



# HOW TO

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# NOTES

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## How to Design a Presumptive Income Tax for Micro and Small Enterprises

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## How to Design a Presumptive Income Tax for Micro and Small Enterprises

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# How to Design a Presumptive Income Tax for Micro and Small Enterprises

Jean-François Wen<sup>1</sup>

June 2023

Turnover taxes are prevalent in developing countries as a simple form of presumptive taxation of business income. Such simplified tax regimes can reduce the relatively high compliance costs of micro and small enterprises, which might otherwise discourage entrepreneurs from formalizing their activities and paying taxes. The note addresses design issues for a turnover tax regime—which taxes it replaces, what the criteria are for eligibility, how to determine the optimal threshold, and how to set the tax rate. A key observation is that, although low turnover tax rates may incite larger firms to artificially reduce their sales, the rate should also not be so high as to discourage formalization of activities. A table of tax rates and turnover thresholds observed internationally is provided. The note concludes by suggesting analytical steps to guide practitioners in designing turnover tax regimes.

## Introduction

**Turnover taxes are prevalent in developing countries as a simple form of presumptive taxation of business income.**<sup>2</sup> Taxes levied on turnover (sales) or on gross receipts,<sup>3</sup> instead of a profit tax—that is, corporate income tax (CIT) for legal entities and personal income tax (PIT) for unincorporated individual entrepreneurs—can reduce the relatively high compliance costs of micro and small enterprises (MSEs), which might otherwise discourage entrepreneurs from formalizing their activities and paying taxes.

**Studies on taxpayer compliance costs show a steeply regressive pattern—the costs are disproportionately large on smaller firms—due to the high fixed costs of tax compliance (Coolidge 2010).** For the tax administration, sales may be easier to ascertain than profits, which require deductions to be verified. Moreover, although MSEs constitute the largest segment of taxpayers, their importance for revenue collection is small. Having a simple tax system for MSEs allows the tax administration to focus its resources on the more lucrative large and medium taxpayer segments.

**Tax collection from turnover tax regimes is typically below 0.25 percent of GDP, but their main objective is to promote greater inclusiveness within the formal sector of the economy.**<sup>4</sup> In countries where voluntary compliance with the income tax laws is strained by a lack of taxpayer knowledge and capacity, a turnover tax

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<sup>2</sup> Presumptive taxation refers to the use of indicators (for example, sales, assets, floor space, number of employees) or a combination of them to measure the “presumed profit” of the enterprise or individual. Turnover has the merit of being easy for the taxpayer to understand compared with other forms of presumptive taxation, where a tax inspector’s assessment of ability to pay is based on a combination of proxy variables, which can make the assessment appear arbitrary and susceptible to negotiation. However, some of these other indicators of profit can be used to develop scoring criteria to guide auditing of the MSE segment.

<sup>3</sup> Gross receipts include sales unrelated to the normal business activity of the entity.

<sup>4</sup> The figure excludes collections of value-added tax and excises.

can be a useful policy to encourage formalization if it is combined with taxpayer education and tax collection enforcement.

**A policy trade-off exists between accurately measuring profit and using turnover as a simple tax base.**

Because a turnover tax does not allow deductions of costs, including wages, distortions of business choices can generate inefficiencies,<sup>5</sup> and because loss-making firms would still pay tax on turnover, they may be discouraged from taking risks. Compared with a progressive personal income tax, a flat rate turnover tax can also result in violations of vertical and horizontal equity.<sup>6</sup> Ultimately, what is simple cannot be precise, and what is precise cannot be simple.

**The three common approaches for simplifying the tax calculations for small businesses are as follows:**

- A. Turnover—The tax rate is multiplied by the amount of gross sales (turnover) during the reporting period. For example, if the tax rate is 3 percent and sales are 100, then tax liability is 3 (that is,  $100 \times 0.03$ ).
- B. Turnover minus *notional* expenses—The tax rate is multiplied by the difference between the amount of gross sales and notional expenses during the period. The notional expenses are calculated as a fixed percentage of sales. For example, if sales are 100 and the tax rate is 5 percent, notional expenses could be fixed at, say, 40 percent of sales. Then the tax liability would be  $0.05 \times (100 - 40) = 3$ .
- C. Turnover minus actual expenses—The tax rate is multiplied by the difference between the amount of gross sales and the business expenses paid during the period. For example, if sales are 100, expenses paid are 45, and the tax rate is set at 5 percent, then the tax liability would be  $0.05 \times (100 - 45) = 2.75$ .

**Methods A, B, and C each have advantages and disadvantages.** Method A (turnover) has great simplicity. However, it is not precise because profit margins vary between sectors and even within them. Method B permits some recognition of varying profit margins across sectors by adopting differential notional expense rates for broad sectors (for example, goods versus services, or manufacturing versus trade). Method C is the most accurate of the three because it is based on the taxpayer's actual cash flow. However, method C requires accounting (albeit simplified) for both turnover and purchases; therefore, it is more demanding than methods A and B.<sup>7</sup>

**A one-for-one equivalence exists between the tax rate on notional net income in method B and the tax rate levied on turnover in method A.** In the previous example, the 5 percent tax on notional net income is equivalent to a 3 percent tax rate on turnover. An attractive feature of method B is that the tax base is notionally the same as the regular income tax (that is, profit). Hence, the applicable tax rate can be the standard income tax rate (for example, the CIT rate); the policy choice is shifted from the tax rate on turnover to the share of turnover allocated by fiat to cost recovery. This method could allow for some differentiation across broad economic sectors by applying sector-specific notional expense rates. For example, notional expenses could be 60 percent for goods and 40 percent for services. This is, of course, equivalent to varying the turnover tax rate across sectors, as some countries do.<sup>8</sup>

<sup>5</sup> The nondeductibility of wages also creates disincentives to hire formal labor, which contributes to the proportion of individuals who are unprotected by labor legislation and social security. Nondeductions of purchases diminish requests for receipts, weakening VAT administration. Turnover taxes also create inefficiencies in supply chains via tax cascading.

<sup>6</sup> Some countries apply a progressive tax rate schedule to the taxpayer's turnover. The equity advantages of a graduated turnover tax must be compared with the benefits of simplicity arising from a proportional turnover tax.

<sup>7</sup> Method C is used for medium-sized enterprises in West African Economic and Monetary Union countries, for example, as a transition regime between the turnover tax (method A) and the full-fledged accrual accounting and regulatory requirements of the corporate income tax.

<sup>8</sup> However, tax rate differentiation leads to additional compliance costs for those businesses that carry out transactions in both goods and services. It also creates opportunities for noncompliance through intentional misclassification of services for goods to take advantage of the larger notional expenses.



