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Profit shifting by multinational corporations in Kenya

The role of internal debt

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Abstract: Illicit financial flows directly impact a country's ability to raise, retain, and mobilize its own resources to finance sustainable development. Against a backdrop of a weak public financial position attributed to capital flight, tax avoidance, and dependence on corporate income taxes, governments in Africa face impediments to their efforts to widen the tax base. Using firm-level annual data from 2015–19 from multinational corporations' audited financial statements, we assess the scale of profit shifting by those corporations with a presence in Kenya. Using a panel analysis, the study delves into the incentives for profit shifting, focusing on internal debt. It finds that a 10 per cent increase in the difference between Kenya's corporate tax rate and that of the lending corporation's home country increases the internal debt ratio by between 1 and 2 per cent. The results provide a basis for the design of targeted tax and revenue administration reforms against the backdrop of rising revenue needs.

Key words: profit shifting, corporate tax rate, multinational corporations

JEL classification: F23, H25, H26, O23

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1 Introduction

The mobilization of domestic resources to finance Sustainable Development Goals (SDG) has been undermined by illicit financial flows (IFFs). Such IFFs affect a country's ability to mobilize and retain its own resources to finance sustainable development (UNODC and UNCTAD 2020). Estimates from previous research show that various forms of IFFs constrain domestic public resource mobilization in many countries. For instance, capital flight and trade mis-invoicing are estimated to generate annual losses of US\$88.6 billion and between US\$30 billion and US\$52 billion, respectively, in Africa (Cobham and Jansky 2018). Estimates of annual revenue losses related to corporation tax range from US\$500 billion to US\$650 billion globally and from 6 per cent to 13 per cent of total revenue for developing countries (UNCTAD 2020).

The Addis Ababa Action Agenda of 2015 acknowledges that huge financial resources are required to achieve the 2030 Agenda for Sustainable Development. It places a central role on the mobilization and utilization of domestic public resources, which requires concerted efforts by governments to intensify revenue collection and minimize any leakages through IFFs. Additionally, the fourth target of SDG Goal 16 requires all governments to significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets, and combat all forms of organized crime by 2030. While tax evasion and fraud are connected to IFFs, there is no consensus in the literature on the treatment of tax avoidance. Some of the literature argues that tax avoidance practices are legal and should be excluded from IFFs (Forstater 2018; World Bank 2016), while others argue that despite being legal they are an unethical practice and should be considered as a form of IFFs (High Level Panel on Illicit Financial Flows from Africa 2015). Indeed, governments in Africa face significant constraints to widening their tax base due to tax avoidance coupled with a marked dependence on corporate income taxes (UNCTAD 2020). Sachs et al. (2019) showed that 59 low-income developing countries, including Kenya, have an SDG financing gap of US\$400 billion for the period from 2019 to 2030.

The tax practices of multinational corporations (MNCs)¹ generate cross-border fiscal externalities in the form of strategic rate or base spillovers leading to financial leakages (Crivelli et.al. 2016). Strategic rate spillovers occur through international tax competition and mainly affect advanced economies. On the other hand, base spillovers, or the stripping of earnings, take place through related party transactions. An example would be an MNC which lends to its subsidiary in a high-tax jurisdiction without changing its overall debt exposure in order to minimize tax liability abstracts from the costs incurred in undertaking these practices. They can also occur through unrelated lending by a firm which is not subject to tax on interest income in the high-tax jurisdiction (Gravelle 2013). The literature on fiscal externalities mostly focuses on base spillovers, which occur through their impact on real activities, or profit shifting. Three channels through which MNCs engage in profit shifting have been empirically identified. These include the movement of tangible assets in various jurisdictions where there is under- or over-pricing of goods to minimize tax liability; intercompany debt by allowing MNCs in high-tax jurisdictions to hold high levels of debt, thereby reducing pre-tax profits as interest payments are tax deductible; and locating intellectual property rights, research, and brand development in jurisdictions with low taxes (Bryan et al. 2017; Buetnner and Wamser 2013; Davies et al 2018).

This study focuses on profit shifting via intra-company loans. Intra-company loans are more amenable to income-shifting activities (Fuest et al. 2011). Kenya is, to a sizeable extent, reliant on

¹ MNCs have facilities and other assets in at least one country other than their home country.

income tax and is therefore vulnerable to erosion of the corporate tax base. As a share of total revenue, income tax accounted for 43.1 per cent and 39.5 per cent in the fiscal years 2017/18 and 2019/20, respectively (National Treasury 2020). Since 2011 Kenya is estimated to have lost an average of US\$400 million every year through IFFs attributed to tax avoidance practices (Barasa 2018). This constitutes over 10 per cent of Kenya's annual net domestic financing requirement and is equivalent to the country's average annual revenue losses. Barasa (2018) identified MNCs as an important group of actors involved in IFFs through income tax avoidance in the form of hefty pay packages for expatriates, mis-invoicing, and transfer pricing.² However, the author did not explore the effect of the profit-shifting channel via the use of internal capital markets on revenue losses in Kenya. To the best of our knowledge, no empirical study has been undertaken on internal debt and profit shifting using MNC data in Kenya. The availability of firm balance sheet data for developing countries is generally limited (Cobham and Loretz 2014). Available datasets such as Orbis mostly contain data on developed economies. Using data on 47 MNCs in Kenya, this study therefore seeks to address some of the identified gaps in the previous work by focusing on the following :

- (i) estimating the impact of corporate tax rate differentials on internal debt;
- (ii) assessing the tax incentive motive on the basis of the geographical presence of MNCs;
and
- (iii) identifying sector-specific effects of profit shifting.

