

Final report

Analysis of effective tax rates for CIT and PIT in Myanmar

Laura Abramovsky
Andrea Smurra
Ross Warwick

October 2019

When citing this paper, please
use the title and the following
reference number:
S-19066-MYA-1

IGC

International
Growth Centre



DIRECTED BY



FUNDED BY



from the British people



Analysis of Effective Tax Rates for CIT and PIT in Myanmar

Laura Abramovsky, Andrea Smurra and Ross Warwick

The Institute for Fiscal Studies

Published by:

The Institute for Fiscal Studies

7 Ridgmount Street
London WC1E 7AE

Tel: +44 (0) 20-7291 4800

Fax: +44 (0) 20-7323 4780

Email: mailbox@ifs.org.uk

Website: <http://www.ifs.org.uk>

© The Institute for Fiscal Studies, August 2019

Preface

This project was funded by the International Growth Centre (project MMR-19066) and the IFS' Centre for Tax Analysis in Developing Countries (TAXDEV), through UKAID. Support from the ESRC-funded Centre for the Microeconomic Analysis of Public Policy (CPP) at IFS, grant reference ES/M010147/1, is also gratefully acknowledged. The views expressed in this report are, however, those of the authors and do not necessarily reflect the views of those of the funders nor of the other individuals or institutions mentioned here, including IFS, which has no corporate views.

We are grateful to Sudhanshu Sharma for his invaluable comments and insights about the Myanmar tax system.



Contents

Executive summary	5
1. Introduction	11
2. CIT and PIT systems	14
2.1 CIT	14
2.2 PIT	19
3. CIT Effective tax rate analysis	23
3.1 Methodology	23
3.2 Analysis	27
3.3 Emerging findings and policy issues	32
4. PIT effective tax rate analysis	35
4.1 Methodology	35
4.2 Analysis	39
4.3 Emerging findings and policy issues	48
5. Summary and discussion	50
References	52

Executive summary

Introduction to the study

Tax revenues as a share of GDP – at 6.7% in 2017/18 – are low in Myanmar relative to peer countries. Increasing tax revenue to improve the government’s ability to finance much needed physical and social infrastructure remains a challenge. In this context, the government faces a difficult trade-off in tax system design between encouraging formal investment and labour market activity on the one hand, and setting rates that bring in significant tax revenue on the other. In both the corporate and personal income tax systems, the structure of taxation – including special incentives and allowances, which are widespread – is used to try to affect economic behaviour, with consequences for both revenue and distributional effects. Policymakers and international stakeholders in Myanmar are eager to better understand how the existing structure of these taxes impacts economic incentives. This is an important step in beginning to explore opportunities for tax policy reform that may help create a simpler and more efficient system that does not forego revenue loss due to poorly targeted incentives.

This project focuses on two tax instruments: Corporate Income Tax (CIT) and Personal Income Tax (PIT), which in 2017 represented together with taxes on capital gains 35.6% of total tax revenues. The project involves the computation of effective tax rates (ETRs) under each regime using a consistent and well-established methodology that allows complex features of the tax system to be summarised in simple measures that contain information about investment and labour supply incentives as well as the progressivity of the personal income tax system and are relevant to policymaking. This initial mapping of the existing CIT and PIT systems and calculation of effective tax rates for example investment projects and taxpayers raises a number of interesting policy issues to consider.

Effective tax rates for corporate income tax

- **We compute forward-looking effective (marginal and average) tax rates (ETRs),** which summarise the investment incentives of the CIT system in a single measure reflecting the tax rate, the tax base, and key features of special regimes. Within a country, the computation of ETRs can provide useful information about investment incentives across asset types and across types of special regimes. It can also be used to evaluate policy proposals ex-ante, by looking at ETRs before and after the implementation of a given reform (e.g. changes in depreciation allowances, or the introduction or removal of tax holidays or other incentives).

- **There are two main measures of ETRs. *Effective marginal tax rates (EMTRs)*** measure the extent to which taxation increases the pre-tax rate of return required by investors to break even. The EMTR is defined as the tax rate on a marginal investment that just breaks even (i.e. marginally profitable investments). That is for an investment where the pre-tax rate of return equals the cost of capital, so no economic rents arise. The EMTR is an important measure of incentives at the intensive margin – that is, incentives to expand existing investment projects. ***Effective average tax rates (EATRs)*** measure the effect of taxes on profitable investment projects that earn an economic rent, that is with a pre-tax rate of return above the cost of capital. Such discrete investment projects might include, for instance, the location choice of a multinational company that possesses a valuable patent or production process or a technology choice. In such cases the EATR is a useful measure of investment incentives at the extensive margin across different locations or projects.
- **ETRs can be calculated for different assets and for different sources of finance.** Using information about economic depreciation and depreciation allowances by asset type, ETRs can be calculated for different asset types from aggregate categories such as plant and machinery and non-residential buildings to specific assets like computers or transportation equipment. Analysing the differences in ETRs across assets can provide a picture about the neutrality of corporate taxation within a given country, to highlight the existence and magnitude of tax-induced biases across asset types and industries. Given that personal income tax on shareholders is not included in the model, projects financed either by new equity or retained earnings yield the same ETRs. In many countries, including Myanmar, interests' payments associated with debt contracted to finance the investment project can be deductible from taxable corporate income and hence this means that ETRs for debt-finance investments projects can be significantly lower than the ETRs financed by equity or by retained earnings (self-financed). Looking at ETRs for different sources of finance can quantify the extent of the debt bias arising from interest deductibility.
- **The picture that emerges is of a complex corporate income tax system,** with different tax rates for different sectors, types of activities and parts of the country as well as for projects according to their source of finance, resulting in substantial variation in effective tax rates on different types of investments. This analysis represents a first but important step in understanding the impacts of Myanmar's corporate income tax system on the investment incentives for different firms and different forms of capital.
- **The CIT tax system in Myanmar generates distortions in investment incentives and a potential erosion of the tax base.** Differences in effective tax rates can distort the type of sectors and investments that firms invest in, basing their decisions on differences in tax rates rather than underlying commercial and economic fundamentals. Firms may then invest in less productive assets or may organise their production in less efficient ways. And once incentives are granted for one economic sector or area there often is pressure to extend incentives to additional areas. This can lead to a slow erosion of the effective tax base, which seems to be the case in Myanmar. Economic theory suggests that one might want to offer lower effective tax rates on investments that are more sensitive to taxation (for instance, those profitable investments by multinational firms that are subject to international mobility), or that have positive externalities (such as technology transfer). Thus, there might be an economic case for

lower ETRs for investment projects in Free Zones undertaken by multinational companies choosing between a number of different countries. However, it is important to contrast any potential benefits with the potential costs involved to make policy decisions based on cost-benefit analysis. We discuss the potential benefits and costs, the results from the existing evidence and issues around measuring these costs and benefits briefly below.

- **Whilst tax incentives within the CIT system generate revenue loss in the short run, the benefits are uncertain.** Most obviously there is lost revenue from offering costly reduced rates or incentives for investments that would have occurred anyway (a so called ‘deadweight cost’). Estimating deadweight cost – and, the flipside, the amount of additional investment and productivity spillovers induced by tax incentives – is notoriously difficult, generally requiring high-quality firm-level data and policy variation across firms and over time. The existing empirical literature shows inconclusive evidence on the causal impact of tax incentives on investment and other economic outcomes such as employment and output. Moreover, evidence from self-reported investor surveys have often shown that tax incentives are not particularly relevant when making investment decisions in developing countries, relative to other factors such as skills and infrastructure in terms of determinants for investment decisions. More broadly, the general investment climate, determined in part by good skills and infrastructure, good institutions and political stability, seems to be a more salient factor affecting investments decisions by multinational firms choosing where to locate their productive activities. In turn, the revenue lost due to the tax incentives is costly since it could have been used to finance much needed infrastructure and skills that seem to be more relevant for firms’ investment decisions. Although doing a full cost-benefit analysis has challenges given the lack of detailed firm level data in Myanmar and other methodological considerations, a useful stepping stone would be an analysis of the overall revenue cost of incentives and preferential corporate income tax rates in Myanmar, which is something that is being estimated by a team of World Bank analysts as part of their tax expenditure calculations.
- **Tax incentives can also facilitate tax avoidance, making enforcement more costly and difficult and the system more complex.** For instance, the variation in tax rates within Myanmar that results from the special economic zones where tax holidays of varying lengths apply in effect leads to internal ‘tax borders’ that need to be policed. Companies with operations both inside and outside these zones will try to shift around profits using transfer prices so that as much is possible is subject to the reduced rate of tax (this incentive will be greater for firms in sectors subject to higher rates of tax). The tax authorities need to devote resources to try to stop this and may not be successful. This is likely to generate further complexities in terms of administration and compliance and opportunities for rent-seeking and lack of transparency, which can result in a lack of tax morale.
- **Discretionary tax incentives can introduce economic uncertainty.** An additional issue is how the discrete nature of some of the tax incentives in Myanmar can undermine i) the government’s ability to predict revenue flows and hence to plan investments accordingly and ii) firms’ ability to plan their tax position for a given investment with certainty.

- **There may be scope to simplify the system, raise more revenues and still attract investment.** Taking this together, questions arise of whether the lower effective tax rates on specific activities, areas and special economic zones serve Myanmar well. It is hard to be conclusive about whether the potential benefits of targeted tax incentives and special economic zones outweigh the costs in terms of lost revenues, potential economic distortion, and the creation of tax avoidance opportunities. There is no evidence from Myanmar that these tax incentives are actually generating additional investments that can compensate the increase in complexity of the tax system and the distortions introduced. It might be that a simpler and more neutral system that treats all activities in the same way and implements reduced effective corporate tax rates across the economy more generally is more efficient. It could furthermore remove opportunities for tax evasion and rent-seeking and raise more revenue for the government budget, which can be used to fund much needed growth-enhancing infrastructure. More research is needed to understand the effects of the current special tax regimes in Myanmar and make more specific recommendations.

Effective tax rates for personal income tax

- **We compute also two measures of effective tax rates on earned income** based on hypothetical taxpayers that have a given gross income level and a specific household composition, combining information about the tax base and rates. These measures are useful summary statistics in terms of evaluating the **progressivity of the personal income tax system** and its impacts on **(formal) work incentives**. It can also be used to **evaluate policy proposals ex-ante**, by looking at ETRs before and after the implementation of a given reform
- The **effective average tax rate (EATR)** is the proportion of gross income (or pre-tax income) that is taken in tax. This provides a measure of the relative contribution to the taxman at a given income level. A tax schedule is considered *progressive* if the proportion of income that is taken in tax increases with gross earnings. The **effective marginal tax rate (EMTR)** is the fraction of a worker's additional earnings (starting from some gross income level) that goes to the taxman. This gives an idea of the extent to which taxation distorts formal labour supply compared to the (financial) incentives created by the market at the intensive margin – that is, conditional on having a formal job.
- **The PIT system in Myanmar is progressive.** The progressive schedule of PIT rates and the set of allowances in place ensures that effective average tax rates are increasing with gross earnings for all household types considered. This, however, does not account for any benefits that may depend on income, nor any household-level income interactions, both of which are outside the scope of this project.
- **However, very few people are likely to be in the PIT system at all.** Relative to average income in the country, the minimum threshold at which individuals become liable to pay PIT is very high in Myanmar. While this keeps the tax burden on poor households low, it also clearly has implications for tax revenue and the familiarity of the population with tax processes. The fact that income tax thresholds are not regularly updated in line with inflation implies that 'bracket creep' – where growing incomes push people into paying tax or facing higher marginal rates – could push more people into the system. However, recent reforms (such as the introduction of the

standard 20% allowance) have prevented this from happening in a relatively indirect and somewhat complicated way.

- **Some features of the PIT system could be significantly distorting behaviour.** Primarily, while the 4.8 million kyat exemption threshold may protect those on lower incomes from ‘bracket creep’, the fact that it creates a discontinuous increase in the effective *average tax rate* (depending on the allowances claimed by the individual) creates very strong incentives to avoid entering the PIT system at this point. Similarly, as the self-employed face lower overall tax rates due to not being liable for social security contributions, some workers be unnecessarily incentivised to organise themselves as self-employed.
- **Other allowances in the system have large effects on effective tax rates and may create some undesirable incentives at the household level.** Our analysis showed that the composition of an individual’s household and the way they organise their labour (employee or self-employed) can have significant implications for both effective average and marginal tax rates. In the absence of alternatives mechanisms, this may be one way to target resources to certain household types which may be more vulnerable. However, given that taxpayers in the PIT system have incomes far above the national average, it is not clear that the current allowances are reaching those most in need. Furthermore, as the allowances are relatively generous, they may affect household decisions more broadly – for instance, a spouse may choose not to work or to do so informally so that their partner can claim the PIT allowance for a non-working spouse.
- **There may be scope to simplify elements of the system.** Taken together, Myanmar’s current PIT system looks to be somewhat complicated overall given the different exemptions and allowances in place – not all of which are necessarily achieving their desired goals. For instance, the standard 20% allowance, the 4.8 million kyat threshold and the underlying income tax threshold could be consolidated into a single income tax threshold with a single tax-free allowance which is the same for every taxpayer. It may also be worth reducing the number of tax rates in the schedule at the same time. A simpler PIT system such as this would be easier for taxpayers to understand and comply with, and would reduce the differences in effective tax rates across the gross earnings distribution for otherwise similar taxpayers. At the same time, reviewing the rationale and effect of other standard allowances in place would be a worthwhile activity. However, it must be noted that any such reforms would require more detailed research than is contained in this report to understand the broader impacts for work incentives, the distribution of income, and the public finances. For instance, a microsimulation model could be a useful tool for investigating some of these issues.