**Lump-sum taxes based on turnover brackets are sometimes used for individual entrepreneurs with low compliance capacity.** In Benin, for example, five turnover brackets exist for enterprises with turnover below 20 million West African CFA franc (XOF), and the lump-sum amounts are equal to 2 percent of the midpoint of the corresponding bracket. The equivalent of the exempt-income level of the personal income tax can serve as a reference to determine the lower-end cutoff for such regimes. In Benin, a 2 percent tax applies directly to turnover only for enterprises with turnover between 20 million XOF and 50 million XOF (the CIT and VAT threshold).

**The lump-sum form of a turnover tax is easy for entrepreneurs to understand, and tax inspectors need only to assess which bracket sales are in rather than precise sales levels.** The implicit tax rate can also be varied across the turnover brackets to create a progressive tax to address equity issues. Lump-sum systems should not be too complex, as when the tax liability is a function not only of the turnover bracket but also of a detailed classification of economic activities or other proxies of profitability.<sup>9</sup> Furthermore, the fixed payments must be indexed or periodically adjusted for inflation. A lump-sum regime is best reserved for small operators who cannot readily comply even with a turnover tax. A drawback of this type of system is that the effective turnover tax rate is inevitably discontinuous at the edges of the turnover brackets, which could discourage growth in sales or encourage its underreporting.

**It is also important to consider the reporting and filing requirements associated with the turnover tax regime.** Simple bookkeeping based on cash accounting can be used to record receipts. The taxpayer should also be required to record and keep the invoices from purchases because they can be useful for cross-checking against information provided by the suppliers. Tax payment can be monthly, and a single tax return can be filed, preferably online, at the end of the year.

**Reducing the costs of taxpayer compliance and tax administration is the motive for tax simplification.** The relative sizes of these costs between the regular tax regime and the simplified regime are the drivers of the optimal design of a turnover tax regime. A formula for the optimal turnover tax threshold is presented in Appendix 1. The empirical research findings on the sizes of taxpayer compliance costs and tax administration costs are discussed in Appendix 2. These cost estimates are used in the threshold formula and in simulations of a theoretical model of the optimal tax rate.

**More than 40 countries currently use turnover (method A) as a presumptive income tax base for qualifying entrepreneurs and enterprises.** Table 1 showing cross-country turnover tax thresholds and tax rates appears at the end of the note.

**The purpose of this note is to guide policymakers and practitioners on the design of a turnover tax—as a presumptive tax on income or profit—based on the IMF Fiscal Affairs Department’s research and experience in providing capacity development assistance in developing countries.** The note addresses the following key design issues for a turnover tax regime:

- Which taxes it replaces
- What the criteria are for eligibility
- How to determine the optimal threshold
- How to set the tax rate

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<sup>9</sup> In some countries, the General Tax Code contains a section that indicates how the microenterprise tax will be assessed, based on detailed criteria that vary by activity, when the taxpayer lacks adequate financial records on turnover. Although this can provide a backstop in lieu of reliable information on turnover, it also runs the risk of rendering a turnover tax into a de facto license fee. Inadequate bookkeeping on sales has no simple solution. Improving the compliance culture requires taxpayer education and adequate client services provided by the tax administration.

## Key Policy Choices for a Turnover Tax

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### Which Taxes It Replaces

The turnover tax regime is intended primarily as a substitute for profit tax on micro and/or small enterprises (including self-employed individuals). However, in many developing countries, it also replaces various other taxes and charges, including the requirement to register for value-added tax (VAT).<sup>10</sup> It replaces the licensing fee (or so-called *patente*) common in Francophone countries and payroll taxes or social contributions in some countries. For this reason, turnover tax regimes are often referred to as “unified tax,” “single tax,” “synthetic tax,” or “simplified tax.” See Box 1 for a Latin American example.

#### Box 1. National Simplified Tax System in Brazil

The Simples Nacional tax regime for micro and small businesses, introduced by Brazil in 2007, substituted a single tax on gross revenues for the corporate income tax, the contributions for Social Integration Program and for Social Security Financing, the tax on Industrial Products, the tax on the Circulation of Goods and Services and the tax on Services, as well as payroll taxes for social security. The significant reduction in tax and regulatory compliance costs due to this unification of tax bases and payments lowered the barriers to the formalization of microfirms and increased the number of registered businesses (Fajnzylber, Maloney, and Montes-Rojas 2011; Monteiro and Assunção 2012).

#### **Social security eligibility can be an important reason for entrepreneurs to formalize their activities.**

Where social security or social insurance contributions are included in the single payment scheme, which generally means a higher turnover tax rate, it is advisable to explicitly allocate a portion of the receipts to the taxpayers’ social security or social insurance entitlements. For example, Latvia allows owners of microenterprises to opt for a tax on revenues at the rate of 25 percent, of which 80 percent of receipts goes to the state social contributions fund.

**However, high mandatory social contribution rates can be a deterrent to formalizing MSE activities and employment (Kugler, Kugler, and Prada 2017).** For this reason, some countries subsidize the social contribution rates of adherents to MSE tax regimes (for example, Brazil, Uruguay) or allow mandatory social contributions to be deducted from taxable turnover (for example, Russia).

**Employers subject to turnover tax should be required to withhold personal income tax and social contributions on the wages of their employees.** This is the practice in many countries, although the frequency of filing may be less than for firms in the general tax regime (for example, in Madagascar). Individual entrepreneurs subject to turnover tax can also be required to have an owner-manager employment contract with their enterprise and to pay the social insurance contributions as per any employee.

### Eligibility Criteria

#### *Types of Entities*

**Turnover tax regimes apply mainly to unincorporated self-employed individuals and partnerships, although they may also admit limited liability sole proprietorships and close corporations.** Publicly held corporations are typically excluded from MSE regimes because the additional financial reporting and disclosure requirements imposed on them by securities laws ease their compliance with CIT. Because turnover tax regimes exist to facilitate the compliance of individuals and businesses that would find the financial reporting

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<sup>10</sup> A turnover tax is used in some countries (for example, Ethiopia) as a substitute for VAT for businesses not registered for VAT; these businesses remain liable for income tax or else they pay an additional turnover tax in lieu of it.

requirements of a profit tax to be too onerous, individuals in professional occupations, such as doctors, lawyers, engineers, and accountants, are excluded in some countries, because their educational attainment presumably makes them capable of complying with the regular income tax laws and they tend to earn high profit margins.<sup>11</sup>

### *Segmenting by Turnover*

**Establishing a maximum enterprise size in terms of turnover is the most robust approach for determining eligibility.** The threshold should apply to the consolidated operations of individuals or legal entities as per their unique tax identification number.<sup>12</sup> This is to mitigate the risk that entrepreneurs will run multiple companies, each with a turnover below the threshold. Only taxpayers with consolidated revenues below the threshold qualify for the turnover tax regime.

