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# Personal Income Taxes in the Middle East and North Africa: Prospects and Possibilities

Mario Mansour and Eric M. Zolt

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**Personal Income Taxes in the Middle East and North Africa: Prospects and Possibilities**  
Prepared by **Mario Mansour and Eric M. Zolt\***

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**ABSTRACT:** Personal income taxes (PITs) play little or no role in the Middle East and North Africa, often yielding less than 2 percent of GDP in revenue—with the exception of few North African countries. This paper examines how PITs have evolved in recent decades, and what they might look like in the next 20 years. Top marginal tax rates on labor and business income of individuals have declined substantially, a trend that mirrors reductions in advanced and developing economies. Taxation of passive capital income has changed very little, and the revenue intake from this source remains low throughout the region (less than 1 percent of GDP on average and concentrated in oil-importing non-fragile states). Social security contributions (SSC) have increased in importance in nearly all MENA countries, and some countries have introduced additional payroll taxes. The combination of reduced marginal tax rates, light taxation of income from capital and business activities, and increase of SSC, have resulted in income tax systems that create disincentives to work and incentives for informality, and contribute little to government revenue and income redistribution. Given differences in economic and political structures, demographics, and starting points, the path to PIT/SSC reforms will vary across the region. Countries with relatively mature PIT/SSC systems, where revenue performance has improved in the past two decades, will increasingly need to balance the revenue and equity objectives against efficiency objectives (in particular labor market incentives and informality). Countries with no PITs will have to weigh whether a consumption tax/SSC system that mimic a flat tax on labor income is sufficient to diversify revenue away from oil and whether to adopt PITs to address rising income and wealth inequality. Finally, fragile states, who face more political volatility and weaker fiscal institutions, will have to focus on simplicity of tax design and collection to be able to raise revenue from PITs.

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Author’s E-Mail Address:	<a href="mailto:mmansour@imf.org">mmansour@imf.org</a> ; <a href="mailto:zolt@ucla.law.edu">zolt@ucla.law.edu</a>

\* Respectively, Division Chief, Fiscal Affairs Department, International Monetary Fund, and Michael H. Schill Distinguished Professor of Law Emeritus, UCLA School of Law, and Extraordinary Professor, African Tax Institute, University of Pretoria. Views expressed are the authors’ and do not necessarily represent those of the IMF, its Executive Board, or IMF management. The authors would like to thank Julieta Raquel Ladronis and Fernanda Morales for excellent research assistance, and for their comments, Marwa Alnasaa, Cristian Alonso, Juan Carlos Benitez, Brenden Crowley, Ruud de Mooij, Michael Keen, Priscilla Muthoora, Rose Nyongesa, Fadia Sakr, Elife Ture, and Charles Vellutini. An earlier version of this paper was presented at the Canadian Tax Foundation’s conference *Public Finance in the Real World: A Symposium in Honour of Richard Bird* (April 2022).

WORKING PAPERS

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Prepared by Mario Mansour and Eric M. Zolt

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## Glossary

CIT	Corporate Income Tax
EATR	Effective Average Tax Rate
FCS	Fragile and Conflict State
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
MENA	Middle East and North Africa
PAYE	Pay-As-You-Earn
PIT	Personal Income Tax
SSC	Social Security Contributions
SATR	Statutory Average Tax Rate

# I. Introduction

Personal income taxes play little or no role in most countries in the Middle East and North Africa (MENA),<sup>1</sup> yielding on average about 2 percent of GDP in revenue. Like all countries, MENA countries must reassess the extent to which their tax systems can cope with restoring some degree of normalcy in a post-pandemic world and providing an adequate base for future growth and development. Although no simple answer can possibly be right for such a diverse set of countries, the question is particularly salient with respect to the personal income tax (PIT). Like other taxes, PIT could be an important source of revenue. A well-designed PIT may also play a key role in redistributing income and may be potentially important in strengthening the political base for sound government. Taxpayers are more willing to pay taxes if they believe that governments spend tax revenues on programs that benefit people like them or programs they value, that others are paying their fair share of tax, and that they have some role in making tax and spending decisions (Brautigam, Fjeldstad and Moore, 2008). While it is often both politically and administratively easier to raise needed revenues through indirect taxes like VAT and excise taxes, in countries with high levels of income and wealth inequality, a well-designed PIT can play an important role in raising revenue, reducing inequality, and in developing a more inclusive society.

This paper seeks to assess the role of PIT systems in MENA countries. We take a long-term view of PITs, by examining what they looked like at the turn of the century and how they have changed since, and what they might look like in the next 20 years. The key question is easy to state: should MENA countries adopt a PIT regime, or for those who already have a PIT, should they substantially strengthen them and how? The answer is a lot more challenging. It may depend on the time horizon of policymakers, the objectives they intend to achieve with PITs, as well as a host of economic, demographic, institutional, and political factors.

Several reasons exist to review the role of the PIT in MENA countries. First, probably because of the small role the PIT plays in most of these countries, little analysis exists that examine them in detail.<sup>2</sup> Over the last 20 or so years, policymakers have not paid too much attention to the taxation of individual incomes, although in nearly all countries social security contributions (SSCs) have increased, and some countries introduced payroll taxes in addition to PITs. More recently, the primary focus of fundamental tax changes in the region has been the introduction of VATs and excise taxes in Gulf Cooperation Council (GCC) countries.<sup>3</sup>

Second, all countries in the region face pressure to maintain or increase spending on social programs. The economic and social impact of the pandemic will increase both the level of government spending and the challenges in raising tax revenue. Resource-rich MENA countries need to diversify their revenue base to replace declining oil revenues, manage the fiscal implications of oil price volatility, and introduce climate mitigation policies to counter the impact of CO<sub>2</sub> emissions. While these countries have faced revenue volatility in the past, this time is different. Many of these countries have “notched in” higher living standards, generous subsidies for food and fuel,<sup>4</sup> and other social spending programs—all requiring additional non-resource revenue to sustain them.

Third, like other regions, there is greater attention in MENA countries to levels of income and wealth inequality and the role taxation may play in reducing inequality. MENA countries likely have the highest level of both income and wealth inequality in the world (Alvaredo, Assouad, and Piketty, 2018). The PIT is the tax instrument that has the greatest potential for reducing income inequality, but it has limited impact on reducing wealth

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<sup>1</sup> MENA can be, and has been, defined in many ways. Annex 1 lists the countries and subgroups considered here, which follow the IMF’s regional classification. The two subgroups are oil-exporting and oil-importing countries. We also note those countries that are fragile and conflict states.

<sup>2</sup> Recent studies covering some aspects of PITs include Mansour (2015), Jewell and others (2015), IMF (2016) on a proposal for a business profit tax for GCC countries, and IMF (2022). None of these studies extend the analysis of personal income taxes to social security contributions, an increasing channel through which governments in MENA have been raising taxes on labor income.

<sup>3</sup> The GCC is a regional intergovernmental union consisting of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The GCC is also a customs union.

<sup>4</sup> These include tax subsidies, such as reduction in VAT and excises, which tend to be cost-ineffective as they benefit consumers irrespective of income levels. Some, such as low or zero excises on fuel products, are also detrimental to the environment, as they increase externalities associated with consumption of fossil fuels.

inequality.<sup>5</sup> The few PIT reforms in the region in recent decades took the form of reductions in top marginal tax rates without any meaningful improvement in taxing income from capital. This likely reduced the progressivity of the PIT, at a time when issues related to equity and inclusiveness play a more prominent role in policy debates (Jewell and others, 2015; Purfield and others, 2018).

Fourth, several developments improve the likelihood that countries could successfully adopt a PIT or strengthen existing ones. Most MENA countries have VATs that increased tax administration capacity and effectiveness over the past three decades (and more recently in GCC members), which may be transferable to PIT regimes. Changes in technology and digitalization, business practices, and payment methods have the potential to improve information available to tax authorities, a key element for a successful implementation of PIT regime. Across regions, greater cooperation among tax authorities will increase transparency and provide access to information about taxpayers' activities and financial holdings outside their country of (tax) residence.

Fifth, over the last 70 or so years, policy advisors, academics, and others have focused on the evolving role of the PIT, as well as on how nominally global, comprehensive, progressive PITs fail to tax certain sources of income and different types of taxpayers. More recently, the focus has been on the role taxation (particularly the PIT) can play in making governments more accountable and transparent. The potential for PIT regimes to contribute to "state-building" depends on some type of fiscal contract between taxpayers and the government, as well as a political environment that allows such bargaining. These developments may influence both the decision of whether to have a PIT, as well as design considerations for new and existing ones.

Finally, the diversity of MENA countries, in terms of natural resource endowment, fragility, and political systems, should provide lessons that could be useful for other regions and countries around the world.

This paper has three main sections. Section II examines different alternatives for adopting or reforming PITs, as well as the economic and political factors that may influence policy choices. Section III assesses how PIT systems have evolved in the MENA region since 2000, paying particular attention to their revenue contribution, their progressivity (or lack of) and the role of social security contributions (SSCs), which have become more prominent in the region in the past two decades, including in GCC countries. Against this background, Section IV then suggests possible reform strategies. Section V concludes. Throughout the paper, we divide MENA countries into two groups: oil-exporting countries,<sup>6</sup> and oil importing countries.<sup>7</sup> This division roughly corresponds, respectively, to countries with no PIT or a PIT that raises little revenue and countries with a relatively robust PIT and the tax administration capacity to collect substantial revenue. We also consider fragile and conflict states (FCSs),<sup>8</sup> which have their own particularities, including political volatility and limited institutional capacity.

## II. Policy Design Considerations

In this section, we consider different alternatives for countries seeking to adopt a PIT or expand an existing one. We first examine tax regimes by both types of income and types of taxpayers. We then review various factors that may influence tax capacity and spending levels, as well as those factors that are unique to the MENA region that may contribute to a successful adoption or expansion of PITs. The final part examines political considerations influencing the design and viability of PIT regimes. The discussion abstracts from the role that the CIT can play as a tax on capital income of shareholders.

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<sup>5</sup> Wealth and inheritance taxes can also play a role, especially at the top of the income/wealth distributions. Several MENA countries have inheritance taxes but because they are poorly designed, they raise little revenue. In many countries, inheritance taxes may be preferable to wealth taxes (see IMF, 2017).