Our main contribution is to build on the body of literature by exclusively assessing MNCs' corporate tax, debt, and profit shifting in Kenya, which has not yet received much attention.

We use panel data methods to estimate the response of the internal debt ratio to tax rate differentials. The study focuses on loans provided by related parties as well as trade payables between related parties. In some cases we find that trade payables do attract an interest charge and therefore qualify as a deductible interest expense. We differentiate between 13 industries based on the principle activity identified in their annual reports. The sample covers activity that generates turnover and total income of about 12 per cent and 2 per cent of nominal gross domestic product (GDP), respectively.

The rest of the paper is organized as follows. Section 2 discusses the theoretical literature and empirical studies on capital structure, debt, and profit shifting. Section 3 provides information on MNCs in Kenya and the application of corporation tax in line with both national and international agreements. Section 4 defines the data and empirical methodology used in the study, while Section 5 provides the estimation results. Section 6 provides some policy insights.

2 Literature review

Theories which explain the choice of corporate capital structure have been discussed extensively over the years. The basic theoretical work focused on the optimal capital structure, determined as the level at which the marginal benefit of debt financing equalizes the marginal cost. The main theoretical argument was that a firm can achieve an optimal capital structure by adjusting equity

² Transfer pricing refers to the prices placed on goods, services, and intangibles as they move between the economic entities of an MNC (Cecchini et al. 2013).

and debt levels, thereby balancing the tax benefits and costs (Kraus and Litzenberger 1973; Modigliani and Miller 1958, 1963). The initial pioneering work by Modigliani and Miller (1958) hypothesized a ‘perfect capital market’ with no information asymmetries, no transaction costs, no taxes, and no bankruptcy costs. Its main proposal was that a firm’s choice of capital structure is irrelevant to its intrinsic value.

A follow-up supposition by Modigliani and Miller (1963) corrected the zero-tax assumption and made a value proposition that firms should maximize debt financing in a pseudo perfect market to allow optimal utilization of the debt tax shield. They argued that debt financing reduces the taxable profits of a firm and thus acts as a tax shield, unlike the payment of dividends to equity holders (Modigliani and Miller 1963). Further tax saving benefits arise from the deductibility of interest expenses from corporate profits, with the value of the tax shield conditional on the applicable tax rates of borrowing corporates or firms (Kraus and Litzenberger 1973; Scott 1976).

The main theoretical framework underlying the profit-shifting motive assumes that leverage of an affiliate is a function of two components, that is, the corporate tax rate of the host country and the tax rates of other jurisdictions where the multinational has affiliates. Thus the interdependence of decisions on financing between affiliates will arise even without obvious borrowing relationships within the multinational group (Huizinga et al. 2008). In this regard a direct investor in one country, which directly or indirectly owns two profit-making corporations (one in a second country with a low tax rate and another in a third country with a higher tax rate), may shift profits from the former to the latter. This yields tax savings large enough to cover the costs of profit shifting. The main determining factor of profit shifting is statutory corporate tax.

A direct investor in one economy will strategically allocate debt to its MNCs in an effort to facilitate excessive interest deductions (OECD 2015). Consequently the MNCs will shift profits to a point where the marginal cost of moving a unit of profits equals the marginal gains (Buettner and Wamser 2013; Overesch and Wamser 2014). It is presumed that the marginal cost of shifting profits increases with the amount of profits moved. Therefore a rise in tax differentials will increase the benefits from shifting profits (Niels et al. 2020). From the perspective of a high-tax country, an increase in the statutory corporate tax rate or a decline in the foreign affiliate’s statutory corporate tax rate implies that more profits will be shifted out of the high-tax country to the low-tax country. In addition it is more beneficial to use internal debt when the tax rate of the borrowing affiliate is high and the tax rate on the interest income of the lending affiliate is low.

The empirical literature on profit shifting is entrenched in the premise that the tax consequences of internal and external debt are different. In particular, high corporate taxes make it profitable to finance investments with debt, as opposed to equity, as interest paid on debt is deductible from corporate profits (Reiter et al. 2021). Profit shifting involves borrowing from MNCs situated in low-tax countries and lending to those situated in high-tax countries. Consequently interest income is paid in low-tax countries, while tax deductions on interest expenses are claimed in the high-tax country, largely reducing the MNC group’s total tax burden (Buettner and Wamser 2013; Dischinger and Riedel 2010; Egger et al. 2010; Huizinga et al. 2008; Tørsløv et al. 2018). Empirical evidence supporting this hypothesis reveals a positive response of internal borrowing to relative tax rates in different countries in which MNCs operate. However, the evidence is predominantly from developed economies (Altshuler and Grubert 2003; Beer et al. 2020; Buettner and Wamser 2013; Clausing 2003; Desai et al. 2004; Dischinger and Riedel 2010; Egger et al. 2014; Grubert and Slemrod 1998; Huizinga and Laeven 2008; Mintz and Smart 2004).