**Many countries also impose a limit on the number of employees an enterprise may have while in the regime, often up to five employees, sometimes fewer, sometimes without restriction.** However, using the number of employees as an eligibility criterion is susceptible to manipulation through outsourcing or hiring informal labor. Requiring firms in the microenterprise tax regime to have zero employees should be avoided because this induces entrepreneurs to hire informal workers.

**Usually, new taxpayers are assigned initially to a tax regime based on expected annual turnover.**<sup>13</sup> A taxpayer electing for the standard regime is typically required to remain in it for at least two years to prevent switching regimes based on tax planning considerations such as the timing of income receipts.

**A common recommendation is to set the turnover tax threshold equal to the VAT threshold.** This is simple and has intuitive appeal. It postulates that a business capable of complying with VAT must be similarly capable of complying with the laws of a profit tax. To put it differently, there are economies of scope in recordkeeping. Because VAT requires records of sales and purchases, it facilitates compliance with a profit tax, although only the latter typically entails accrual accounting. If the enterprise voluntarily opts for the VAT regime, then it usually becomes ineligible for the turnover tax regime and must conform with the income tax laws.<sup>14</sup> A harmonized threshold for VAT and CIT also aids the tax administration because segmentation is usually by firm size rather than by tax type.

**In some cases, the turnover tax threshold must be established on its own merits.** In particular, the VAT threshold may be zero (for example, Chile and Peru) or VAT is nonexistent (for example, Comoros). Even when a positive VAT threshold exists, the considerations associated with optimizing the threshold for the turnover tax (as discussed as follows) can be relevant in assessing whether the joint threshold for the turnover tax and VAT is set appropriately. When South Africa introduced a turnover tax for enterprises with gross receipts below R1

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<sup>11</sup> Some countries explicitly exclude various services from the turnover-based presumptive regime, such as patisseries, wholesalers, pharmacies, brickmakers, or bar dancers (for example, Chad). Extensive “negative lists” of activities ineligible for the presumptive regime may be motivated by tax enforcement difficulties, but it is generally advisable to make the turnover-based presumptive regime as uniform as possible. Niger disqualifies department stores from the turnover tax regime because these are typically subsidiaries or branches of multinationals.

<sup>12</sup> Another “anti-splitting” provision is to require a registrant of the turnover tax regime to combine the business receipts of connected persons in relation to that person. If the combined turnover exceeds the qualifying threshold, none of the connected parties qualify for the MSE regime. “Connected persons” include family members and connections in relation to companies. See *Tax Guide for Microbusinesses 2016/17*, produced by the South African Revenue Service.

<sup>13</sup> An undesirable requirement is to oblige new enterprises to be taxed for one year in the regular regime before being allowed to opt for the turnover tax, an administrative practice observed in a sub-Saharan country. This undermines the attraction of the simplified regime for informal operators, as they are confronted with the full compliance burden of the regular regime when formalizing their operations.

<sup>14</sup> An MSE regime is called rebuttable if enterprises with sales below the threshold are permitted to opt into the regular income tax regime. Reasons they may wish to do so include (1) to register for VAT and hence be eligible to reclaim input VAT, (2) to be eligible for public procurement contracts, and (3) to avoid tax as loss-making startups. Rebuttable systems accord with the notion that small enterprises should be encouraged to abide by the reporting requirements of the income tax because this helps the tax administration in combating tax evasion and promotes financial literacy among entrepreneurs. However, it should be noted that the addition of MSEs to the regular income tax segment imposes an externality on the tax administration, which must then devote more resources to taxpayers who generate relatively little tax revenue. Benin, for example, disallowed firms in its microenterprise regime to register for VAT and income tax in 2017, while reversing the decision in the following year.



million, it raised the VAT threshold from R300,000 to R1 million because (until 2012) businesses could not be registered for turnover tax and VAT at the same time.

**There are strategic reasons why it can be desirable to have different thresholds for VAT and turnover tax.** The argument is that the potential tax liability and compliance cost of crossing two thresholds at the same time—when two taxes have the same threshold—act as a substantial barrier to growth, whereas separate thresholds smooth the costs of transitioning beyond each turnover threshold. Tax revenues could then be higher when each tax has a distinct threshold (Kanbur and Keen 2014).

**In some countries, the cutoff for the turnover tax in lieu of profit tax is lower than the VAT registration threshold.** The value-added margin is greater than the profit margin because wages are not deductible for VAT. This is an argument for setting a relatively lower threshold for VAT than for CIT—a higher sales threshold forgoes less CIT revenue than VAT revenue. A contrary argument is that VAT is more difficult to administer and comply with than CIT. In 2021, Madagascar doubled its VAT threshold, without changing the CIT threshold, to combat perceived VAT refund fraud by small enterprises. Ultimately, harmonizing the sales threshold for VAT and CIT is a good default option, but other considerations may be warranted depending on country circumstances (for example, if the VAT threshold is unusually high or low relative to the segment of entrepreneurs targeted for income tax simplification).

### How to Determine the Optimal Threshold

**The theoretically optimal threshold for the turnover tax equates the marginal social benefit and the marginal social cost from adjusting the threshold.** When the threshold is increased slightly, some taxpayers previously paying the regular income tax (and possibly VAT) will now slip below the threshold and become eligible for the turnover tax. The welfare effect will depend on the net tax revenue change, the marginal social value of public funds, the relative differences between tax regimes in their costs of compliance and administration, and the efficiency loss associated with the nondeductibility of input costs, including wages, under the turnover tax. Appendix 1 provides a simple formula for the optimal turnover tax threshold.<sup>15</sup>

**Analysis of the optimal threshold, for a given tax rate, yields the following insight:**

- The optimal threshold is proportional to the difference in the cost of compliance and administration between the regular and presumptive tax regimes. Technology innovations, such as digital platforms for information exchanges between customs and the revenue administration, electronic billing systems that link taxpayers' transactions with the tax authority's electronic network, and e-services for taxpayers can all be viewed as generating reductions in the costs of complying with and administering the tax system, which warrants a lower threshold.<sup>16</sup>
- The optimal threshold decreases with the profit tax rate while increasing with the turnover tax rate. This is because the tax rates affect the revenue-raising capacities of each regime.

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<sup>15</sup> See Keen and Mintz (2004) for an analysis of the optimal VAT threshold.

