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Reform in the Digital Era
in Developing and Developed Countries**

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International Center for Public Policy Andrew Young School of Policy Studies

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Tax Revenue Management and Reform in the Digital Era in Developing and Developed Countries

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Abstract

This paper surveys recent trends in tax administration reform with the main goal of identifying contemporaneous lessons for improving the efficacy and efficiency of revenue collection and tax enforcement. The paper first reviews the impact that globalization and the digital economy have made on shaping the three paradigms jointly structuring modern tax administrations' performance: enforcement, facilitation (service), and trust. The paper also reviews modern trends in tax administration institutional design and the roles played by financial sufficiency and managerial efficiency in those designs. Ultimately, this paper demonstrates, successful tax administration reform appears to rest on the presence of a broad sociopolitical consensus on the need for higher and more fairly distributed tax revenues.

Keywords: Tax administration, tax compliance, policy reform, globalization, digital economy

JEL Classification: H26, H29, H39, H83

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1. Introduction

The aim of this paper is to offer a survey of best practices across tax administration systems in developing and developed countries, with a particular focus on extracting lessons for improving efficacy and efficiency on revenue collection and enforcement performance. The paper puts a special focus on the deep challenges and meaningful opportunities that globalization and the digital era have brought to tax enforcement.

The fundamental role of tax administrations across the globe is to raise tax revenues according to existing tax laws. An effective tax system is crucial for both developing and developed countries alike, since adequate revenue collection is an important determinant of economic growth (Matthews, 2011; Arnold et al., 2011; Akgun, Cournède, & Fournier, 2017), and is highly connected to firms' performance (Dabla-Norris et al., 2017; Bergner et al., 2017). Moreover, in the case of developing countries, an effective tax system is also a decisive contributor to successful state-building (Fjeldstad & Moore, 2007).

Three paradigms stand out as the most widely shared models for tax authorities across the globe in recent times: the enforcement paradigm, the service (or facilitation) paradigm, and the trust paradigm (Alm, 2012; Prichard et al., 2019). The first and most traditional, enforcement, prioritizes auditing and “catch and punish” activities, while the second places more weight on facilitating compliance through better information and lower compliance costs, sometimes overlapping with the third, in which emphasis is placed on building citizens' trust in the system reinforce voluntary compliance. All these paradigms have their own benefits and drawbacks, and are frequently best used in combination, which can significantly contribute to more efficient collections and overall higher compliance levels. This has been confirmed in recent empirical studies and laboratory experiments (Alm, 2012; Kasper & Alm, 2020). Moreover, the combined

effects of these paradigms not only improvement enforced compliance but also strengthen voluntary compliance, generate social and political support for fiscal reforms, and produce stronger fiscal contracts. This modern view of tax administration is being incorporated in recent tax administration reforms, such as in the case of the UK's HMRC (HMRC, 2021). Whichever paradigm(s) are used by a given system, the overall efficiency and effectiveness of any tax administration also depends, not surprisingly, on its specific institutional design and organizational structure, making such design a fundamental issue meriting review and improvement.

Ultimately, "tax administration is tax policy" (Casanegra de Jantscher, 1990). However, even the effectiveness of the best institutional design is also significantly conditioned by tax laws. Complex tax laws make the role of tax administration harder in terms of costlier enforcement processes, more extensive and expensive taxpayer services, and increased taxpayer compliance costs. These latter factors tend to negatively affect voluntary tax compliance and there is evidence that they can even lead to higher rates of tax fraud (Pyle, 1993; Bird, 2004; Blesse, 2021). Therefore, the simplification of tax laws is always the first and most important measure to improve tax administrations' efficiency and effectiveness.

At the same time, several recent global trends are also significantly affecting the effectiveness of tax administrations. The combined pressures of globalization and technological change, the growing importance of data management and the renovation of economic activities under digitalization all force a transversal rethinking and deep restructuring of tax administrations themselves. Perhaps more than ever, tax administration in the era of digitalization will need to rely on financial sufficiency and managerial efficiency (Alm & Duncan, 2014).

From that perspective, it is likely that, in the near future, tax administrations will have to reorient their budgets toward larger capital expenditure to support the digitalization of tax services. At the same time, it will be necessary to increase investment in human capital to prepare existing staff for the technological challenges ahead. For obvious reasons, both physical and human capital investments will be a disproportionately large challenge for developing countries.

In light of these changes, future assessments of tax administrations' performance should emphasize pathways for improving new performance-core activities, such as strategic management, operational performance, and organizational structure (Crivelli, 2019). Accordingly, it is wisest for the shapers of tax policy to understand tax authorities' budgets as an investment, rather than an expense (Sarin & Summers, 2020), even though a wide array of improvements does require no more than "political commitment to overcome vested interests among taxpayers, politicians and tax administrations themselves" (Moore & Prichard, 2017: 20).

This paper provides an overview of the main trends in tax administration, aggregated into three large groups of initiatives that cope with the main challenges tax authorities face in order to enhance compliance: tax enforcement measures, taxpayer services, and efforts to increase voluntary tax compliance or tax morale. These three types of initiatives, if well designed, have the potential of reinforcing each other and producing even greater effects (Akitoby et al., 2018; Prichard et al., 2019; CIAT/IOTA/OECD, 2020).

This paper is organized as follows. In the next section, we offer an overview of successful tax administration reform in the 21st century under the enforcement, service, and trust paradigms. The third section devotes its attention to modern tax administrations' organizational challenges. The fourth and last section highlights the main conclusions and lessons.

2. Successful Tax Administration Reform in the 21st Century

2.1 A roadmap of best practices under the enforcement and facilitation or service paradigms

Tax enforcement is a worldwide challenge and is especially so in environments where both evasion and corruption traditionally have been above average (Chander & Wilde, 1992; Moore & Prichard, 2017). At the same time, the improvement of taxpayer services in order to lower compliance costs goes hand in hand with improving overall compliance.¹ In the digital and globalized era, both paradigms (combined) offer deep challenges and significant opportunities for tax administrations to improve their efficacy and efficiency in revenue collection; generating research to facilitate the adoption of evidence-based tax policies is increasingly crucial (Lundberg, 2017; Moore, 2019).