<sup>6</sup> GCC countries (which do not have PITs), and Algeria, Iran, Iraq, Libya and Yemen (which all have a PIT).

<sup>7</sup> Djibouti, Egypt, Jordan, Lebanon, Mauritania, Morocco, and Tunisia. Syria, Somalia, Sudan and Afghanistan were excluded due to unavailability of data.

<sup>8</sup> FCSs are oil-exporting countries Iraq, Libya and Yemen, and oil-importing countries Djibouti and Lebanon. They are classified as fragile states according to the World Bank's Country Policy and Institutional Assessment (CPIA) index. All fragile states in the MENA region have an income tax, but its enforcement is relatively weak relative to non-fragile states.

Policymakers face many choices when designing a PIT regime. Revenue expectations, administrative challenges, and trade-offs between the various objectives of the PIT shape and constrain these decisions. Tax choices are interrelated and influenced by non-tax policies. Countries make different choices on what collective government goods and services to provide and the types and level of taxes necessary to fund them. Many design choices also depend on country-specific circumstances.

## A. Types of PIT Systems

While differences exist, the PIT regimes in different countries generally follow a common approach for defining income subject to tax, providing adjustments for personal characteristics, and using PAYE (pay-as-you-earn) to collect most of the tax revenue. Despite these common features, PIT regimes vary greatly, primarily along three dimensions: (1) the types of income taxed; (2) the percentage of the population subject to tax; and (3) the share of the population that bears the primary burden of the tax. These differences result both from policy choices made as well as political will and administrative capacity for taxing certain types of income and groups of individuals.

### Tax regimes by types of income

One type of PIT regime seeks to tax all forms of income in a uniform manner. The so-called comprehensive, global PITs adopted by most developed countries are better classified as “semi-comprehensive” regimes. The PIT systems of all countries fall far short of taxing all income. These systems provide favorable treatment (including exemptions, rate reductions and deferral of tax liability) for different types of income. For example, income related to personal residences, health insurance, and retirement benefits generally receive favorable tax treatment and a substantial portion of income from capital is generally not taxed until the gain is realized, and then at favorable tax rates.

In the post-World War II era, policy advisers viewed the PIT as a centerpiece of any modern tax system. They recommended that developing countries adopt a comprehensive, global, progressive personal income tax.<sup>9</sup> Advisors and academics contended that comprehensive, global systems were more efficient than schedular systems because they taxed income from all sources in the same way, thus minimizing tax-induced distortions. They also thought that these systems were fairer on horizontal and vertical equity grounds. The progressive rate structure reflected the ability to pay principle—such that those who had greater capacity to pay taxes should bear a greater portion of the tax burden by paying taxes at higher rates, and taxpayers with similar income but from different sources faced similar tax liabilities.

Two measures that highlight the comprehensiveness of the tax base of a PIT regime are the share of total personal income taxed (adjusting for tax-free thresholds) and the relative split between revenues from different types of income. Countries vary greatly on the relative amount of revenue from labor income and from income from capital.

Some “semi-comprehensive” PIT regimes are effectively limited to a tax on wages. They focus almost exclusively on taxing income from labor in the formal sector (including public sector employees). Countries generally collect taxes on wages through withholding under PAYE regimes. While revenue collected under PAYE represents a substantial percentage of PIT revenues in developed countries, it could be higher in developing countries due to light taxation of capital income and weaker administrative capacity, especially as they relate to the taxation of business income of unincorporated entities.

A second type of PIT regime seeks to tax all income but provides for separate treatment of labor income and income from capital (recognizing that substantial challenges exist in separating these types of income, especially in owner/employee settings). These dual (or tri-partite) tax regimes combine a tax on wages (at progressive tax rates) with a tax on capital (generally at a single rate and often collected through withholding). This type includes both explicit dual income tax regimes (such as those of the European Nordic countries) as well as more ad hoc regimes that combine a tax on labor income and a series of separate regimes for different

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<sup>9</sup> In many developing countries, the global progressive personal income tax long advocated by experts is in fact neither global or progressive, nor personal, and often not even a tax on income (Bird and Zolt, 2005).



types of income from capital (more typical of what MENA countries do). While dual income taxes were first adopted to address the challenges that high-tax Scandinavian countries faced from tax rates cuts in the U.S. and other countries in the 1980s, they have become an attractive alternative for many developing countries (Bird and Zolt, 2011).

With respect to taxing business income of non-corporate entities (sole proprietorships and partnerships), countries have two primary options. One approach, consistent with the semi-comprehensive PIT regimes, taxes business income together with other types of income at progressive tax rates. Another, more typical of dual income tax regimes, taxes business income at a single flat rate, typically equal to the CIT rate. The latter approach is used in Mauritania and Djibouti, and for non-GCC nationals in GCC countries. Taxing business income without regard to legal status eliminates the incentive to incorporate where CIT rates are lower than the top PIT rate. It is interesting that the policy rationales in Mauritania and Djibouti (where the choice was made in the context of an existing PIT) differ from that in the GCC (where the choice is largely dictated by the absence of a PIT).

### **Tax regimes by types of taxpayers**

Countries also vary greatly with respect to the portion of the population that is subject to PIT. At one end of the spectrum, countries can design a PIT as a class tax on the wealthy by imposing taxes primarily on high-income taxpayers. The early PIT regimes of many countries applied only to individuals at the very top of the income distribution. It is easy to design a PIT regime to exclude the non-wealthy by adopting a high exempt income threshold—which would exclude from the taxpayer population most wage earners.

But even in those countries with lower tax thresholds, the PIT could provide tax benefits that result in middle-income individuals paying a relatively smaller share of the PIT—though likely still high payroll and consumption taxes. While countries are generally successful in taxing the wage and salary income of high-income taxpayers, they face substantial challenges in taxing other types of income, primarily income from capital.

In some developed countries, high-income taxpayers pay a relatively large portion of the total PIT revenues; these taxpayers also receive a very large portion of total income. In the US for example, the top quintile (20 percent richest individuals) paid about 70 percent of federal PIT revenues, and the top percentile (1 percent richest paid about 26 percent (Congressional Budget Office, 2021). Similar PIT burdens are borne by high-income taxpayers in Latin America (Breceda, Rigolini and Saavedra, 2009).<sup>10</sup>

At the other end of the spectrum, countries can design a PIT that applies to almost all individuals by adopting either no threshold or a very low tax threshold (e.g., Mauritania, Montenegro). The distribution of the tax burdens across income levels in this type of mass tax depends greatly on the types of income subject to tax (and the rates) and the political and administrative capacity to tax different types of income.

In the middle of the spectrum are PIT regimes that reach a substantial portion of the population. A substantial tax threshold excludes the poor and lower-middle income but theoretically taxes everyone else. Again, the effectiveness of this type of regime in reaching the income of individuals above the threshold depends greatly on the ability to tax certain sectors of the economy and certain types of income.

The percentage of the population that is required to file PIT returns or be subject to PIT liability varies greatly among countries. Some countries come close to universal coverage (Norway, Sweden and Canada), while other countries subject a very small percentage of the population (less than 5 percent) to the PIT (India, China and Pakistan). While substantial variation exists, in many developed countries more than 50 percent of the population is subject to PIT liability. The number of people filing PIT returns is higher in those countries that have income support programs (such as the earned income tax credit in the US) built into their tax systems.

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<sup>10</sup> Historical factors contribute significantly to differences between PITs in developed and developing countries. Most developed countries adopted and expanded their PIT systems to raise revenue required to finance military operations during World War I and II (Besley and Persson, 2014). The need for additional revenue allowed these countries to make politically difficult decisions to increase dramatically the tax burdens on a large portion of the population, rather than just the wealthy—and made substantial investments in the needed tax infrastructures. It also allowed them to impose much higher rates on high-income taxpayers, especially as war casualties among the lower and middle-class reached very high levels (Scheve and Stasavage, 2016).

## B. Factors Influencing the Success of PIT

This part examines several factors that may influence tax capacity and spending levels and that may contribute to the successful adoption or expansion of PITs. Beginning in the 1960s, researchers used cross-country comparisons to identify several factors that explain a significant share of the variance in taxes among countries. The challenge was to develop certain proxies that would effectively capture such factors. The Fiscal Affairs Department of the International Monetary Fund took the lead in identifying those explanatory factors that were useful in determining differences in tax revenue between countries (Lotz and Morss, 1970; Bahl, 1971; Chelliah, Baas and Kelly, 1971; and Tait, Gratz and Eichengreen, 1979). These studies focused on the supply side factors that likely provide tax authorities the necessary tax handles to facilitate tax collection.<sup>11</sup> They included per capita GDP, trade openness (imports plus exports of goods, as a percent of GDP), the size of the agriculture sector, foreign aid, and revenue from natural resources. These factors support an intuition that tax authorities have an easier time collecting taxes in wealthy countries, with economies that generate a lot of activity with cross-border flows, and where agriculture (particularly, subsistence agriculture) plays a relatively smaller role in total economic activity. For developing countries, foreign aid and natural resource revenues are generally negatively associated with tax revenue (Benedek, Benitez, and Vellutini, 2022; Crivelli and Gupta, 2014; Brun, Chambas and Mansour, 2014).

While there is much to learn from this extensive body of work, it provides limited guidance to those concerned with improving tax policy in any particular country. While it is true that richer countries tend to have more options in designing tax systems, that they raise relatively more in taxes than poorer countries, and that they can generally do so without arousing strong domestic opposition, this provides little useful information for a developing country contemplating its fiscal future.

A different set of scholars have focused on factors that influence the size of government, including those that may limit the level of social spending. The level of social spending may be influenced by a combination of income levels, income distributions, relative sizes of different age groups, and political factors (Lindert 1996 and 2004; Lindauer and Velenchik 1992). These factors are associated with larger spending programs that require government revenues to fund them. For many developing countries, the challenges of meeting sustainable development goals, especially in a post-pandemic world, call for significant increases in tax revenue to fund government programs (IMF, 2019).