1. Introduction

Since 2011, the government of Myanmar has been introducing a range of political and economic reforms to support domestic and foreign private businesses and boost economic growth. Economic growth has been strong in the last half decade, with annual gross domestic product (GDP) growth of around 7%.¹ Foreign Direct Investment (FDI) has also been flowing into Myanmar, with net inwards flows of around 5% of GDP over the same period. Nonetheless, Myanmar remains a low-income economy, with a GDP per capita of circa 1,250 US\$ in 2018/19,² over 80% of employment being informal and almost 50% of the labour force employed in agriculture.³

Against this background, tax revenues as a share of GDP – at 6.7% in 2017/18 – are low in Myanmar relative to peer countries. Increasing tax revenue to improve the government's ability to finance much needed physical and social infrastructure remains a challenge.⁴ In this context, the government faces a difficult trade-off in tax system design between encouraging formal investment and labour market activity on the one hand, and setting rates that bring in significant tax revenue on the other. In both the corporate and personal income tax systems, the structure of taxation – including special incentives and allowances, which are widespread – is used to try to affect economic behaviour, with consequences for both revenue and distributional effects. Policymakers and international stakeholders in Myanmar are eager to better understand how the existing structure of these taxes impacts economic incentives. This is an important step in beginning to explore opportunities for tax policy reform that may help create a simpler and more efficient system that does not forego revenue loss due to poorly targeted incentives.

This project focuses on two tax instruments: Corporate Income Tax (CIT) and Personal Income Tax (PIT), which in 2017 represented together with taxes on capital gains 35.6% of total tax revenues.⁵ The project involves the computation of effective tax rates (ETRs) under each regime using a consistent and well-established methodology that allows complex features of the tax system to be summarised in simple measures relevant to policymaking.

For CIT, the methodology originally developed by Devereux and Griffith (2003) and extended by Klemm (2012) will be used to study hypothetical investment projects in the context of the tax system in Myanmar. By calculating effective tax rates for different types of investments which may be treated differently by the tax system (in terms of corporate tax rates, holidays or depreciation allowances, for instance), the project will provide novel evidence on the extent to which the CIT system discriminates between investment projects, as measured by ETRs. This is an important input into discussions regarding the economic rationale for special tax incentives, as well as CIT design more generally.

¹ See, for instance, 2018 ARTICLE IV CONSULTATION for Myanmar, IMF Country Report No. 19/100 (April 2019).

² See Idem footnote 1.

³ See the report describing the results about the Labour Force Survey 2017, published by the Government of the Republic of the Union of Myanmar Ministry of Labour, Immigration and Population Annual Labour Force Survey September, 2017 Department of Labour, and supported by the ILO.

⁴ Idem footnote 1.

⁵ See <https://data.worldbank.org/indicator/GC.TAsX.YPKG.ZS>. The IMF reported a figure of 38% for 2016.

Similarly, ETRs will be calculated for PIT based on simulated personal income tax and social contributions paid on formal wages in Myanmar for hypothetical individuals with different earnings levels and household compositions, accounting for the different exemptions and allowances that characterise the existing PIT structure. This will provide insights about the extent to which the tax system disincentivises formal labour market activity for different types of individuals, as well as the progressivity of the PIT system – both of which are crucial as the country looks to expand the tax base in the coming years.

As part of the project, researchers will generate simple tools to calculate CIT and PIT ETRs, accompanied by user manuals aimed at policymakers and local researchers. These can be used in the future to simulate the effects of changes to the CIT and PIT system on economic incentives and progressivity, and thus will be a useful long-term input to the policymaking process.

Before summarising the results, it is useful to take a step back and think about basic principles for the design of good tax systems. The cost of taxation is inevitably higher than the sums that are raised to fund public spending: there are administrative costs to government and compliance costs to taxpayers, as well as costs resulting from people changing behaviour to minimise the amount of tax they pay. However, the structure of the tax system and how this system is administered in practice plays a crucial role in determining the size of these costs, and hence the ability of governments to raise revenues. The key challenge for policymakers designing a good tax system – and determining the direction for its reforms – is to raise sufficient revenues and satisfy one's equity objectives (i.e. redistribute as much or as little as one wants) at the lowest cost in terms of economic efficiency (including forgone economic growth, and administrative and compliance costs). The importance of getting the structure of the tax system right, and understanding how various taxes impact businesses and individuals, only increases when governments try to raise greater revenues. Rigorously established evidence on these issues becomes a crucial input when designing tax policy and tax administration tools.

In all countries, the issues to consider when thinking about the design and administration of a good tax system or tax reform are many and complex. Even though low- and middle-income countries differ from advanced economies in several key respects – and are themselves a highly diverse group – some key principles around tax design and many of the implications flowing from them are relevant to both types of countries. However, the interrelated economic, political and institutional characteristics of low- and middle-income countries, including weaker tax administrations and institutional capacity, lower tax morale, and a larger cash-based and unregistered economy relative to high income ones mean the challenges may be greater in such nations. For example, the issue of collectability is typically more important in low- and middle-income countries. Consequently, understanding the interactions between tax policy and administration and how this shapes a country's tax system in practice is crucial.

When thinking about the design of the PIT and CIT systems, it is important to consider how it fits into a country's wider tax and benefit system: i.e. to think about the system as a whole. Other key principles to consider when thinking about a tax system (or specific taxes like PIT and CIT) include neutrality, progressivity, simplicity, stability, transparency, and collectability.

Myanmar's corporate tax system is complex and introduces distortions (non-neutralities) across types of capital, location, market-orientation and industry of the investment and has low degrees of transparency and due to its discretionary nature, introduces a lack of stability. The CIT system faces a difficult juggling act between two main aims. On the one hand it needs to raise revenues for the government to help fund public services and public investment in infrastructure. On the other hand, there is a need to ensure it is consistent with the desire to offer an attractive environment for domestic and foreign business and investment. However, it is not clear that the current differential effective rates are actually generating additional investment at all, nor that they are focused on industries that generate positive externalities for the Myanmar economy. Furthermore, the international literature suggests that on average special tax regimes are not a cost-effective way of generating additional investment and economic growth, and that investors value more good infrastructure, skills and governance than tax incentives. A cost-benefit analysis based on quantitative economic analysis of the special tax regimes in Myanmar is needed to understand whether these regimes are a good policy option or just introducing economic distortions and rent-seeking opportunities at a high revenue and administrative cost.

Myanmar's personal tax system is progressive, in that the share of gross income that is paid to the government in tax increases with gross earnings. However, very few people are likely to be in the PIT system at all given average earnings levels. The system is also complex and introduces significant distortions to behaviour that may be undesirable. Primarily, while the 4.8 million kyat exemption threshold may protect those on lower incomes from 'bracket creep', it creates very strong incentives to avoid entering the PIT system at this point. Other allowances in the system have large effects on effective tax rates and may create some undesirable incentives at the household level such as disincentivising parents or spouses to work in the formal labour market. Taken together, Myanmar's current PIT system looks to be somewhat complicated overall given the different exemptions and allowances in place – not all of which are necessarily achieving their desired goals. In the report we describe these in more detail and some emerging findings and policy issues that could be explored further to inform policy reform. It must be noted that any such reforms would require more detailed research than is contained in this report to understand the broader impacts for work incentives, the distribution of income, and the public finances.

The next section discusses the key features of the CIT and PIT systems in Myanmar. Section 3 focuses on the analysis of ETRs of CIT. Section 4 focuses on the analysis of ETRs for PIT. The last section provides a summary of the results and a discussion of the emerging lessons for policy.

2. CIT and PIT systems

Since 2011, the Myanmar economy has been in transition from a centrally planned economy to a market-oriented one. There has been a range of new laws aimed at the deregulation of economic activity, the encouragement of the private sector and since 2012/13 the fostering of foreign direct investment. The new regulatory framework ensured that companies could lease land for a long period of time and that nationalization of economic activities would not happen.

The general income tax law is the "Income Tax Law 2011", which set the basic definitions and basic framework for both personal income tax (PIT) and corporate income tax (CIT). However, the tax base, the tax rates, and special regimes are then set on a yearly basis through the corresponding "Union Tax Laws" and specific notifications. The latest one is the Taxation of the Union Law, 2018.

Other than state-owned economic enterprises, the tax financial year goes from 1 April to 31 March of a calendar year.

2.1 CIT

The Corporate Income Tax is governed by a group of laws and notifications. In particular, we have identified the following key legal instruments affecting both domestic and foreign firms:

- 1) Income Tax Law (2011),
- 2) Union Tax Laws (2015, 2016, 2017, 2018),
- 3) Myanmar Investment Law (2016),
- 4) Special Economic Zone Law (2014), associated rules (2015) and
- 5) Notifications that amend or clarify dimensions of the different laws listed above.⁶

Myanmar operates a worldwide taxation system, where resident companies are taxed on income derived not only within Myanmar but also abroad. Non-resident companies are taxed only on income accrued within Myanmar and are generally subject to the same tax treatment as residents.

The *headline rate* is 25% on taxable income, for all enterprises that do not enjoy a tax incentive.⁷ There is also a reduced rate of 20% available to firms listed on the Yangon Stock Exchange, but this only applies to 5 companies at present. However, the system offers a range of tax incentives as described below, which in practice means differential effective rates across locations, sectors and type of activities.

⁶ This section draws also on the following tax summaries: "CIT Summary for Myanmar for 2018" published by PWC, the "Myanmar Tax Booklet 2018" published by VDB/Loi, and "Doing Business in Myanmar 2017" published by EY.

⁷ Companies incorporated in Myanmar under the Myanmar CA or Special Companies Act, enterprises operating under the MIC or SEZ, or non-resident foreign organisations registered under the Myanmar CA or Special Companies Act, such as a branch of a foreign company.

In terms of the *tax base*, corporate income is categorised as income from a profession, business, property, capital gains, other sources, and undisclosed sources. Income from capital gains is assessed separately and not included in the calculations of effective tax rates below.

Tax is levied on taxable income, which is total business income after subtracting deductible expenditures and depreciation allowances. The Ministry of Planning and Finance, with the approval of the government, may issue notifications that prescribe, amend, and add assessable income and rates of income tax. Currently, expenditure incurred for the purpose of earning business income can be deducted. Non-deductible items include capital expenditure, personal expenditure, expenditure that is not commensurate with the volume of the business, and non-related expenses of any type.

There is no specific provision for *interest deductibility* for debt-financed investment projects in the law. In practice, however, interest expenses and the related financing costs are likely deductible, provided that the interest expenses incurred are commensurate with the volume of business or benefits that the taxpayer received and that the loan has been approved and the loan approved by a government office.⁸ Interest deductibility is a standard practice within the CIT systems worldwide.

A depreciation allowance is deductible for CIT purposes. Capital assets must be capitalized and depreciated on a straight-line basis in accordance with the rates set out in Notification 19/2016. The depreciation rates for calculating *depreciation allowances* for fixed assets vary by type of assets and within type of asset as follow, according to Notification 19/2016⁹:

- Buildings: 1.25% to 10% (simple average is 4.4% excluding bamboo buildings).
- Furniture and fittings installed in buildings: 5% to 10% (simple average is 7%).
- Machinery and equipment: 2.5% to 20% (simple average is 9.4%)¹⁰.
- Various kinds of vehicles: 12.5% to 20% (simple average is 15%).
- Any fixed assets that are not prescribed: 5%.

Special tax regimes

The standard system operates alongside a range of parallel stipulated CIT special regimes that offer different incentives according to the attributes of the investment: market

⁸ See, for instance, KPMG tax profile of Myanmar 2018. Having said this, it is not clear what is meant by approved, who needs to approve the loan, etc.

⁹ Note that some projects/firms that benefit from tax incentives can have accelerated depreciation allowances of up to 1.5 times the stipulated depreciation rates.

¹⁰ These are all assets listed under the following categories included in Notification 19/2016: Machinery, Machines and Equipment, Miscellaneous, Other items for industrial use and Water transportation. There are 111 assets listed in these categories with 6 different depreciation rates: 2.5% (2 assets), 5% (8 assets), 6.25% (48 assets), 10% (40 assets), 12.5% (9 assets) and 20% (7 assets).

orientation (export/domestic), location of activity (geographic area), sector, and domestic or foreign (since foreign firms are only allowed to operate in specific sectors)¹¹.

The Directorate of Investment and Company Administration (DICA) is responsible for drafting the investment law, approving investment projects and maintaining the firms' registry.¹² Within DICA sits the Myanmar Investment Commission (MIC), this is responsible for verifying and approving investment proposals and regularly issues notifications about sector-specific developments.¹³ The MIC is comprised of representatives and experts from government ministries, departments and governmental and non-governmental bodies.

Firms need to apply for investment permits or investment endorsements from the Myanmar Investment Commission (MIC). Firms also need to get the endorsement of regional and state-level investment committees for certain projects. In the application to get approval for specific investment projects, investors may ask to be granted specific tax incentives that are available to different type of investments. There seems to be a strong element of discretionary decisions and further incentives granted ad-hoc by MIC.¹⁴ We try to summarise the set of parallel CIT regimes below.

Special Economic Zones

The Special Economic Zone Law was enacted in 2014, and its implementing Rules were published in 2015. The law has paved the way for Special Economic Zones (SEZ) in

¹¹ Notification 15/2017 is the latest notification that specifies which sectors foreign investors are allowed to operate via joint ventures with local businesses or stand-alone with approval of the MIC. The notification can be accessed via this link https://dica.gov.mm/sites/dica.gov.mm/files/document-files/20170419_eng_42_update.pdf.