To review the most successful practices underway, this section follows a structure based on the main areas that comprise tax administrations' operational tasks. In doing so, we aim to provide evidence about the interlinks between enforcement, facilitation, and trust initiatives throughout the whole range of operational processes that define tax administration.

2.1.1 Registration and identification

A high-quality taxpayer registration and identification system is crucial for optimal tax system performance. In the digital era, tax administrations need sophisticated tools to record information about taxpayers, withholding agents, and third parties that provide information about the activity and transactions of other taxpayers. Thus, although traditionally channels for registering and identifying taxpayers have been taxpayers' voluntary tax return-filing and withholdings, registrations performed by other governments agencies within the same country or by other tax administrations in foreign countries are growing sources for tax administrations to

¹ As a recent HMRC report emphasizes, simplifying registrations processes or a smarter use of taxpayers' data that avoid taxpayers to submit information the tax administration already has are seeing as two measures that would reduce compliance costs, increasing tax revenues (HMRC, 2021).

identify potential taxpayers and gain access to taxpayers' information (OECD, 2019). Moreover, cooperation between different government agencies plays an increasingly important role for the improvement of tax administration operations.

One of the best practices to improve taxpayer registration is the use of multichannel systems, allowing taxpayers to register in person, online, or through mobile apps. What's more, this process can offer taxpayers simultaneity in their actions, allowing registration for multiple taxes at the same time or allowing both registration and payment. This system is gaining significant prominence and wide uptake; the 2020 wave of the ISORA survey² indicates that more than 80% of the tax administrations surveyed use multichannel registration systems, a large share of the tax administrations consulted allow simultaneity, and only a few of them obligate users to activate separately registration and payment (OECD, 2021).

Another important practice with high uptake that many tax administrations have focused on is establishing a unique taxpayer identification number (TIN). To increase compliance, in some countries, holding and providing this number is mandatory for obtaining permits such as driver licenses and passports, thus forcing potential taxpayers to register. In the same vein, another innovation to facilitate registration is maintaining current accounts between tax administrations and taxpayers that allow articulating the flow of receipts and payments between both (Martínez-Vázquez, 2021).

² The International Survey on Revenue Administration (ISORA) is a multi-organization international survey that collects standardized information on tax administration at the national level. This project is conducted by five partner organizations: The International Monetary Fund (IMF), the Intra-European Organization of Tax Administrations (IOTA), the Organization for Economic Cooperation and Development (OECD), the Inter-American Center of Tax Administrations (CIAT) and, since 2018, the Asian Development Bank (ADB). The latest edition (ISORA 2020) collected information for 2018 and 2019 from tax administrations from 156 countries, accounting for 96.1% of global GDP and 90.6% of the planet's total population. ISORA 2018 had data from 2016-2017. International precedents in the same line were the IDB/CAPTAC-RD/CIAT reports (2012), CIAT (2016), the OECD "Tax Administration Comparative Information Series" (since 2004), and the pioneering surveys of the IMF's RA-FIT (Revenue Administration's Fiscal Information Tool) platform (IMF, 2019).

The above being said, one well-established vehicle to enhance the registration function is the use of tax withholding through the collaboration of third parties (employers, banks, sellers, etc.). In the withholding context, the main innovations of late include: 1) advances in data processing systems, allowing the strengthening of withholdings calculations; 2) increasing use of electronic invoices as a mandatory system for recording sales, allowing improved information in the transactions for most consume taxes (Bellon et al., 2019); and 3) the requirement for sellers of goods and services to record their operations through electronic fiscal devices or duly certified cash registers (Pomeranz, 2015).³

An important challenge tax administrations face is ensuring the veracity of taxpayers' identities and of the information provided by them. Ensuring a taxpayer's true identity not only guarantees their rights but also avoids possible fraud. To tackle this issue, most innovative advances in tax administration performance are in the development of multi-step identification procedures and the use of biometric identification factors. In this regard, tax administrations are also improving procedures to prevent the theft of tax identities or taxpayers' tax data that could subsequently be used fraudulently to obtain tax refunds or access to tax credits (OECD, 2019).

Digitalization and globalization have caused an unprecedented growth in the share of economic activity carried out beyond national borders. Multiple businesses models allow companies and even individuals to generate income or carry out consumption operations beyond their countries of residence, including multinational companies' activities, online commercial activities, use of sharing economy platforms, and so on. Tax administrations face the challenge to capture information flows about these kind of activities beyond national borders. Different

³ ISORA data show that the 32.1% of countries surveyed have a mandatory electronic invoicing system for some or all registered taxpayers, and that 50% of them require sellers of goods and services to record their operations (Moran & Diaz de Sarralde, 2021).

international cooperation agreements have been implemented in order to address these challenges (OECD, 2019). The following such compacts are worth mentioning:

- The European Union’s Electronic Identification Authentication and Trust Services (eIDAS) agreement, which set out procedures to capture information flows and manage identity and registration issues across borders.
- The *Common Reporting Standard* (CRS) which sets out the basis for countries to obtain information of fiscal interest from their financial institutions and which can be automatically exchanged with other countries. The CRS sets out the financial account information to be exchanged, the financial institutions required to report, the different types of accounts and taxpayers covered, and the common due diligence procedures to be followed by financial institutions
- The use of gig economy platforms operating in third-party countries to ensure the effective taxation of those selling goods or services through information sharing (OECD, 2019b).

2.1.2. Assessment: information, filing tax returns, and payment

A key phase in a tax administration’s operational process is the so-called “tax assessment” function. It refers to all activities aimed at ensuring that taxpayers collect the necessary tax information to file their taxes, correctly file their tax returns, and make subsequent payments of their tax liabilities. Traditionally, the burden of these activities has been on the taxpayer, which resulted in high compliance costs—tax information collection, accounting bookkeeping, filing tax returns and payments, etc. (Benzarti, 2020).