Table 1 presents our observations about key factors in the empirical literature that are highly correlated with tax and spending levels, and the direction of the correlation.<sup>12</sup> Challenges exist in isolating the effect of different factors on tax and spending policies partly because of the differences in the political and economic environments across countries. Studies have found a complex and often ambiguous relationship for different factors on fiscal outcomes, including trade openness (Cagé and Gadenne, 2018), levels of foreign aid (Benedek et al., 2014), and political factors (Dutzler, Johnson, and Muthoora, 2021). Some factors (such as level of development and trust in government) have a mostly positive effect on both tax capacity and demand for public services. Other factors (such as share of agriculture and share of informal economy) have a mostly negative effect on both tax capacity and demand for public services. For some factors, the impact on tax capacity and demand for public services may work in opposite directions (e.g., availability of natural resource revenues).

Challenges exist in using country-specific factors on tax capacity to predict whether a MENA country will be able to adopt or improve a PIT. Countries with higher per capita GDP, larger formal sectors, and more efficient tax administrations systems tend to have more robust (at least in terms of revenue generation) PIT regimes than countries without those attributes. But MENA countries, especially the GCC countries, have different combination of factors that may influence the success of PIT regimes. While some of these factors lead one to be optimistic about adopting or expanding a PIT, other factors work in the opposite direction.

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<sup>11</sup> Later studies added explanatory variables on the demand side, including how levels of corruption, voice, and accountability impact tax revenues and compliance (Bird, Martinez-Vazquez, and Torgler, 2014). Methodologies also evolved, with the use of stochastic frontier estimation models (Fenochietto and Pessino, 2013; Brun, Chambas and Mansour, 2014; and Brun and Diakité, 2016).

<sup>12</sup> These factors will be examined more formally later using regression analysis.

Several elements may contribute to the relative success or failure of a new or expanded PIT in MENA countries. First, in many countries, governments have access to a lot of information about potential taxpayers. This could result from the governments having the ability to track financial transactions or from information available from state pension and subsidy systems. Providing tax administrators with access to this information will make it easier for a country to adopt or expand a PIT regime.

Second, many MENA countries have a large public sector workforce. On the positive side, having a substantial percentage of employees working for the government makes tax administration relatively easy. On the negative side, a large public sector payroll increases the need for higher taxes and reduces funds available for other government spending programs. The revenue consequences of imposing or increasing taxes on government workers are unclear, as higher taxes will increase demands for higher public sector wages. To the extent a large public sector wage premium exists in MENA countries, taxing government workers (and not workers throughout the economy) may have the advantageous effect of reducing the size of the premium and increasing private sector employment.

**Table 1. Factors Influencing Tax Capacity and Spending Levels**

Factors	Effect on tax capacity	Effect on public spending
<b>Economic factors</b>		
Level of development	Mostly Positive	Mostly Positive
Trade openness [(imports + exports) / GDP]	Mostly Positive	Mostly Positive
Share of agriculture in GDP	Negative	Negative
Share of informal economy in GDP	Negative	Negative
<b>Demographics</b>		
Population growth	Mostly Positive	Positive
Age distribution (dependency levels)	Mostly Negative	Positive
Level of inequality (of income or wealth)	Ambiguous	Mostly Positive
<b>Political factors</b>		
Democracy index	Mostly Positive	Mostly Positive
Voting participation	Mostly Positive	Mostly Positive
Trust in government	Positive	Positive
Corruption	Negative	Negative
<b>Non-tax revenue</b>		
Natural resource revenue	Negative	Positive
Foreign aid	Ambiguous	Mostly Positive
<b>Effectiveness in taxing/spending</b>		
Investment in tax administrative capacity	Positive	Positive
Investment in delivery of government services	Positive	Positive

Third, many MENA countries have experienced rapid population growth, due to different factors and raising different policy debates on income taxation and equity. Some, notably GCC members, have experienced a large growth in expatriates. Others have had substantial internal displacements and migration. In most (non-oil) countries, the growth of an increasingly youthful population has not been accompanied by any parallel expansion of either easily accessible tax bases or the revenue needed to finance the expenditures that facilitate economic growth (e.g., education and health).

A fourth development is rising levels of income and wealth inequality in many MENA countries. High levels of inequality make it both easier and harder for countries to adopt a progressive PIT. It is easier because growing inequality may increase popular and political support for progressive taxes. In addition, tax administrations can focus their resources on a relatively small group of taxpayers. But high levels of inequality also make it harder to adopt or expand a PIT. The economic elite have substantial political power to block PIT reforms. In addition, the wealthy are also in a better position to structure their business activities and financial holdings to minimize their tax liability by tax avoidance and tax evasion strategies.

The ability to use fiscal policy to reduce inequality varies greatly among and between developed and developing countries.<sup>13</sup> For example, Chu, Davoodi, and Gupta (2000) and IMF (2017) found that before redistributive tax and spending policies, inequality was, on average, greater in developed countries than in developing countries. In developed countries, taxes and spending programs significantly reduced levels of inequality (mainly due to spending programs). In contrast, neither taxes nor spending programs contributed to meaningful reduction in inequality in developing countries. On the tax side, the PIT has done little to redistribute income or reduce inequality in developing countries (Bird and Zolt, 2005). This is not surprising given the small role it plays in many developing countries, both in terms of amount of revenue raised (as a percentage of GDP) and the challenges in taxing income of the wealthy.

So, what has changed in the last 20 years? While there has been some progress in many developing countries in improving the progressivity of PIT regimes,<sup>14</sup> Benedek, Benitez and Vellutini (2022) note that the progressive capacity of the PIT (a measure of its capacity to contribute to income redistribution) remains low in developing countries relative to advanced economies, primarily due to its small contribution to taxes, rather than its statutory progressivity—substantial increases in PIT revenue has been confined to a small number of countries. Developing countries (particularly in Latin America) have been more effective in targeting spending programs for those at the bottom of the income distribution (Lustig, Lopez-Calva, and Ortiz-Juarez, 2013).

A final factor is the issue of state capacity, particularly the ability of governments at all levels to develop and implement tax policy effectively, efficiently, and equitably. Countries with successful VAT regimes will have a greater chance of success in adopting or expanding a PIT. Many of the tasks in implementing and administering a VAT are transferrable to PIT regimes, particularly those applied to professionals (e.g., doctors, lawyers, accountants, consultants, architect, engineers). MENA countries that have successfully digitized their VAT regimes will find it easier to administer a PIT than countries that rely on manual processes and paper records. Countries that require e-invoicing for most commercial transactions will also have a substantial comparative advantage in administering a PIT than countries that do not require e-invoicing.<sup>15</sup> Developments in digitalization and the availability of a well-educated labor force in MENA make it more feasible than ever for most countries in the region to design and implement much better tax systems than most now have. This puts the spotlight on whether governments have the political will or at least the political support to make substantial reforms. A brief discussion of this factor follows.

### C. Political Economy Considerations

Political factors play an important role in influencing the level of taxation in a country and the relative use of different tax instruments. Countries with different political institutions will likely make different decisions as to both the level and type of public expenditures and the taxes necessary to fund them. The political conditions that support improving tax capacity are constitutive institutions, inclusive politics, and credible leadership (Gaspar, Jaramillo, and Wingender, 2016). One key insight of the literature is that political institutions matter for improving tax systems (especially for PIT regimes), and that taxpayers' views of the state's accountability, transparency, and competency affects their willingness to pay taxes. This is especially important for PIT regimes where taxpayers have greater opportunities to avoid or evade taxes and where political support for PITs is contingent on voters' trust in government.

A large literature examines the relationship between taxation and democracy (Levi, 1988; Peters, 1991; Steimo, 1993, Hettich and Winer, 2003, and Bird and Zolt, 2015). A common starting point considers the social contract between the state and its citizens, particularly the fiscal component whereby individuals pay taxes in exchange for protecting certain rights and providing services. Fiscal contract models grew out of feudal

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<sup>13</sup> See Bourgignon (2018) for an accessible read on this issue.

<sup>14</sup> Progressivity of income taxation in itself does not mean much, from a distributional point of view, unless revenue collected from it are spent on low-income individuals.

<sup>15</sup> E-invoicing provides taxing authorities with real time information that allows them to better administer a VAT, especially in identifying taxpayers with greater likelihood of under or non-compliance. The digitation of data allows taxing authorities to use triangulation (comparing data from point-of-sale transactions with sales declared on tax returns) and segmentation (comparing data among similar taxpayers).

bargains whereby residents paid powerful kings and nobles for protection against outside invaders, and then, contracts between kings and nobles to exchange tax revenue for protection of property rights and some influence over government policy.

Despite the intuitive appeal of these models, it is hard to establish a causal relationship between taxation and democracy. While one can identify historical examples where taxation played a central role in fostering democratic institutions, it is uncertain how transferrable these relationships are to other countries, such as MENA countries. It is also not clear the direction of the causal relations: does democracy lead to taxation or does taxation lead to democracy? What is more likely is that the causation runs in both directions.

For oil-exporting MENA countries, a key question is the role of revenue from natural resources in shaping political institutions. The “resource curse” rests on the notion that governments that generate substantial revenue from non-tax sources do not need to engage in the messy business of collecting taxes from their residents (Ross, 2001; Crivelli and Gupta, 2014). As such, they are less accountable to citizens as citizens do not directly bear the costs of government. These types of governments also have less incentive to invest in spending programs to support other sectors of the economy and to invest in improving tax administration capacity. Governments lacking resource revenues must raise revenue directly from citizens who would then play a greater monitoring role in government activities, forcing governments to be more transparent and accountable.

What is not clear is whether countries blessed with natural resources would have become more democratic if such resources were not present (Haber and Menaldo, 2011). While resource revenues likely help autocratic regimes remain in power, the lack of resource revenues may not result in institutions that are more democratic.

Scholars focusing on the contribution of tax systems to state building use several of the themes set forth in the resource curse literature. Effective tax systems play a crucial role in creating effective governments. In a virtuous cycle model, tax increases lead to greater spending in health, education, and infrastructure, which leads to greater economic growth, and then to higher levels of tax revenues.