¹² See <https://dica.gov.mm/en>. The registration is the first step a businessperson will be required to take before incorporating a company or making an investment in Myanmar, whether that person is a citizen of Myanmar or a foreigner, and it should be in accordance with the Myanmar Companies Law 2017. Foreign investors may register their companies under the Myanmar Companies Act (CA) or in conjunction with the Myanmar Investment Law (MIL) or Myanmar Special Economic Zone Law (Myanmar SEZ Law).

¹³ This link provides a guideline for investors, including firms for applying for tax incentives and investment permits, and suggests that the level of paperwork and discretionary decisions is high. https://www.dica.gov.mm/sites/dica.gov.mm/files/news-files/investment_application_guidebook_en_1.pdf

¹⁴ The latest notification is Notification No. 35/2017, which specifies the discretionary provisions that entitle the MIC to grant tax exemptions and reliefs in these promoted sectors and refers to the Special Economic Zone Law. For example, in Notification 35/2017, paragraph 51 stipulates "Without limitation of other rules, the permission in relation to a permit, or tax exemption or relief may be:

- (a) granted in respect of a proposed or stipulated investment;
- (b) granted in respect of types of investments;
- (c) granted in accordance with the payment of a bond;
- (d) granted for a specified duration; or
- (e) granted in whole or in part."

Furthermore, in paragraph 100 of the same notification, it says that the MIC can grant accelerated depreciation for specific firms "The Commission may grant a Tax Incentive to the Investor comprising the right to depreciate its assets at a rate equal to 1.5 times the depreciation rate permitted under the relevant laws of the Union or such other rate as may be notified from time to time." Notification 35/2017 can be accessed via this link https://dica.gov.mm/sites/dica.gov.mm/files/document-files/mir_english_0.pdf

Myanmar with the aim of fostering the manufacturing sector and its exports.¹⁵ There are currently three SEZs:

- Kyauk Phyu SEZ, located in the Western part of the country in Rakhine State
- Dawei SEZ, located in the Southern part of the country, in the Thanintharyi Region
- Thilawa SEZ, located 20kms south of Yangon

Each zone has its own one-stop service centre to simplify application procedures and reduce operational and trade costs. Within each of the three SEZ, there are “free zones” that provide incentives for export-oriented investment projects, and “promotion zones” for domestic-oriented investment projects, for both foreign-owned and domestically-owned firms. The incentives for SEZs include CIT exemptions and CIT reduced rates but also exemptions from custom duties (to lower trade costs) and other taxes and in principle improved infrastructure.

Investment Zones

In addition, there are CIT tax holidays for investments in promoted sectors listed in MIC Notification 13/2017, and the level of incentive can vary by geographic area according to the level of economic development as determined by the government (there are three development zones).¹⁶ The designation of these zones is likely to change from time to time, according to the level of development of the area.¹⁷ The current list of promoted sectors is in Table 2.1.¹⁸

Type of tax relief by special regime

Table 2.2 details the CIT-specific incentives for investment projects/activities in the SEZs by market-orientation of sales (free/exports or promotion/domestic)¹⁹ and for the promoted business activities in investment zones 1, 2, and 3.²⁰

¹⁵ See this link for more official information <https://dica.gov.mm/en/special-economic-zones> and Khandelwal and Teachout (2016), “Special Economic Zones for Myanmar”, IGC Policy Note for more details about the aims of the SEZs in Myanmar and the international mixed evidence on their positive impact on the implementing country.

¹⁶ See article 75 of the Myanmar Investment Law (2016). Exemptions to customs duties and other internal taxes may also be granted.

¹⁷ The latest classification of areas by level of development can be found in Notification No. 10/2017, which can be accessed via this link https://dica.gov.mm/sites/dica.gov.mm/files/document-files/zone_notification_102017_unofficial_translation.pdf

¹⁸ See Myanmar Investment Commission Notification 13/2017 for the latest list of promoted sectors, which can be accessed via this linked https://dica.gov.mm/sites/dica.gov.mm/files/document-files/promotedsector_notification_english-update_code.pdf

¹⁹ The incentives for activities located in SEZs also include carry forward of losses for up to 5 years in both the free and promotion zones, which we are not able to model in the calculation of the effective tax rate tool. Actually, we also cannot model the exemption of 50% of profits if profits are reinvested within a year. The range of incentives also includes exemptions from customs duties and other local taxes. Furthermore, the CIT tax incentives are more generous for firms actually developing the SEZs infrastructure, which can benefit from tax holidays of up to 8 years, instead of 7.

Table 2.1. Promoted sectors in Myanmar

Agriculture	Manufacturing	Infrastructure and transport services	Other services
<p>1. Agriculture and its related services (except cultivation and production of tobacco and virginia)</p> <p>2. Plantation and conservation of forest, and other businesses with forest</p> <p>3. Livestock production, breeding and production of fishery products, and its related services</p>	<p>4. Manufacturing (except manufacturing of cigarette, liqueur, beer, and other harmful products to health)</p>	<p>5. Establishment of industrial zones</p> <p>6. Establishment of new urban areas</p> <p>7. City development activities</p> <p>8. Construction of road, bridge and railway line</p> <p>9. Construction of seaport, river port and dry port</p> <p>10. Management, operation and maintenance of airport</p> <p>11. Maintenance of aircraft</p> <p>12. Supply and transport services</p> <p>13. Power generation, transmission and distribution</p> <p>14. Production of renewable energy</p> <p>15. Telecommunication businesses</p>	<p>16. Education services</p> <p>17. Health services</p> <p>18. Information technology services</p> <p>19. Hotel and tourism</p> <p>20. Science research development business</p>

²⁰ Part of the incentives for activities in promoted sectors includes the right to deduct R&D costs from assessable income. This is not going to be modelled in the tool to calculate effective tax rates below. Other type of incentives includes exemptions for certain imports from custom duties and other local taxes during the construction and expansion period.

Table 2.2. CIT incentives under special regimes in Myanmar

SEZ Free zone (export-oriented investment projects/ activities)	SEZ Promotion zone (domestic-oriented investment projects/ activities)	Investment Zone 1 (in any state in zone 1, for promoted sectors)	Investment Zone 2 (in any state in zone 2, for promoted sectors)	Investment Zone 3 (in any state in zone 3, for promoted sectors)
7 years of CIT exemption from the start of commercial operations (tax holidays)	5 years of CIT exemption from the start of commercial operations (tax holidays)	7 years of CIT exemption from the start of commercial operations (tax holidays)	5 years of CIT exemption from the start of commercial operations (tax holidays)	3 years of CIT exemption from the start of commercial operations (tax holidays)
CIT rate reduction of 50% for the next 5-year period	CIT rate reduction of 50% for the next 5-year period	-	-	-
50% of the profits exempted for the next 5-year period if profits are reinvested within the first year in year 13	50% of the profits exempted for the next 5-year period if profits are reinvested within the first year in year 11	Tax-free profits of reinvested within one year is exempted from CIT	Tax-free profits of reinvested within one year is exempted from CIT	Tax-free profits of reinvested within one year is exempted from CIT
May include accelerated depreciation at 1.5 times the stipulated rate for each asset	May include accelerated depreciation at 1.5 times the stipulated rate for each asset	May include accelerated depreciation at 1.5 times the stipulated rate for each asset	May include accelerated depreciation at 1.5 times the stipulated rate for each asset	May include accelerated depreciation at 1.5 times the stipulated rate for each asset

At first sight, the system is very complex and exhibits distortions across activities by location, type of market orientation, type of firm, and industrial sector. In addition, there is a high degree of discretionary power executed by the MIC in terms of incentives granted at the firm-level.

2.2 PIT

Employers, whether residents or non-residents of Myanmar for tax purposes, are liable to deduct personal income tax (PIT) from payments of salaries, wages and other remuneration made to all employees. Employees that are residents of Myanmar (both Myanmar nationals and foreigners) are taxed on their worldwide income at progressive

rates after deducting the prescribed allowances and reliefs; whereas non-residents are taxed only on their Myanmar-sourced income, at the same progressive rates.²¹

Employment income is defined as “salary, wages, annuities, bonuses, awards, and fees or commissions received in lieu of or in addition to the salary or wages”. Taxable benefits are not defined under the law; therefore, any payment from an employer to an employee will be considered a taxable benefit unless it can be demonstrated that it is business-related only. The following are exempt from PIT: pensions, gratuities, salary income of non-resident citizens received in foreign currency abroad, and money received from the state lottery. The tax unit for personal income tax is the individual, but certain reliefs and allowances depend on family circumstances as discussed below.

Defining the tax base: tax reliefs and allowances

There are a number of *tax reliefs and allowances* for Myanmar residents, which are listed below and need to be taken into account when calculating total taxable income:

- Basic allowance of 20% of annual income, up to a maximum of 10,000,000 kyats (approximately US\$6,667).
- 500,000 kyats per annum (approximately US\$333) for each child living with the taxpayer who fulfils ALL of the following criteria: 1) is unmarried; 2) is not earning assessable income; and 3) is either under 18, or if 18 or over, is in full-time education.
- 1,000,000 kyats (approximately US\$667) for one non-working spouse who is living with the taxpayer.
- 1,000,000 kyats (approximately US\$667) per parent for dependent parents living with the taxpayer. The term “parent” includes a father- or mother-in-law.
- Premiums paid for the life insurance of the taxpayer and taxpayer’s spouse.²²
- Contributions towards savings funds approved by the Internal Revenue Department (“IRD”).²³
- Social security contributions made by employees to the Social Security Board (2% of annual salary, capped at 72,000 kyats (approximately US\$48*) (see Social Security Act 2012).

²¹ A foreign individual is considered a resident foreigner for tax purposes if they are in Myanmar for 183 days or more during an income year (1 April to the following 31 March) or they are working on an MIC project and are in Myanmar for any length of time. Accordingly, foreigners who are not working on an MIC project and reside in Myanmar for less than 183 days are considered non-resident foreigners.

²² This is not going to be included in the calculation of the tax base since it is difficult to know the corresponding amount.

²³ This is not going to be included in the calculation of the tax base since it is difficult to know the corresponding amount.

The tax rates for resident and non-resident employees are now at the same progressive rates, although for resident taxpayers, the PIT rates are applied on their worldwide income after deduction of the reliefs and allowances above, while for non-residents, the PIT rates are applied on their Myanmar-sourced salary income without any deduction.

Tax schedule

According to the Union Tax Law of 2018, anyone whose annual gross *salary income* is MMK4.8 million (or 48 lakhs of kyats, roughly US\$ 3,200²⁴) or less is exempt from paying PIT. Our understanding is that the threshold applies to both employees and the self-employed, but greater clarity on this point would be welcome.

If an individual earns a gross salary over MMK4.8 million (or 48 lakhs of kyats) or the income is from professional business, enterprise or other sources, income tax is charged on the whole income. The tax rate schedule is applied to total income earned after accounting for the reliefs set by the Union as per section 6 of the Income Tax Law. Table 2.3 shows the PIT on annual earned taxable income, after deductions of reliefs and allowances. There are six income bands with corresponding rates, including a 0% rate for the first 2 million kyats earned. The income thresholds for each band were established in the Income Tax Law 2011 and have not been updated by inflation since then.²⁵ However, the later introduction of the basic allowance of 20% of gross income has – in a somewhat blunt way – created some effective uprating for inflation.

Table 2.3. Personal income tax rates for individuals earning a salary above 4.8million MMK (or US\$ 3,200) or earning income from other sources other than salary.

Taxable income		Income tax rate
From MMK (US\$)	To MMK (US\$)	
1 (0.0007)	2,000,000 (1,333)	0%
2,000,001 (1,333)	5,000,000 (3,333)	5%
5,000,001 (3,333)	10,000,000 (6,667)	10%
10,000,001 (6,667)	20,000,000 (13,333)	15%
20,000,001 (13,333)	30,000,000 (20,000)	20%
30,000,001 (20,000) and above		25%

Note: According to the Union Tax Law of 2018, income thresholds refer to total taxable income, which corresponds to total earned income minus all the reliefs and allowances as stipulated by the Income Tax Law. Approximate US\$ amounts are shown in brackets based on an exchange rate of US\$1 = MMK1,500.

Compulsory Social Security Contributions

The Social Security Act 2012 requires an employer with more than five employees to contribute to a social security scheme. The rates of the monthly social security

²⁴ We use an exchange rate of US\$1 = MMK1,500.

²⁵ According to the IMF, consumer inflation rates in Myanmar have oscillated between 0.4% and 9.1% since 2012. In 2018 the figure was 5.9%. See: <https://www.imf.org/en/Countries/MMR>

contributions (SSC) by the employer and employees are 3% and 2%, respectively, of an employee's total salary including benefits, in local currency or US dollars, depending on the currency in which the employee is paid. With effect from 1 April 2014, the maximum monthly contribution for an employee is MMK 6,000, and for an employer it is MMK 9,000 per employee. The employer is responsible for deducting the contribution from the employee's salary and paying the amount to the social security board.

We assume that employees earning a gross income below the income tax threshold of 4.8 million of kyats do not pay social security contributions. We also assume that self-employed workers are not obliged to make SSC.

3. CIT Effective tax rate analysis

In this section we analyse how some of the main structural features of Myanmar's corporate income tax system affect firms' incentives to invest. In particular, we calculate effective tax rates that incorporate the effects of statutory tax rates, depreciation allowances, interest deductibility, and corporate income tax incentives and tax holidays. We discuss the methodology in more detail in section 3.1.