In the digital and globalized era, third parties’ support is increasingly becoming crucial to tax administrations, in a similar way to the role traditionally played by withholding. Moreover,

especially for self-employed and companies, it has been also common to count on the help of tax advisors to help with their compliance (Durán & Esteller, 2020). At the same time, tax administrations have collaborated with taxpayers by providing them with a variety of assistance instruments, either for the collection of relevant tax information, for filling tax returns, or for quicker payment of tax debts. The best practices followed by tax administrations to gain efficiency regarding different operations in this phase are related to information collections, filing, and payment, as follows.

Collecting information

Regarding the collection of relevant tax information by taxpayers, tax administrations have developed multi-channel taxpayer assistance systems (face-to-face / telephone assistance / online assistance) to enhance it.⁴ There also seems to be a growing trend in the use of online assistance channels, especially in higher-income countries (Moore & Prichard, 2017; Moran & Diaz de Sarralde, 2021). Additionally, some tax administrations are exploring the use of artificial intelligence (AI) such as virtual assistant automatic response systems, chatbots, etc. to strengthen this type of taxpayer assistance (OECD, 2021; Moran & Diaz de Sarralde, 2021).

Filing process

The filing of tax returns by taxpayers has also evolved with technological changes, and physical filing has been progressively replaced by online channels. This change has meant big savings for tax administrations via reducing costs caused by face-to-face taxpayer assistance. What's more, these changes have also vastly improved the percentage of filings in term, that is, tax returns filed correctly and in a timely fashion (Moore & Prichard, 2017; Alm et al., 2020).⁵

⁴ ISORA 2020 shows that the main assistance channel used by taxpayers is the telephone (38.4%), followed by face-to-face (26.0%) and online assistance (21.9%).

⁵ ISORA 2020 shows that the proportion of tax returns using electronic channels has reached the average levels of 70.7% for Corporate Income Tax (CIT), 63.5% for Personal Income Tax (PIT) and 74.1% for Value-Added Tax (VAT), with the share growing in recent years and already reaching 100% in some countries for some taxes. Not

In the same vein, great progress has been made in the development and improvement of taxpayer services, creating understandable and simpler forms with clearer information, improving phone assistance services and website instructions, and assisting in filing returns and paying taxes (Martínez-Vázquez, 2021). As an illustration, based on data provided by third parties, a successful measure that has led to a significant reduction in taxpayers' compliance costs has been the introduction of pre-filled returns by some tax administrations (Junquera et al., 2017; Moore & Prichard, 2017; Benzarti, 2020; Moran & Diaz de Sarralde, 2021). This innovation significantly facilitates taxpayers' compliance since taxpayers only have to review the information provided in the pre-filled return and confirm its accuracy or claim any errors with the tax administration.

The success of these procedures has been based on the possibility for tax administrations to access a significant volume of electronic information offered by third parties. This fundamentally requires a legislative framework supporting the third parties' obligation to offer accurate and in real time information on the taxpayers. Initially, this approach has focused on personal income taxes and for taxpayers in simplified tax situations or regimes, where the tax administration can reasonably have all, or almost all, relevant tax information. However, advances in data analytics and greater possibilities of sharing information between entities facilitate the further development of this approach. Thus, for example, there are countries, such as Portugal, where the pre-filing of income tax returns is almost universal and entirely automatic for taxpayers; the current system has made it possible to even enter information on tax deductions, benefits, expenditures on health and education, etc. that previously were difficult, if

surprisingly, the higher percentages correspond to high-income countries. Using this mode of filing additionally yields acceptable degrees of compliance, although according to the tax considered the results achieved differ (64.8% CIT; 68.6% PIT, and 77.5% VAT) (Moran & Diaz de Sarralde, 2021).

not impossible, to capture by the tax administration. Additionally, the growing use of electronic invoicing anticipates new possibilities to extend the pre-filled returns approach to other significant tax instruments, such as the corporate income tax or the value added tax (Bellon et al., 2019; Moran & Diaz de Sarralde, 2021).

Payment

Tax administrations have also made significant improvements aimed at expanding taxpayers' payment options. This not only reduces compliance costs, but it also decreases the tax administration costs associated with managing arrears and outstanding debts. The principal option to facilitate this last step in tax compliance has been to expand payment channels. Initially, besides the traditional direct payment at collection at tax administration's offices, payments were extended through financial entities. In recent years, these systems have been improved with greater possibilities for online payments, either directly to the tax administration or through financial intermediaries and adding credit cards, mobile applications, personalized quick response (QR) codes, or other methods (Moore & Prichard, 2017; Alm et al., 2020). These innovations for enhancing tax payment through the expansion of allowed channels has resulted in significant improvements in on-time payment indicators.⁶

2.1.3 Verification, control, and audit

The "verification and control" function is a main part of tax enforcement. It includes all actions undertaken by tax administrations aimed to verify that the information provided by taxpayers and third parties is accurate and that tax returns and payments have been correctly executed. The importance of this function is twofold. First, empirical evidence shows a positive

⁶ ISORA 2020 indicates an acceptable level of on-time payment, with some differences between taxes with an average of 79.1% in the CIT, 77.7% in PIT and 85.8% in VAT. The use of electronic channels for payment represents a growing trend: 57.0% of global payment instances for 60.9% of total amount paid (Moran & Diaz de Sarralde, 2021).

correlation between larger controls and tax audits with increases in tax collections (Keen & Slemrod, 2016; Kasper & Alm, 2020). Second, verification and control is also crucial to support voluntary tax compliance, to the extent that taxpayers tend to be more prone to such compliance when they perceive that their tax administrations are committed to pursuing fraudulent behaviors (Beer et al., 2019).