Buettner and Wamser (2013) used firm-level data on German multinationals to assess the impact of corporate taxes on internal debt and profit shifting for the period from 1996 to 2003. The main argument was that a multinational firm aiming to minimize overall tax payments will lend to its

subsidiaries in a high-tax country. Interest income is then declared in the country that levies the lowest tax rate, thereby utilizing internal debt as a channel for moving profits from high- to low-tax jurisdictions. The findings showed that the host country's statutory corporate tax rate and share of internal debt were positively related, with a 10 per cent increase in the host country's tax rate resulting in a 0.64 percentage point higher internal debt ratio. In addition the findings also showed that the lowest tax rate among affiliates declined with internal debt usage.

Similar findings by Overesch and Wamser (2014) and Buettner et al. (2009) confirmed the effect of local taxes on the use of both internal debt and external debt by affiliates of German multinationals from 1996 to 2003. Huizinga et al. (2008) estimated the effect of taxation on total debt for a sample of 33 European countries covering the period 1994 to 2003. The findings revealed that leverage was more sensitive to taxation due to debt shifting. In particular, a 1 per cent increase in the overall tax rate increased the liabilities-to-assets ratio by 0.24 per cent for multinational firms and by 0.18 per cent for domestic firms. The studies used a tax rate differential derived from the difference between the tax rate applied when borrowing from the affiliate's host and the weighted average tax rate of the MNC group.

Empirical work on profit shifting in developing countries is quite scant. Existing studies reveal profit shifting through the transfer pricing channel (Barasa 2018; Koivisto et al. 2021; Ndikumana 2015; Twesige and Gasheja 2019; Wier 2020). Studies on the internal debt transfer channel include those by Etter-Phoya et al. (2020), Fuest et al. (2011), Johannesen et. al (2020), and Reynolds and Wier (2016). For instance, Johannesen et al. (2020) used micro-data for 210,000 corporations from 142 countries, including 25,000 corporations from 94 low- and middle-income countries, to study the problem of profit shifting. The study also examined whether the level of economic and institutional development affected the amount of profits shifted from a country. The study found that incentives for cross-border profit shifting varied with the level of economic and institutional development. Moreover, the low-income countries were more exposed to tax avoidance by the MNCs compared to middle- and high-income countries.

Koivisto et al. (2021) examined effective tax rates and profit shifting in MNCs in Uganda. The study showed that, as well as incurring tax losses through profit shifting, Uganda also experienced tax leakages arising from numerous tax exemptions and holidays and special arrangements entered into by Uganda and countries of global ownership for MNCs. In this case, the differences in taxes paid by large MNC affiliates and large corporates in Uganda suggested that MNC affiliates benefited from the lower effective tax avoidance channel as well as the profit-shifting channel. Specifically, MNC affiliates with global owners situated in countries that had a double tax agreement with Uganda had an effective tax rate that was five times lower than the large Ugandan corporates. The study observed that even if thin capitalization laws had been amended to minimize profit shifting through the debt channel, double tax agreements, tax holidays, and inadequate tax administration still limited the Uganda Revenue Authority's ability to increase revenue collection in the country.

Etter-Phoya et al. (2020) assessed the Corporate Tax Haven Index (CTHI) of nine African countries in a panel study comprising EU, OECD, and African countries. The study showed that corporate tax rules undermined the ability of African governments to raise revenue to finance public expenditure. Similar findings by Crivelli et al. (2016) revealed that, compared to developed countries, developing countries experienced significant revenue losses due to base erosion resulting from profit shifting.

3 Multinational companies in Kenya

3.1 Corporation tax and double taxation agreement in Kenya

Based on the CTHI, when compared to countries in high-income regions, African countries are more exposed to tax avoidance risks as opposed to creating the risks. However, in the categories of anti-avoidance of base erosion and profit shifting (BEPS) and transparency on financial affairs and taxation, African countries' performance remains below the average of the EU and OECD. In particular, an assessment based on Kenyan data revealed a CTHI score of 51 per cent against a maximum risk haven score of 100. This score incorporated the fact that foreign investment income is exempt from the corporate tax base in Kenya in the form of dividends (Tax Justice Network 2019). Moreover, the minimum capital gains tax rate is 0 per cent due to the exemption on domestic securities for shares listed on the Nairobi Securities Exchange. In addition Kenya's tax system does not allow for taxation of gains from the disposal of foreign securities (Tax Justice Network 2019). While companies in Kenya are liable for tax based on computed tax profits at the rates of 30 per cent for resident companies and 37.5 per cent for non-resident companies, a raft of other sectoral tax exemptions are available. For example, the corporate income tax rate is either zero or considerably lower than the statutory rate for the specialized export processing zones and economic zones in Kenya.

Kenya has entered into several bilateral investment treaties (BIT) and double taxation agreements (DTAs) to protect foreign investment in Kenya and provide for cooperation in taxation matters in order to avoid double taxation. The BITs include guarantees against nationalization and for foreign investors to repatriate profits. The DTAs focus on incomes for corporates and individuals, and on investment or international trade when the same income is taxed in two different jurisdictions. As at June 2021 Kenya had 20 DTAs³ and 6 BITs⁴ with various countries that have investments in Kenya. There are also some DTAs under development such as the proposed Kenya–Turkey DTA.