In addition to this quantitative analysis, we also highlight both the potential benefits and costs of the different features of Myanmar's tax systems in terms of their targeting at marginal or mobile investments, their potential impacts on tax avoidance, and other distortions that may arise.

3.1 Methodology

Our approach is to compute effective (marginal and average) tax rates, which summarise the investment incentives of the CIT system in a single measure reflecting the tax rate, the tax base, and key features of special regimes, which can significantly affect the tax burden on investors and hence their investment incentives. The computations are based on the methodology set out in Devereux and Griffith (2003) and its extension by Klemm (2012) to allow for time varying tax rates which are common in special regimes and certainly relevant in the case of Myanmar. The methodology excludes personal income taxation from the analysis, so that rates provide investment incentives at the corporate level (not at the shareholder level). These approaches are widely applied when evaluating how different features of the CIT system affect investment incentives, including in the model maintained by the OECD that is used to look at investment incentives across countries.²⁶

Within a country, the computation of ETRs can provide useful information about investment incentives across asset types and across types of special regimes. It can also be used to evaluate policy proposals ex-ante, by looking at ETRs before and after the implementation of a given reform (e.g. changes in depreciation allowances, or the introduction or removal of tax holidays or other incentives).

Effective tax rates (ETRs) are calculated for a *forward-looking* hypothetical investment project of a *profit-making, value-maximising* firm that operates its investment project over a period of time. The ETRs are derived by calculating how the tax system (CIT statutory rate, tax holidays, depreciation allowances and methods) combined with asset-specific information and other economic assumptions (such as the rate of return and true economic depreciation) affect the cost of capital. The cost of capital is defined as the minimum required rate of return on a marginal investment to break even.²⁷ The ETRs also depend on the nominal interest rates and the inflation rate.

There are two types of effective tax rates to consider:

²⁶ See Hanappi, T. (2018), "Corporate Effective Tax Rates: Model Description and Results from 36 OECD and Non-OECD Countries", *OECD Taxation Working Papers*, No. 38, OECD Publishing, Paris. This section draws heavily on this paper, Klemm (2012), and Devereux and Griffith (2003).

²⁷ See early theoretical contributions of Jorgenson (1963) and Jorgenson and Hall (1967).

- **Effective marginal tax rates (EMTRs).** The EMTR measures the extent to which taxation increases the pre-tax rate of return required by investors to break even. The EMTR is defined as the tax rate on a marginal investment that just breaks even (i.e. marginally profitable investments). That is for an investment where the pre-tax rate of return equals the cost of capital, so no economic rents arise. The EMTR is an important measure of incentives at the intensive margin – that is, incentives to expand existing investment projects.
- **Effective average tax rates (EATRs).** The EATR measures the effect of taxes on profitable investment projects that earn an economic rent, that is with a pre-tax rate of return above the cost of capital. Such discrete investment projects might include, for instance, the location choice of a multinational company that possesses a valuable patent or production process or a technology choice. In such cases the EATR is a useful measure of investment incentives at the extensive margin across different locations or projects.

ETRs can be calculated for different assets and for different sources of finance:

- **ETRs can be calculated for different assets.** Using information about economic depreciation and depreciation allowances by asset type, ETRs can be calculated for different asset types from aggregate categories such as plant and machinery and non-residential buildings to specific assets like computers or transportation equipment. Analysing the differences in ETRs across assets can provide a picture about the neutrality of corporate taxation within a given country, to highlight the existence and magnitude of tax-induced biases across asset types and industries.
- **ETRs can be calculated for different sources of finance.** Given that personal income tax on shareholders is not included in the model, projects financed either by new equity or retained earnings yield the same ETRs. In many countries, including Myanmar, interests payments associated with debt contracted to finance the investment project can be deductible from taxable corporate income and hence this means that ETRs for debt-finance investments projects can be significantly lower than the ETRs financed by equity or by retained earnings (self-financed). Looking at ETRs for different sources of finance can quantify the extent of the debt bias arising from interest deductibility.

In particular, the effective average tax rate (EATR) can be defined as

$$EATR = \frac{PDV \text{ of taxes}}{PDV \text{ of pre-tax total capital income stream net of depreciation}}$$

The numerator of this equation is the difference in the present discounted value (PDV) of the economic rent associated with a one unit increase in the capital stock without and with taxation. Intuitively, the difference between the economic rent earned with and without taxation is simply the PDV of the taxes due in the presence of taxation, and this depends on all features of the tax system – the tax base, the rate(s) and any allowances or special incentives as well as the interest rate and the inflation rate. The denominator is simply the PDV of the pre-tax total capital income stream net of depreciation (or profits) associated

with an investment project. The calculation requires assumptions regarding the profitability of any given project, the true economic depreciation rate of an asset as well as the rates of interest and inflation which determine the cost of capital and the role of discounting given the dynamic nature of investment decisions. The EMTR can be considered a special case of the EATR, calculated for a pre-tax rate of return of zero.

As explained in more detail in Devereux and Griffith (2003), Klemm (2012) and Hanappi (2018), the EATR is a weighted sum of the EMTR and the statutory rate where the weight is the pre-tax rate of return. As the pre-tax rate of return increases, economic rents arise and are taxed at the statutory rate. This means that the higher the profitability level, the closer the EATR is to the statutory rate and the higher the divergence between the EMTR and the EATR.

We briefly explain some of the complex dynamic interactions between the different parameters in determining ETRs. Given a real rate of return, increases in the inflation rate can increase ETRs through different channels. First, since corporate taxes are levied on nominal returns which increase with inflation regardless of the real rate of return then ETRs can increase with inflation. Furthermore, the value of depreciation allowances depends on the initial cost of the asset that is not updated by inflation, hence decreasing the value of depreciation allowances relative to real returns and increasing ETRs. In addition, the present discounted value of depreciation allowances depends on the discount factor, which is determined in this model by the inflation and real interest rate. The higher the inflation, the lower the value of the depreciation allowances and hence the higher the ETRs. However, for debt-financed projects, the higher the inflation (and the real interest rate) the higher the interest that can be deducted and hence the lower the ETRs.

The effects of depreciation allowances on ETRs depend on its relation to true economic depreciation. If the tax system allows for faster depreciation allowances compared to the true depreciation rate of a give asset (i.e. accelerated depreciation), then the ETRs are usually lower than the statutory rates with zero inflation. However, if allowed rates are lower than economic rates of depreciation, ETRs can be higher than the statutory rates. Having said this, it is difficult to know the true (potentially context-specific) depreciation rates and these could also vary across types of buildings and machinery and equipment.

Furthermore, depreciation allowances can interact in interesting ways with tax holidays as discussed in Klemm (2012). Depreciation allowances are only valuable when statutory rates are positive but become worthless when the tax rate is zero as is the case of tax holidays. Tax holidays in generally reduces ETRs significantly, in particular at high levels of profitability, leading often to higher EMTRs relative to EATRs (see pages 261 and 262 in Klemm 2012). If tax holidays are time-limited, in general the closer to the end of the tax holiday an investment happens the higher the ETRs. If a firm is given a time-bound tax holiday and needs to replace capital over time, tax rates will be increasing over time, and investment will be discouraged as the tax holiday runs out. In this sense, tax holidays will be attractive for firms making highly profitable one-time investment projects at the beginning of the tax holiday and that need little capital replacement or repeated investments over time. Tax holidays that are bounded in time will be less attractive for projects with lower profitability and that need frequent incremental investments. For these type of projects, more generous depreciation allowances are more beneficial than tax holidays.

In some cases, generous tax depreciation allowances or deductibility of the cost of interest for debt-financed projects can make marginal projects that would not be profitable in the absence of taxation become profitable due to the tax treatment. This can be interpreted as a subsidization of those marginal projects. In those cases, EMTRs can be negative, as is very common with interest deductibility. Another way to explain the negative EMTRs is that the tax system increases the economic rent of the project, but it should not be interpreted as a payment from the taxman to the company carrying out that project.

To recap, in order to calculate these summary measures, a number of modelling assumptions and choices about underlying parameters have to be made:

- The focus is on CIT; other taxes remitted by businesses such as property or payroll taxes or CIT collected by other countries under the residence principle are not included. We also calculate ETRs at the corporate level, which essentially implies ignoring personal income taxes on dividends, interest and capital gains. This is something that could potentially be incorporated in extensions to this analysis.
- The parameters of CIT system included in the modelling tool to calculate the ETR are the CIT rate, any CIT holidays, depreciation allowances (including accelerated depreciation or special first-year allowances) and debt interest deductibility (when applicable). The rules dictating each of these are taken from tax laws and notifications and are assumed to be implemented and administered as written in law.
- The baseline project examined is an equity-financed investment in machinery and equipment, with the following assumed parameters:
 - an expected pre-tax rate of return of 20 % (in the case of EATR)
 - a true economic depreciation for machinery and equipment of 8%²⁸
 - as stipulated in the tax law of Myanmar, straight-line depreciation is used in all calculations, with an allowed depreciation rate of 9.4% for machinery and equipment²⁹
 - an inflation of 6.4%³⁰

²⁸ It is difficult to assert the true economic depreciation rates for each asset; one could ask firms to elicit what they use in their accounting books to depreciate their assets to get closer to what is consider true depreciation in Myanmar. However, this is beyond the scope of this project.

²⁹ The depreciation rate allowed for each type of asset considered (machinery and equipment and industrial buildings) is a simple average of the figures for specific assets (e.g. paint spraying machine or sugar making machines) as provided by the government in its Notification 19/2016 and described in more detail in section 2.1. In particular, we use 9.4% for machinery and equipment and 4.4% for industrial buildings. We take the approach of showing the ETR for each type of asset with an average depreciation rate, although we note the difference between true economic depreciation and depreciation allowances can significantly affect the calculated effective tax rates for each asset. Schündel (2013) show that the assumption of constant depreciation rates across countries for specific assets is reasonable and estimate that true economic depreciation ranges from 8% to 14%, varying by industry, age and firm size. See Schündel, M. (2013), "Appreciating depreciation: physical capital depreciation in a developing country," *Empirical Economics*, Springer, vol. 44(3), pages 1277-1290, June.

- a real interest rate is 5.26%³¹
- Asset types: ETRs for investments in machinery and equipment are compared with ETRs for investment in industrial buildings – two of the largest types of business investment
 - the true economic depreciation for industrial buildings is assumed to be 2.5%
 - the rate for depreciation allowances is 4.4%
- Calculations allow for interest deductibility for debt-financed investments.
- We ignore incentives on reinvested incomes, so that the derived rates apply to fresh investments. This is a feature observed as part the package of incentives provided by the Myanmar government for the special economic zones after a first period of tax holidays and a second period of reduced rates, as described above.
- We do not incorporate tax incentives and deductions specifically for Research and Development expenditures.

Calculating forward-looking ETRs for representative projects based on the tax law allows us to combine complex information about the statutory rate, specific depreciation allowances, years of reduced tax rates or tax holidays, investment allowances into a single measure. It is worth noting a couple of important limitations up front, however. The methodology used in this report cannot account for allowances for research and development, for example. Firm-specific, discretionary incentives also cannot be included, which may be an important consideration in Myanmar given the current institutional set-up. As such, the results presented herein should be interpreted in across broad types of investments as opposed to firm- or project-specific investment incentives. An alternative approach – which is not pursued in this report – would be to use firm-level accounting data to build backward-looking effective tax rates for specific firms using recorded tax payments and capital income. While useful for considering firm-specific investment incentives, such approaches are less aligned with economic theory and, perhaps more importantly, are less useful for considering investment incentives in the current period.

3.2 Analysis

In this section we present the ETR calculations.

³⁰ The IMF, for instance, has a website with outturns and forecasts for inflation in Myanmar: <https://www.imf.org/external/datamapper/PCPIPCH@WEO/MMR>. These figures show inflation averaging 6.3% between 2013 and 2018 and forecast to average 6.5% between 2019 and 2024. We have picked the mid-point: 6.4%.

³¹ Our understanding is that there are rules on nominal interest rates in Myanmar, with the minimum rate on savings of 8.25% and a maximum rate on loans of 13%. Hence, we assume that a typical loan has a nominal interest rate of 12% (below the cap, but above the rates paid on savings). Given our assumption on inflation, this implies a real interest rate of 5.26%. This is calculated as $1.12/1.064 - 1$

Table 3.1 shows ETRs for an investment in machinery and equipment, financed by new equity or self-financed. Columns 1, 2 and 3 show the EMTR, the EATR for a profit rate of 20% and the EATR for a profit rate of 40% for the different tax regimes that are stipulated by the law as described in section 2.1, using the standard depreciation rates allowed. Columns 4 to 6 use the accelerated depreciation rates, which are one and a half time the normal rates.

Looking at the ETRs under the standard depreciation rates allowed (columns 1 to 3), one can see that, as expected, the special regimes reduce the effective tax rates for investment projects substantially relative to the standard regimes, particularly for projects earning positive rents (i.e. EATRs). This is because economic rents are taxed at the statutory rate, and as the pre-tax profit rate increases, the share of profits taxed at the EMTR decreases and the EATR approaches the statutory rate (see Klemm 2012 and Hanappi 2018). The statutory rate is zero in the first years under the special regimes and reduces to half of the statutory rate afterwards for a period of time in the free and promoted areas. For example, the most generous regime is the Free Zone with an EATR of 8.3% for an investment with a profit rate of 40%, which is a third of the EATR of 24.9% under the standard regime (at a profit rate of 40%, the EATR tends to the statutory rate, which is actually 25% under the standard regime). The second most generous regimes are those for promotion zones and promoted sectors in investment zones 1 (the least developed areas in the country).