Because there are typically large numbers of taxpayers and because careful audits tend to be expensive, the verification and control function has evolved in two directions. On the one hand, there are *extensive controls*, applied to the whole or many taxpayers, aimed to verify the accuracy of the information provided by taxpayers with other data that tax administrations can collect themselves. These controls are supported with instruments such as “information cross checking” or “information provided by third parties” and are applied in discriminating ways to groups of taxpayers depending on the economic sector of their activity or the taxpayer category (large taxpayers, self-employed, etc.). On the other hand, tax administrations carry out *intensive controls* in which some groups of taxpayers are selected for deeper controls and integral tax audits. Several criteria have been traditionally employed for taxpayers’ segmentation in order to identify who should be subject to those intensive controls; those include the economic sector in which they carry out their activity, the category of the taxpayer according to the volume of collection that they should contribute, changes in the path of taxpayer behavior, information supported by the “International Exchange of Information,” etc. This segmentation of targeted taxpayers for deeper tax audit has normally been supported by “risk management models” that evaluated the probability of individual taxpayers or groups of taxpayers being more or less non-

compliant.⁷

To show best practices followed by tax administrations to improve the control and audit function, we can distinguish between two large groups of initiatives: improvements in information collection and taxpayer monitoring and improvements in tax administration performance.

Taxpayer monitoring improvements

Better access to taxpayers' information by tax administrations is a key element to strengthen tax enforcement. Only by having access to information on taxpayers' income, wealth, and consumption patterns can tax administrations effectively carry out the tasks of control, inspection, and fighting against tax evasion. Thus, technological change and digital developments in society at large have facilitated significant improvements in the task of monitoring taxpayers.

First, technological improvements, with new instruments such as “cloud computing,” have exponentially increased the possibilities for storing and managing financial and tax information data, gathered either from the taxpayers themselves or from third parties.

Second, technological advances have brought an unprecedented development in multiple instruments used by tax administrations to collect information from third parties both public and private. This yields not only a greater ability to know the amounts individuals' incomes and companies' profits, but also improves the knowledge of sales and operations developed between companies (Carillo, Pomeranz, & Singhal, 2017). Similarly, the extensive use of credit cards and

⁷ ISORA 2020 survey allow to analyze the effectiveness of these control procedures in countries included in the survey. It is observed that 67% of the control actions carried out a positive adjustment for tax liabilities and collections. The additional collection generated yields about an overall return of 4.7% of net tax revenues, with different earnings according to the type of taxes: 8.7% (CIT), 2.8% (PIT) or 3.8 % (VAT). The data also show that these actions were much more effective in low-income countries (91.5%) than in high income ones (58.1%) (Moran & Diaz de Sarralde, 2021).

smartphone applications to engage in commercial activity generates a significant amount of information, leaving a digital footprint that allows an administration to follow the taxpayer's activities and verify the accuracy of their tax reports (Alm et al.,2020; Alognon, Koumpias, & Martínez-Vázquez, 2021).

As an illustration, regarding indirect taxes, the extension of the electronic invoice and the introduction of mandatory regulated cash registers are leading to more effective control of commercial operations (Pomeranz, 2015; Bellon et al., 2019; Moran & Diaz de Sarralde, 2021). Regarding wealth taxes, better online access to information from property cadasters has led to better valuation of properties for tax assessments even as it also enhances the possibility of analyzing large datasets on real estate transactions to improve control on these sources of wealth (De Mello & Ter-Minassian, 2020). Finally, the implementation of sensors connected to public services can allow greater administrative control over their use by citizens and expand the possibilities of applying fees on users (De Mello & Ter-Minassian, 2020).

Additionally, technological change has increased options to manage and share data that is already collected and held by governments. Some of these improvements include the development of data sharing across divisions within tax administration departments or even with other public agencies (Moore & Prichard, 2017; Alm et al., 2020). A deserved special mention in this vein is the improvements developed in the field of international information exchange that have made it possible to overcome the logistical barriers that existed to sharing information in the international arena (Alm et al., 2020; OECD, 2018).

Finally, it is worth considering that advances in data science have made possible new tools that allow tax administrations to better monitor tax returns and transactions, which eventually can be subjected to more in-depth controls. Many of these tools can even operate in

real time and thus allow tax administrations to generate automatic reviews of tax returns or tax information recently submitted by taxpayers.

Tax administration performance improvements

Along with improvements in taxpayer monitoring, other important measures include developments to expand the tax administrations' audit capacity while reducing opportunities for tax evasion and avoidance.

One of the main measures aimed at optimizing the resources dedicated to audit tasks has been the use of risk selection models for better identifying cases meriting deeper audit. Risk-based audit models classify taxpayers by assigning them a score or value according to whether they are more or less likely to have non-compliance risks associated with their tax obligations. This risk assessment is typically carried out by analyzing the role played by different taxpayers' features and characteristics. Technological advances have allowed relevant improvements in this approach. First, advances in data analytics have made it possible to improve the risk prediction models that are used to select those groups of taxpayers that should be subject to greater controls and tax inspections (OECD, 2016). Second, Artificial Intelligence (AI) developments have paved the way for machine learning models that generate tools capable of anticipating possible fraudulent behaviors based on past trajectories (De Mello & Ter-Minassian, 2020).⁸ Finally, the development of blockchain technology anticipates possible developments for better control of the operations carried out by all kinds of taxpayers (Alm et al., 2020).⁹

⁸ A recent example in Latvia shows the potentialities of machine learning in order to classify compliant and non-compliant firms regarding labor taxes (Gavoille & Zasova, 2021).

⁹ ISORA 2020 shows an increasingly widespread use of these tools. Of tools that are fully implemented or in the mid-implementation phase, those related to "Data Science" are currently the most widespread at 65.4% of ISORA countries. In second place comes "Cloud Computing," with implementation rates of 41.7%. Tools related to "artificial intelligence" and "machine learning" are used in 37.2% of ISORA countries. Blockchain technology seems to be the least developed, with only 8.3% of countries exploiting it so far (Moran & Diaz de Sarralde, 2021).

