allow for more financial stability, predictability and control (e.g. Mascagni, Moore, and McCluskey 2014; Von Haldenwang et al. 2013). One econometric analysis finds support for this contention, finding that non-resource tax collection in developing countries was more resilient than their aid and natural resource revenues during the 2008 financial crisis (Prichard et al., 2014a).

There is uncertainty about the relationship between aid and taxation revenue. The question of whether aid undermines tax effort and revenue has been rigorously researched but with conflicting conclusions. The paucity of data is a key constraint and there is debate on the methodology of the studies with researchers failing to replicate findings. An influential econometric analysis found a negative association between aid grants and tax revenues, though the authors note that this relationship has become weaker over time and can be moderated by policymakers focusing on strengthening tax collection (Benedek et al., 2011). Two further econometric studies using a revised methodology and dataset fail to find a consistent significant relationship between aid and tax (Clist 2014; Morrisey et al., 2014). The authors of one of these studies conclude that there are high levels of heterogeneity amongst countries and types of aid which would prevent a robust relationship at an aggregate level (Morrisey et al., 2014).
Key readings


This econometric analysis paper uses the new ICTD dataset, which the authors argue are notably more accurate than earlier datasets. It finds that there is no consistent, significant relationship between aid and tax performance. In general they find a positive, though not significant, relationship between net aid and government revenue. With Sub-Saharan African countries they find a significant relationship between tax revenue and aid when given as loans.


This paper presents a new government revenue dataset which the authors argue is more complete and consistent than previous efforts. Econometric analysis using this data finds that tax collection in developing countries has improved markedly and consistently across income groups and regions. Progress has been most rapid among low-income countries, most notably in Africa. Non-resource tax collection has increased but still remains at a low level and is not sufficient to produce all of the necessary revenue. The data suggest that for developing countries, non-resource tax collection was more resilient than other revenue streams to the 2008 financial crisis. The authors speculate that this may reflect less integration of low-income economies into the global economy.


This econometric analysis finds that a negative relationship between ODA grants and tax revenue. These results are reasonably robust across income levels and different geographical regions, and appear to be stronger in low-income countries. However, the impact of ODA grants on tax revenues appears to be weakening over time when compared with earlier studies. The authors argue that negative impact of grants can be managed by the policymakers if adequate attention is paid to strengthening domestic revenue mobilization capacity.

4. Statebuilding

The literature on tax and statebuilding is often theoretical and normative, and links between tax and governance are “complex and context specific and much of the evidence is anecdotal” (Fjeldstad 2014). However, “it is clear that there are strong synergies between tax reforms and governance. If tax reform is undertaken in a way that promotes greater responsiveness and accountability, alongside improvements in the state's institutional capacity, then tax reform can become a catalyst for improvements in government performance” (Fjeldstad 2014). A joint IMF, OECD, UN, and World Bank report argues that strengthening tax systems is “key to achieving equity objectives and enhancing state building” provided that there is a clear link between tax revenues and services provided (IMF et al. 2016, pp. 8-9). Strengthening tax capacity can improve governance and accountability, promote economic growth, improve state capacity in
other areas, and engage citizens in politics (Therkildsen 2008; OECD 2010) and is positively associated with democracy (Prichard et al. 2014a). However, in many low-income countries there is a need for “considerable and sustained efforts” before tax systems are perceived as legitimate by the majority of citizens (Fjeldstad 2014). Conversely, weak tax systems have often undermined statebuilding (IMF et al. 2016, pp. 8-9) and raising revenues through natural resource rents has been found to have a consistent and strong negative impact on democracy (Prichard et al. 2014a).

The literature identifies the following channels through which taxation can impact statebuilding (Prichard 2010; Fjeldstad & Moore 2008): (1) Common interest processes: governments dependent on taxes, have stronger incentives to promote the prosperity of taxpayers; (2) State apparatus processes: dependence on taxes requires states to develop a bureaucratic apparatus which can lead to broader public administration improvements; (3) Accountability processes: taxation may engage taxpayer-citizens collectively in politics and lead them to make claims on government for reciprocity and encouraging constructive state-society engagement around taxes.; (4) Adequate revenue: taxation can provide higher, more sustainable resources to support citizen demands; and (5) Appropriate revenue: shifting the distributional impact of taxation to a normatively more appropriate pattern.