<sup>16</sup> It is worth noting that the effect of economic development on the optimal threshold arises only indirectly. On the one hand, the time spent by taxpayers to comply with the tax laws may be relatively greater in poor countries, due to lower rates of education. On the other hand, the financial or opportunity cost of each hour of compliance activities will tend to be smaller, given lower wage (productivity) rates in poorer countries. If the total money value of time spent on compliance and administrative activities is approximately constant as per capita GDP varies, then lower per capita GDP would translate to a higher relative cost of compliance and administrative activities and hence a higher turnover threshold for the regular regime. In the formula for the optimal threshold, this argument is equivalent to postulating that lower GDP per capita is reflected in lower average profit margins of enterprises.

**The optimal threshold formula ignores some potentially important behavioral responses by firms.** One such omission is underreporting of sales (tax evasion).<sup>17,18</sup> Another is the incentive to limit the scale of an enterprise to keep it below the sales threshold (tax avoidance). This so-called bunching situation is discussed as follows.

### *Bunching*

**Firms may either underreport their sales or abstain from growing their operations to remain eligible for the turnover tax regime.** “Bunching” is manifested empirically when there is a disproportionately large mass of firms with turnover levels (reported or actual) just below the threshold. The size of the excess mass can be estimated by comparing the frequency of firms in the turnover bin just below the threshold with the mass extrapolated from fitting a smooth curve on the distribution of firms in the bins above the threshold.

**Bunching may indicate that the tax burden just below the threshold is significantly less than upon crossing it.** In that case, the tax advantage of remaining in the MSE regime could impede growth and innovation by entrepreneurs. Box 2 describes how to calculate effective tax rates (ETRs) to compare the marginal tax burden below and above the turnover threshold, using the example of tax regimes in Senegal.

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<sup>17</sup> Based on surveys, Coolidge and Yilmaz (2016) report that 18 percent and 16 percent of businesses in the turnover tax regime in South Africa and Ukraine, respectively, abuse the regime, and, correspondingly, only 8 percent and 29 percent of businesses that are eligible for the regime use it. The latter fact may indicate that microentrepreneurs are uninformed about the tax systems available to them.

<sup>18</sup> A particularly striking, but apparently not uncommon, case of tax evasion occurs when large firms pay the presumptive tax by massively underreporting sales to the fiscal authorities, with the acquiescence of, or even collusion with, high government officials (Mbaye and Benjamin 2012). Although this type of situation may be facilitated by the existence of a presumptive tax regime, it should be viewed as part of a wider problem of governance and corruption. Little reason exists to believe that, if the presumptive tax regime were rescinded, these firms would willingly start paying corporate income tax.

## Box 2. Effective Tax Rates

The effective tax rate (ETR) on profit is defined as the tax liability per currency unit (for example, dollar) of profit. It can be used to compare the tax burden in the turnover tax regime with the burden faced by an incorporated entrepreneur paying corporate income tax (CIT) on profit and dividend tax (DT) on distributions. (Other types of taxes, such as a proportional tax on the rental value of capital assets, could be included but are abstracted from here.) The ETR on profit in the standard tax regime equals  $CIT\ rate + (1 - CIT\ rate) \times DT\ rate$ . In the case of the turnover tax (TT), the effective rate on profit will depend on the profit margin because costs are nondeductible. Profit margin refers to operating profits before tax  $\div$  turnover. The effective tax rate on the entrepreneur's profit under the TT equals  $TT\ rate \div$  profit margin.

Tax policies in Senegal can be used as an illustration. The turnover tax, called the *Contribution Globale Unique* (CGU), applies to MSEs with turnover lower than 50 million XOF (about \$90,000) at a rate of 2 percent for trade in goods and 5 percent for services. The CIT rate applies to enterprises at or above the threshold at the rate of 30 percent, while the dividend tax rate is 10 percent. The effective tax rates on profit below and above the threshold for trade and services at alternative realistic profit margins for the sectors are shown in Table 2.1. The ETR from the CGU turnover tax exceeds the ETR of the regular regime only in the case of trade with a profit margin of 5 percent. However, keep in mind that tax compliance costs for the regular regime in developing countries are often 5 percent or more of turnover for small businesses, which is akin to an extra tax burden (Coolidge 2012).

**Table 2.1. Effective Tax Rates**

Sector and Margin	Goods Traded at 5% Profit	Goods Traded at 15% Profit	Services at 15% Profit	Services at 25% Profit
Effective Tax Rate below Threshold (CGU Tax Regime)	40.0%	13.3%	33.3%	20.0%
Effective Tax Rate above Threshold (Profit Tax Regime)	37.0%	37.0%	37.0%	37.0%

**Bunching is not necessarily an indication of a problem in the policy design.** Bunching can occur even in a first-best policy situation (that is, where the government faces no informational constraints regarding the revenues and costs of individual firms). The reason is that the taxpayers' fixed costs of complying with the income tax laws create a discontinuity (a "jump") in the compliance costs of firms when they transition from the presumptive regime to the regular regime. As enterprises expand production beyond the threshold, they must be able to generate sufficiently large incremental sales and after-tax profits to justify the higher costs of complying with the regular tax regime.<sup>19</sup>

## How to Set the Turnover Tax Rate

**The optimal turnover tax rate must balance two behavioral margins.** On the one hand, the turnover tax rate cannot be too low, as otherwise some medium-sized firms in the regular regime may be attracted to the regime for MSEs, where they do not belong (the case of bunching).<sup>20</sup> A practical rule based on this margin is to set the

<sup>19</sup> If bunching is observed and is attributable to firms strategically restricting output to avoid the regular income tax regime, then a gap of firms producing output levels just above the threshold should also be observed. If such a gap is not observed to accompany bunching, then it is more likely that the firms that are bunching just below the threshold are understating their sales (tax evasion) rather than reducing their output (tax avoidance).

<sup>20</sup> The tax administration must also consider the possibility of tax fraud, whereby an enterprise in the turnover tax regime generates receipts for fictitious sales to an enterprise in the profit tax regime. Although the former is taxed on the additional sales, the latter economizes on profit taxes by declaring the additional purchases as a cost deduction. See Schatan and others (2019).

effective rate of the turnover tax moderately above the rate of profit tax, as a means of capturing, as government revenues, part of the compliance cost savings of enterprises choosing to remain just below the threshold.

**On the other hand, the turnover tax rate cannot be set too high because microenterprises may prefer to remain informal rather than register for the presumptive tax regime.** This point is less often recognized in tax policy design, where the focus tends to be on eliminating bunching. According to survey results from Ethiopia, informal businesses indicated that a reduction in tax rates would encourage them to register for taxes and operate in the formal sector (World Bank 2016). Undoubtedly, the low tax burden on MSEs frequently observed in practice is intended to serve as part of a multifaceted long-term strategy to transform an economy away from informality.