Complementarily with technological developments, wider legislative frameworks have also been strengthened to encourage tax collectors in their audit tasks. However, there are differences according to the type of powers granted and the structure of different tax administrations. According to ISORA data for 2019, most tax administrations surveyed have been given broad powers to request information for tax purposes from both taxpayers and third parties without consent or court warrant. Likewise, there are tax administrations that themselves have powers to carry out registration operations, while others have to request them from the holders of judicial powers. However, when it comes to taking actions "without consent or court order," the picture is more mixed, because citizens' rights might be challenged by such action. More than 60% of the administrations surveyed state that they have the ability to enter commercial premises, slightly less than half have the power to seize documents, but only 5% claim to have the power to enter the taxpayer's home without consent or court order (OECD, 2019).

2.1.4 Collections

Over recent years, tax administrations have developed great improvements in taxpayer assistance instruments for filing tax returns and paying tax liabilities, all of which have contributed to generally achieving better collection indicators. However, it is still quite usual in the international practice to find abundant cases of outstanding tax returns, tax arrears, and outstanding debts.

One of the main strategies is a preventive approach, focusing on developing measures to prevent tax debt arising in the first place. This approach enhances, on the one hand, all those measures aimed at strengthening taxpayer information and assistance services, by facilitating the filing and payment by those taxpayers who are willing to do the right thing but are not always able to do it. On the other hand, tax administrations are developing empirical experiments,

fundamentally based on the methodological advances offered by behavioral economics, for trying to investigate reasons why taxpayers are late in filing and paying and identifying what types of actions can encourage better compliance. For this approach, taxpayers' fiscal trajectories are analyzed to identify trends and possible anomalies in behavior, as well as studying the operation of the incentive system that conditions behaviors (OECD, 2016, 2019; Andersson et al., 2021).

A second strategic approach to reduce debt accumulation is to strengthen taxpayers' assistance programs to support them in the correct managing of tax debt or payment, as well as to facilitate taxpayers' compliance (OECD, 2019). Illustratively, many tax administrations do have instruments aimed to facilitate management of outstanding debts, such as the formulation of payment agreements, the possibility of offsetting debts with tax refunds of other taxes, the possibility of demanding tax settlements to receive subsidies or to contract with government, and the reduction of interest or other penalties on taxpayers. Additionally, other measures that also serve to enhance compliance and diminish tax debt arrears are being used, including: the use of third-party collection via banks and employers, garnishment orders over salaries and property, withholding government payments to tax debtors, collecting disputed tax while the disputed cases are under administrative review, and collecting tax arrears through agreements with other tax administrations.

A third approach is made up of measures aimed to enforce the payment of debts (OECD, 2019c). In this regard, tax administrations use many different tools and legal procedures, but it is important that their use be effective and proportionate. Some of these instruments include obtaining liens over taxpayers' assets, imposing liability on company directors for certain company tax arrears, initiating bankruptcy or liquidation procedures, publishing the names of

debtors, denying delinquent taxpayers access to certain government services, temporarily closing a business or withdrawing a license, and imposing restrictions on overseas travel. A more recent measure to enforce debt payment, which started in an experimental mode but has become widely practiced, is the organization of “Outbound Call Centers,” whose specialized performance has yielded significant efficiency gains in the collection of outstanding debts.

2.1.5 Disputes and appeals

Taxpayers and tax administrations do not always agree on the amount of taxes to be paid. This may be due to the different interpretation of the tax laws, misinformation, or even in the concrete way an audit process may be developed. Thus, the existence of a formal procedure to resolve disputes is a necessary guarantee to protect taxpayers’ rights and to balance the relationship between tax administration and citizens.

Tax administrations regularly work on improving dispute resolution processes and the timeliness of processing objections, as further contributions to a better functioning of the tax system. Such efforts offer dual benefits: to the taxpayers, should they choose to file a claim, enhanced dispute resolution processes reduce taxpayers’ compliance costs, and for the government, the process allows the administration to achieve more effective collection of tax debts in cases of conflict.

All tax administrations guarantee the right of taxpayers to challenge tax assessments and have established formal procedures for it. These procedures are usually carried out first with a review by an internal body within the tax administration itself; after that, there is the possibility of going to a subsequent judicial review. Some administrations offer taxpayers the option to request an independent review by an external body as a first step, which can help clarify the dispute and reinforce the taxpayers’ legal security. Some administrations even have an

Ombudsperson service for the increased protection of taxpayers. Almost all tax administration systems have developed these procedures through Administrative Courts or ad hoc Offices specializing in conflict resolution.

There are several important innovations that tax administrations have developed to improve the timelines involved in the taxpayer objections process. Some tax administrations (for example, Canada) have implemented a triage function for a more agile selection of disputes presented by taxpayers in certain low-complexity taxes. This function allows an optimal ordering of the challenges according to their degree of complexity, facilitates the request of additional information from the taxpayer, and prepares the claim files for a speedier resolution. Another innovative measure has been the development of a feedback loop approach that seeks to analyze and evaluate results obtained in the conflict resolution to identify reasons why they were decided in favor of taxpayers, in order to minimize future claims and improve disputes resolution procedures in the future (OECD, 2019).

2.2 Trust and further challenges for tax administrations' reformers across developed and developing countries

Compliance levels around the globe are higher than we could expect from the predictions of the “catch and punish” paradigm (Allingham & Sandmo, 1972). Though traditional tax enforcement stands out as a completely unavoidable task to ensure lower tax fraud levels (Ariely, 2010), the fact is that evaders must have not only the opportunity and the ability to commit evasion, but also the will to engage in it (Elffers, 2000; Kleven et al., 2011). The bottom line is that, in most cases, voluntary tax compliance would appear to be higher than the traditional “rational” models of tax evasion would anticipate. So the big question is—why? The answer, which has been extensively researched, lies in the presence of tax morale, the intrinsic willingness to voluntarily pay taxes based on social and individual norms.

The link between compliance and tax morale (or why people pay their taxes voluntarily) has gained enough causal support to become one of the most accepted political economy determinants for enhancing compliance levels (Cummings et al., 2009; Halla, 2012; Luttmer & Singhal, 2014; Koumpias & Martínez-Vázquez, 2019). In other words, improving citizens' tax morale has become the third core pillar (mutually reinforcing enforcement and facilitation) for designing modern tax administrations' strategic tax compliance programs.