There are two other important takeaways from this table. First is the fact that the EMTRs are almost always higher than the EATRs within each tax regime, except the standard regime. These results show that the Myanmar CIT system tends to favour more profitable, one-time investments. However, the CIT system is less attractive for investments that are less profitable and projects that may need to replace capital frequently, as would be necessary in certain industries. This is common for tax holidays offering zero tax rates for a period of time as discussed in Klemm (2012).

Second, the comparison between ETRs under the standard depreciation rates (columns 1 to 3) and those under accelerated depreciation rates (columns 4 to 6) shows the potential importance of interactions between different special tax incentives for overall investment incentives. Note that in the case of special regimes, for investments in machinery and equipment, the ETRs are usually higher under accelerated depreciation than standard depreciation allowances. In effect, this can occur because depreciation allowances are more valuable to firms when the tax rate is higher, and in the initial years after investment in the special regimes offer tax holidays or lower tax rates. Thus, accelerated depreciation means more of the total depreciation allowance is used up in 'low-tax' years when their value in terms of tax payment reduction is lower to the firm, and the resulting ETR is higher than it would otherwise be. This means that accelerated depreciation can in certain cases (for assets with shorter lives, for instance) be counterproductive in the presence of tax holidays in terms of investment incentives. The flipside to this is that potentially less tax revenue is foregone as a result of this interaction.

Table 3.2 shows the ETRs for investments in buildings. The table shows again that the special regimes decrease ETRs significantly, and again the SEZ Free Zone regime appears to be the most generous in terms of tax incentives. Just like in Table 3.1, EMTRs are also generally higher than EATRs under all regimes except for the standard regime. This again suggest that the special regimes within the CIT system in Myanmar is better suited to

discrete, profitable projects across regions or sectors, rather than incentivising marginal investments.

Accelerated depreciation decreases ETRs in general when compared within tax regimes, in contrast with the pattern observed for machinery and equipment – although it should be noted that the effect is small in magnitude. This is likely related to the fact that buildings usually depreciate at a lower rate and hence over a longer period frame, which means that higher depreciation allowances are still useful and more beneficial after the tax holidays expire compared to the case of machinery and equipment.

Table 3.3 shows the ETRs for debt-financed projects in machinery and equipment. As noted in the previous section, debt-finance reduces both EMTRs and EATR across the different regimes. Furthermore, the reduction in rates is higher the lower the profit rate, to the point that EMTRs are negative across most special tax regimes and the standard regime, with or without accelerated depreciation. Similar results are observed for investments in buildings (not shown in the report for brevity). As discussed in more detail in Abramovsky et al (2014)³², this can generate a major distortion between investments funded by equity/retained earnings and debt. However, tax systems typically do not pay out unused allowances and deductions, but instead allow tax losses to be deducted from some other profits or carried forward. Hence, the actual effective tax rate can only drop below zero percent if there are taxable profits from other investments or in the future that are eligible for a loss offset. Hence, the lower ETRs due to interest deductibility for debt-financed investments are a big advantage to larger corporations that have access to credit to finance their investments and that have many investments or longer life expectancy than to small corporations. Potentially, this can incentivise unproductive or inefficient debt-financed investment by such large corporations.

³² Abramovsky, Klemm and Phillips (2014), “Corporate Tax in Developing Countries: Current Trends and Design Issues”, *Fiscal Studies*, vol.35, no.4, pp. 559-588

Table 3.1. Effective tax rates on investment in machinery and equipment, by tax regime (equity or self-financed) (%)

Tax regime	EMTR	EATR	EATR	EMTR	EATR	EATR
	(1)	(20% profit) (2)	(40% profit) (3)	(4)	(20% profit) (5)	(40% profit) (6)
	Standard depreciation rates			Accelerated depreciation rates (x1.5 standard)		
Standard	24.5	24.8	24.9	18.7	23.0	24.0
SEZ Free Zones (export-oriented projects)	13.4	9.2	8.3	16.7	10.3	8.8
SEZ Promotion Zones (domestic-oriented projects)	15.3	11.4	10.5	17.6	12.2	10.9
Promoted sectors (Area 1)	15.2	11.4	10.6	21.4	13.6	11.7
Promoted sectors (Area 2)	16.6	14.0	13.4	20.3	15.2	14.0
Promoted sectors (Area 3)	18.8	17.4	17.0	19.5	17.6	17.2

Notes: The EMTR is the tax rate for an investment that just covers capital costs, or alternatively has a 0% post-tax profit rate. The allowed depreciation rate is the simple average of listed rates in Notification 19/2016, which is 9.4% and a straight-line depreciation method is applied. The true economic depreciation rate is assumed to be 8%. The real interest rate is assumed to be 5.26% and the inflation rate is assumed to be 6.4%. The headline tax rate is 25%.

Table 3.2. Effective tax rates on investment in buildings, by tax regime (equity or self-financed) (%)

Tax regime	EMTR	EATR	EATR	EMTR	EATR	EATR
	(1)	(20% profit) (2)	(40% profit) (3)	(4)	(20% profit) (5)	(40% profit) (6)
	Standard depreciation rates			Accelerated depreciation rates (x1.5 standard)		
Standard	23.4	24.5	24.7	19.6	23.2	24.1
SEZ Free Zones (export-oriented projects)	13.7	12.7	12.5	13.9	12.8	12.5
SEZ Promotion Zones (domestic-oriented projects)	15.4	14.7	14.5	15.0	14.5	14.4
Promoted sectors (Area 1)	15.7	15.0	14.8	15.3	14.8	14.7
Promoted sectors (Area 2)	17.6	17.2	17.1	16.5	16.9	17.0
Promoted sectors (Area 3)	19.7	19.8	19.8	17.7	19.2	19.5

Notes: The EMTR is the tax rate for an investment that just covers capital costs, or alternatively has a 0% post-tax profit rate. The allowed depreciation rate is the simple average of listed rates in Notification 19/2016, which is 4.375% and a straight-line depreciation method is applied. The true economic depreciation rate is assumed to be 2.5%. The real interest rate is assumed to be 5.26% and the inflation rate is assumed to be 6.4%. The headline tax rate is 25%.

Table 3.3. Effective tax rates on investment in machinery and equipment, by tax regime (debt-financed) (%)

Tax regime	EMTR (1)	EATR (20% profit) (2)	EATR (40% profit) (3)	EMTR (4)	EATR (20% profit) (5)	EATR (40% profit) (6)
	Standard depreciation rates			Accelerated depreciation rates (x1.5 standard)		
Standard	-59.6	11.1	18.0	-85.1	9.4	17.2
SEZ Free Zones (export-oriented projects)	-1.6	5.0	6.2	2.9	6.2	6.8
SEZ Promotion Zones (domestic-oriented projects)	-5.1	5.9	7.8	-1.5	6.7	8.2
Promoted sectors (Area 1)	-5.6	5.9	7.8	3.9	8.1	8.9
Promoted sectors (Area 2)	-12.9	6.8	9.8	-6.2	8.1	10.4
Promoted sectors (Area 3)	-24.7	8.0	12.3	-23.0	8.2	12.4

Notes: The EMTR is the tax rate for an investment that just covers capital costs, or alternatively has a 0% post-tax profit rate. The allowed depreciation rate is the simple average of listed rates in Notification 19/2016, which is 9.4% and a straight-line depreciation method is applied. The true economic depreciation rate is assumed to be 8%. The real interest rate is assumed to be 5.26% and the inflation rate is assumed to be 6.4%. The headline tax rate is 25%.

These tables show clearly that the different tax systems that allow for different lengths of tax holidays, differences in statutory tax rates for a specific time period and accelerated depreciation allowances translate into substantial differences in effective tax rates across activities according to sector, location and market-orientation and source of finance. The fact that EATRs are generally higher than EMTRs means that tax system favours profitable investments over marginal investments. The results also show that the accelerated depreciation rates can be counterproductive in the presence of tax holidays for machinery and equipment but not for buildings, which have longer depreciation periods. In practice, this means that accelerated depreciation rates result in an increase in ETRs for both marginal and rent-earning investments in machinery and equipment. The subsidization of debt-financed projects is likely to benefit larger corporations that can access finance and have a large portfolio of investment projects.

3.3 Emerging findings and policy issues

This analysis represents a first but important step in understanding the impacts of Myanmar's corporate income tax system on the investment incentives for different firms and different forms of capital. The picture that emerges is of a complex corporate income tax system, with different tax rates for different sectors, types of activities and parts of the country as well as for projects according to their source of finance, resulting in substantial variation in effective tax rates on different types of investments.

- **The CIT tax system in Myanmar generate distortions in investment incentives and a potential erosion of the tax base.** Differences in effective tax rates can distort the type of sectors and investments that firms invest in, basing their decisions on differences in tax rates rather than underlying commercial and economic fundamentals. Firms may then invest in less productive assets or may organise their production in less efficient ways. And once incentives are granted for one economic sector or area there often is pressure to extend incentives to additional areas. This can lead to a slow erosion of the effective tax base, which seems to be the case in Myanmar. Economic theory suggests that one might want to offer lower effective tax rates on investments that are more sensitive to taxation (for instance, those profitable investments by multinational firms that are subject to international mobility), or that have positive externalities (such as technology transfer). Thus, there might be an economic case for lower ETRs for investment projects in Free Zones undertaken by multinational companies choosing between a number of different countries. However, it is important to contrast any potential benefits with the potential costs involved to make policy decisions based on cost-benefit analysis. We discuss the potential benefits and costs, the results from the existing evidence and issues around measuring these costs and benefits briefly below.
- **Tax incentives within the CIT system generate revenue loss in the short-run whilst the benefits are uncertain.** Most obviously there is lost revenue from offering costly reduced rates or incentives for investments that would have occurred anyway (a so called 'deadweight cost'). Estimating deadweight cost – and, the flip-side, the amount of additional investment and productivity spillovers induced by tax incentives – is notoriously difficult, generally requiring high-quality firm-level data and policy variation across firms and over time. The existing empirical literature shows inconclusive evidence on the causal impact of tax

incentives on investment and other economic outcomes such as employment and output.³³ Moreover, evidence from self-reported investor surveys have often shown that tax incentives are not particularly relevant when making investment decisions in developing countries, relative to other factors such as skills and infrastructure in terms of determinants for investment decisions.³⁴ More broadly, the general investment climate, determined in part by good skills and infrastructure, good institutions and political stability, seems to be a more salient factor affecting investments decisions by multinational firms choosing where to locate their productive activities. In turn, the revenue lost due to the tax incentives is costly since it could have been used to finance much needed infrastructure and skills that seem to be more relevant for firms' investment decisions.

- **Raising public funds to finance public investments in infrastructure, skills and governance may have higher economic returns than CIT tax incentives.** In countries like Myanmar, with relatively low levels of infrastructure, skills and poor business climate, the returns to public funds from improving these areas could be high. Although doing a full cost-benefit analysis has challenges given the lack of detailed firm level data in Myanmar and other methodological considerations, a useful stepping stone would be an analysis of the overall revenue cost of incentives and preferential corporate income tax rates in Myanmar, which is something that is being estimated by a team of World Bank analysts as part of their tax expenditure calculations.
- **Tax incentives can also facilitate tax avoidance, making enforcement more costly and difficult and the system more complex.** For instance, the variation in tax rates within Myanmar that results from the special economic zones where tax holidays of varying lengths apply in effect leads to internal 'tax borders' that need to be policed. Companies with operations both inside and outside these zones will try to shift around profits using transfer prices so that as much is possible is subject to the reduced rate of tax (this incentive will be greater for firms in sectors subject to higher rates of tax). The tax authorities need to devote resources to try to stop this and may not be successful. This is likely to generate further complexities in terms of administration and compliance and opportunities for rent-seeking and lack of transparency, which can result in a lack of tax morale.
- **Discretionary tax incentives can introduce economic uncertainty.** An additional issue is how the discrete nature of some of the tax incentives in Myanmar can undermine i) the government's ability to predict revenue flows and hence to plan investments accordingly and ii) firms' ability to plan their tax position for a given investment with certainty.

³³ See, for example, Abramovsky et al (2018), "Review of Corporate Tax Incentives For Investment in Low- and Middle-Income Countries", IFS Report available at <https://www.ifs.org.uk/publications/12875> and Khandelwal and Teachout (2016), "Special Economic Zones for Myanmar", IGC Policy Note for more details about the aims of the SEZs in Myanmar and the international mixed evidence on their positive impact on the implementing country.

³⁴ UNIDO (2011), "Africa Investor Report: Towards evidence-based investment promotion strategies" and World Bank (2009), "FIAS: the investment climate advisory service FY2009 annual report", Washington, DC: World Bank.

- **There may be scope to simplify the system, raise more revenues and still attract investment.** Taking this together, questions arise of whether the lower effective tax rates on specific activities, areas and special economic zones serve Myanmar well. It is hard to be conclusive about whether the potential benefits of targeted tax incentives and special economic zones outweigh the costs in terms of lost revenues, potential economic distortion, and the creation of tax avoidance opportunities. There is no evidence from Myanmar that these tax incentives are actually generating additional investments that can compensate the increase in complexity of the tax system and the distortions introduced. It might be that a simpler and more neutral system that treats all activities in the same way and implements reduced effective corporate tax rates across the economy more generally is more efficient. It could furthermore remove opportunities for tax evasion and rent-seeking and raise more revenue for the government budget, which can be used to fund much needed growth-enhancing infrastructure. More research is needed to understand the effects of the current special tax regimes in Myanmar and make more specific recommendations.