**Business registration trends can be used to detect tax rate misalignments between the presumptive and regular regimes.** Box 3 offers guidance for detecting when the turnover tax rate may be too low or too high based on business registration trends.

### Box 3. Examining Data for Turnover Tax Rate Misalignments

It is useful to examine data on the size distribution of firms in the simplified and regular tax regimes for signs of anomalies in tax policies aimed at micro and small enterprises.

#### Migration of Enterprises to the Simplified Regime

Unusual tax registration trends toward the presumptive regime and the absence of a substantial category of medium-sized businesses can be indicators of system abuse. For example, in Kazakhstan, the number of individual entrepreneurs with declared turnover in the band below the simplified tax regime threshold (KZT 20–40 million) suddenly increased significantly in 2009, coinciding with a reduction of the turnover tax rate from 5 percent to 3 percent, whereas the number of individual entrepreneurs in the band above the eligibility threshold declined, and the number of incorporated businesses in the medium taxpayer segment (KZT 40–100 million) was comparatively low (Table 3.1).

**Table 3.1. Number of Active Medium and Small Taxpayers in Kazakhstan**

Turnover (Million tenges)	Individual Entrepreneurs <sup>1</sup>		Legal Entities <sup>2</sup>	
	KZT 20–40	KZT 40–100	KZT 20–40	KZT 40–100
2007	2,208	820	8,464	10,073
2008	2,998	1,120	8,587	10,043
2009	4,745	893	8,665	9,339

1. Taxpayers under patent regime and single land tax excluded; 2. public agencies and associations excluded.

Source: Engelschalk and Loeprick (2016) using data of the Tax Committee of the Ministry of Finance, Kazakhstan.

#### Lack of Take-up of the Simplified Regime by MSEs

In the contrary situation, a lack of take-up of the turnover tax regime by MSEs can indicate that the tax rate is too high, especially for sectors where informality is a common option. The widely different take-up rates across different service sectors observed in Tajikistan, for example, may indicate an excessive effective tax rate for activities with low profit margins, such as retail and construction. Less than 40 percent of the retail and construction enterprises eligible for the turnover tax regime in Tajikistan, with a tax rate of 4 percent (5 percent for turnover above SM 200,000), chose it over the regular regime. Lack of take-up of the MSE tax regime may also occur due to taxpayers lacking information about its benefits, as some surveys of taxpayer beliefs have suggested.

Source: Engelschalk and Loeprick (2016) using survey data from International Finance Corporation 2009.

### Key Considerations in Setting the Tax Rate

**Setting the optimal turnover tax rate should balance several factors, for which information may not be available.** As discussed previously, the optimal rate depends on the tax revenue bases in the regular and presumptive regimes, which, in turn depend on the size of the registration threshold, the incentives for informality and bunching, the tax compliance and administrative costs of each regime, and the social value of public funds.



**Theoretical analysis of the optimal turnover tax rate, for a given threshold,<sup>21</sup> yields the following insights:<sup>22</sup>**

- The optimal turnover tax rate is independent of the profit tax rate when bunching is absent. However, when bunching occurs, the turnover tax rate rises with the profit tax rate.
- The optimal turnover tax rate is inversely related to the profit margin in the informal (that is, untaxed) sector. The unit cost and profit margin of informal production are partly determined by the enforcement policies of the tax administration. Enforcement makes tax evasion risky and inconvenient for the entrepreneur, such as having to locate in discrete areas to avoid detection. Measures taken to make informal production less attractive can be accompanied by a higher turnover tax rate.
- The optimal turnover tax rate is positively related to the taxpayer's cost of complying with the regular regime (relative to the presumptive regime) when there is bunching. Innovations such as e-services reduce the cost of complying with the regular regime, thereby diminishing the relative attractiveness of the MSE regime for firms above the threshold. This creates space for reducing the turnover tax rate to induce informal operators to register for the MSE regime, without inducing bunching.

**When the turnover tax rate and threshold are set simultaneously to optimal levels, numerical simulations of the theoretical model yield a turnover tax rate around 2.5 percent.** The optimal threshold varies between \$65,000 and \$85,000, depending on parameter values and the profit tax rate. The effective tax rate on profit implied by the optimal turnover tax rate is not necessarily above the statutory rate of the profit tax in the regular regime. This finding reflects the fact that the optimal turnover tax trades off concerns about bunching behavior with concerns about dissuading informality. Allowing some amount of bunching can be a consequence of optimal policy.

*Other Considerations for the Tax Rate*

**It is advisable to limit the number of turnover tax rate categories to one or two, such as commercial and industrial activities versus services.** A taxpayer engaged in several activities should calculate and pay the tax separately for each type of activity. However, it can be difficult to define and delineate the boundaries of different types of activities. Furthermore, although profit margins differ between trade, services, and manufacturing, they are unlikely to have substantial impacts on the tax burdens of microbusinesses operating in competitive sectors.<sup>23</sup> The advantages of simplicity and the elimination of arbitrage opportunities across economic categories are essential. The simplicity of a flat-rate turnover tax makes it particularly conducive to administrative innovations, such as mobile tax declaration and mobile money payment platforms. See Box 4 for the case of Rwanda.

<sup>21</sup> The analysis of the tax rate when the threshold is treated as predetermined is particularly pertinent when there is a policy decision to peg the turnover tax threshold to whatever is the VAT registration threshold.

<sup>22</sup> The theoretical model adapts the approach of Kanbur and Keen (2014) for studying VAT to a turnover tax and CIT setting. Firms are characterized as having maximum potential sales levels, but they may choose to produce less than their maximum to remain in the presumptive regime. When this occurs, bunching is observed at the threshold. The firms also have the option of operating tax-free in the informal sector but at an additional cost of production. The model's solution for the optimal turnover tax rate, which is the analogue of the optimal threshold described in Annex Box 1.1, is complicated. Interested readers are encouraged to consult the working paper by Wei and Wen (2023). See also Wei and Wen (2019) for related work on the optimal design of turnover taxes.

<sup>23</sup> Coolidge and Yilmaz (2016) note that, in South Africa, the Revenue Service had initially considered setting different turnover tax rates for industry sectors, but an examination of the data did not reveal statistically significant differences in average profit margins between sectors. A survey of small and medium enterprises conducted in Tajikistan in 2009 (International Finance Corporation 2009) indicated profit margins ranging between 10 and 15 percent for most service activities but with some outliers (only 4.5 percent for communications but a high of 24.5 percent for consulting).