A number of observational and econometric studies show these channels in operation. An observational study in Nigeria found that regions under different tax regimes during colonial times developed different local government capacities (Berger 2009). One influential econometric analysis study finds that increases in taxes are associated with improvements in services or with democratic reforms (Ross, 2004). A 2014 econometric analysis supports this conclusion finding that increases in non-tax revenue result in a reduced likelihood that a non-democratic state will transition to democracy, and that there is a generally positive association between tax reliance and democracy (Prichard, Salardi & Segal, 2014a). Another such study finds that states which tax the poor prioritise basic public services over property rights, while states that tax the rich do the reverse (Timmons 2005). An experimental study in Uganda finds that actions that mimic taxation cause greater demands from those designated as leaders in the experiment (Martin, 2013). A study of tax capacity building in Brazilian municipalities found that investments in local tax administration led to increased tax revenues which were found to improve education infrastructure (possibly linked with citizens being better informed), in contrast to non-tax revenues (grants) which had no such effect (Gadenne 2015). On the other hand, a study of tax reform in Bangladesh showed that increased revenue from VAT and income taxes did not lead to changes in spending on health and education, as funds contributed to the Annual Development Programme which funds general public investment instead (ITC-OECD, 2015).

Key readings


This literature review argues that particular tax reforms can generate gains in state capacity and trigger the expansion of responsive and accountable government through common interest processes, state apparatus processes, and accountability processes. Governments and donors can take steps to strengthen tax-governance links by reforming tax administrations to catalyse bureaucratic reforms, reorienting existing tax reform programmes towards greater emphasis on
how collecting tax revenue can contribute to statebuilding goals, and supporting civil society actors to engage in tax debates.


This book chapter, a literature review on statebuilding and tax, concludes that tax reform may contribute to state-building through providing adequate revenue, shifting towards more appropriate revenue sources, creating more effective tax administrations; and encouraging constructive state-society engagement around taxes. The authors argue that tax reform has been successful in producing more effective and efficient tax administrations, but that some important opportunities have been missed (involving poorer countries in designing reforms; taxing the informal sector, property, and aid agencies; promoting centralised revenue authorities without considering linkages across government). The authors argue for greater attention to politics and citizen participation.


This policy brief, based on a review of literature, argues for a push for broader-based taxation in fragile states. The brief notes that key features of taxation and governance in post-conflict and fragile states are: low tax to GDP ratio; high dependence on trade taxes; very high aid dependence; off-budget donor-funded programming; and private contractors providing security and public services. The brief argues that taxation issues should be dealt with at early stages of planning in post-conflict states, even if revenue yields may be modest to start with. Taxes that suit local circumstances should be identified and prioritised over current global ‘best practice’. There should be attempts to reduce or abolish tax exemptions for donors and their contractors, such as NGOs.

5. Inequality and redistribution

There is a significant body of literature on the issue of inequality and redistribution but with conflicting evidence and conclusions, in particular relating to the impact of progressive taxation on economic growth. On the one hand, there is quantitative and qualitative evidence that a shift towards progressive taxes can be harmful to growth, although growth is good for the poor according to some econometric analyses (Dollar at al. 2013). On the other hand, econometric analysis shows that reducing inequality can create improved and more sustainable economic growth in the longer term (Ostry et al. 2014). Progressive taxes, such as income taxes, have been ineffective on distribution (Bird and Zolt, 2014) and politically challenging to implement (Ardanaz & Scartascini, 2013). The capacity of taxation to alleviate poverty and reduce inequality through redistribution is limited in the poorest countries (those with annual consumption per capita under $2,000) since the required tax burdens (marginal tax rates in excess of 100 percent) on the richer citizens would be politically infeasible to implement (Ravallion, 2010).

Bird and Zolt (2014) suggest that rather than focusing on progressive taxes it may best to focus on improving consumption taxes, and adjust expenditure programmes to compensate for the
impact on the poor. Lustig et al. (2012) advocate more cash transfer programmes over tax reform to address inequality. Other experts suggest that when designing tax policy, there is a need for a balance between growth objectives and redistribution objectives, and for the poorest countries to shift towards redistributive tax policies only once a sufficient income per capita has been reached (Ravallion, 2010). A 2016 study examining the contributions of social protection and income taxation to reducing poverty and inequality in Ethiopia through a microsimulation model found that social spending was more effective than income taxation in reducing poverty, and that the redistributive effects of income tax can lead to an adverse effect on poverty if tax brackets are not regularly adjusted to keep up with inflation (Hirvonen, Mascagni, and Roelen, 2016, pp. 11-12).