Kenya has recently been engaged in the Multilateral Convention to Implement Tax and Profit Shifting (Multilateral Instrument Initiative (MLI)), which paves the way for the exchange of tax information in light of income tax amendments. The MLI treaty aims at modifying the existing double tax avoidance agreements (DTAAs) between countries. Other initiatives aimed at reducing profit shifting include measures contained in the Finance Bill for 2021/2022 which propose to amend taxation regarding debt financing, effective from 1 January 2022. The proposed provision on deductible interest is in line with the OECD's 2015 best practice principles for curbing base erosion resulting from the deduction of interest and other related financial payments.⁵ The proposition is to introduce an 'earnings before interest, taxes, depreciation and amortization' (EBITDA) limitation rule to replace the thin capitalization interest limitation rule. The measure will replace Section 16(2)j of Kenya's Income Tax Act, which prohibits a 'foreign controlled entity from claiming a deduction of interest in excess of the debt-to-equity ratio of 3:1 and replace with a provision to prohibit deduction of interest paid/payable to related and third parties in excess of 30 per cent of EBITDA'.

³ Burundi, Uganda, Rwanda, Tanzania, Botswana, Canada, Denmark, France, India, Iran, Kuwait, Mauritius, Netherlands, Norway, Seychelles, South Africa, Sweden, UAE, UK, and Zambia.

⁴ France, Germany, Italy, Netherlands, Switzerland, and UK.

⁵ See action 4 of the OECD/G 20 BEPS project (OECD 2015).

In Africa several MNC's have undertaken to explore natural resources through contracts with respective governments. These investments tend to be risky with long gestation periods and are also capital and technology intensive. However, the agreements between governments and MNCs tend to be one sided whereby the foreign companies benefit more as they have the right to explore without having responsibilities imposed on them. Moreover the domestic countries do not seem to benefit from the revenues generated therefrom (Migua 2018).

3.2 Dynamics of MNCs in Kenya

This section reviews the characteristics of the sampled 47 multinational companies located in Kenya for the period covering 2015 to 2019 with regard to profit and economic activity, the debt-equity structure, the extent of intra-company loans, and the location of parent firms and associated corporate taxes. The definitions of debt vary in the literature. Most definitions include loans, overdrafts, finance leases and derivatives, and specified debt factoring arrangements and redeemable preference shares. Debt is defined more broadly to comprise provision for calls under standardized guarantees, currency and deposits, loans, debt securities, insurance technical reserves, accounts receivable/payable, pension and related entitlements, and special drawing rights (IMF 2009).

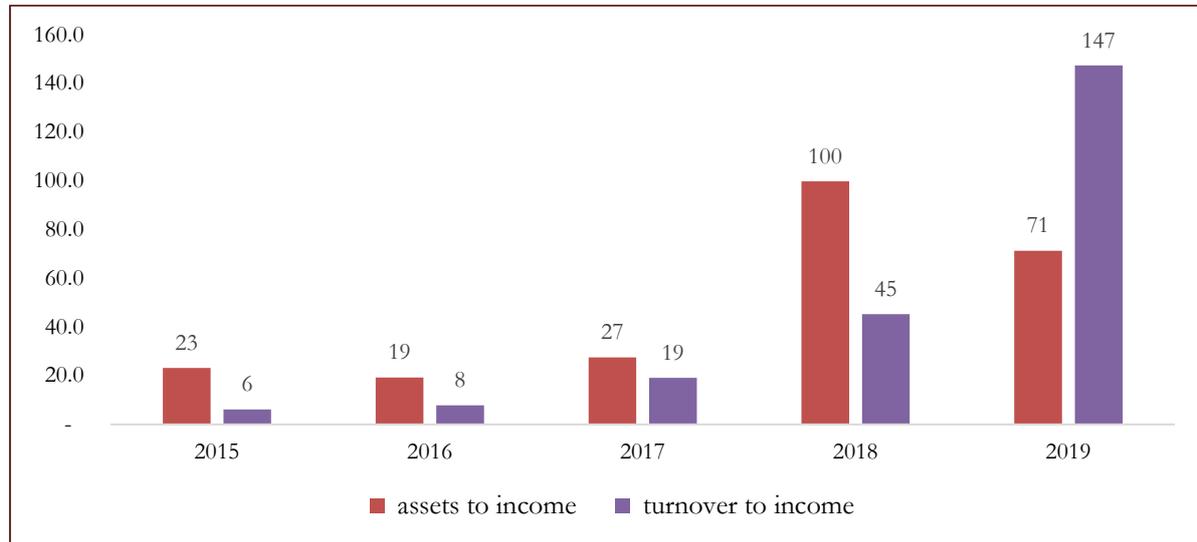
Three levels of debt are considered, as provided in the company financial reports: total borrowing; borrowing provided by the parent firm or the group affiliates, i.e. internal borrowing; and trade and other payables attributed to entities within the group. For the analysis internal debt is the consolidation of internal borrowing, typically in the form of loans, and trade payables between related parties. Notes to the annual financial statements provide further explanations on ownership, the source of the borrowings, and related party transactions, thus facilitating the demarcation of loan liabilities and trade payables into those that are from external and internal sources. The notes also allow identification of the resident source or home country with respect to internal debt, thus providing guidance on the applicable tax rates for the analysis on tax differentials.