While adopting a new PIT or strengthening an existing PIT has the potential to contribute to more democratic institutions or more effective government, many factors influence whether the potential can be realized. Pritchard (2010) sets forth several factors that may make constructive tax bargaining more likely in a particular country. Some factors relate to levels of trusts (both among diverse groups of taxpayers and between taxpayers and the government) and other factors relate to taxpayers’ enthusiasm for political engagement and their belief a link exists between taxes and government spending that they value. A key condition for taxes contributing to state-building element requires taxpayers to have effective politically organizations and the ability to bargain constructively with the government.

Social contracts between governments and its citizens come in different shapes and sizes. They are a combination of informal and formal arrangements between different social groups and governments that comprise the rights and obligations towards each other. The tax components of social contracts vary among countries. Bargains can be both implicit and explicit. For example, in recent years some Latin American countries, conservative governments have increased taxes on the rich to fund programs for the poor in order to maintain political control (Fairfield and Garay 2017). Other countries have made greater use of earmarked tax revenues to get popular support for new or higher taxes (McCleary, 1991).

Following independence in the 1950s and 1960s, the social contracts in MENA countries shared much in common. Governments provided social and economic benefits (free health care and education, commodity subsidies, and public sector jobs for college graduates) in exchange for limited government accountability and restricted political participation (Loewe, Zintl and Houdret, 2021). The politically relevant groups that benefit from such contracts vary among MENA countries. They include the educated middle-income (Algeria, Egypt, Morocco, and Tunisia), all citizens in the GCC economies, and members of certain sects, tribes, or clans (Jordan, Iraq, Libya, Syria, and Yemen (Assaad, 2014)). Noticeably missing from the fiscal part of the social contract in many MENA countries is a meaningful tax component.

For several years after independence, MENA countries financed the costs of the social contracts through a combination of oil and gas revenues, foreign aid, and transfers from wealthy GCC countries. Declining oil and

gas revenues, growing populations and a decline in the quantity and quality of publicly provided goods and services strained the social contract in many countries. Several MENA countries scaled back public sector hiring and reduced or eliminated fuel and food subsidies (IMF, 2014). The 2011 Arab Uprisings reflect the frustrations of different societal groups with social and economic policies and the lack of any meaningful political participation.

While it is difficult to predict how and whether social contracts might evolve in MENA countries, it is likely that these countries will take different approaches. Some may adopt taxing and spending policies that reflect a new equilibrium and other countries may seek to retain the old social contract, with minor concessions. An important question for many MENA countries is how increases in size of the middle-income class might influence demand for public goods and services as well as individuals' willingness to pay taxes. For those countries with PIT systems and meaningful political participation, a growing middle-income class will increase the proportion of the population that both vote and pay taxes. Preferences for size of government and types of government spending programs may change as the size of the middle-income class increases. In some MENA countries, this may result in moving from general food and energy subsidies to more targeted spending programs, as well as higher quality healthcare and education programs.

All countries face substantial challenges in changing social contracts (including the fiscal component). But there are several reasons why the challenges may be even greater in many MENA countries. First, several MENA countries have a long history of providing public services and subsidies without charge to most or all of the population. It is much more difficult to impose taxes for public services that have already been available than to impose taxes for new public spending programs. It is even more challenging in those countries where the quality of public services and levels of subsidies are declining. Second, high levels of inequality means a new or expanded PIT would fall mainly on the wealthy. In all countries, it is challenging to convince the economic and political elite to pay higher taxes to fund government spending programs that they do not use. Finally, in many MENA countries there is little appetite or foundation for tax bargaining between governments and citizens. Without some opportunity for such bargaining, it is challenging to use PITs to make governments more accountable and transparent.

### III. Assessment of Personal Income Taxes

In this section we review the key structural elements of MENA PITs and assess their revenue contribution. We then study to what extent PITs are progressive and whether such progressivity has been enhanced since the early 2000s. We complete the analysis by assessing how SSCs contribute (or not) to the progressivity of PITs.

Table 2 provides selected macro-economic and demographic indicators for the MENA region. This puts in perspective the analysis in this section and the next. Some observations are noteworthy: (1) since 2000, the MENA population increased by 47 percent, and that of the GCC doubled primarily due to migration; (2) total revenues in percent of GDP declined by 1.7 percentage points of GDP, and total tax revenue by 0.9 percentage point; most of this decline is due to less oil revenue in oil-exporting countries; (3) tax revenue in non-GCC oil exporters (mostly FCSs) also declined, by 3.1 percentage points of GDP. In summary, while the need for public spending may have increased due to changes in population composition and growth, tax revenues remained stable on average and declined in FCSs, and oil revenues declined.<sup>16</sup> Meanwhile, per capita GDP (in USD PPP) remained constant on average, except in oil-importing countries where it grew by 79 percent.

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<sup>16</sup> These changes should be viewed in the light of the recent volatility in oil prices, and the corresponding additional oil rent that has accrued to oil-exporting countries due to the impact of the war in Ukraine on oil and gas supply chains. Oil-exporting countries stand to gain significantly from the war shock. From a long-term perspective, it would be wrong to assume that this should postpone the debate on income tax reform in the MENA. The VAT debate in the GCC for instance, which took over a decade before countries started implementation of VAT in 2018, provides a useful lesson in this regard.

Table 2. Selected Economic and Demographic Indicators in MENA

	Oil- Importing Countries	Oil-Exporting Countries			All MENA
		Total	GCC	Non-GCC	
<b>2000</b>					
Population (millions)	167	141	29	112	308
Share of oil GDP (%)	4.3	47.1	42.2	55.9	36.8
GDP per capita (USD, PPP)	5,178	37,930	61,525	9,617	24,140
Government revenues (% of GDP)					
Total revenues	23.0	34.4	35.3	33.0	29.3
Tax revenues	14.1	5.8	4.1	8.4	9.5
<b>2020</b>					
Population (millions)	235	220	59	161	455
Share of oil GDP (%)	1.9	36.2	41.0	23.0	28.2
GDP per capita (USD, PPP)	9,285	34,938	56,566	8,985	24,962
Government revenues (% of GDP)					
Total revenues	23.2	30.9	30.5	31.3	27.7
Tax revenues	14.1	4.5	3.8	5.3	8.6
<b>Change 2020-2000 (%)</b>					
Population	41	55	100	44	47
Share of oil GDP	-56	-23	-3	-59	-23
GDP per capita (USD, PPP)	79	-8	-8	-7	3
Government revenues					
Total revenues	1.1	-10.2	-13.5	-5.3	-5.7
Tax revenues	0.6	-21.9	-5.4	-36.4	-9.5

Sources: WEO, WDI, IMF Staff reports, and authors' calculations.

Note: Averages are simple means across countries.

## A. Overview and Evolution since 2000

The tax laws in most MENA countries broadly define income subject to PIT. Progressive income tax rates generally apply to wage and business income of the self-employed. Countries take different approaches to taxing income from capital, with some countries taxing certain types of capital income at flat rates and other countries taxing at progressive tax rates (less common). For MENA countries with PIT regimes, most countries tax their residents on their world-wide income (including Algeria, Iran, Iraq, Morocco, Tunisia, and Yemen) but some countries tax their residents only on income earned in the country (including Jordan, Libya, and Syria). For those countries with world-wide tax regimes, it will be interesting to see whether greater availability of information exchanges will allow them to be more successful in taxing residents on income earned on assets held outside the country. Countries generally collect income taxes through withholding, which are creditable against the tax liability reported on tax returns for those taxpayers who are obligated to file.

### Tax Unit

Most countries in MENA define the individual as the tax unit in their laws, and joint taxation is not allowed. But there are few exceptions: Algeria and Jordan allow spouses to file a joint tax return, and the option extends to dependent children; and in Libya, joint filing of spouses is required. In general, joint filing has a detrimental effect on individual incentives to work and earn income, particularly women who tend to be the second (and lower) income earner in a household. Given that joint filing is not prevalent in the region, its implications are not discussed further in this paper.

### Rate Structure

The rate structure of PITs varies across MENA countries (Table 3). Most countries have an income tranche taxed at zero percent (except Mauritania); few provide instead a basic allowance (i.e., deduction from income before the application of tax rates) which varies according to the taxpayer's situation (e.g., marital status, number of children).<sup>17</sup> The lowest positive tax rates range from 2 percent in Djibouti and Lebanon, to 26 percent in Tunisia,<sup>18</sup> and the top marginal tax rates range from 10 percent in Libya to 40 percent in Mauritania. As discussed in section II, these disparities in headline rates reflects country-specific factors, including the share of oil revenue in total revenue, and social preferences as to the role PIT plays in raising revenue and reducing inequality.

**Table 3. MENA: PIT Rates and Brackets in MENA, 2020 vs. 2000**

	2020						Early 2000s					
	Rates (Percent)			Brackets (Multiples of per Capita GDP)			Rates (Percent)			Brackets (Multiples of per Capita GDP)		
	Low	Top	T/L	Exempt	Low	Top	Low	Top	T/L	Exempt	Low	Top
Algeria	20.0	35.0	1.8	0.29	0.88	3.51	10.0	40.0	4.0	0.44	1.33	14.17
Djibouti	2.0	30.0	15.0	0.08	0.05	0.98	2.0	20.0	10.0	n.a.	n.a.	n.a.
Egypt	2.5	25.0	10.0	0.41	0.93	13.10	10.0	20.0	2.0	0.56	2.23	4.45
Iran	10.0	25.0	2.5	0.77	1.92	3.84	10.0	35.0	3.5	2.83	4.01	28.27
Iraq	3.0	15.0	5.0	0.61	0.67	1.03	3.0	15.0	5.0	0.00	0.23	0.46
Jordan	5.0	30.0	6.0	2.96	4.60	328.87	5.0	25.0	5.0	0.00	1.09	7.62
Lebanon	2.0	25.0	12.5	0.80	1.45	25.54	4.0	21.0	5.3	1.12	0.90	17.98
Libya	5.0	10.0	2.0	0.45	0.45	3.44	8.0	15.0	1.9	0.11	0.44	0.88
Mauritania	15.0	40.0	2.7	0.00	0.13	0.30	5.0	33.0	6.6	7.23	21.68	72.25
Morocco	10.0	38.0	3.8	0.95	1.58	5.68	13.0	44.0	3.4	0.97	1.17	2.92
Tunisia	26.0	35.0	1.3	0.49	1.94	4.86	15.0	35.0	2.3	0.48	3.18	15.88
Yemen	10.0	15.0	1.5	0.23	0.47	0.47	10.0	20.0	2.0	0.40	0.79	2.77
<b>Average</b>	<b>9.2</b>	<b>26.9</b>	<b>5.3</b>	<b>0.67</b>	<b>1.26</b>	<b>32.63</b>	<b>7.9</b>	<b>26.9</b>	<b>4.2</b>	<b>1.28</b>	<b>3.37</b>	<b>15.24</b>

Sources: IMF, IBFD, country tax laws, and authors.