4. PIT effective tax rate analysis

4.1 Methodology

This section outlines the methodology used to calculate taxes paid by workers and their social security contributions, taking into account the range of allowances that depend on household characteristics.³⁵

The effects of the personal income tax (and social contributions) arise from the interaction of the tax schedule (rates) and the tax base. The design of the tax structure may have in mind a number of different objectives, but two key ones that will be of primary interest in this report are the (dis)incentive effects and the distributional burden (otherwise known as progressivity) of taxation. These two goals may not always align, meaning that the design of PIT/SSCs can face important trade-offs. It is worth briefly distinguishing between the formal and economic incidence of a tax. The formal (or statutory) incidence is borne by those that have the legal liability to pay the tax (like employees for personal income tax imposed on earned income, or manufacturers of tobacco for indirect taxes on tobacco consumption). The economic (or effective) incidence is concerned with who is actually worse off or out of pocket as a result of the imposition of the tax, and this incidence will typically be shared between several parties. Economic and formal incidence can be very different for any given tax.

Calculating effective incidence is an empirically challenging exercise, however, since it requires knowledge of what would happen to earnings, wages, labour supply, tax revenues and public expenditure in the counterfactual scenario where the tax is not imposed. This counterfactual is of course not observable. However, economic theory has established some general principles that can guide our understanding of the likely burden of economic incidence in a given context. For instance, when an agent is relatively less able to substitute away from a taxed activity, they are likely to bear more of the economic incidence of a tax. While the economic incidence of personal income taxes is generally assumed to fall largely on workers – and there is some evidence to support this assumption in high-income countries – it is possible that economic incidence is more complex in Myanmar. The presence of large informal labour markets outside of the PIT system means that it is likely that workers can substitute away from taxed employment in certain jobs or activities, which may imply less revenue raised or perhaps greater incidence on formal employers. However, it is important to note that there are non-tax related benefits associated with formal jobs, like security or health insurance, and that some jobs are only available in the formal sector, like public sector employees or high-skilled engineers working for big firms. In those cases, it is less likely that workers substitute away from formal jobs so easily.

Employers then care about gross labour costs, inclusive of social security contributions and payroll taxes. This will determine the level of employment offered at any particular wage. The employee will be interested in his net take-home pay, after deductions imposed

³⁵ This methodology and analysis have been developed by the authors based on Adams, S. (2018) "Work incentives, redistribution and the tax/benefit rate schedule", IFS presentation; OECD (2019), "Taxing Wages 2019", OECD Publishing, Paris. https://doi.org/10.1787/tax_wages-2019-en, and Kay, J.A. and M. King (1990), *The British Tax System*, Oxford University Press.

on him. This will determine the amount or quality of work that he will be willing to provide at any wage rate.

EATRs and EMTRs, income and substitution effects and the progressivity of the tax system

In the context of the PIT and the SSC, the *effective average tax rate (EATR)* is the proportion of gross income (or pre-tax income) that is taken in tax. This does not measure work incentives as it does not compare working with not working, but it does provide a measure of the relative contribution to the taxman at a given income level.

The *effective marginal tax rate (EMTR)* is the fraction of a worker's additional earnings (starting from some gross income level) that goes to the taxman. This gives an idea of the extent to which taxation distorts formal labour supply compared to the (financial) incentives created by the market at the intensive margin – that is, conditional on having a job.^{36, 37} EATRs and EMTRs are useful summary statistics in terms of evaluating a couple of key features of the PIT system: namely its progressivity and its impacts on work incentives.

A tax schedule is considered *progressive* if the proportion of income that is taken in tax increases with gross earnings. This implies that the EATR should increase with income. This does not mean that the EMTR should also increase with income, as actually happens in Myanmar and many other countries like the UK. In other words, as stated by Kay and King (1990), “A tax system is progressive if, and only if, the marginal rate of tax is higher than the average rate of tax: if you pay a higher rate of tax on any *additional* earnings than you do on our current earnings.” A tax could be progressive over the whole range of the income distribution of a given country, or only throughout a range (sub-segment) of the income distribution.

One typical example of a progressive tax is a *linear tax schedule*, which is totally described by two parameters: the basic allowance and the tax rate. The slope of the schedule for EATRs describes how quickly the average rate changes over the income distribution, and the degree of progressivity of the schedule.

Taxation of personal incomes may be associated with a number of different types of welfare loss. First, individuals and households are worse off after paying taxes (this is usually referred to as an *income effect*), though some of it comes back to them in terms of benefits from public services funded by their tax contributions – this will vary significantly

³⁶ To measure incentives to work at the extensive margin, that is, for individuals that are not working, one needs to compute the incentive to be in formal work at all that can be captured by two other measures. The first one is the replacement rate, which is the proportion of net income that is replaced if a worker does not work in the formal sector relative to net in-work income from a formal job. This may depend on the outside options of the worker, which could include household income, income from informal jobs or other sources, and government benefits. Another measure is the participation tax rate, which is the proportion of total earnings taken in tax and withdrawn in benefits as a worker goes from not working in the formal sector to working in the formal sector. These are outside the scope of this report, as calculating these would require strong assumptions on the outside options of formal workers which we do not currently have good evidence on.

³⁷ It is worth noting that the EATR and EMTR in the context of PIT are tax payments calculated in relation to gross earned income in one period. Whereas the EATR and EMTR in the context of CIT, presented in section 3, are tax payments calculated in relation to the present discounted value of gross (or pre-tax) capital income stream net of depreciation of a perturbation to the capital stock or an investment project.

by household. The EATR provides an overview of the extent to which overall incomes are reduced by taxation. Secondly, and perhaps more importantly for a tax like PIT which depends on the choices individuals make, there is what is called the “excess burden” of taxation. In this case, taxation reduces the return to work, meaning a lower net take-home pay for any additional hour worked and creating an incentive to work less – this is usually called the *substitution effect* and will depend on the EMTR. The size of this effect depends on how responsive hours of work are to net take-home pay.

Computing EMTR and EATR

Our approach is to compute effective average and marginal tax rates by applying key parameters from the tax law that define the tax base and the tax rates to hypothetical income earners with different characteristics that determine the allowances they are entitled to under the current PIT rules in Myanmar. The methodology we employ – which is static in nature and employs certain simplifying assumptions – is standard in effective tax rate analysis, including in the models maintained by the OECD.³⁸

To calculate income tax payments, tax allowances are first applied to gross income depending on the characteristics (in terms of income and household demographics) of the selected hypothetical taxpayer. Next, the schedule of tax rates is applied, and the resulting tax liability is calculated. In calculating allowable deductions, we distinguish between two different broad categories, and only model the first of these two:

- Standard allowances/reliefs, which are those unrelated to actual expenditures incurred by the taxpayer and are automatically available to all taxpayers who satisfy the eligibility rules specified in the laws. These are usually fixed amounts or percentages of income and are typically the most important set of reliefs in the determination of taxable income and hence tax payments paid by workers. As described in section 0, in the case of Myanmar these reliefs are:
 - The basic allowance of 20% of gross income, irrespective of marital or family status.
 - The allowance for a non-working spouse.
 - The allowance for children.
 - The allowance for parents and parents in law.
 - The deduction for employee’s social security contributions
- Non-standard reliefs, which are those related to actual expenses incurred. Hence, they are not a function of income or fixed amounts. In the case of Myanmar these include:
 - Insurance premiums paid

³⁸ Our analysis ignores administrative and compliance costs and other welfare effects due to changes in taxpayers’ behaviour, among other complexities of the tax system.

- Contributions to saving funds

The calculation of the effective marginal tax rates is based on considering the impact of a small increase in gross earnings on personal income tax and social security contributions for an individual worker with specific characteristics.

We compute EMTRs and EATRs for eight model earners:

- Type 1: Individual earner, no non-working spouse, no children, no parent³⁹
- Type 2: Individual earner, no non-working spouse, no children, 2 parents
- Type 3: Individual earner, no non-working spouse, 2 children, no parent
- Type 4: Individual earner, no non-working spouse, 2 children and 2 parents
- Type 5: Individual earner, 1 non-working spouse, no children, no parent
- Type 6: Individual earner, 1 non-working spouse, no children, 2 parents
- Type 7: Individual earner, 1 non-working spouse, 2 children, no parents
- Type 8: Individual earner, 1 non-working spouse, 2 children and 2 parents

These examples were chosen to give a broad overview of how work incentives and progressivity vary across individual taxpayers with different realistic household structures due to the different allowances and rates in the PIT system in Myanmar. As well as allowing us to say whether the system is progressive overall and providing a picture of broad disincentives to work marginally more in the formal labour market, this 'representative taxpayer' approach allows us to analyse the extent to which the design of PIT is differentially targeted across household groups.

Having said this, there are some important issues to note. Given the focus on personal income tax and social security contribution for formal wage earners, the results cannot be taken as an indication of the overall impact of the government sector on the welfare of individual taxpayers and their families. That comprehensive analysis should consider the impact of all taxes and benefits accruing to individuals and their families.⁴⁰ Furthermore, the analysis shows the formal incidence of personal income tax and social security contributions, not the economic incidence. As discussed above, it is often assumed that incidence of personal income tax and social security contributions is largely on workers, and hence we label the calculated rates effective tax rates. However, in reality the incidence is likely to be shared between employers and employees, or result in revenue loss if both employers and employees practice tax evasion. Finally, the analysis considers earnings, and does not include unearned incomes.

³⁹ If the individual has a spouse that is working, we assume that the allowances are claimed by this individual and not the working spouse.

⁴⁰ Such an analysis would ideally include indirect taxes and cash and in-kind benefits and transfers as well. A tax-benefit microsimulation model would be one way to pursue this.

Another important issue to note is that we have calculated tax rates for individual workers with declared income and have not considered total household income and the tax position of households. In the case of Myanmar, it seems unlikely that there are many households with two earners that work in the formal sector and earn above the threshold at which employees should start paying personal income tax. Nonetheless as the country grows and household surveys with information on incomes and expenditures improve, it would be relevant to calculate the tax position of households as a whole to understand the impact of the tax system on families.

4.2 Analysis

Before describing the results on the calculated ETRs for PIT, it is useful to situate the PIT parameters (in particular the tax base) in the context of actual earnings and formal employment. Gross Domestic Product (GDP) per capita in Myanmar was estimated to be 1.80 million of kyats in 2018/19.⁴¹ Using the Labour Force Survey Report 2017, we can also characterise the workforce in terms of informality, whether employee or self-employed, and average earnings.⁴² The definition used in this report characterises 83% of employment as informal. Though there may be a number of ways of proxying for informal employment (by reported job benefits or by type of organisation, for instance), this suggests informal employment is very common in Myanmar. Furthermore, only 40% of workers are employees (with 34% self-employed and 24% contributing family workers). In terms of the reported earned income levels of workers in the LFS 2017, it is unclear if the figures reported are net (after taxes) or gross (before taxes). The LFS 2017 reports an average annual wage for employees of 2,157,818 kyats in 2018 prices,⁴³ which rises to 4,424,926 for a formal employee.⁴⁴ These figures are both below the 4.8 million kyats threshold of gross income above which employees are obliged to start paying PIT. Even if these income statistics are actually net income, this suggests that the average employee does not earn enough to be liable to pay PIT – regardless of whether they are employed in the formal or informal sector.

One category of employees that seem to earn an average wage that is well above the threshold of 4.8 million kyats is managers (formal and informal), with annual wage earnings of 7,509,157 kyats.^{45,46} Managers (both employees and self-employed, business owners) represent just 0.7% of total workers, however, or around 153,000 individuals.

⁴¹ This is approximately 1,200 USD dollars, or less than half of the threshold of MMK4.8 million. Figure comes from the IMF IV Consultation.

⁴² It is not clear how informality is defined in the LFS 2017 report. Unfortunately, the LFS raw data is not available to the authors to provide a more refined analysis of worker characteristics and their family composition. We understand that the latest household survey with raw data available to the authors is from 2009 (The INTEGRATED HOUSEHOLD LIVING CONDITIONS ASSESSMENT SURVEY (2009) First Round) and does not seem to have good information on work and work earnings, although it does contain information on family composition. Furthermore, it is not clear if earnings reported are gross earnings or net earnings.

⁴³ This comes from information in Table 3 in the report, multiplying 169.8 thousand of kyats by 12, and then updating this by the inflation rate in 2018, which was 5.9% according to the IMF,

⁴⁴ Again, according to information in Table 3, the monthly wage is 348,200 kyats, multiplied by 12 gives to 4,178,400, and then updated by inflation.

⁴⁵ In 2017 prices, they earned on average 7,090,800 kyats according to the LFS.

Taken together, these statistics paint a picture of a PIT system that only a small percentage of workers will actually interact with due to informal working arrangements, income below the minimum PIT threshold, or both. Only a small minority of employees and potentially also a small number of self-employed workers will actually be paying PIT in Myanmar, since they have to earn a level of formal declared gross income above 4.8 million kyats.

We now turn to our results concerning the effective marginal and average tax rates, starting with a type 1 employee (a taxpayer claiming no family allowances who hence has higher taxable income for any given level of gross earnings) before turning to a type 8 employee (a taxpayer claiming allowances for a non-working spouse, two children and two parents living in the household). For each of these types, we consider how their level of gross earnings changes the effective tax rates they face.