For an illustration of the connections between tax morale and the enforcement and facilitation paradigms, we can focus on the importance of tax codes' design. Simpler and more stable tax laws not only promote a more efficient auditing process and reduce compliance costs, but also enhance voluntary compliance (Bird, 2004; Jacobs, 2013). This result seems to hold true even for small and medium enterprises (SMEs) in developed countries, for which has been found that “administrative relief” in the form of diminishing compliance costs yielded a greater increase in voluntary compliance than did monetary tax benefits (Bergner et al., 2017).¹⁰

According to the most recent empirical literature, tax morale determinants might be ascribed to three dimensions: (i) citizens' socioeconomic characteristics and values—gender, civil status, age, educational and levels, work status, risk aversion, financial satisfaction and even happiness, ideology, national pride, altruism, religiosity, and ethics;¹¹ (ii) people's views about other's tax compliance behavior—that is, the general level of evasion, tax horizontal inequities, different tax evasion opportunities and tax compliance performance among social groups;¹² and

¹⁰ An additional example of this effect is found in concrete initiatives connected to technological advances, such as prefiled returns, which might positively influence voluntary compliance through diminishing compliance costs as well as enforcement and facilitation (Lee, 2016; Kochanova et al., 2020; Benzarti, 2020).

¹¹ In a recent survey, Martínez-Vázquez (2021) emphasizes how married, older, female, more educated, and more satisfied people exhibit greater tax morale, as well as those that share personal values against evasion.

¹² For example, perceived widespread tax evasion and/or horizontal tax inequities erode citizens' tax morale (respectively, Sandmo, 2005, and Clotfelter, 1983).

(iii) beliefs and opinions (including trust) about the government institutions, performance, and size. Within the latter, along issues related to democratic participation, territorial organization, and fiscal exchange represented by the tax and benefit systems, the literature has especially emphasized how trust in government (meaning “government” in a broad sense), as well as people’s views about the tax administration itself, have the potential to influence citizens’ tax morale (López-Laborda & Sanz-Arcega, 2016; Horodnic, 2018; Koumpias, Leonardo, & Martínez-Vázquez, 2021).

Though socio-demographics and social norms matter (Alm et al., 2020), the empirical evidence on tax morale offers great opportunities for tax administrations as well as for the public sector as a whole for increasing revenues. In what follows, we focus on the empirical evidence on these two issues, bearing in mind, first, that better institutions reinforce themselves (Chang, 2010), and second, that formal institutions must be aligned with informal ones to prove successful (North, 1990).

Building trust in the government in order to enhance compliance goes even beyond pure taxation issues (Dom, 2019). An uncontested result that stands out in the literature is the harm that corruption does on tax morale. Likewise, operating the other direction, the perceived institutional quality and satisfaction with the public sector enhances citizens’ tax morale (Torgler & Schneider, 2007). In this vein, a recent paper on Tanzania emphasizes how business professionals’ satisfaction with public services promotes voluntary compliance (Fjeldstad et al., 2020).¹³

Moreover, Koumpias et al. (2021) provide further evidence about the superior effect of

¹³ In the same sense, this satisfaction operates on business professionals’ perception of their counterparts’ compliance levels, which poses an additional link in the chain of the interconnections between the different dimensions of tax morale determinants.

“output government institutions”—police, civil service, tax administration—over “input organizations”—such as the parliament—on tax morale.¹⁴ This result might be even stronger for countries where the informal economy plays a major role (Joshi, Prichard, & Heady, 2014).

In sum, the quality of (and satisfaction with) governmental institutions as a whole have the potential of positively influencing citizens’ tax morale (and thus compliance). At the same time, the former is also a prerequisite for successfully implementing tax policy. Ultimately, a successful comprehensive tax reform may rely on the existence of an environment of trust between tax agencies and other public institutions (Fjelstad & Moore, 2007).¹⁵ Unsurprisingly, both results hold for developed and developing countries.

Along this line of reasoning, we need to highlight and focus on the different methods for enhancing trust in the tax administrations themselves. This task may be achieved through different pathways that converge in stimulating taxpayers’ perceived fairness of tax policy and how it is administered, both of which enhance tax morale.

As we saw above, in the case of public institutions as a whole, avoiding corrupt practices emerges as an unavoidable prerequisite upon which citizens’ trust can begin to be built. In this regard, citizens’ perception of fairness is thus conditioned by the way taxpayers interact (or may think they interact) with tax administrations, which does make a great impact on people’s trust in the tax administration as a whole, either enhancing or eroding tax morale (Forum on Tax Administration, 2010). As an illustration, the effect of prefilled income tax returns on Spanish taxpayers’ tax morale depends to a great extent on the citizens’ perception of how fairly this technological innovation in tax administration actually works (Martínez-Vázquez & Sanz-

¹⁴ The same result about trust in the police was achieved by Leonardo and Martínez-Vázquez (2016).

¹⁵ In the same sense, Kristiaji and Poesoro (2013) provide evidence about the connection between governance, democracy, and SARAs’ performance.

Arcega, 2020).

Organizational issues can also be addressed in order to reduce civil servants' incentives to engage in corruption. As summarized by Moore and Prichard (2017: 18), "experience tells us that any organization that combines (a) a guaranteed income, with (b) the potential to intimidate individual citizens and businesses, and (c) weak public accountability, will be tempted to abuse that situation. Both corruption and organizational laziness will likely result."¹⁶ In contrast, enhancing tax collectors' accountability (and even kindness) leads to higher trust in tax authorities (Feld & Frey, 2007; Prichard et al., 2019), ultimately enhancing tax morale and compliance.