The inclusion of related trade payables is made on the basis that outstanding balances on related trade payables are a form of internal debt. The term of borrowings with respect to rates and tenor are also indicated. Notably, interest charges on payables due to related parties vary. In some cases interest rates applied on outstanding balances from associated parties are almost half of the interest rates that would be applied in an arm's length arrangement, whereas in other cases no interest rates are levied. A proxy for internal debt is also considered by examining total liabilities, which is given by the sum of the non-current and current liabilities attributable to the parent company as per the ownership structure. The definition of equity, which includes capital and reserves, is less controversial. Definitional issues are central to enforcement measures by tax authorities in cases of income shifting and are therefore important.

The analysis shows that, based on their principal activities as indicated in the respective annual reports, MNCs resident in Kenya fall into the category of financial and non-financial firms and are further found in several economic sub-sectors. The identified economic sub-sectors are manufacturing, telecommunications, engineering, construction, agriculture, transport and logistics, wholesale and retail trade, insurance, banks, services, energy, media, and publishing. Notably, several of the MNC subsidiaries operate in Kenya as marketing and distribution centres, whereas the more investment-intensive activities such as research and development and manufacturing are undertaken in the home country. As a result, these firms are found in the wholesale and retail trade category in the host country (Kenya), even though they are categorized in the manufacturing sector in the home country of the parent firm.

Misalignments between measures of economic activity and profit have been highlighted in the literature as being indicative of income shifting (Cobham and Janksy 2018). Employment, assets, and sales are also common measures of economic activity. A comparison of shares⁶ of assets and turnover in comprehensive income shows a disparity. For instance, the share of turnover was larger than the share of comprehensive income by a factor of 6 in 2015 and increased to 147 in 2019 (Figure 1).

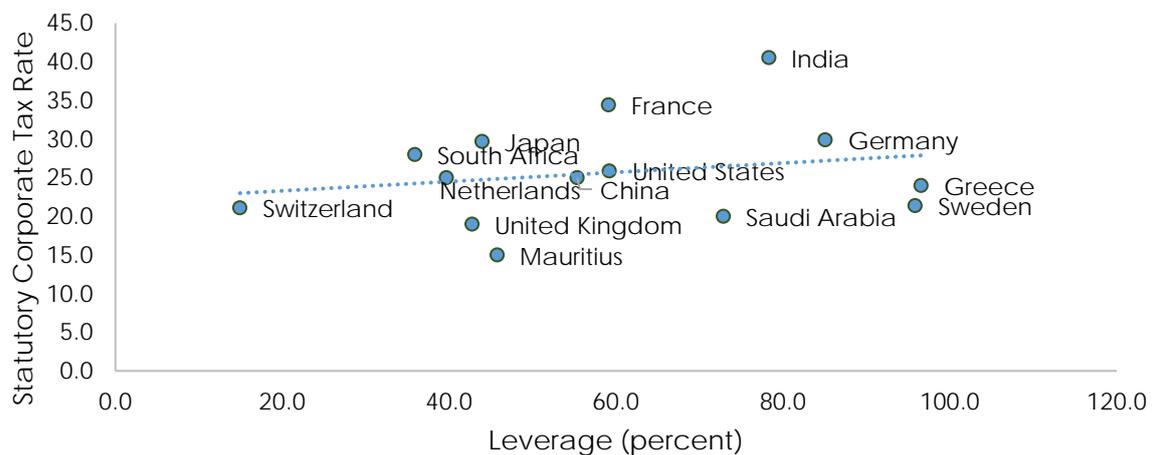
Figure 1: Measures of comprehensive income and economic activity



Source: authors' computations based on data from annual reports of MNCs for the period 2015–19.

Leverage defined as total liabilities as a share of equity is found to be higher in MNCs from home countries with tax regimes that are lower relative to Kenya (Figure 2).

Figure 2: The relationship between tax rates and affiliate leverage, 2019



Source: authors' computations based on data from annual reports of MNCs for the period 2015–19 and data from OECD Corporate Tax Statistics.

Leverage for the construction sector is the highest at 157 per cent (Table 1). The analysis shows that manufacturing, wholesale and retail trade, transport and logistics, and banks are generally more

⁶ Computed as a share of nominal GDP.

highly leveraged compared to the other economic activities. Leverage ratios tend to be relatively higher for capital-intensive industries that require larger financial outlays in order to produce goods and services. The need for fixed assets as well as inventories requires actors in these sectors to take on higher levels of debt in the form of loans. The financial sector is likely to be more highly leveraged as it is more adept at tax planning. Notably, banking income is exempt from controlled foreign corporation rules in several countries, which should ideally prevent profit shifting (Reiter et al. 2021).

Table 1: Leverage and internal debt components

Sector	Leverage (total liabilities as a share of total equity)	Internal debt as a share of total liabilities (%)	Share of internal borrowing to total borrowing (%)	Trade & other payables as a share of total liabilities (%)
	(1)	(2)	(3)	(4)
Agriculture	26.4	26.8	71.4	6.7
Banks	83.8	4.8	37.5	6.2
Media	32.8	92.0	100.0	2.6
Construction	157.5	87.4	-	7.3
Engineering	33.2	41.0	80.0	36.6
Insurance	44.3	7.9	24.6	42.8
Manufacturing	54.9	67.1	49.6	24.8
Publishing	52.5	64.6	5.2	37.3
Telecommunications	25.0	76.7	-	15.3
Transport & logistics	90.4	37.0	41.3	34.5
Wholesale & retail trade	58.9	52.5	55.8	35.4

Source: authors' computations based on data from annual reports of MNCs for the period 2015–19.