Figure 4.1 and Figure 4.2 show that no taxpayer pays tax with a level of gross income equal to 4.8 million of kyats or below (indicated by a red line in the graphs). As discussed above, this threshold is higher than the average wage for formal employees as estimated from the Labor Force Survey 2017. This means that there is a disincentive to take formal jobs paying above 4.8 million, or to increase earnings above that threshold. In the case of Myanmar, the specific design of the PIT system makes this disincentive particularly strong, although it varies according to the individual's household composition. This is due to the fact that a worker that moves above the 4.8 million threshold can potentially be taxed on not only any income above this figure, but on a portion of earnings below the threshold which were previously untaxed. This creates a discontinuity in the *average tax rate* at this threshold – otherwise known as a tax 'notch' in the economics literature. Such features in a tax system create very strong incentives for individuals to change their behaviour in response to the tax system because they create 'strictly dominated regions'. In particular, an individual worker can work less and at the same time increase their net income by moving from just above the 4.8 million income threshold to just below it. Tax notches have been shown to have massive impacts on individual behaviour in many different contexts, including the personal income tax system in Pakistan.⁴⁷

For a type 1 worker, as shown in Figure 4.1, a worker with a gross income just above 4.8 million kyats starts paying 5% income tax on some portion of its income that would be untaxed were gross income below 4.8 million, resulting in a jump in the average income tax rate from 0% to just below 3% at this threshold. This is closer to 4% if social security contributions are included. For a type 1 worker to face a marginal income tax rate of 10%, she needs to earn above 6.34 million of kyats. Average tax rates are lower than the top marginal income tax rate the taxpayer faces over the whole range of earned income levels considered given the graduated, progressive structure of income tax rates and the set of allowances available.

⁴⁶ Depending on their family situation, one could simulate their gross earnings. For example, for an individual with no allowances for family members (type 1 in our typology), the corresponding gross income for a net income of 7,500,000 is 7,850,00 kyats approximately.

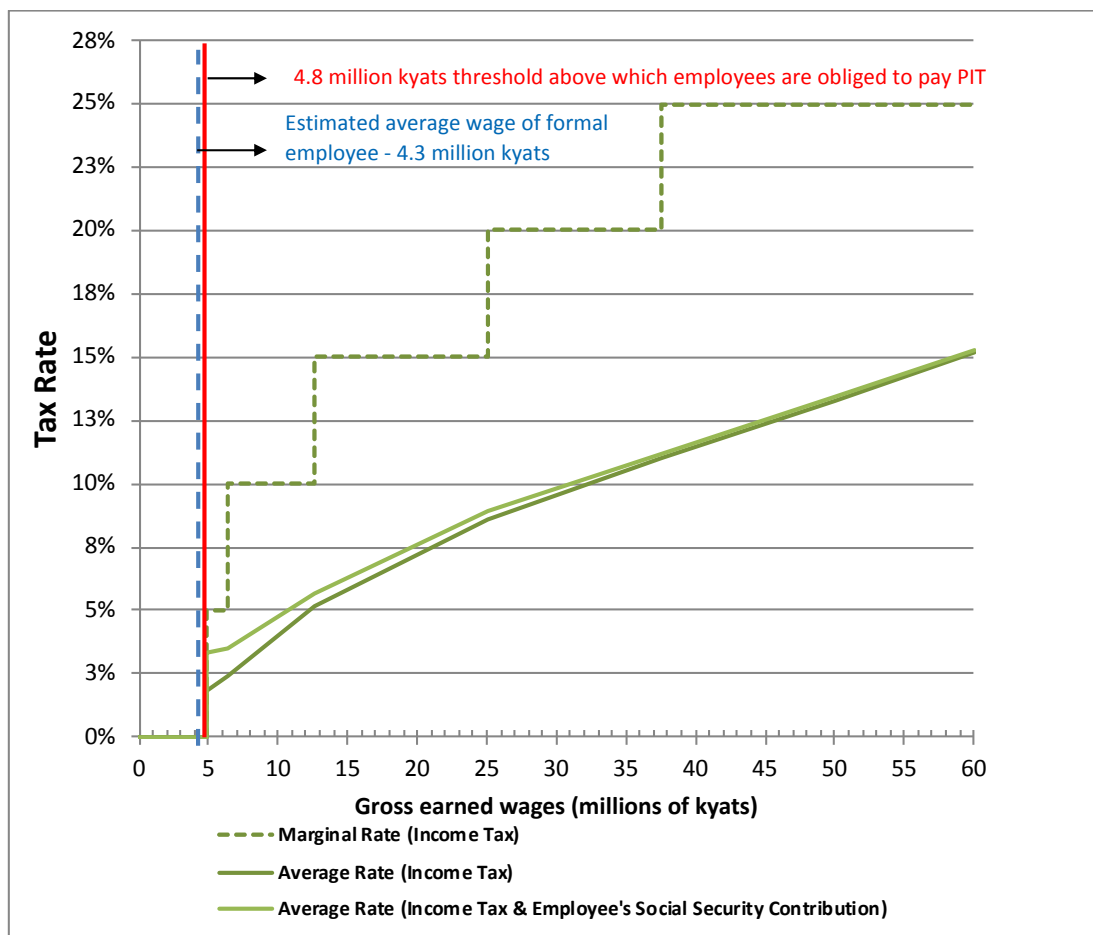
⁴⁷ Kleven, H.J. and Waseem, M., 2013. Using notches to uncover optimization frictions and structural elasticities: Theory and evidence from Pakistan. *The Quarterly Journal of Economics*, 128(2), pp.669-723.

However, at a given gross income level the effective marginal and average tax rates can vary significantly depending on the standard allowances one can claim.

For a type 8 worker, as shown in Figure 4.2, a worker with a gross income just above 4.8 million of kyats with extra allowances for a non-working spouse, two parents and two children only starts paying income tax at 5% above 7.59 million of kyats. This means that the change in average tax rate observed for type 1 workers is not observed for a worker who can claim these allowances. The proportion of gross income to which the 5% rate is applied is so low that average income tax rates for personal income tax are close to zero in this range and only start significantly rising above 11.3 million of kyats when employees face a marginal tax rate of 10%. However, we assume that taxpayers still pay social security contributions (SSCs) with gross incomes above 4.8 million of kyats, so average tax rates including SSC start rising above zero from that income level. Again, average tax rates are below marginal tax rates across the full range of income.

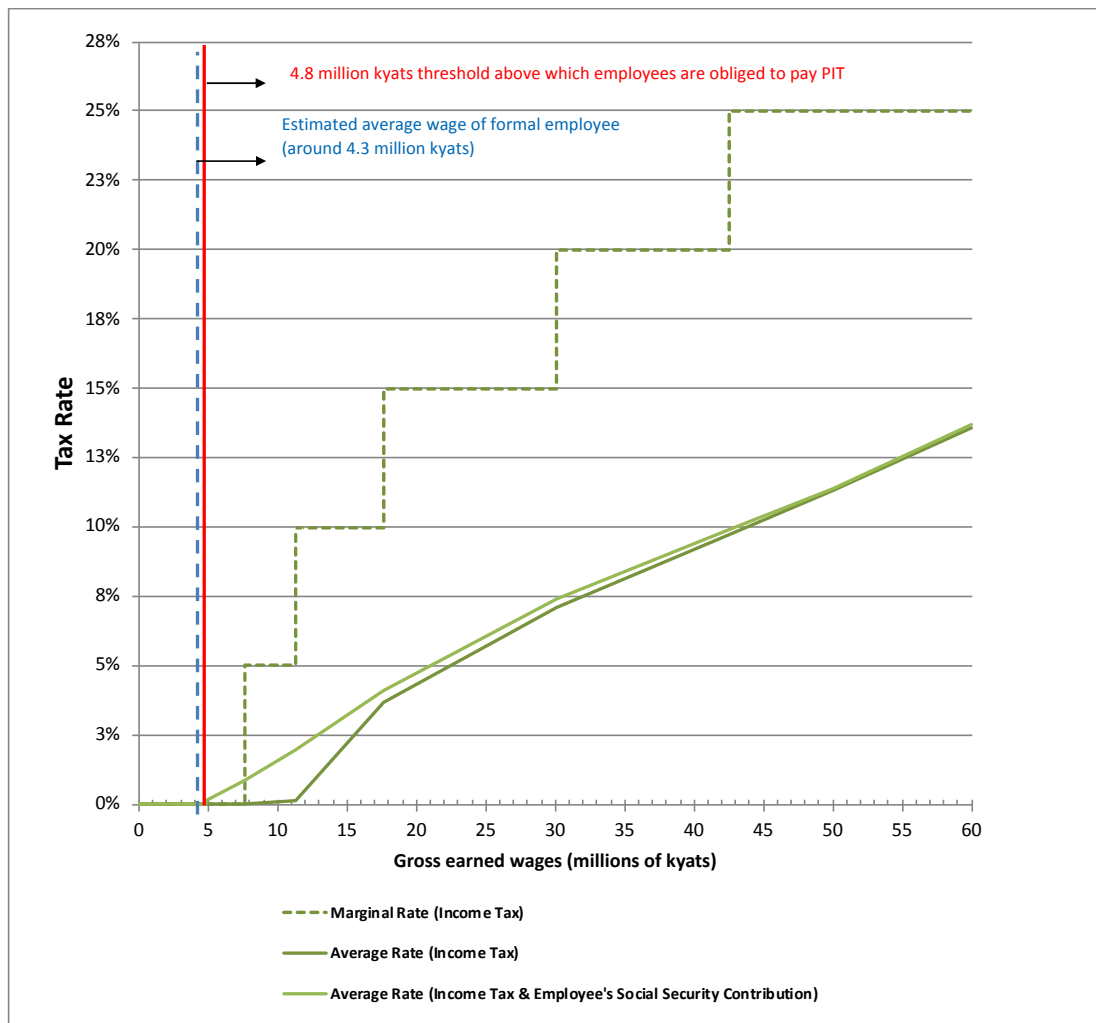
Figure 4.1 and Figure 4.2 show that for both types of worker the PIT system is progressive. The dark green solid line shows that the effective average tax rates paid by employees increases with the level of gross income earned. This is also true if social security contributions paid by employees are included (interpreted as a tax paid by employees on their earned income) as shown by the light green solid line. The average tax rate for social security contributions becomes very small as income increases since contributions are capped at a maximum level of 72,000 kyats per year, so eventually these contributions become very small as a share of income. This decline in the average tax rate imposed by SSCs is shown by the convergence of the effective average tax rate schedules including and excluding SSCs.

Figure 4.1. Marginal and Average tax rates for a type 1 employee



Note: Type 1 employee is a wage earner that has no dependent children, parents or spouse. She could have a spouse that is working; hence it would not qualify as dependent and hence not receive an allowance for a spouse.

Source: Authors' own elaboration.

Figure 4.2. Marginal and Average tax rates for a type 8 employee

Note: Type 8 employee is a wage earner that has two dependent children, two dependent parents and one dependent (non-working) spouse.

Source: Authors' own elaboration.

Tables 4.1 and 4.2 show calculations for the effective average and marginal tax rates for a specific level of gross income for each of the different types of employees described in section 4.1. The level of formal earned income chosen is 5,890,000 kyats, which is 33% more than average annual earnings for formal employees and above the threshold at which formal employees need to start paying PIT. We show the relevant rates for PIT, but also include social security contributions by employees and employers.

This analysis shows significant variation in the effective tax rates faced by individuals and households that might otherwise look similar in some dimension(s). This can be seen in a couple of ways.

Firstly, consider the differences in ETRs within a household type depending on whether we consider income tax, total payments (which includes employee SSCs), or the total tax wedge (which also includes employer SSCs). At the level of gross income considered, the

difference in effective average tax rate between the first and last of these is around 3% in each case. This creates a strong incentive for workers to organise their labour in such a way that they can avoid this additional 3% tax rate – for instance, perhaps they can avoid it by being self-employed. At this level of income, the marginal tax rate does not vary according to the inclusion of SSCs – this is because the annual cap on SSC contributions is very low.

Secondly, looking across the taxpayer types considered in this analysis shows another aspect of heterogeneity in ETRs. Each representative taxpayer type earns the same gross income, but as a result of the different allowances in place, the resulting ETRs can be very different. As has previously been noted, type 1 taxpayers have the fewest allowances and type 8 the most. This results in an average total tax wedge of 5.3% for type 1 taxpayers, and 3% for type 8 – other taxpayer types face tax rates between these two figures. Effective marginal tax rates also differ by taxpayer type and are either 0% or 5% at the income level considered depending on whether income tax has become payable yet given the allowances available. It is possible that targeting allowances to affect ETRs in this way is a useful approach for distributing benefits to household types that require more support on average. In countries such as Myanmar where the welfare system is perhaps less developed on the benefits side, this may be especially true. However, it is important to bear in mind that those participating in the PIT system at all in Myanmar will typically have incomes far above the national average, and thus there may be groups in the country that are more vulnerable and will not benefit from the allowances currently in place.