Note: Early 2000's: 2000 for Yemen and Lebanon, 2001 for Algeria, 2006 for Egypt, Iran, Jordan, Mauritania, and Mauritania, and Morocco, 2012 for Yemen.

The lowest tax rates in some countries are too low to raise any significant revenue and are often part of a rate schedule with a high number of tax rates (e.g., Djibouti has 6 rates; Egypt, Jordan and Lebanon have 7 rates). In most countries, the top tax rate applies at high income levels, and likely has little impact on effective progressivity (Egypt, Lebanon, and Morocco; Jordan is an extreme case). To put things in perspective, the low PIT tax bracket in advanced economies is, on average, 0.25 times per capita GDP, and the high bracket is 4 times per capita GDP.

In terms of the brackets (all expressed in multiples of GDP), we observe a significant increase in the top-rate bracket and a reduction of the low-rate bracket, with the consequence that the exempt threshold declined from 1.3 to 0.7 percent of GDP. All this means that, relative to the early 2000s, more individuals are now subject to the PIT at the low-end of the income distribution and fewer are taxed at the top rate.

Finally, it is worth noting that like countries in other regions, top marginal PIT rates in MENA have declined significantly over the last 30 years (Figure 1),<sup>19</sup> but the bulk of this decline took place in the 1980s and 1990s, with the average top rate losing one-third of its value per decade.<sup>20</sup>

<sup>17</sup> In these cases, we take the allowance for single individuals without dependents as the income tranche taxed at 0 percent.

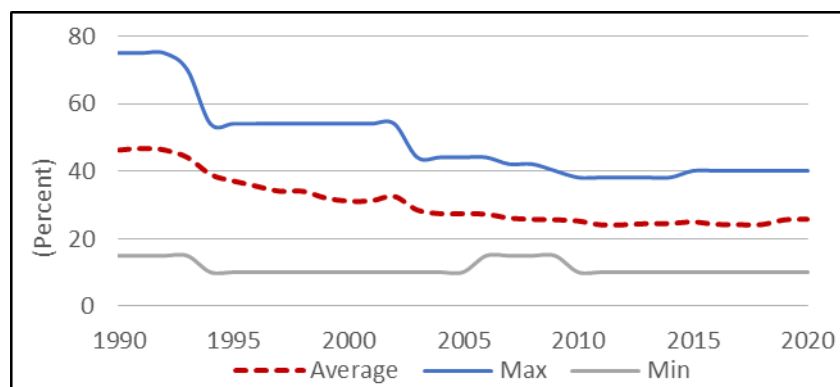
<sup>18</sup> Tunisia adds a payroll tax of 1 percentage point to its PIT rates, with the effect that the exempt allowance is taxed at 1 percent. We include this payroll tax in the analysis, but given the marginal nature of the payroll tax, we also show the basic exempt allowance as percent of per capita GDP.

<sup>19</sup> See for instance Gerber and others (2019). This trend in the reduction of top marginal rates, followed that in high-income countries, which occurred in the 1980s, with landmark reforms in the US and UK.

<sup>20</sup> Top rates in the early 1980s were very high in some MENA countries—e.g., 90 percent in Iran; 80 percent in Egypt and Tunisia; 75 percent in Algeria; and 70 percent in Sudan.



Figure 1. Evolution of Top PIT Rates in MENA: 1990-2020



Sources: IMF, IBFD, and countries tax laws.

### Income from Wages and Salaries

All MENA countries apply the progressive tax rate structures to wage income, except GCC countries, where wages are not taxed. Generally, “wage income” is defined broadly and includes full-time and part-time remunerations and benefits, monetary or in-kind. However, there are significant exemptions, which reduce the tax base, create distortions to labor markets, and open tax avoidance opportunities. The rules are complex and country-specific, and it would be impractical to replicate here. Examples of exemptions include the following: subsidized employment income, income earned in specified geographical areas, pension income, income of public sector employment, in-kind benefits, and income from exercising certain professions (e.g., teaching). Some of these exemptions are partial, in that only a portion of income is exempt (e.g., pension income, public sector wages), or certain sub-categories (e.g., in-kind benefits).

MENA countries use different types of PAYE regimes to collect tax on wages and salaries. Most, including Algeria, Djibouti, Lebanon, and Iraq, use a simple calculation method whereby employers withhold taxes on wages on a monthly basis, with no adjustments for wage changes in the taxable year. Some MENA countries (including Egypt, Iran, and Libya) combine monthly withholding with a requirement that employers calculate withholding for the year on a cumulative basis and adjust withholding amounts for each employee.

Countries also differ on requiring individuals receiving wages and salaries to file annual tax returns. Several MENA countries (including Algeria, Iran, Iraq, Jordan, and Lebanon) require employees to file income tax returns. In contrast, other countries (including Djibouti, Libya, Mauritania, Morocco, and Tunisia) exempt employees from filing tax returns if they do not have an additional job or substantial non-wage income.

### Business and Professional Income of the Self-Employed

Most MENA countries include income from unincorporated businesses with wage income and tax the consolidated income at progressive rates. However, there are exceptions. Djibouti and Mauritania apply a flat rate on income from professional and other business activities, which is set at the CIT rate. Iran, Lebanon, Sudan, and Yemen apply progressive rates and brackets on such income that differ from the rates applied to wage income. The first group of countries are therefore close to a pure dual income tax system, taxing business income at a single rate, lower than the top marginal tax rate on labor income, and without regard to the legal form of the entity earning the income. The latter group are closer to a pure schedular income tax system, taxing each source of income under its own schedule and rules for the calculation of the tax base.

In GCC countries, Oman, Qatar, and Saudi Arabia extend their corporate income taxes to business income earned by unincorporated businesses, but only to the extent that such businesses are owned by non-GCC nationals. In these countries, the absence of income tax on wages and the non-taxation of non-wage income of

nationals, remain an important source of distortion and revenue potential, and is likely to shape the design of future tax systems.<sup>21</sup>

### Passive Income from Capital

MENA PIT systems vary greatly in taxing various types of capital income (Table 4). The tax rules are relatively complex, and attempt to direct investment to specific use and/or time horizons. These take the form of outright exemptions or low rates and include the following: exemption of interest income on time-bound savings accounts and government bonds; exemption or reduced rates on dividends paid by certain companies (on the basis of their activities), including holding companies through which exempt profits are channeled; and exemption or lower rates on capital gains from the sale of certain types of movable (e.g., listed shares) or immovable properties (e.g., real estate used in a business). While other countries (especially developing countries) provide favorable tax treatment for different types of passive income, the extent of the favorable treatment in most MENA countries makes it relatively easy to avoid capital income taxation.

**Table 4. Typical Tax Rates on Income from Capital in MENA, 2020**

	Interest Income	Dividend Income 1/	Capital Gains 2/	
			Movable Property	Immovable Property
Algeria	10%	15%	PIT	Exempt
Djibouti	E	5%	E	5%
Egypt 3/	E	5%	E	E
Iran	E	E	E	E
Iraq	PIT	E	E	PIT
Jordan	5%	E	E	E
Lebanon 4/	10%	10%	15%	E
Libya	5%	E	E	E
Mauritania	10%	10%	25%	10%
Morocco	20%	15%	15%	20%
Sudan	PIT	E	2%	2%
Tunisia	PIT	10%	10%	15%
Yemen	E	E	E	E

Sources: IBFD, countries' tax laws, and authors' calculations.

Note: Positive rates are most common rates in 2020. Standard or maximum rates are often inapplicable given the prevalence of exceptions and exemptions. "E" means the income is exempt, and "PIT" means the income is included in the PIT tax base, and taxed at its progressive rate structure.

1/ Since dividends are paid out of taxable corporate profits (except where such profits are exempt or taxed lightly) the dividend income tax rate at the individual level is another tax on the return to equity shares and should, in principle, be lower than the rate on interest income to ensure ultimate neutrality in the taxation of debt and equity.

2/ Rates abstract from the fact that capital gains may be taxed at the corporate level as part of corporate profits.

3/ Interest on government bonds is taxed at 20% withholding. Capital gains from listed companies have been suspended since their introduction and until December 2021, with no details as to how they will apply afterwards.

4/ Dividends from holding companies and offshore companies are exempt, which means that reported rates here are often inapplicable.

The implications of the light (or no) taxation of capital income for revenue mobilization and reducing income inequality could be profound—especially in the absence of inheritance taxes. On the former, and as we will discuss later, the revenues from these income sources are negligible in most countries. On the latter, there is limited potential to increase progressivity of individual income taxation without significantly reforming the taxation of capital income. For instance, changing the taxable income brackets and rates that apply to wages and business income is likely to weigh more heavily on wage income, both directly and indirectly through the

<sup>21</sup> We exclude Zakat, which in some countries, is levied by the tax authority on national residents. The most established Zakat can be found in Saudi Arabia. It applies to nationals of Saudi Arabia and GCC countries resident in Saudi Arabia. It is calculated at a rate of 2.5 percent of the lower of net assets (computed using balance sheet data), and net business income, and irrespective of the legal form of the entity holding the assets or earning income. Given its low rate, its revenue impact and effect on overall progressivity of the tax system are likely limited, but deserve further study given that it is earmarked for transfers to the poor.

incidence of the business income tax, and would encourage taxpayers to structure their affairs to have income taxed at lower rates. This will negatively impact the allocation of the productive resources of MENA economies.

