

# Review of Corporate Tax Incentives For Investment in Low- and Middle-Income Countries

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# **Key points**

- Corporate income tax is an important source of revenues in low- and middle-income countries (LMICs). At the same time, many LMICs provide corporate tax incentives hoping to attract mobile business investments, promote specific geographic areas and industrial sectors, or address market failures. It is unclear whether these policies are effective in reaching their goals, while the associated costs are likely very significant.
- Best practices for tax design provide valuable information for the economic rationale of tax incentives. The economic case is stronger for some incentives, e.g., tax incentives for export-oriented and footloose investments that are likely to be sensitive to cost factors, including tax. However, many LMICs provide wide-ranging incentives, sometimes with a high degree of variation across narrowly defined industrial sectors and geographical areas. These types of non-neutralities generate costs beyond foregone revenues, by creating economic distortions and complexities; putting non-targeted firms at a disadvantage; inducing avoidance and rent-seeking behaviour associated with corruption; and increasing compliance, administration and enforcement costs.
- Evidence on costs and benefits of tax incentives in LMICs is scarce but increasing. Existing studies on the causal impact of tax incentives are inconclusive and the results are mostly context-specific.
- More empirical evidence is needed to assess the costs and benefits to the tax system and the economy more broadly. Measuring the causal impact of tax incentives is complex and data intensive. Due to better data and new econometric techniques, there is increasing scope for new and better impact evaluation.
- Given current evidence and economic principles, it is better to avoid tax incentives unless there is a very strong economic rationale, while opportunities for abuse and cost of implementing and monitoring are low.

#### Introduction to the study

Corporate income tax is an important source of revenue for many low- and middle-income countries. At the same time, many such countries lose much needed revenues by providing corporate tax (and non-tax) incentives in the hope of attracting mobile business investments, incentivising specific geographic areas and industrial sectors, or addressing market failures. Many countries thus face a difficult trade-off between raising vital revenues and maintaining an attractive corporate tax environment in a world of increasingly footloose capital and international tax competition that can lead to a race to the bottom.

Against this background, there is scarce evidence about the cost and benefits of tax incentives in developing countries, which hinders evidence-based policy-making. This paper, written collaboratively by IFS researchers and policy-makers from Ethiopia and Ghana, has multiple and interlinked objectives: (i) to provide an overview of tax incentives and best practices for their design grounded in economic principles, and assess how these apply to the case studies of Ethiopia and Ghana; and (ii) to understand more broadly the causal impacts of tax incentives on economic outcomes in developing countries by reviewing the relevant methodologies to conduct rigorous quantitative analysis and the existing empirical literature. Finally, we discuss the policy implications and avenues for research given the existing literature on the causal impact of tax incentives.

#### The economics and governance of tax incentives

The focus of the main study is corporate tax incentives. These are broadly defined as all measures that provide for an unambiguously more favourable tax treatment of particular sectors, type of firms, activities or investments relative to the standard tax regime applying to general industry. Corporate tax incentives can take many forms, which include, but are not limited to, the following: tax holidays, special zones, investment tax credits, investment allowances, accelerated depreciation, and reduced tax rates.

Tax incentives can be split into broadly two categories: cost-based incentives and profitbased incentives. Cost-based incentives include investment allowances, tax credits and accelerated depreciation, which decrease the cost of capital. Additional investment gained per unit of revenue forgone is higher for cost-based incentives, since the benefits to investors only accrued if capital investments are made. Profit-based incentives that reduce tax rates on taxable income or waive tax altogether, like tax holidays, apply to all profits. Profit-based incentives are better suited to attract footloose investments that generate firm-specific rents. These may also be easier to administer than cost-based initially, though not necessarily easy to monitor. Tax holidays tend to benefit short-term projects with low upfront investment costs.

Targeted tax incentives generally: create non-neutralities, further distortions and complexities; put non-targeted firms at a disadvantage; and can induce rent-seeking behaviour associated with corruption. However, in some cases targeting may be justified economically, e.g. when targeting more mobile investments is possible in a cost-effective way, or when it reduces the overall cost of the policy.

The economic case for tax incentives is stronger for activities that are (i) most mobile; (ii) have positive social returns. The case for tax incentives is ambiguous for (i) investments that generate regional rents or (ii) investments that are located in disadvantaged areas. The economic case for tax incentives is weak for (i) investments that exploit location-specific rents such as natural resources (exogenous rents) or (ii) investments that exploit agglomeration benefits (endogenous rents).