In this regard, as it is the case for good practices under the enforcement and facilitation paradigms, the perceived fairness and simplicity of the tax code itself may reinforce or harm tax administrations' efforts for enhancing citizens' trust in them (Falkinger, 1988; Pyle, 1993; Andreoni, Erard, & Feinstein, 1998; Alm & Gómez, 2008; Alm, 2012). In fact, tax collectors have no choice but to apply whatever tax law has been enacted by government. This is an additional reason not to view in isolation any of the three modern paradigms for increasing tax compliance.

Overall, in a practical sense, all the advice above on the need for improving citizens' perceived fairness must be generally implemented in environments where deep differences coexist across groups of individuals regarding their attitudes towards paying taxes (Beer et al., 2019; Alm, Enani, & McKee, 2020; Battaglini et al., 2020). In other words, traditional policy design aimed at stimulating citizens' trust in tax administrations—improving tax education,

¹⁶ In the case of India, a recent paper by Khan, Khwaja, and Olken (2016) emphasizes how tax collectors' payment system might condition the engagement in corruption practices.

giving more information about the revenue-spending trade-off, training tax collectors' sympathy, etc.—and even those designed for enforcement (Andersson et al., 2021) must exploit the behavioral insights gained under the trust paradigm to become more efficient. For example, there is considerable evidence that it does matter “what” and “how” is messaged to different profiles of taxpayers.¹⁷

All of these dynamics simultaneously pose two complementary challenges. On the one hand, investment in digitalization stands out as a key prerequisite for successfully figuring out the basics of accurate taxpayer profiles. On the other hand, despite the power of digital tools, deep research to disentangle taxpayers' profiles remains a time-consuming task to be carried out by highly skilled staff. Both tracks need to rely on the financial sufficiency of tax administrations and must support one another.

In the globalized era of digitalization, building trust and enhancing tax morale must be implemented in tailored and targeted ways. This can only be achieved through both increasing and reorienting tax administrations budgets.¹⁸ Only then will the benefits of the most recent insights in tax administration operations be reaped.

3. Tax Administration Institutional Design

The overall efficiency of tax administration services has always deeply depended on organizational design. The most recent advances introduced in the three main drivers of tax compliance (enforcement, facilitation, and trust) also require new organizational designs.

In this way, different areas in a modern tax administration system (strategic planning,

¹⁷ An example of the like would be the impact of media campaigns on compliance (see the recent evidence observed by Koumpias and Martínez-Vázquez, 2019), a result also showed in lab experiments (Fisar et al., 2021).

¹⁸ Empirical evidence affirms the higher responsiveness of revenues total increases in OCED countries devoting more resources to tax authorities (Akgun, Bartolini, & Cournède, 2017).

operational tasks, human resources, etc.) are in continuous readjustment, especially in changing technological environments. In recent years, the empirical evidence on tax administration shows a variety of experiences in organizational reforms. However, not all the reforms that have been introduced have proved successful. We profile some of the most common and most successful organizational patterns and reforms.

3.1 Optimal organizational structure

A broad debate has arisen on the design of the optimal organizational structure for tax administrations. Different alternatives have been tested, among which can be highlighted a structure “by types of taxes,” a “functional structure,” or a structure “by types of taxpayers” (Gallagher, 2004; Jacobs, 2013b; Junquera et al., 2017).

The most traditional organizational scheme that can still be found in many countries is the “type-of-tax” structure that distinguishes separate departments for each tax (income, VAT, excises, social security, etc.). However, this scheme has shown different problems: inefficiencies due to the repetition of functions for each tax figure, fragmentation of resources for enforcement in different departments, and lack of coordination and data sharing among tax administrations’ departments. All these caveats lead to higher compliance costs, multiple registrations, and overlapping controls and audits, ultimately leading to higher tax evasion and avoidance rates.

A generalized trend in developed countries, also followed by many developing ones, has been to implement a “functional structure,” with a tax administration structured by functions or type of work performed (registration, assessment, control and audit, collection, appeals, etc.). This scheme allows the grouping together of functions that require similar skills and entails a greater specialization with efficiency gains. This design has showed multiples advantages: more efficient identification of taxpayers; standardization of similar processes across all taxes and

improvements in data computerization; effectiveness in collection and audit since all on a given taxpayer's taxes could be examined simultaneously; improvement in services facilitation in each function even with segmented treatment by type of taxpayer; improvement in detection of noncompliance due a full taxpayers' monitorization across types of taxes; etc. Nevertheless, this scheme has some disadvantages, such as the need for a higher level of training for officers, with staff become specialized in one function. From the taxpayer's point of view, this scheme also generates advantages, such as simpler and more standardized procedures, diminishing costs of compliance by eliminating duplication of visits, better possibilities of assistance, etc.

A third option in development in many countries has been a "type of taxpayers" structure, with a tax administration organized in departments dedicated to specific categories of taxpayers (large taxpayers, small taxpayers, high-wealth individuals, pay-as-you earn individuals, self-employed persons, microbusinesses, informal sector firms, etc.). The foundation of this scheme is to take advantage of a segmented treatment of certain groups to the extent that they present specific characteristics, varied tax compliance behavior, or different levels of risk for revenue loss. However, this scheme has showed some problems that have stopped a generalized implementation: greater administrative costs because staff and functions are repeated across taxpayer segments, fragmentation of staff specialized only in one segment, problems derived from an inconsistent application of tax laws and procedures across different taxpayer segments, etc.

All in all, empirical evidence shows the predominant trend has been the progressive replacement of the most traditional "types of taxes" structure by the implementation of "functional structures" mixed with some specific segmentation of taxpayers, with a special attention to large taxpayers and businesses subject to international taxation.

3.2 Tax administrations reforms

Merger of customs and tax administration

This option has had special significance in developing countries that usually rely heavily on customs duties, VAT, and excises collected on imports. An increasing number of developing countries (especially Latin American ones), following the experience of developed countries, have opted for this merger, looking to capture efficiency gains on collection due to greater sharing and exchange of information, the simplification of procedures and a closer coordination. However, this trend is not generalized in all developing countries and in some areas, such as the Asia-Pacific region, this merger isn't usual.¹⁹ There are many guidelines that justify an independent operation of these departments. Both administrations present important differences in their origins and foundational bases. Customs particularly differs from standard tax administration in its their objectives, having the special functions in addition to collection that are related to national security and health; in its tools, procedures, and operational functioning, with tax administration functioning retrospectively and customs in real time; and in its operational features, of which customs shares some aspects similar to a police or national security department.