The composition of liabilities also varies across the sectors. Deposits from customers and intra-group financing are the main sources of funding for the banking sector, whereas other trade payables and deferred tax liabilities are predominantly in manufacturing and wholesale and retail. Further, the analysis shows that internal borrowing (loans and bank overdrafts) account for over half of total liabilities in the following sectors: media, construction, manufacturing, publishing, telecommunications, and wholesale and retail trade (Table 1, column 2). In terms of the sources, internal borrowing comprises more than 50 per cent of total borrowing (Table 1, column 3) in the media, wholesale and retail trade, engineering, and agriculture sectors. By comparison telecommunications, publishing, banks and insurance have lower shares of internal borrowing. Financial firms such as banks are inclined to borrow externally, especially from international financial institutions (IFIs). Banks in Kenya receive significant financing from IFIs, as shown in the various annual reports. This is consistent with findings which show that IFI commitments to the financial sector in Africa have increased considerably.

As is the case with internal borrowing, trade payables also comprise more than one-third of the liabilities for several sectors (Table 1, column 4). In particular, internal borrowing in insurance, engineering, publishing, wholesale and retail trade, and transport and logistics accounted for 43 per cent, 37 per cent, 37 per cent, 35 per cent, and 34 per cent, respectively. A large proportion of the trade payables are with related parties. Typically, the wholesale and retail sectors are found to have considerable trade payables associated with inventory management, while the utilities and services sector have lower levels or none.

Table 2: Internal debt as a share of total liabilities and tax differentials

Home country	Internal debt as a share of total liabilities (%)	Tax differentials
China	89.4	5.0
Netherlands	68.8	5.0
Germany	67.8	0.1
France	67.1	-4.4
Mauritius	58.3	15.0
South Africa	50.6	2.0
India	48.9	-10.6
UK	45.7	11.0
US	41.4	4.1
Switzerland	33.7	8.9
Japan	32.6	0.3
Sweden	20.2	8.6
Saudi Arabia	2.3	10.0
Greece	0.4	6.0

Source: authors' computations based on data from annual reports of MNCs for the period 2015–19 and data from OECD Corporate Tax Statistics.

The tax differentials are derived from the combination of the corporate income tax rates, which comprise rates charged by the central government and sub-central government (OECD Corporate Tax Statistics) in the respective home countries. An assessment of the corporate tax rate applicable in Kenya (30 per cent) relative to the rates of the respective MNCs' home country jurisdictions, based on the parent company's home country, shows divergence. For instance, in 2019, Kenya's corporate tax rate was 15 per cent higher than that of Mauritius and 4.4 per cent and 10.6 per cent lower than that of France and India, respectively.

The definitions of tax havens in the literature are mixed. The strict definition of tax haven applies to a limited number of countries. However, there are also countries with characteristics similar to tax havens even though they are not classified as such. According to the Tax Justice Network (2019), the top ten ranking tax haven jurisdictions are British Virgin Islands, Cayman Islands, Bermuda, Netherlands, Switzerland, Luxembourg, Hong Kong, Jersey, Singapore, and the United Arab Emirates. An assessment of the parent country's corporate tax rates for the MNCs in our sample shows that almost all are lower than Kenya's, thus providing an incentive for income shifting. It can be inferred from the comparison of the internal debt-to-total-liabilities ratio and tax differentials that there are significantly more instances of internal borrowing in cases where the home country's corporate tax rates are lower (Table 2).

4 Data and methodology

This paper assesses the role of internal debt as a channel for profit shifting. The study accordingly uses firm-level annual data on Kenyan multinational firms. We extracted the data from the financial statements, specifically the balance sheets and the profit-and-loss positions, of the selected MNCs for the period 2015–19. We obtained data on the book value of equity, assets, liabilities, and physical assets from the financial position statements, whereas that on profitability, interest

expenses, and turnover was obtained from the statements of profit and loss. The data also identifies the investment relationship including the immediate investor and ultimate controlling parent of each corporation as well as the geographical distribution. It includes both foreign MNCs with a presence in Kenya and domestic companies with foreign affiliates. The data on corporate tax rates is compiled from the Tax Foundation database (Tax Foundation 2021). The empirical analysis uses panel estimation methods on a sample of 47 MNCs.

The empirical model follows Buettner and Wamser (2007, 2013), Grubert and Slemrod (1998), and Mintz and Smart (2004). In the model leverage is obtained from the difference in the tax rate applicable to affiliates located in low- and high-tax jurisdictions, respectively, evaluated using the lending rate. In addition the cost of borrowing faced by an affiliate is assumed to increase in the share of capital financed by external debt as well as internal debt. As a result the equity share of the lending affiliate reduces (Buettner and Wamser 2007). The debt-to-asset ratio, L_i , of each affiliate i consists of debt from external creditors δ_{ii} , intercompany loans refinanced with external credit ϕ_{ji} , and intercompany loans not externally refinanced μ_{ji} (Buettner and Wamser 2007). The proportion of intercompany loans refinanced with external credit is used for capital market arbitrage, while that which is not refinanced is used to shift profits.

$$L_i \equiv \delta_{ii} + \sum_{j \neq i} \phi_{ji} + \sum_{j \neq i} \mu_{ji} \quad (1)$$