#### Box 4. M-Declaration in Rwanda

Rwanda launched a mobile phone platform (M-Declaration) in 2013, as an alternative to its e-filing and e-payment platforms, customized to help small entrepreneurs comply with their tax obligations using their phones, bypassing internet connectivity, personal computers, and bank accounts. Based on the turnover declared by the taxpayer, the system calculates the tax to be paid and generates a reference number of the declaration that has been submitted. The system reduces the time and cost for users to declare their taxes and makes it easier and less costly for the revenue authority to monitor and collect revenues.

The M-Declaration tool of tax administration formed a complement to the 2012 tax policy reform aimed at simplifying the income taxation of micro, small, and medium enterprises. The reform lowered the turnover tax rate from 4 percent to 3 percent (applicable to businesses with turnover below RWF 50 million—reduced to RWF 20 million in July 2018) and created a lump-sum payment regime into which firms with annual turnovers below RWF 12 million could opt. The lump-sum amounts vary across five turnover bands and are equivalent to 3 percent of the turnover at the lower limit of each band; firms in the first band of the lump-sum regime are thereby exempted from tax. More complicated tax schedules, such as activity- or location-specific tax rates, would likely have hindered the development and taxpayer adoption of the M-Declaration platform, compared with the uniform tax rate.<sup>1</sup>

<sup>1</sup> For assessments of the Rwandan MSME tax reforms, see Eissa, Murray, and Zeitlin (2017) and Tourek (2018).

**Another important consideration is the choice of self-employment versus working as an employee.** If an important gap exists between the effective tax rate on earnings between the two forms of employment (including mandatory social security contributions), administrative rules may be required to prevent employees of professional services companies from organizing themselves as microentrepreneurs for tax purposes. For example, the personal service provider company should not qualify for the MSE regime when the entrepreneur (1) renders the services at the premises of the former employer; (2) performs all activities themselves and does not or is not allowed to hire someone else to perform the activities or if the former employer still controls or supervises the way the activities are performed; and (3) a major part of the income is earned through the activities performed for the same former employer. In such cases, the relationship should be deemed as employment (Schatan, Grote, and Kobetsky 2017).

**Although their purposes are different, turnover taxes resemble turnover-based minimum taxes (MTs) that are commonly used in low-income and lower-middle-income countries to shore up the corporate income tax base against evasion or avoidance.** As of 2018, MTs based on turnover were in use across 31 countries with rates varying from 0.2 percent (Tunisia) to 3 percent (Bolivia, Equatorial Guinea, Guinea, and Madagascar) with an average tax rate of 1.2 percent (Aslam and Coelho 2021). To avoid discouraging the transition of MSEs to the standard income tax regime, the turnover tax rate for MSEs should be superior to the MT tax rate on turnover.

## Country Practices with Turnover Tax Regimes

**Country practices can help inform the design of a turnover tax regime.** Table 1 shows the annual threshold (in US dollars and local currency units) and turnover tax rates for selected countries as of January 1, 2022. The sales threshold for the turnover tax, typically identical to the VAT registration threshold, and the turnover tax rate vary quite widely across countries. However, the median threshold is close to \$100,000, and turnover tax rates between 1 and 2 percent are the most common.

**Table 1. Turnover Tax Systems in Practice**

Country	Threshold (USD)	Threshold in LCU	Turnover Tax Rate (%)
<b>Eastern Europe</b>			
Armenia	240,000	AMD 115 million	5 (trading), 3.5 (production)
Azerbaijan	117,000	AZN 200,000	2
Belarus	196,000	BYN 500,000	6
Georgia	162,000	GEL 500,000	1
Kyrgyzstan	354,000	KGS 30 million	4 (mfg., comm., agri. proc.), 6 (other)
Latvia	35,000	EUR 40,000	25, 40 (progressive; incl. soc. sec.)
North Macedonia	110,000	MKD 6 million	1 (exemption of MKD 3 million)
Romania	880,000	EUR 1 million	1 (3 if no employees)
Russia	32,000	RUB 2.4 million	4 (B2C sales), 6 (B2B sales)
Ukraine	278,000	UAH 7,585,500	5 (for 3 VAT payers)
Uzbekistan	92,000	UZS 1 billion	4
<b>Africa</b>			
Algeria	58,000	DZD 8 million	5 (goods), 12 (other)
Benin	95,000	XOF 50 million	2
Congo (DRC)	40,000	CDF 80 million	1 (goods), 2 (services)
Congo (Brazzaville)	174,000	XAF 100 million	5
Egypt	637,000	EGP 10 million	1
Ethiopia	20,000	ETB 1 million	2 (general), 10 (other)
Guinea	16,000	GNF 150 million	5
Kenya	442,000	KES 50 million	1
Liberia	21,000	LRD 3 million	4
Madagascar	51,000	MGA 200 million	5
Mauritania	83,000	MRU 3 million	3
Morocco	54,000	MAD 500,000 <sup>1</sup>	0.5 (comm.), 1 (services)
Niger	190,000	XOF 100 million	3 (trade), 5 (other)

Rwanda	20,000	FRW 20 million	3
Senegal	86,000	XOF 50 million	2 (mfg.), 5 (services)
Seychelles	68,000	SCR 1 million	1.5
Tanzania	43,000	TSZ 100 million	3–5.3
Uganda	42,000	UGX 150 million	1.5
Zambia	48,000	ZMW 800,000	4
<b>Asia</b>			
Indonesia	336,000	IDR 4.8 billion	1
Mongolia	17,000	MNT 50 million	1
Tonga	44,000	TOP 100,000	2
<b>Central and South America</b>			
Brazil	21,000	BRL 120,000	3–5 (progressive rates)
Ecuador	300,000	USD 300,000	2
Guatemala	19,000	GTQ 150,000	5 (7 for sales above the threshold)
Peru	132,000	PEN 525,000	1.5
<b>Western Europe</b>			
Austria	31,000	EUR 35,000	11–27.5 (goods), 16–40 (services)
France	73,000	EUR 82,800	1.7 (ind./comm.), 2.2 (noncomm.)
Italy	57,000	EUR 65,000	15 (5 during first five years of activity)
Portugal	176,000	EUR 200,000	2.175–5.8 (hosp.), 10.9–29.2 (prof.)

Sources: International Bureau of Fiscal Documentation library and country tax codes. Thresholds in US dollars are rounded to the nearest \$1,000. <sup>1</sup> MAD 200,000 (\$22,000) threshold for services.

**Note:** agri. proc. = agricultural processing; B2B = business-to-business; B2C = business-to-consumer; comm. = commercial; hosp. = hospitality; incl. soc. sec. = including social security; ind./comm. = industrial or commercial; LCU = local currency units; mfg. = manufacturing; noncomm. = noncommercial; prof. = professional services.