General costs associated with tax incentives include: (i) immediate revenue loss; administrative costs of implementing incentives (which are usually incurred by the tax administration); compliance costs incurred by taxpayers (possible exceptions are tax holidays or exemptions); the costs of monitoring and preventing their fraudulent use and corruption; associated social costs of rent-seeking behaviour; and importantly economic distortions introduced due to differential treatment of certain investments. Benefits may include: additional investment; additional output, employment and economic growth associated with additional investment; and increased tax revenues from increased economic activity.

Guidelines for implementing (good) governance of tax incentives emphasize the importance of: granting incentives as part of the tax law in a transparent and ruled-based way; empowering a single agency (typically the Ministry of Finance) to design and grant tax incentives and to give the revenue authority the responsibility of administering them; ensuring that beneficiaries file tax returns so that the data can be used to monitor and evaluate tax incentives; and conducting systematic reviews as part of the budget analysis and sharing these with the public for scrutiny.

#### Worldwide prevalence

Corporate tax incentives are found across low- middle- and high-income countries as can be seen inTable 1 Prevalence of Tax Incentives around the World. Tax holidays and exemptions are mostly found in developing regions and are noticeably less prevalent amongst OECD countries. Both reduced tax rates and discretionary processes are noticeably more prevalent in East Asia and the Pacific and Sub-Saharan Africa (SSA). However, discretionary processes are present around the world, including among OECD countries.

The general trend in the prevalence of tax incentives in developing countries is not clear. While some studies have found that tax holiday periods have shortened and special tax regimes have decreased in low- and middle- income countries over time, other findings point in the opposite direction. There is evidence suggesting that tax holidays have remained prominent in lower-income countries, but have decreased in upper-middle income countries. There are some indications that developing countries with higher GDP per capita are less likely to operate special regimes.

|   | Number<br>of<br>Countrie<br>s<br>Surveyed | Tax<br>holiday/<br>Tax<br>exemption | Redu-<br>ced<br>Tax<br>rate | Investment<br>allowance/<br>Tax credit | R&D Tax<br>Incentive | Super-<br>dedu-<br>ctions | SEZ / Free<br>Zones/ EPZ /<br>Freeport | Discretio-<br>nary<br>process |
|---|---|-------------------------------------|-----------------------------|--|----------------------|---------------------------|--|-------------------------------|
| East Asia<br>and Pacific                    | 12  | 92%                                 | 75%                         | 67%                                    | 83%                  | 33%                       | 92%                                    | 83%                           |
| Eastern<br>Europe<br>and<br>Central<br>Asia | 17  | 82%                                 | 35%                         | 24%                                    | 29%                  | 0%                        | 94%                                    | 35%                           |
| LAC   | 24  | 92%                                 | 33%                         | 50%                                    | 8%                   | 4%                        | 71%                                    | 42%                           |
| MENA  | 15  | 80%                                 | 40%                         | 13%                                    | 0%                   | 0%                        | 80%                                    | 40%                           |
| OECD  | 34  | 12%                                 | 32%                         | 65%                                    | 76%                  | 21%                       | 68%                                    | 35%                           |
| South Asia                                  | 8   | 100%                                | 38%                         | 75%                                    | 25%                  | 63%                       | 63%                                    | 38%                           |
| SSA   | 44  | 78%                                 | 62%                         | 78%                                    | 11%                  | 18%                       | 64%                                    | 82%                           |

Table 1 Prevalence of Tax Incentives around the World

Source: James (2014)

SSA stands out from other low- and middle-income regions when it comes to the use of tax incentives, with a higher percentage of countries adopting reduced rates and using discretionary processes. Tax holidays, reduced CIT rates, investment allowances, and free zones have all become more prevalent across the region. The increased importance over time of tax holidays in SSA contrasts with the trends in other regions. Figure 1 shows how in SSA tax incentives have become more prominent, while incentives through Investment Codes have decreased.



Figure 1. Tax Incentives in 40 Sub-Sahara African Countries (2005 and 2014)

Source: James (2014).

#### **Case studies: Ethiopia and Ghana**

The case studies show that tax incentives can vary substantially according to firms' location, size, and economic sector, in a way that makes the tax system highly complex, opaque, and difficult to administer without always a clear economic rationale, or supportive evidence of their costs and benefits.

In Ethiopia, the length of tax holidays varies significantly across and within very narrowly defined sectors, which is difficult to rationalise from an economic and public policy point of view. Additionally, Ethiopia offers lower CIT rates for mining and petroleum, which are industries in which firms exploit location-specific rents. Instead of the reduced rate, the government should consider additional taxes to ensure that these rents are shared between the firm and the citizens of the country.

In Ghana, the tax rate applicable to the extractive sector is higher than the standard CIT rate, which is in line with best practices for a well designed tax system. However, fiscal concessions for large investments undermine the original objective.