In line with Buettner and Wamser (2007, 2013), we assume that intercompany loans are of the same kind and therefore perfect substitutes, even though they are from different locations. The local tax rate and a positive tax rate differential relative to other locations in which the multinational company has a presence determine the affiliate's capital share financed with intercompany loans. Accordingly, the baseline regression equation is:

$$ID_{i,k,t} = \beta_1 (CT_{i,t} - CT_{k,t}^{min}) + \beta_2 CT_{i,t} + \beta_3 X_{i,k,t} + \gamma_t + \delta_k + \varepsilon_{i,k,t} \quad (2)$$

where CT is the corporate tax rate, $\beta_1 (CT_{i,t} - CT_{k,t}^{min})$ is the tax differential, and $\beta_2 CT_{i,t}$ is the statutory tax rate applicable to affiliate i . The dependent variable is the internal debt-to-asset ratio $ID_{i,k,t}$, $X_{i,k,t}$ represents control variables, γ_t and δ_k correspond to company fixed effects and time fixed effects, respectively, and $\varepsilon_{i,k,t}$ is the error term. The focus of the empirical analysis is thus internal debt, which comprises internal borrowing (loans) granted by the parent company not domiciled in Kenya as well as trade and other payables due to foreign affiliates.

The dependent variables include the statutory corporate tax rate ($CT_{i,t}$) of the country in which the borrowing affiliate has a presence (host country) and the statutory corporate tax rate ($CT_{k,t}^{min}$) of the country of the lending affiliate. The effective tax rate differential is derived from the two variables ($CT_{i,t} - CT_{k,t}^{min}$). Profit shifting is deemed to be costly if the effective corporate income tax is greater than zero and costless if the effective CT is equal to zero. The effective CT rate is given as the difference between the applicable CT and weighted average CT. The coefficient β_1 is expected to be positive if multinational affiliates shift profits using the internal debt channel. Similarly, the coefficient β_2 is expected to be positive. In particular, a higher level of internal debt is expected if the corporate tax rate for the host country is relatively higher compared to affiliates in other locations (Buettner and Wamser 2007; Overesch and Wamser 2014). The variable on taxes is taken as the difference between Kenya's corporate tax rate applied on resident companies and the foreign corporate tax rate associated with the parent company's home country.

The control variables include tangibility, which is defined as the ratio of fixed assets to total assets (Buettner and Wamser 2007). Tangibility reflects the amount of long-term investment projects.

The theory of agency and financial distress posits that firms with a higher proportion of tangible assets will contract more debt as they incur lower financial distress costs in the case of bankruptcy. In this regard the effect of tangibility is expected to positively affect internal debt.

Sales or company revenues affect the financing decisions of borrowing MNCs. Higher company sales or revenues may imply profitability of a company and therefore higher retained earnings. According to pecking order theory firms' preferred source of investment funds is retained earnings and they will only consider debt and new equity if necessary (Myers 1984). In this case the effect of sales on internal debt will be negative, as MNCs will prefer retained earnings as opposed to debt. On the other hand higher levels of sales may imply favourable lending conditions and therefore accessibility to external or internal debt (Graham and Harvey 2001). Previous studies showed that external and internal finances are considered perfect substitutes (Buettner et al. 2009; Desai et al. 2004). Therefore higher sales may imply more internal debt and the expected sign would therefore be positive but may also have a negative relationship if there is easy access to external loans.

The cost of credit to the private sector in the affiliate country's location may affect the financing of MNCs. The cost of credit is captured by the lending rate and the expected sign is positive as a higher cost of local lending is associated with a higher cost of external borrowing from the domestic market and, given the substitutability of external and internal debt, MNCs will prefer internal debt. Alternatively, an indicator for financial depth can also be used to capture the ease with which firms are able to finance their needs from domestic financial markets. A priori, a negative sign is expected. The study uses an indicator of financial depth.

The age of a firm, measured by the number of years the entity has been in existence or the number of years under present ownership, can affect the firm's ability to acquire debt. Older firms are considered sound and stable and may therefore have more long-term debt than younger firms. Gwatidzo and Ojah (2009) found conflicting evidence for firms in five African countries with regard to firm age. In particular, firm age was found to have a significant negative relationship with leverage in the case of Zimbabwe. A positive correlation was observed for firms in Kenya and Nigeria. The coefficient for firm age in the case of South Africa was significant and positive for long-term debt but significantly negative for short-term debt. We do not consider the age of the firms in our study due to data constraints.

5 Empirical results

The estimation results of the impact of corporate tax rates on internal debt are presented in Table 3. We estimated four models, each capturing different measures of internal debt, using firm-level as well as common variables. In particular, the dependent variables for models 1 to 3 are internal debt-to-total-asset and total-equity ratios for models 1 and 2 and internal debt in absolute terms for model 3. The internal debt variable used in model 4 is a proxy for internal debt derived by taking a proportion of total liabilities attributed to the parent company's shareholding structure. The domestic corporate tax rate included is relative to the foreign corporate tax rate, in differences.