Creation of specialized units

A successful trend in tax administration design has been the creation of specialized units in certain taxpayers' segments or activities that require special focus (Basri et al., 2021). Some examples are the introduction of "Large Taxpayers Units" (LTUs), which provide specific attention to those with high contributions to collections; "International Tax Units" (ITUs) which require specially-qualified personnel both due to the complexity of the potentially audited (international) tax schemes and the need for specialized tools for the international exchange of

¹⁹ In the Asia-Pacific region, none of the 22 revenue bodies surveyed by the Asian Development Bank in 2014 had a customs administration function (ADB, 2014).

information; the creation of centralized “Data Processing Centers” (DPCs), which allow realization of economies of scale by sharing information for several offices, such as registration, tax return processing and payments; or, finally, the introduction of “Management Risk Analysis Units” (MRAUs) which require special qualifications to manipulate large amounts of data and analytical skills to assess taxpayers’ different risk profiles.

Semi-Autonomous Revenue Authorities (SARAs)

There have been also reform initiatives aimed at promoting greater functional independence from political interference and increased professionalism in tax administrations, especially in country environments with inefficient and even corrupt bureaucracies. Accordingly, some Latin American and African countries have introduced “Semi-Autonomous Revenue Authorities” (SARAs), entities endowed with broad performance autonomy and partly or fully removed from the direct control of a ministry or department of finance. Their managers have great independence to direct the organization, including large capacities to alter their structure and broad powers in hiring and firing staff and offering them better salaries and work conditions. SARAs’ aim was to remain isolated from political interferences that could lead to corruption and fraud (Junquera et al., 2017; Ahlerup, Thushyanthan, & Bigsten, 2015).

So far, the empirical evidence for some countries is that the creation of SARAs has not always produced greater revenues in a sustained manner; the weakest point appears to be the general difficulty of keeping the autonomy of management and special conditions for the staff, with recurrent problems of corruption and politicization eventually cropping up in some of these organizations (Dom, 2019).

Privatization and tax farming

There have also been experiments with the privatization of some taxes and "tax farming methods," especially at the local level; in these cases, the collection for smaller taxes is delegated

to private entities in exchange for a percentage of the revenues collected. Results of these initiatives have been mixed. In some places, these initiatives have achieved greater collections, but in other cases, they have led to problems with corruption at the contracting phase, arbitrariness in the enforcement of the law, or duplicate costs (Iversen et al., 2006; Khan, Khwaja, & Olken, 2016).

Human resources

Other initiatives have also been developed in the human resources area aimed to improve the skills and performance of tax officers. Most of these organizational reforms are accompanied by salary increases and improvements in working conditions. To the extent that revenue collection is essential for the overall country's performance, the incentive system for tax collectors is usually more generous than in the case of other public agencies, in an attempt to encourage recruitment and performance (Schreiber, 2018). There have been also initiatives to improve staff monitoring and to reduce opportunities for collusion and corruption, such as reduction of personal interactions with taxpayers, automation of process and audit selection, development of tax payments online or at banks etc. All these measures, where introduced, have generally contributed to more professional and productive tax administration organizations.

4. Concluding Remarks: Lessons for tax Administration Reform

The processes of globalization and digitalization have introduced deep changes in the behavior of economic agents and how business is conducted (new business models, greater mobility of tax bases, etc.), which have directly challenged the effectiveness and overall performance of tax administrations around the world. At the same time, these very processes have also provided new opportunities for tax administrations to better manage compliance and tackle non-compliance.

The most important challenge for successful tax administration reform to overcome may not be technical but social. Tax administration must strive to reach a broad social and political consensus on its need and importance to society, especially for emerging and low-income countries (Akitoby et al., 2018; Bierbrauer, Boyer, & Peichl, 2021). This poses the need for first acknowledging the political feasibility of any future reform as a precondition for successful implementation. Therefore, tax administration reform has to account for the concrete institutional framework in which the country operates. As in the case of tax policy reform, there is also always some degree of path dependence, meaning it is not possible to start the reform process from a clean slate. However, this does not mean that countries must not innovate; indeed, the international experience offers a wealth of lessons and practices to undertake those innovations and enable the modernization of the country's tax administration.

In this paper we have described a long list of international best practices for tax administration reform under the three modern paradigms: enforcement, facilitation, and trust. Overall, two issues decisively influence the outcomes of tax administration reform.

First, it must be borne in mind the importance of the tax code design since it is well-established empirically that, *ceteris paribus*, simpler and more stable tax laws facilitate compliance (even promoting voluntary compliance), as well as easing monitoring and enforcement (Bird, 2004; Jacobs, 2013a).²⁰

Second, the three modern paradigms for improving tax compliance must not be viewed or applied in isolation of each other. The rationale for this is clear from the fact that tax evasion decisions are driven at first by a rational calculus of the pros and cons of engaging in tax fraud—

²⁰ Recent realities such as e-commerce put a huge emphasis on the importance of the quality of regulation (Agrawal & Fox, 2016).

the amount of money saved versus the audit probability and the potential fine that would be imposed—but the final stage of the decision process involves the cost of compliance, the information available, and also the values and social norms of taxpayers, especially the trust they have in governments and in the tax administration in particular. Encouraging citizens' tax culture is thus an increasingly important lever within the tax compliance policy toolkit (OECD, 2021b).

Overall, it is tax administrations' institutional design that stands out as the necessary precondition for the successful implementation of reforms seeking to improve tax compliance. Ultimately, the effectiveness of any reform will rest on the presence of a broad sociopolitical consensus regarding the need to increase tax collections and on the financial sufficiency and managerial efficiency of the tax agency in question.

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