### Payroll and Social Security Contributions

The analysis of PITs would be incomplete without examining other levies on payroll, of which SSC are the most important. All MENA countries levy SSC on a withholding basis on employers and employees, including GCC countries, where wages are not taxed under a PIT. These levies fund various types of social spending, including pension and old age income, health services, and unemployment benefits. The rates vary substantially, from 8 percent in Bahrain to 35 percent in Algeria (total rate of employer and employee SSC). Other payroll taxes are applied in few countries, and the rates do not exceed 2 percent of gross wages. Generally, SSC in the region have a weak direct link to benefits received and the respective revenues are paid directly into earmarked funds and often do not show in central government consolidated fiscal statements.<sup>22</sup>

In advanced economies, SSC are a substantial source of revenue and their contribution to total tax revenue far outweighs that of the PIT, particularly in the European Union (EU). But the policy interest in SSC goes beyond revenue, as they raise equity and efficiency considerations. The economic literature on the topic is well-developed (see, for instance, the comprehensive review in Piketty and Saez, 2013). A key finding is that differential consumption taxes have little extra redistributive benefit beyond a progressive income tax (including SSC). This result is important for the region, and particularly for GCC countries, where some members have already implemented a single-rate VAT, and some are contemplating widening the application of their income taxes, which are currently limited to profits. In weighing revenue, efficiency, and equity considerations, which are clearly country specific, the literature points to a substantial role for joint PIT/SSC design.

## B. The Revenue Contribution of PITs

MENA countries vary greatly in the importance of PIT revenues in funding government operations. As set forth in Table 5, in some countries (Algeria, Morocco and Tunisia) the PIT generates substantial revenue (as a percent of GDP), while in most other countries the PIT raises relatively little revenue.<sup>23</sup> There is also great variation in the role played by PIT in its contribution to total tax revenue, ranging from about 7 percent in Lebanon to 47 percent in Yemen.

Table 5. The Size of PIT Revenues in MENA

	Percent of GDP	Percent of Tax Revenue
<b>Oil Importing Countries</b>		
Djibouti*	2.4	20.0
Egypt	2.0	13.1
Jordan	1.2	20.4
Lebanon*	1.0	6.9
Mauritania	1.5	11.9
Morocco	3.9	18.1
Tunisia	4.3	17.8
<b>Oil Exporting Countries</b>		
Algeria	4.2	30.7
Iran	1.1	17.0
Iraq*	0.3	16.1
Libya*	...	...
Yemen*	1.2	46.9

Source: Mansour (2015) and updates, and authors' calculations.

Note: "\*" denotes FCS, and "..." insignificant. Figures are simple averages over 2018-2020, and exclude SSCs and Zakat.

<sup>22</sup> The absence of consistent (across countries and over time) data on revenue from SSC is a lacuna in tax analysis, both for the study of revenue levels and structure as well as the incentive implications of taxes on payroll.

<sup>23</sup> Throughout the paper, we use the dataset produced in Mansour (2015), plus updates. These data are entirely based on information in IMF staff reports, with the distinct attribute that they separate, where data is available, oil revenue (including CIT on companies in extractive industries) from other taxes and non-tax revenues.

Figure 2 shows the evolution of the revenue contribution of the PIT since 1990, in the three country groups outlined in the introduction: oil-importing, oil-exporting, and fragile states. Oil-importing countries all have well-established PIT regimes and tax administrations, and their PIT revenues are not disproportionately affected by withholding on public sector wages, which tend to be very high in oil-exporting countries. On average, the PIT yield in this group has increased from about 1.3 percent of GDP in the early 2000s, to about 2.2 percent in 2020, and the share of the PIT in total tax revenue increased from about 10 to 14 percent. At face value, this is a significant development. A closer look at the data suggests that this increase is largely attributable to Morocco and Tunisia. In Tunisia, the basic allowance (in percent of per capita GDP) declined by tenfold, and the low tax rate nearly doubled. In Morocco, there were no significant changes to the tax structure at the low end of the income distribution. In fact, the low rate declined from 13 to 10 percent, and the exempt threshold remained constant in terms of per capita GDP (suggesting that it has moved in tandem with nominal wages). Moreover, the top rate was lowered from 44 to 38 percent. These two countries are examples of how the reasons for revenue performance can differ significantly—including, possibly, improvement in compliance.

The revenue contribution of the PIT can also be examined together with that of the corporate income tax (CIT) and other taxes on income. Empirical evidence suggests that low CIT rates, relative to top PIT rates (which has been the case in the MENA), create incentives to incorporate, especially for those individuals whose income can be earned as a business activity (see, for instance, de Mooij and Nicodème, 2008). These incentives are stronger when dividends, capital gains (and other forms of payments to shareholders) are lightly taxed. This makes it difficult to disentangle changes in revenue performance of PITs and CITs. Figure 2 also shows the revenue yield of the CIT and all income taxes.<sup>24</sup> For oil importing countries, where the PIT matters most, there was no significant increase in the CIT, which suggests that the overall increase in income taxes was due to other factors, most likely higher revenue collected from non-wage income—i.e., passive capital income and active business income. Indeed, the component of revenue non attributable to either the PIT or the CIT grew by 1 percentage point of GDP between 1990 and 2000.

In oil-exporting countries, the PIT as a percent of GDP increased from about 1.5 percent to 2 percent. The reason for this increase differs from the oil-importing countries, as it is largely due to Algeria, and to a lesser extent Iran, two countries where public sector wages (including state-owned enterprises) form a significant share of the PIT tax base.

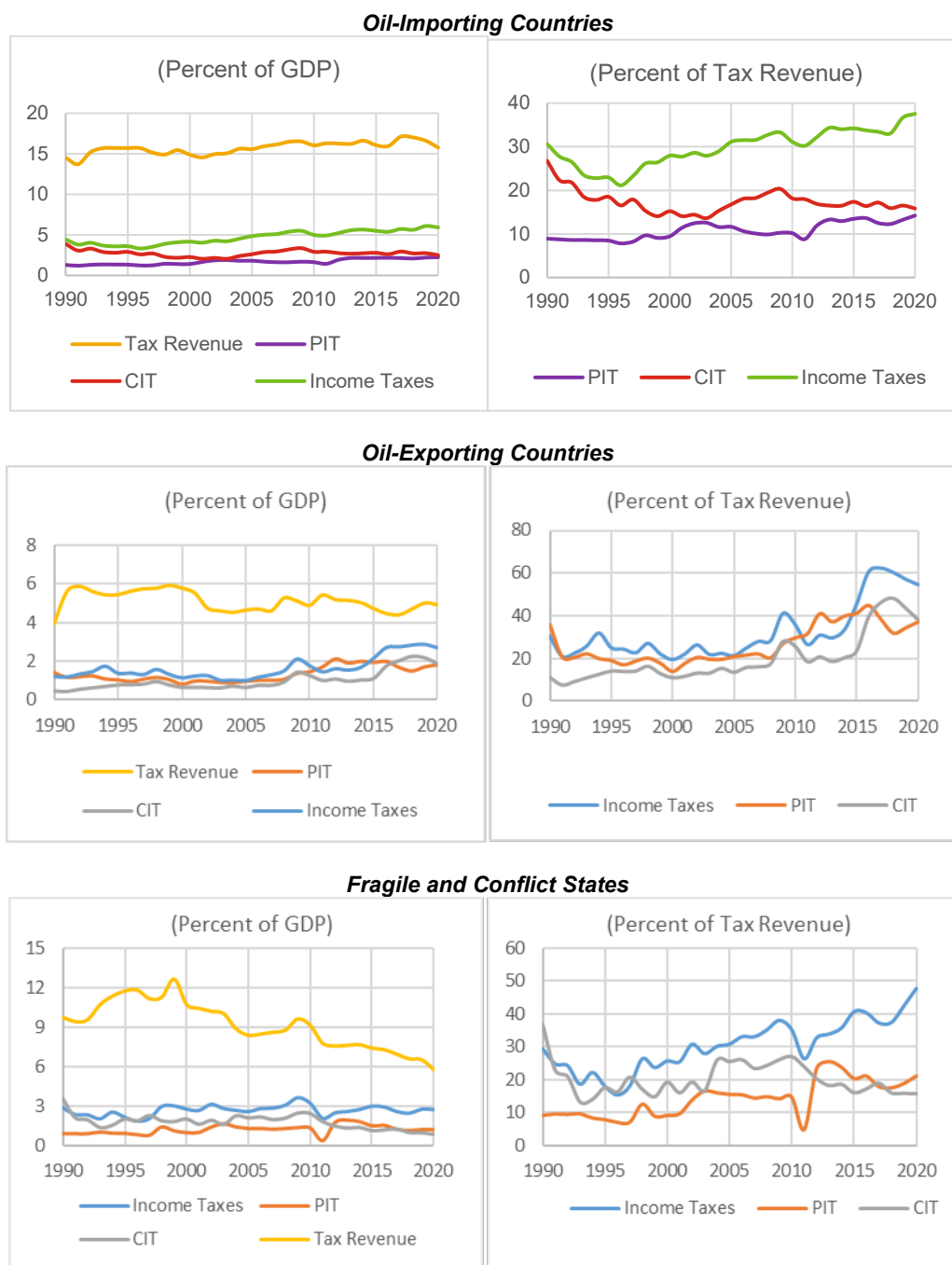
Finally, in FCSs,<sup>25</sup> data coverage is low for the 1990s. Taking 2000 as the base year shows that the contribution of the PIT has increased from 1 percent of GDP to about 1.5 percent, and that almost all this increase is attributed to Djibouti, where the nature of fragility is different from that of other countries in this group—political instability is less acute than, say, in Libya or Iraq, but there are large presence of foreign military bases, arguable with some (indirect) impact on the income tax base.

In summary, the PIT plays a significant role in the tax system in only few oil-importing countries in North Africa (namely, Algeria, Morocco, and Tunisia), where this role has also improved over the past two decades. In oil-exporting countries (other than FCSs), the revenue contribution of the PIT reflects in large part the use of the oil rent to provide public (and quasi-public) sector employment and wages. In FCSs, the PIT plays a small revenue role, less than 1 percent of GDP, except in Djibouti, and this role has been unchanged in the past two decades.

<sup>24</sup> “All income taxes” includes taxes that cannot be clearly attributed to PIT and CIT due to data availability.

<sup>25</sup> The group of fragile states include Djibouti, Iraq, Lebanon, Libya, and Yemen.