Both Ghana and Ethiopia provide incentives to firms that sell most of their output as exports. This may be justified under the grounds that firms that are export-oriented are likely to be more mobile and cost-sensitive, and thus in principle more reactive to tax incentives. However, verifying that firms in practice are exporting their outputs and not selling instead to domestic markets is hard to monitor, and entails further administrative costs in countries with growing but still limited administration capacity.

# Estimating the causal impact of tax incentives: methodological considerations

One of the most common challenges for empirical strategies involves building a valid counterfactual using "similar" firms or areas that have no access to tax incentives and compare them to firms or areas that do. Interactions between firms that are granted tax incentives and firms that are not are likely to lead to indirect effects that can be difficult to measure. Identifying and separate the effect of tax incentives from other policies or factors that might affect the results are equally necessary.

Both survey and administrative data sources can be used. Accurate (ideally firm-level) survey data on firms' investment, employment, outputs, prices, industry of operation, location, can be used to assign tax treatment to each firm and to measure outcomes. This can be combined with data from tax returns. Counting on both administrative and survey data before and after the policy reform will improve the quality of an empirical evaluation of tax incentives.

Different methodologies exist for measuring how tax incentives affect investment decisions. Economic modelling using investment equations allows quantifying the mechanisms through which tax incentives affect investments more accurately, and thus can be used for policy simulations of hypothetical tax reforms. While challenging, the returns can be higher for policy-makers. Particular econometric techniques are contingent on the structure of the data and the design of the tax incentives to be studied (i.e. eligibility criteria), including the variation over time.

Existing studies looking at the impact of tax incentives on economic outcomes have looked at variations across countries, (sub-national) areas, and firms. Although firm-level analysis is likely to give the most accurate estimates, very few little firm-level evidence exists in developing countries due to data limitations.

#### Empirical literature on the impact of tax incentives

We find that the existing literature shows inconclusive evidence on the causal impact of tax incentives on investment and other economic outcomes such as employment and output. Evidence from cross-country studies using aggregate-level outcomes show that tax incentives may affect FDI levels but not necessarily total investment, suggesting the possibility of crowding out effects. Cross-country studies however suffer from some methodological limitations.

Studies using firm-level data and variation across regions or sectors within a country show mixed results. For example, results from China and India point to positive outcomes for Special Economic Zones and regional tax incentives, respectively, however a recent study in Ethiopia shows that tax incentives have not been a cost-effective way of increasing investment or other economic outcomes.

Despite observing positive impacts of tax incentives on outcomes in India and China, there are likely co-founding factors affecting investments and other economic outcomes. Furthermore, more generally, it is unclear whether these policies are cost-effective since most studies do not account for spillover effects, distortions to markets, or administrative costs. Questions concerning external validity should also be considered, as rolling out tax incentives to the broader economy based on results from smaller test areas should be considered very carefully.

Recent studies on R&D tax incentives in middle-income countries have shown positive effects on levels of investment. However, the impacts observed are generally below those found in developed countries in the last two decades, perhaps suggesting that short-to-medium term supply-side constraints (e.g. supply of high-skill workers and research labs) in middle-income countries are important.

#### Summary and avenues for future work

From our case studies in Ethiopia and Ghana, we have seen that corporate tax incentives are important components of the tax systems in both countries. In both cases their design and governance can be improved using principles of best tax design and evidence-based strategies. In particular, reduced rates for extractive industries should be removed, costbased as opposed to profit-based incentives should be more widely considered, and the variation in preferential treatment across priority sectors and geographical areas should be reconsidered in order to reduce complexity, non-neutralities, and both compliance and administration costs. This is probably applicable to other countries that could benefit from conducting revisions of their tax incentives schemes using principles of best tax design, and institutionalising the monitoring and evaluation of their schemes. Given the limited empirical evidence on the impact of tax incentives in developing countries, it is clear that more quantitative and evidence-based analysis is needed for better policy-making. Increasing availability of firm-level data and tax treatment information is promising and conducive to the generation of further evidence in the future.

Analysing the impact of tax incentives in Ethiopia and Ghana would be of particular interest. The considerable variation of tax incentives across sectors and geographical areas, although not great in terms of best policy design, provides an interesting setting from a methodological point of view to evaluate how tax incentives affect economic outcomes. Going forward, TAXDEV researchers plan to work with policymakers in Ghana and Ethiopia to analyse how tax incentives affect firms' incentives to invest by calculating effective tax rates for different sectors and regions, and if possible, combine this analysis with survey and administrative firm-level data to estimate their costs and impact on actual investment and economic outcomes.