## Final Remarks

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**Presumptive taxation, of which a turnover-based tax is a relatively straightforward approach, serves to simplify the tax calculations and payment obligations of micro and small enterprises while permitting the tax administration to focus its resources on larger firms, which contribute significantly more to government revenues.** The appropriate threshold and turnover tax rate depend on country-specific factors, including the prevalence of informal-sector activities, the capacities of the taxpayers, the quality of the tax administration, the use of digital technology for declaring and paying taxes, the average size of profit margins, the statutory corporate and personal income tax rates, and whether the threshold is joint with the VAT registration threshold.

**Turnover taxes can be an important tool in a comprehensive strategy to increase formal-sector employment and entrepreneurship and can foster economic development over time, but they are not a panacea for inadequate tax enforcement.** A tax regime for MSEs needs to be accompanied by control and monitoring through data matching, risk-based auditing, and other administrative measures. The tax filing and recordkeeping requirements for MSEs under the threshold should be minimal, such as an annual tax declaration for MSEs stating their total turnover, with payments made in monthly or quarterly installments. Outreach campaigns to educate informal operators about the opportunities and benefits of the turnover tax regime are essential to promoting voluntary compliance.

**Turnover taxes dovetail well with dual income tax systems whereby labor and capital incomes are taxed separately.** The primary weakness of dual systems is the difficulty of apportioning the business incomes of self-employed individuals or microenterprises to the relative contributions of each factor of production. To the extent that such taxpayers are below the threshold for paying the income tax, the decomposition of their income into sources is unnecessary, as they simply pay tax on their turnover.

**To conclude, several analytical steps can help guide the practitioner in designing a turnover tax regime for the MSE segment.**

1. *Assess the simplicity of the MSE regime.* Is the set of taxes substituted for by the turnover tax appropriate? Are the eligibility criteria simple? Are tax filing obligations aligned for different taxes paid by MSEs?
2. *Estimate the cost of taxpayer compliance.* Are the filing frequencies and payment options of the regular system and the simplified system unusually onerous? Should new e-services be considered? Do taxpayers report widespread harassment by the tax administration? Do taxpayer information campaigns exist?
3. *Examine trends in taxpayer registration.* Are there signs of anomalous migrations of enterprises across tax regimes or between organizational forms? Does evidence exist of de facto employees of companies disguised as microentrepreneurs paying turnover tax?
4. *Plot the frequency distribution of taxpayers by turnover size.* Is there evidence of bunching at the threshold between the tax regimes?
5. *Calculate the effective tax rates.* Does a significant misalignment exist between the turnover tax rate and the rates of regular income taxes (CIT and PIT) or between the turnover tax and the license fee regime? Is the tax burden of the MSE regime suitable for attracting informal operators?
6. *Compare the turnover tax regime design with indicators of best practice.* Is the existing or proposed threshold, given the turnover tax rate, too high or too low, compared to regional comparators (Table 1)? How do the turnover threshold and tax rate compare to the model-based optimal design?



7. *Inquire about the tax administration practices in the MSE segment.* Is there an adequate number of tax inspectors? Do the administrators of micro, small, and medium enterprises exchange the dossiers of firms when their turnovers cross the thresholds?
8. *Consider the impact of new information technologies.* Are changes in the policy design needed to allow for simplified administration using mobile applications? Can sources of third-party information be leveraged (for example, information on sales from banks and e-commerce platforms)?

## Appendix 1: A Formula for the Optimal Threshold

### Appendix Box 1.1. Optimal Turnover Tax Threshold

Consider a turnover tax applied to firms below the threshold and a profit tax (corporate income tax or personal income tax on unincorporated business income) applied to firms at or above it. Equating the marginal social benefits and costs generates the following expression for the optimal turnover threshold for given tax rates.

$$Z^* = \frac{(dA + G) - (dA' + G')}{(d - 1)[(1 - C)t^c - t] + a}$$

where<sup>1</sup>

- $Z^*$ : Optimal turnover threshold separating the tax regimes
- $d$ : Marginal value of public funds (value of \$1 in tax revenue relative to \$1 of private profit)
- $A$  and  $G$ : Fixed cost per firm of tax administration ( $A$ ) and taxpayer compliance ( $G$ ) in the regular regime
- $A'$  and  $G'$ : Fixed cost per firm of tax administration ( $A'$ ) and taxpayer compliance ( $G'$ ) in the turnover tax regime
- $t^c$ : Profit tax rate in regular regime
- $t$ : Turnover tax rate
- $C$ : Production cost per unit of output of firms in the regular regime
- $1 - C$ : Before-tax profit margin for firms in the regular tax regime (the price of the output good is \$1)
- $a$ : Additional cost per unit of output of firms subjected to the turnover tax regime<sup>2</sup>
- $1 - C - a$ : Profit margin of firms in the turnover tax regime

<sup>1</sup> The formula requires the denominator to be positive. The implication of a nonpositive denominator is an infinitely high threshold, that is, the turnover tax regime welfare dominates the regular regime, but that is an artifact of assuming a fixed and common profit margin across firms in the regular regime.

<sup>2</sup> The parameter  $a$  is intended to reflect the distortions of business decisions created by the turnover tax regime, which diminish productivity or increase unit costs. Aside from the drawback of nondeductible costs, the crude bookkeeping requirements of the turnover tax may exacerbate the difficulty of MSEs in obtaining bank credit, and in some countries, only standard income taxpayers are permitted to bid for public procurement contracts. Such disadvantages of being a nonincome tax filer tend to raise the unit costs of production of firms in the MSE tax regime.

To illustrate the formula, reasonable parameter values for the equation are as follows:  $d = 1.5$ ,  $C = 0.875$ ,  $a = 0.025$ ,  $G = \$1,400$ ,  $G' = \$300$ ,  $A = \$800$ , and  $A' = \$25$ . Then, if  $t^c = 0.25$ ,  $t = 0.025$ , the formula yields  $Z^* = \$80,444$ .

## Appendix 2: Estimates of the Costs of Tax Compliance and Administration

### Taxpayer Compliance Costs

**The cost of tax compliance is the sum of the cost of external professional services, in-house employee time costs, and the costs of tax software and hardware.** It is distinct from the cost incurred by businesses for general accounting functions, insofar as tax compliance costs are attributable to tax-related activities, such as becoming informed about the tax laws, recording information for tax purposes, calculating tax, completing tax returns and paying, and communicating with the tax administration. As a firm extends its markets and product lines, tax compliance costs are increased because formal systems need to be put into place to address the growing complexity (Dodge and Robbins 1992). However, compliance costs are known to be highly regressive, which suggests there is a substantial fixed cost component in addition to the variable cost of compliance.<sup>1</sup>

**Compliance costs vary widely across countries because of differences in tax designs and administrative practices, and in the salaries used to value in-house costs of compliance.** Appendix Box 2.1 discusses the empirical findings of compliance cost studies for South Africa, Kyrgyzstan, and Costa Rica.<sup>2</sup> A reasonable baseline fixed compliance cost for calibrating the formula for the optimal turnover tax threshold in developing countries is \$1,400 for profit tax without VAT, and \$300 for a turnover tax (in 2022 dollars).