Evidence suggests that taxes, and in particular income and consumption taxes, can be a source of gender bias (Grown & Valodia, 2010). Women and men tend to consume different goods and services and play different roles in the way in which household income and expenditure is managed and distributed. Targeted consumption tax reform measures can address consumption patterns to improve gender equality outcomes (e.g. through zero-rating on children’s clothes, which tends to impact women) as well as change behaviour (e.g. through higher taxes on private transport fuel, which impacts men).

Key readings


This literature review and econometric analysis on OECD and non-OECD country data finds that: (1) more unequal societies tend to redistribute more; (2) lower net inequality is robustly correlated with faster and more durable growth; (3) redistribution appears generally benign in terms of its impact on growth, except in extreme cases where it may have direct negative effects on growth. The authors highlight the importance of looking at longer term (i.e. at least five-year) growth in analysis of growth impacts of redistribution and inequality and conclude it is a mistake to focus on growth and ignore inequality. This is not only because inequality may be ethically undesirable but also because the resulting growth may be low and unsustainable.


This article reviews quantitative and qualitative literature on the benefit of relying on income tax, as opposed to other taxes, for redistribution in developing countries. In high-income countries, the personal income tax has long been viewed as the primary instrument for redistributing income and wealth. The study finds that personal income tax plays a small role in the tax systems of developing countries, has done little to reduce inequality in many developing countries, and involves significant administrative, compliance, economic efficiency and political costs. The authors argue that it is unrealistic to believe that personal income taxes can have a meaningful impact on distribution and that countries should instead reform expenditure programmes to target resources to the poor. In particular they should consider the distributional impacts of consumption taxes, which dominate the tax structures of developing countries.
This book reviews evidence on the gender dimensions of personal income taxes, value-added excise and fuel taxes in Argentina, Ghana, India, Mexico, Morocco, South Africa, Uganda, and the United Kingdom. It finds that tax codes may be biased against women, and contemporary tax reforms can increase the incidence of taxation on the poorest women while failing to generate enough revenue to fund the programmes needed to improve these women’s lives. To promote gender equality in taxation, policy-makers need to consider how taxes reinforce or challenge current gender and other social inequalities and how to design tax instruments so that such inequalities are overcome. The book advocates specific and targeted usage of the tax system to improve gender equality outcome, such as zero-rating of VAT on children’s clothing, and increasing private vehicle fuel taxes but zero-rating of VAT on household fuel.

6. References

This report is based largely on chapter 2 of the GSDRC Tax Reform Topic Guide (http://www.gsdrc.org/topic-guides/tax-reform), written in 2014 by Sumedh Rao with contributions from Wilson Prichard, Mark Abani, Ritu Dewan, Jo Balsys, Stefan Kossoff, Katherine Newall, Brian Lucas, Claire McLoughlin, Huma Haider and Heather Marquette. The extracts from the topic guide have been supplemented for this report with additional material collected in 2017 by Laura Bolton, with contributions from Rhiannon McCluskey and Brian Lucas.


**Suggested citation**


**About this report**

This report is based on five days of desk-based research. The K4D research helpdesk provides rapid syntheses of a selection of recent relevant literature and international expert thinking in response to specific questions relating to international development. For any enquiries, contact helpdesk@k4d.info.

K4D services are provided by a consortium of leading organisations working in international development, led by the Institute of Development Studies (IDS), with Education Development Trust, Itad, University of Leeds Nuffield Centre for International Health and Development, Liverpool School of Tropical Medicine (LSTM), University of Birmingham International Development Department (IDD) and the University of Manchester Humanitarian and Conflict Response Institute (HCRI).

This report was prepared for the UK Government's Department for International Development (DFID) and its partners in support of pro-poor programmes. It is licensed for non-commercial purposes only. K4D cannot be held responsible for errors or any consequences arising from the use of information contained in this report. Any views and opinions expressed do not necessarily reflect those of DFID, K4D or any other contributing organisation. © DFID - Crown copyright 2017.