Table 4.1. The tax position of different types of employees with an annual gross salary of 5,890,000 kyats and with no non-working spouse (single or working spouse), 2018

	Type 1	Type 2	Type 3	Type 4
Non-working spouse	0	0	0	0
Children	0	0	2	2
Parents	0	2	0	2
1. Gross earned income				
	5,890,000	5,890,000	5,890,000	5,890,000
2. Standard tax allowances				
Basic allowance	1,178,000	1,178,000	1,178,000	1,178,000
Non-working spouse	0	0	0	0
Dependent children	0	0	1,000,000	1,000,000
Live-in parents	0	2,000,000	0	2,000,000
Deduction for social security contributions	72,000	72,000	72,000	72,000
Total	1,250,000	3,250,000	2,250,000	4,250,000
3. Central government taxable income (1-2)				
	4,640,000	2,640,000	3,640,000	1,640,000
4. Central government income tax liability				
	132,000	32,000	82,000	0
5. Employees' compulsory social security contributions				
	72,000	72,000	72,000	72,000
6. Total payments to general government (4+5)				
	204,000	104,000	154,000	72,000
7. Take-home pay (1-6)				
	5,686,000	5,786,000	5,736,000	5,818,000
8. Employer's compulsory social security contributions				
	108,000	108,000	108,000	108,000
9. Average rates				
Income tax	2.2%	0.5%	1.4%	0.0%
Employees' social security contributions	1.2%	1.2%	1.2%	1.2%
Total payments	3.5%	1.8%	2.6%	1.2%
Total tax wedge	5.3%	3.6%	4.4%	3.0%
10. Marginal rates				
Income tax	5.0%	5.0%	5.0%	0.0%
Employees' social security contributions	0.0%	0.0%	0.0%	0.0%
Total payments	5.0%	5.0%	5.0%	0.0%
Total tax wedge	5.0%	5.0%	5.0%	0.0%

Table 4.2. The tax position of different types of employees with an annual gross salary of 5,890,000 kyats and with a non-working spouse, 2018

	Type 5	Type 6	Type 7	Type 8
Non-working spouse	1	1	1	1
Children	0	0	2	2
Parents	0	2	0	2
1. Gross earned income	5,890,000	5,890,000	5,890,000	5,890,000
2. Standard tax allowances				
Basic allowance	1,178,000	1,178,000	1,178,000	1,178,000
Non-working spouse	1,000,000	1,000,000	1,000,000	1,000,000
Dependent children	0	0	1,000,000	1,000,000
Live-in parents	0	2,000,000	0	2,000,000
Deduction for social security contributions	72,000	72,000	72,000	72,000
Total	2,250,000	4,250,000	3,250,000	5,250,000
3. Central government taxable income (1-2)	3,640,000	1,640,000	2,640,000	640,000
4. Central government income tax liability	82,000	0	32,000	0
5. Employees' compulsory social security contributions	72,000	72,000	72,000	72,000
6. Total payments to general government (4+5)	154,000	72,000	104,000	72,000
7. Take-home pay (1-6)	5,736,000	5,818,000	5,786,000	5,818,000
8. Employer's compulsory social security contributions	108,000	108,000	108,000	108,000
9. Average rates				
Income tax	1.4%	0.0%	0.5%	0.0%
Employees' social security contributions	1.2%	1.2%	1.2%	1.2%
Total payments	2.6%	1.2%	1.8%	1.2%
Total tax wedge	4.4%	3.0%	3.6%	3.0%
10. Marginal rates				
Income tax	5.0%	0.0%	5.0%	0.0%
Employees' social security contributions	0.0%	0.0%	0.0%	0.0%
Total payments	5.0%	0.0%	5.0%	0.0%
Total tax wedge	5.0%	0.0%	5.0%	0.0%

Source: Authors' own elaboration.

4.3 Emerging findings and policy issues

As this report represents a first step in understanding some of the most important features of the PIT system in Myanmar, it is not possible to make very specific policy recommendations at this stage. More research is required to obtain a fuller understanding of the possible impacts of the current system on (formal) labour supply, tax revenues, and the distribution of income. For instance, a microsimulation model could be a useful tool for investigating some of these issues. Nonetheless, the mapping of the existing PIT system and calculation of effective tax rates for example taxpayers raises a number of interesting policy areas to consider:

- **The PIT system in Myanmar is progressive.** The progressive schedule of PIT rates and the set of allowances in place ensures that effective average tax rates are increasing with gross earnings for all household types considered. This, however, does not account for any benefits that may depend on income, nor any household-level income interactions, both of which are outside the scope of this project.
- **However, very few people are likely to be in the PIT system at all.** Relative to average income in the country, the minimum threshold at which individuals become liable to pay PIT is very high in Myanmar. While this keeps the tax burden on poor households low, it also clearly has implications for tax revenue and the familiarity of the population with tax processes. The fact that income tax thresholds are not regularly updated in line with inflation implies that ‘bracket creep’ – where growing incomes push people into paying tax or facing higher marginal rates – could push more people into the system. However, recent reforms (such as the introduction of the standard 20% allowance) have prevented this from happening in a relatively indirect and somewhat complicated way.
- **Some features of the PIT system could be significantly distorting behaviour.** Primarily, while the 4.8 million kyat exemption threshold may protect those on lower incomes from ‘bracket creep’, the fact that it creates a discontinuous increase in the effective *average tax rate* (depending on the allowances claimed by the individual) creates very strong incentives to avoid entering the PIT system at this point. Similarly, as the self-employed face lower overall tax rates due to not being liable for social security contributions, some workers be unnecessarily incentivised to organise themselves as self-employed.
- **Other allowances in the system have large effects on effective tax rates and may create some undesirable incentives at the household level.** Our analysis showed that the composition of an individual’s household and the way they organise their labour (employee or self-employed) can have significant implications for both effective average and marginal tax rates. In the absence of alternatives mechanisms, this may be one way to target resources to certain household types which may be more vulnerable. However, given that taxpayers in the PIT system have incomes far above the national average, it is not clear that the current allowances are reaching those most in need. Furthermore, as the allowances are relatively generous, they may affect household decisions more broadly – for instance, a spouse may choose not to work or to do so informally so that their partner can claim the PIT allowance for a non-working spouse.

- **There may be scope to simplify elements of the system.** Taken together, Myanmar's current PIT system looks to be somewhat complicated overall given the different exemptions and allowances in place – not all of which are necessarily achieving their desired goals. For instance, the standard 20% allowance, the 4.8 million kyat threshold and the underlying income tax threshold could be consolidated into a single income tax threshold with a single tax-free allowance which is the same for every taxpayer. It may also be worth reducing the number of tax rates in the schedule at the same time. A simpler PIT system such as this would be easier for taxpayers to understand and comply with, and would reduce the differences in effective tax rates across the gross earnings distribution for otherwise similar taxpayers. At the same time, reviewing the rationale and effect of other standard allowances in place would be a worthwhile activity. However, it must be noted that any such reforms would require more detailed research than is contained in this report to understand the broader impacts for work incentives, the distribution of income, and the public finances.

5. Summary and discussion

This report has analysed effective tax rates for CIT and PIT in Myanmar to shed light on their potential impact on economic incentives and revenues, and in the case of PIT, whether the system is progressive or not.

The analysis suggests that corporate income tax system is complex, with different tax rates for different sectors, types of activities and parts of the country, resulting in substantial variation in effective tax rates on different types of investments. Economic theory suggests that one might want to offer lower effective tax rates on investments that are more sensitive to taxation (for instance, due to international mobility), or that have positive externalities (such as technology transfer). However, questions arise of whether the lower effective tax rates on specific activities, areas and special economic zones serve Myanmar well. It is hard to be conclusive about whether the potential benefits of targeted tax incentives and special economic zones outweigh the costs in terms of lost revenues, potential economic distortion, increased uncertainty and the creation of tax avoidance and rent-seeking opportunities. There is no evidence from Myanmar that these tax incentives are actually generating additional investments that can compensate the increase in complexity of the tax system and the distortions introduced. Furthermore, the international evidence on the cost-effectiveness of special tax regimes in terms of generating additional investment and productivity growth is not conclusively positive, suggesting that basic infrastructure, rule of law and skills are more important factors in attracting additional investment into the country. It might be that a simpler and more neutral system that treats all activities in the same way and implements reduced effective corporate tax rates across the economy more generally is more efficient. It could furthermore remove opportunities for tax evasion and rent-seeking and raise more revenue for the government budget, which can be used to fund much needed growth-enhancing infrastructure and institutions.

More research is needed to understand the effects of the current special tax regimes in Myanmar and make more specific recommendations. If the government decides to keep the special tax regimes for CIT, then there are some guidelines regarding best practice in terms of governance. Guidelines for implementing (good) governance of tax incentives emphasize the importance of: (i) granting incentives as part of the tax law in a transparent and ruled-based way; (ii) 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; (iii) ensuring that beneficiaries file tax returns so that the data can be used to monitor and evaluate tax incentives; (iv) conducting systematic reviews that include a cost-benefit analysis as part of the budget analysis and sharing these with the public for scrutiny. Abramovsky et al (2018) provide a more detailed discussion about special tax regimes for CIT, and Khandelwal and Teachout (2016) provide suggestions on how to evaluate special economic zones to inform their design.

The analysis has also shown that the PIT system in Myanmar is progressive. However, very few people are likely to be in the PIT system at all given average earnings levels. Some features of the PIT system could be significantly distorting behaviour. Primarily, while the 4.8 million kyat exemption threshold may protect those on lower incomes from 'bracket creep', the fact that it creates a discontinuous increase in the effective *average tax rate* (depending on the allowances claimed by the individual) creates very strong incentives to avoid entering the PIT system at this point. Other allowances in the system have large

effects on effective tax rates and may create some undesirable incentives at the household level such as disincentivising parents or spouses to work in the formal labour market.

Taken together, Myanmar's current PIT system looks to be somewhat complicated overall given the different exemptions and allowances in place – not all of which are necessarily achieving their desired goals. For instance, the standard 20% allowance, the 4.8 million kyat threshold and the underlying income tax threshold could be consolidated into a single income tax threshold with a single tax-free allowance which is the same for every taxpayer and could be uprated by inflation. It may also be worth reducing the number of tax rates in the schedule at the same time. A simpler PIT system such as this would be easier for taxpayers to understand and comply with, and would reduce the differences in effective tax rates across the gross earnings distribution for otherwise similar taxpayers. At the same time, reviewing the rationale and effect of other standard allowances in place would be a worthwhile activity. However, it must be noted that any such reforms would require more detailed research than is contained in this report to understand the broader impacts for work incentives, the distribution of income, and the public finances.

In order to conduct further quantitative analysis of the PIT and CIT systems and its impact on firms, households, workers and revenues, it is important to ensure that data from different sources become available to researchers and policymakers. First, it is important to have data on revenue and number of taxpayers by type of tax for the CIT, employees PIT, self-employed PIT and social security contributions. Ideally, anonymised information at the taxpayer level for the different taxes to understand better the tax base and also start understanding better compliance and administration issues and enforcement and collection mechanisms. Furthermore, there is a need to have access to more recent detailed and representative household level survey data with information on incomes and expenditures at the household and for each of the working household members. Ideally, the survey data should capture information about whether workers are formal or informal.

References

- Abramovsky, Klemm and Phillips (2014), "Corporate Tax in Developing Countries: Current Trends and Design Issues", *Fiscal Studies*, vol.35, no.4, pp. 559-588
- Abramovsky et al (2018), "Review of Corporate Tax Incentives For Investment in Low- and Middle-Income Countries", IFS Report available at <https://www.ifs.org.uk/publications/12875>
- Adams, S. (2018) "Work incentives, redistribution and the tax/benefit rate schedule", IFS presentation
- Devereux, M.P. and R. Griffith (2003), "Evaluating Tax Policy for Location Decisions", *International Tax and Public Finance*, Vol. 10, pp. 107-126.
- Government of the Republic of the Union of Myanmar (2017), "Annual Labour Force Survey – 2017. Quarterly Report. 1st Quarter, January-March 2017", September 2017.
- Hanappi, T. (2018), "Corporate Effective Tax Rates: Model Description and Results from 36 OECD and Non-OECD Countries", *OECD Taxation Working Papers*, No. 38, OECD Publishing, Paris
- IMF (2019), 2018 ARTICLE IV CONSULTATION for Myanmar, IMF Country Report No. 19/100, April 2019.
- Jorgenson, D. (1963), "Capital Theory and Investment Behavior", *American Economic Review* 53, No. 2, pages 247-259.
- Jorgenson, D. and R. E. Hall (1967), "Tax Policy and Investment Behavior", *American Economic Review* 57, No. 3, pages 391-414.
- Kay, J.A. and M. King (1990), *The British Tax System*, Oxford University Press.
- Khandelwal, A. and M. Teachout (2016), "Special Economic Zones for Myanmar", IGC Policy Note.
- Klemm, A. (2012), "Effective Average Tax Rates for Permanent Investment", *Journal of Economic and Social Measurement*, Vol. 37(3), pp.253-264.
- Kleven, H.J. and Waseem, M., 2013. Using notches to uncover optimization frictions and structural elasticities: Theory and evidence from Pakistan. *The Quarterly Journal of Economics*, 128(2), pp.669-723.
- OECD (2019), "Taxing Wages 2019", OECD Publishing, Paris. https://doi.org/10.1787/tax_wages-2019-en
- UNIDO (2011), "Africa Investor Report: Towards evidence-based investment promotion strategies".
- World Bank (2009), "FIAS: the investment climate advisory service FY2009 annual report", Washington, DC: World Bank

The International Growth Centre (IGC) aims to promote sustainable growth in developing countries by providing demand-led policy advice based on frontier research.

Find out more about our work on our website
www.theigc.org

For media or communications enquiries, please contact
mail@theigc.org

Subscribe to our newsletter and topic updates
www.theigc.org/newsletter

Follow us on Twitter
[@the_igc](https://twitter.com/the_igc)

Contact us
International Growth Centre,
London School of Economic and Political Science,
Houghton Street,
London WC2A 2AE

IGC

**International
Growth Centre**

DIRECTED BY



FUNDED BY



Designed by soapbox.co.uk