#### Appendix Box 2.1. Taxpayer Compliance Cost Estimates

**South Africa:** Smulders et al. (2012) estimated average taxpayer costs for the small business sector in South Africa from a survey in 2011. Enterprises with turnovers below R1 million (about \$150,000 in 2011) can opt for paying a turnover tax featuring a progressive marginal rate structure, which replaces the general tax system, including VAT and profit tax, except for payment of employee taxes. A total of 40.5 percent of the survey respondents had turnovers below R1 million. The 5 percent–trimmed average in-house cost of complying with the general tax regime was R53,357 (\$7,360), of which VAT, profit tax, and employee taxes accounted for R20,318, R15,822, and R16,533, respectively. In contrast, the average in-house cost of complying with the turnover tax was R14,030 (\$1,935), whereas the average time spent on employee taxes was almost identical between firms in the turnover tax regime and those in the general regime. The 5 percent–trimmed average external taxpayer compliance cost for all taxes was estimated at R9,882 (\$1,360), but smaller businesses (turnover of less than R1 million) tended not to incur these expenses. Coolidge et al. (2009) finds that the outsourcing costs for South African enterprises is mainly for tax compliance activities related to the income tax returns. It

<sup>1</sup> Studies for developing and transition countries show that compliance costs as a share of turnover range from 4 to 18 percent for small businesses, but they are negligible for large enterprises. See Coolidge (2012) and Sapiei, Abdullah, and Sulaiman (2014).

<sup>2</sup> Few taxpayer compliance cost studies exist for developing countries with turnover taxes. World Bank Group (2016) provided evidence for Ethiopia, but the turnover tax there consisted of indicator-based assessments of turnover by the tax inspector (every two years) rather than self-assessed turnover; moreover, the enterprises surveyed were small. The study on South Africa discussed in Appendix Box 2.1 was part of a four-country study (with Australia, Canada, and the UK). The UK study, undertaken by Hansford and Hasseldine (2012), may serve as a reality check for the South Africa results. They estimated that small enterprises (turnover less than £600,000) had average and median total tax compliance costs of £23,687 and £10,876, respectively, most of it due to in-house costs. The average (median) number of employees of these firms was six (three). Their results also showed that the proportion of total in-house tax compliance costs accounted for by VAT, CIT, and employee taxes were 41 percent, 30 percent, and 25 percent, respectively.

should be noted that the progressive turnover tax is likely more costly for microenterprises to comply with than a standard proportional turnover tax.

**Kyrgyzstan:** World Bank (2018) estimated average company tax compliance costs in Kyrgyzstan from survey results for the years 2012, 2014, and 2016. Of the sampled firms, about 60 percent had turnovers below KGS 1 million (\$12,000). Enterprises with turnover below the VAT threshold can elect for the simplified tax regime, where they pay a single tax levied on turnover at rates of 4 percent (trade) and 6 percent (other activities) in lieu of profit tax and VAT, while also paying social contributions. The VAT threshold was KGS 4 million (\$48,000 in 2016), increasing to KGS 8 million on July 1, 2016. Businesses with a turnover below KGS 1 million accounted for 80 percent of adherents to the turnover tax regime in the surveys. The average company cost of tax compliance (external plus in-house) reported in US dollars over the three surveys was \$1,042 for the general regime with VAT, \$342 for the general regime without VAT, and \$246 for the simplified regime. The assessments represent lower bounds against the actual costs of tax accounting because the time costs were evaluated by survey respondents using the formal salary of their employees, whereas the actual level of labor costs exceeds the formally declared salary.

**Costa Rica:** United Nations (2014) assessed the tax compliance costs of enterprises in Costa Rica based on a 2012 survey. Eighty-seven percent of the sample had sales below \$100,000. Businesses in the general regime pay income tax and sales tax (replaced by VAT in 2019). Enterprises with annual purchase volumes (rather than sales) not greater than C 15,000,000 (\$31,000 in 2012) and with no more than five employees pay a simplified tax (Régimen de Tributación Simplificada) that combines income tax and sales tax. The tax liability for firms below the threshold is determined by applying specific coefficients per tax instrument (representing sales tax and income tax) to total taxable purchases (rather than to sales). The resulting total tax rate on purchase volumes varies between 2.5 percent and 7.5 percent depending on the industry. The average total compliance cost of micro and small enterprises in the simplified regime (\$1,115 and \$1,316, respectively) can be compared to those of micro, small, and medium enterprises in the general regime (\$2,272, \$2,165, and \$3,254, respectively).

**Brazil:** Inter-American Center of Tax Administrations, Brazilian Federal Revenue Service, and Brazilian Micro and Small Business Support Service (2015) estimated tax compliance costs for small and medium enterprises in Brazil based on a 2012 survey. It distinguished between taxpayers of corporate income tax and payers of the simplified system, Simples Nacional, which is an optional tax regime for micro and small enterprises. It combines several regular taxes and applies progressive marginal rates to gross revenues rather than to business income. The study found average total compliance costs to be BRL 19,770 (\$10,156 in 2012) for payers of the tax on actual income and BRL 7,563 (\$3,885 in 2022) for payers of Simples. However, the methodology did not disentangle tax costs from total costs charged by accounting firms for their services. The authors noted that the federation of Brazilian accounts attributes only one-quarter of the total accounting costs to strictly tax compliance activities. This suggests an average total compliance cost of \$2,539 for the profit tax and \$971 for the turnover tax in Brazil.

## Tax Administration Costs

**Studies report the total cost of administering a tax system as a percentage of tax revenue collected.** Tax administration costs include three categories: administrative overhead, salaries, and IT-related expenditures (Organisation for Economic Co-operation and Development 2011). A typical estimate is that the costs are about 1 percent of tax revenues (Smulders and Stark 2019). A study on Slovakia (Nemec, Pompura, and Šagát 2015) puts the figure for CIT at 1.65 percent of CIT revenues and at 2.25 percent for the turnover tax form of PIT. The same study notes that the CIT tax administration cost in the Czech Republic is lower, at 0.67 percent of CIT revenues.

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