Overall the results show that both macro and micro factors are important determinants of profit shifting in Kenya. In particular, they show that the corporate tax differential, turnover, GDP, inflation, and financial depth affect MNCs' profit shifting in Kenya. The coefficient on the differences in the corporate tax rates is positive and significant in all the models. The results show that a 10 per cent increase in the tax rate where the MNC has a presence leads to an increase in the internal debt ratio of between 1 per cent and 2 per cent. Hence an increase in the corporate

tax rate differential between the host country (Kenya) and that of the lending MNC's home country results in increased internal debt. This is broadly consistent with other studies undertaken for developing countries. For instance, a 10 percentage point increase in the host country's corporate tax rate is associated with a 2.75 percentage point increase in the loan ratio for developing countries (Fuest et al. 2011). Likewise Desai et al. (2004) showed that a 10 per cent increase in the host country's tax rate led to a 0.34 percentage point increase in the share of loans provided by the parent company. Buettner and Wamser (2007) also found that the use of internal debt was influenced by the lowest tax rate. In particular, a 10 percentage point increase in the host country's tax rate led to a higher internal debt ratio of approximately 0.64 percentage points. This implies that MNCs in Kenya engage in earnings stripping in response to corporate tax rates. The parent company will prefer to provide loans to its subsidiary in order to reduce tax liabilities.

Asset tangibility is found to be positively related to the internal debt ratio, supporting the view that firms with more tangible assets are able to provide relatively more collateral, which improves access to debt due to their higher borrowing ability. This is, however, only significant in model 2.

Turnover is found to be negative and statistically insignificant in model 1 and model 3. This is consistent with the expected signs. In particular, high firm turnover signifies higher retained earnings, reducing the need for debt. Similarly, internal lending to affiliates which have a high turnover is likely to be lower due to better access to capital markets (Desai et al. 2004).

The coefficient on financial market development, measured by financial depth, is found to be negative and is statistically significant in model 1 and model 2. In particular, a higher level of financial development of the host country reduces the need for MNCs to look for alternative sources of financing such as internal markets as external markets are robust. There is a greater likelihood of affiliates in countries opting for external finance as opposed to internal finance in environments where the rights of parties in financial transactions are not adequately protected; ease of legal recourse is low; and aspects of efficiency, fairness, and consistency as well as general investor protection are not guaranteed. Related party debt increases by between a half and three-quarters of the reduction in external debt attributed to unfavourable capital market conditions (Desai et al. 2004).

The coefficient of the consumer price index is negative and significant, reflecting the importance of inflation in explaining the dynamics of the internal debt ratio. Consistent with the theory advanced by Huizinga et al. (2008), to the extent that high inflation leads to higher nominal interest rates, then the value of interest, which is tax deductible, also increases. At the same time an inflationary environment implies higher risk premiums, hence high nominal interest rates, which discourage debt finance.

Table 3: Empirical results

	Model 1	Model 2	Model 3	Model 4
Dependent variable	Internal debt/total assets	Internal debt/total equity	Internal debt	Internal debt (proxy)
Variables				
Difference in tax	0.17(1.71)*	0.20(3.69)***	0.19(2.44)*	0.10(1.80)*
Turnover	-1.89E-11(-4.70)***	-4.42E-12(-0.87)	-1.74E-11(-3.20)***	-9.04E-13(-0.43)
GDP	0.13(2.43)***	0.18(2.75)***	0.11(2.65)***	0.77(5.40)***
Consumer Price Index	-0.18(-1.76)*	-0.002(-0.39)	-0.008(-1.79)*	-0.03(-1.74)*
Financial depth	-0.57(-3.18)***	-0.33(-1.79)*	-0.14(-1.31)	-0.02(-0.65)
Tangibility	0.24(0.54)	0.36(1.96)**	0.33(0.64)	0.33(1.10)
R ²	0.83	0.84	0.86	0.97
Number of observations	103	118	106	80

Source: authors' computations based on data from annual reports of MNCs for the period 2015–19 and data from Kenya National Bureau of Statistics (2021).

6 Conclusions and policy insights

This paper investigated the role of corporate tax rates as a motivating factor for MNCs in Kenya to use internal debt to shift profits. The study used firm-level data obtained from the annual reports of 47 MNCs for the period 2015 to 2019.

The analysis shows that MNC subsidiaries operating in Kenya operate as marketing and distribution centres, whereas the more investment-intensive activities, expected to significantly contribute to the host economy, are undertaken in the MNC parent's home country. In addition there are distortions between selected measures of firm activity in the host country and the profits reported by the MNCs, which is indicative of income shifting.

To understand the role of internal debt as a channel for profit shifting, the study used fixed-effect models on panel data covering the period from 2015 to 2019. Different models were estimated using several internal debt ratio variables. The empirical results show that the internal debt ratio is related to the corporate tax regime and is therefore a channel for profit shifting. Higher corporate tax rates in the host country drive firms' financing structures towards internal debt. In particular, MNCs operating in a high corporate tax rate regime put in place mechanisms that reduce their tax liabilities. Recent steps taken by Kenyan tax authorities to introduce a provision which limits the amount of deductible interest to no more than 30 per cent of EBITDA are therefore beneficial for efforts aimed at limiting base erosion. On another front there have been efforts to entrench a global minimum corporate tax rate on multinationals of at least 15 per cent. However, while this is expected to help reverse the trend of declining corporate tax rates and reduce incentives for MNCs to shift profits from high-tax jurisdictions, there are concerns that it may erode corporate revenues for developing nations.

The implications of the results on financial development highlight the importance of enhancing domestic capital markets. The presence of efficient domestic capital markets implies that MNCs have alternative sources of financing, thus reducing the scope for tax-related arbitrage even as they increase the overall debt exposure. On the margin tax-planning activities can be costly. As a result efficient domestic capital markets reduce the scope for such activities from a cost–benefit perspective.

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