Figure 2. Contribution of Income Taxes to Tax Revenues in MENA



Source: Mansour (2015) and updates; and authors' calculations.

Note: Figures are unweighted averages across countries.

### Determinants of the Revenue Performance of the PIT

An important question is whether the performance of the PIT since the early 1990s is due to policy measures, or to (largely exogenous) economic factors. We can attempt to answer this question by using the standard empirical literature on the determinants of the tax-to-GDP ratio described in section II—i.e., regressing PIT revenue-to-GDP against a set of variables. We opt to focus on standard economic determinants in the

literature, including natural log of per capita GDP (as a change in living standards), share of the primary sector in GDP (as a proxy for the difficult-to-tax share of GDP), share of self-employment in total employment (as modeled by the International Labor Organization), public wage bill as a percent of GDP, and inflation as measured by the CPI. In terms of tax policy variables, we include the PIT exempt threshold and top tax brackets (as multiples of per capita GDP), the low and top tax rates, and the interaction between the exempt threshold and the lowest positive rate. Other control variables include CIT revenue-to-GDP, and dummies for SSC deduction, oil exporters, and FCS. Annex 2 summarizes the statistical approach, which is based on Benedek, Benitez and Vellutini (2022), and presents the results of four specifications.

The results show that tax policy variables are uncorrelated with PIT-to-GDP revenues, except for the top PIT tax rate, which is positively correlated—an increase of 1 point in the top tax rate, is associated with an increase in the average revenue-to-GDP by about 10 to 15 percent, or 0.02 to 0.05 percentage points of GDP. In contrast, the key economic variables are strongly correlated with PIT-to-GDP, with the right expected sign, except for the share of the primary sector in GDP, which is positive but weakly significant.<sup>26</sup>

An interesting (and expected) result is the strong and positive correlation of the public sector wage bill with PIT revenues, with a coefficient of 0.42 in model (1)—i.e., an increase in the wage bill-to-GDP ratio of 1 percentage point, is associated with an increase in the PIT revenue-to-GDP ratio of 0.42 percentage point. This coefficient represents both the PIT and SSC deductibility effect, as well as brackets creep—i.e., as their wages increase, government employees are pushed into higher tax brackets due to lack of bracket indexation. We can illustrate this interaction by using Algeria, Morocco, and Tunisia as examples:

- **Algeria.** Public sector wages increased from 6.8 percent of GDP in 2000 to 10.6 percent of GDP in 2018, which translates into 1.6 percentage points in the PIT-to-GDP ratio (i.e.,  $3.8 \times 0.42$ ). During the same period, the PIT-to-GDP ratio increased from 0.85 to 4.5 percent. This means that 43 percent of the increase in the PIT-to-GDP ratio is associated with the increase in the public sector wage bill.
- **Tunisia.** Public sector wages increased from 11 percent of GDP in 2000 to 14 percent of GDP in 2018, which translates into 1.25 percentage points in the PIT-to-GDP ratio (i.e.,  $3 \times 0.42$ ). During the same period, the PIT-to-GDP ratio increased from 3 to 4.75 percent. This means that about 70 percent of the increase in the PIT-to-GDP ratio is associated with the increase in the public sector wage bill. This should be interpreted as an upper bound, as (unlike Algeria) other direct tax revenue, which cannot be easily attributed to individuals and corporations, also increased in Tunisia, from about 0.7 percent to 3.3 percent of GDP.
- **Morocco.** In contrast to the previous two examples, the public sector wage bill in Morocco remained stable between 2000 and 2018, at slightly over 11 percent of GDP (with some fluctuation in between). Yet, the PIT-to-GDP ratio increased from 2.9 to 3.9.

These examples highlight the importance of understanding the underlying factors affecting PIT revenues, and their interpretation in the light of the nature of the contribution of the PIT to tax revenue, as well as the overall progressivity of the tax system—an issue we now turn to.

### C. Are PITs in the MENA Progressive?

A PIT is progressive if the average tax rate increases with incomes.<sup>27</sup> Measures of progressivity can be “statutory” or “effective.” Statutory progressivity is dictated by what policy prescribes in law. It is useful as *ex-ante* analysis of how policy choices affect economic outcomes and incentives, especially how real decisions (e.g., participation in the labor market) and non-real behavior (e.g., hiding income without changing one’s employment or business situation) of individuals are likely to respond to policy. Comparison of statutory progressivity across countries is often analyzed using a common income distribution, such as multiples of per

<sup>26</sup> The share of value-added of agriculture is negligible in GCC countries and varies between 5 to 15 percent in North African and Eastern Mediterranean countries. We do not have an explanation for the correlation of this variable with PIT revenue.

<sup>27</sup> We include in the analysis PITs and SSCs, but exclude other taxes and spending policies, which also affect progressivity. Spending policies are particularly important; see for instance Engel, Galevotic and Raddatz (1999) in the case of Chile.

capita GDP or income denominated in one currency. This ensures that progressivity measures reflect only the impact of the tax factor.<sup>28</sup>

Effective progressivity, on the other hand, reflects the impact of all factors affecting tax revenue, including the interplay between tax rates and tax brackets and income distributions.<sup>29</sup> It requires administrative data (often from tax returns), and large samples of income distributions—which can be either specific to the country and represent its own income patterns, or representative of a group of countries. Effective progressivity is useful for the analysis of how PIT systems affect actual distribution of pre-tax incomes, which in a dynamic setting are themselves dependent on taxes. Vellutini and Benitez (2021), and Gerber and others (2019) provide a summary of the literature of various measures of statutory and effective progressivity, as well as their uses.

### Statutory Progressivity

Figure 3 shows the statutory average tax rates (SATRs) in MENA, with and without SSCs for 2020, and without SSCs for 2000.<sup>30</sup> The figures are representative of tax rates applicable primarily to labor income—capital income is often taxed at flat rates, depending on its type. For comparability across countries, the rates are estimated for all countries over incomes ranging from USD 0 to USD 100,000, with increments of USD 50.<sup>31</sup>

Consistent with the discussion earlier, PIT systems are progressive in a statutory sense. This progressivity is steep at the low end of the income schedule and rises gently at income levels around USD 10,000 (2.7 times average per capita GDP in 2020), with the SATR reaching a maximum of about 23 percent (excluding SSC) at income levels above USD 100,000. Compared to the early 2000s, the SATR (excluding SSC) curve shifted upward in 2020 by 5 percentage points and is steeper at income levels below USD 10,000. Two key factors explain these changes: (1) the increase in the low PIT rate (from 7.9 to 9.3 percent), and (2) the reduction in the exempt threshold by 0.4 percentage points of GDP. To the extent that countries raise more revenue from lower tax rates (which affect all taxpayers) but less from other rates or other incomes, these changes could explain in part why PIT revenues have remained constant on average since the early 2000s.

Adding SSC paid by employees (SSCe)<sup>32</sup> to standard PIT rates have a dramatic effect on the slope of the SATR curve, as well as its level.<sup>33</sup> Because most countries have ceilings on salaries subject to SSCs,<sup>34</sup> the curve is steeper at low-income levels and exhibit some discontinuities around the ceilings. The incentives implications of tax rates exceeding 17 percent at very low-income levels (essentially, from the first USD earned to around USD 4,000, or roughly average per capita GDP) are arguably profound and could explain in part the low labor participation rates observed in the MENA region.<sup>35</sup>

Figure 4 shows the same distribution of SATRs for oil-importing, oil-exporting, and FCS for 2020 only (all FCSs, except Lebanon, are oil-exporters). The primary observation is that steep progressivity at low-income levels is present in all these country groups, but the level of the SATR at higher incomes is higher in oil-importing countries. Moreover, SSC have a much lower effect on the SATR in this group of countries, relative to the other two—perhaps an indication that oil producers and FCSs view more than other countries the regular PIT and SSC as substitutes.

<sup>28</sup> Using a common currency for such comparisons is preferable, since GDP itself can be somewhat affected by income taxes—although the correlation is likely very low, compared to using wage or personal income distributions.

<sup>29</sup> To the extent that income distributions may be affected by compliance behavior, such behavior also has an impact on effective tax rates.

<sup>30</sup> Figures for 2020 are based on 2020 tax policy parameters. Based on incomplete figures for SSC from the early 2000s, the shape of the SATR curve including SSC for 2000 is similar to that for 2020.

<sup>31</sup> This implies incomes ranging from 5 to 145 times per capita GDP.

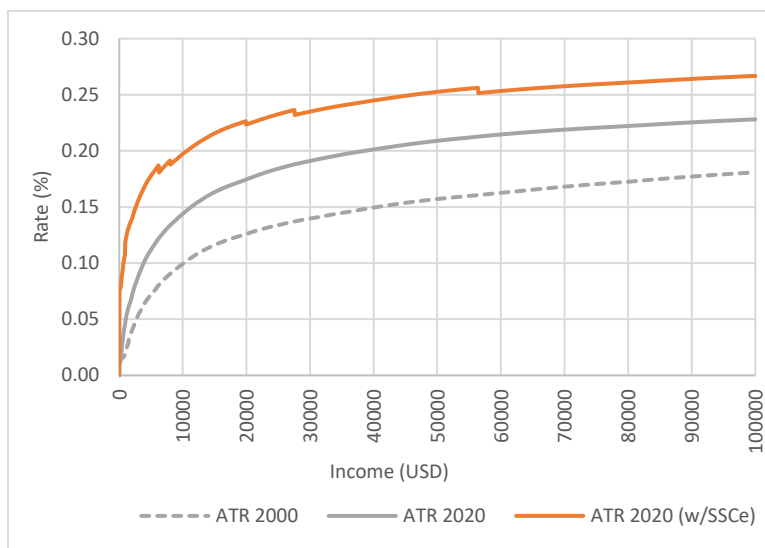
<sup>32</sup> We do not include in the analysis SSC paid by employers, which are relevant for the total cost of labor, but less so (but not entirely) for individuals' post-tax income.

<sup>33</sup> Contrary to SATRs without SSCe, these rates taken into account the deductibility of SSC from the income tax base, as well as applicable floors and ceilings on the calculations of SSC.

<sup>34</sup> Only Egypt has a floor wage above which SSCs apply (in addition to a ceiling), but it is very low at 0.6 times the exempt PIT threshold. Several countries have ceilings, however, with average of about 5.5 times per capita GDP.

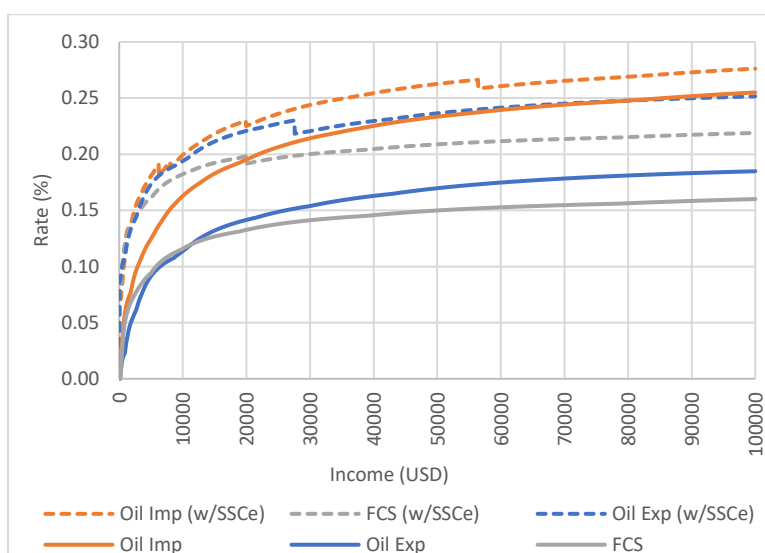
<sup>35</sup> The labor force participation rate in MENA (excluding GCC countries) was 49 percent in 2019, compared to a world average of 67 percent. Note, however, that since these rates do not account for benefits, the analysis is partial, and the progressive rates may not be as progressive when benefits are accounted for.

Figure 3. Statutory Average Tax Rates in MENA



Note: Data points represent average tax rates on income, averaged across countries.

Figure 4. Statutory Average Tax Rates in MENA, by Country Sub-Group



Note: Data points represent average tax rates on income, averaged across countries.

Average SATRs masks differences across countries, which we illustrate in Figure 5 with three countries: Morocco, where the PIT plays a substantive revenue role; Libya, an FCS where PIT revenues are negligible; and Jordan, where both economic conditions and tax administration capacity are present to have a meaningful PIT, but the PIT revenue yield is low relative to other comparable countries. The PIT in Morocco (excluding SSC) is progressive at relatively low-income levels, and top rates are comparable to advanced economies. The tax also provides for an exempt threshold roughly equal to per capita GDP (higher than all countries, except Jordan), ensuring that individuals with average incomes pay little tax. In contrast, Jordan has a much higher exemption threshold (at 3 times per capita GDP), exempting potentially a large share of the population from

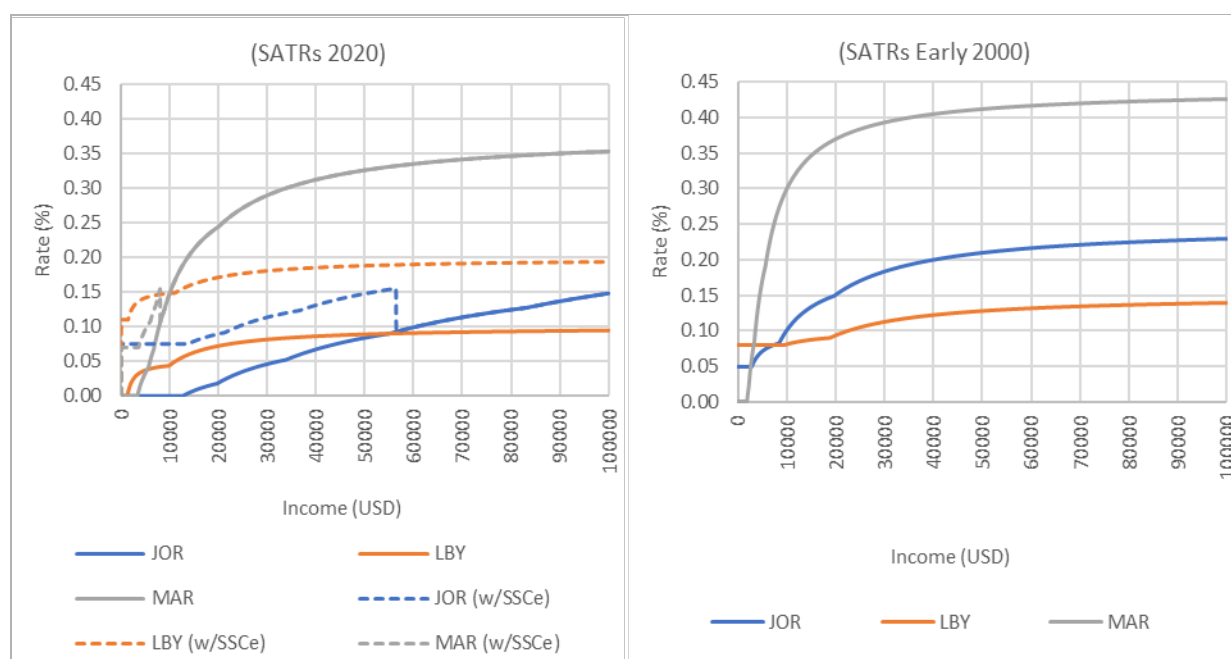


income tax, and its top tax rate bracket stands at nearly 350 times per capita GDP.<sup>36</sup> These design features of the PIT in Jordan explain its low revenue yield. The Libyan SATR curve is even flatter and lower, a direct result of its low top rate of 10 percent.

Changes in marginal tax rates (i.e., the progression of SATRs) in these three countries also provide interesting lessons. In Morocco, marginal tax rates have declined relative to the early 2000s, yet revenue performance has held up. This is the virtuous circle referred to earlier in section II where tax design benefits from economic growth and vice versa, allowing countries over time to reduce marginal tax rates, while preserving or even increasing revenue and improving compliance.

Finally, it is interesting to note that including SSSe in the SATRs changes significantly the shape of the curves for Jordan (which caps SSSe at very high incomes) and Libya (which has no cap on SSSe), while SSSe in Morocco are capped at 2.4 times per capita GDP—roughly the start of the income bracket taxed at 34 percent.

Figure 5. Statutory Average Tax Rates in Libya, Jordan and Morocco



### Effective Progressivity

Effective progressivity is achieved when effective average tax rates (EATRs) increase with income levels. It is challenging to measure effective progressivity because it requires information on actual pre-tax and post-tax income distributions—reflecting all sources of individual income, from labor, capital, and inheritances. The most common method to estimate EATRs uses tax-return (administrative) data, which contain pre-tax income and all the tax rules affecting the passage from pre-tax to post-tax incomes.<sup>37</sup> A drawback of this measure is that it renders comparisons across countries difficult—because it depends on country income distributions, progressivity can be achieved in different ways. This is why actual income distributions are the most appropriate to calibrate PITs, to properly reflect country realities and policy choices.

<sup>36</sup> This is a good example of why changing the top tax rate is unlikely to improve progressivity. See Gale, Kearney and Orszag (2015) for an empirical study of the US PIT.

<sup>37</sup> Tax policy affects pre-tax income because taxes affect behavior that impact the level of income earned and how it is earned.

An alternative method combines country tax parameters with a representative distribution of pre-tax income. This so-called “transplant-and-compare” method<sup>38</sup> allows for the calculation of a progressivity index, which reflects primarily the shape of the SATR curves estimated above as it applies to plausible pre-tax income distributions. It also allows for the estimation of a redistribution index, which accounts for the revenue importance of the PIT—measured as PIT revenue per taxpayer divided by per capita GDP. The intuition is that a PIT that yields very little revenue, even if it is progressive in law, is unlikely to have a significant redistributive role (e.g., Libya, Jordan, Yemen). IMF (2020) uses this method, with results broadly consistent with the results reported above. In particular, PITs in most MENA countries, including in some fragile states (i.e., Lebanon, Iraq), are progressive, but their redistributive capacity is small, due to the small revenue contribution of the PIT—with Morocco, Tunisia, and Mauritania being exceptions. One caveat of this method is that it does not account for the sources of PIT revenue—a PIT whose revenues over the past two decades come primarily from higher government employment and wages, can have the same redistributive capacity of a PIT whose revenues come from private wages. This caveat is relevant in the context of weak administrative capacity, because governments can simply increase PIT revenues by increasing the public sector wage bill.

## IV. Where Next for PIT in MENA?

The analysis above has shown that PITs in MENA differ significantly in terms of their revenue contribution and progressivity, and hence effective redistributive capacity. Generalized ‘one-size-fits-all’ policy options are therefore unlikely to be useful or successful. Policy options will differ depending on a country’s relative weighting of PIT objectives (revenue, efficiency, equity, and state building) and administrative capacity, and will reflect a country’s history, current position, and the ability of political institutions to adopt tax and spending policies that facilitate inclusive economic growth. It is also important to make personal income tax reform more prominent in the political debate on fiscal policy (Moore, 2004), and there has been progress in this regard in the past decade.

### A. Competing PIT Objectives

Where one goes often depends on where one starts. The current role played by the PIT strongly influences PIT options. It is also important to consider PIT options in the context of a country’s existing tax regime. For example, developed countries and some developing countries (including some MENA countries) had a PIT in place before adopting a VAT. This provided an opportunity to address potential VAT regressivity concerns by changing the PIT. In contrast, several MENA countries have adopted VATs without an existing PIT.

As set forth in section II, countries can use the PIT to achieve different objectives, including raising revenue, reducing income inequality, and state building. The exercise below reviews the PIT design choices if a country adopts just one objective as the primary goal. It then examines areas where the design choices may overlap or conflict. Table 6 matches PIT policy objectives with four PIT design elements.

If a country’s primary goal were to raise revenue, then the basic PIT design would include broad coverage of both persons and types of income subject to tax. Countries can increase the proportion of the population subject to income tax by adopting a zero or relatively low PIT threshold. Income subject to tax would include income from capital and foreign source income.

In terms of tax rates, Diamond and Saez (2011) provide a useful framework for a country’s choice of a revenue-maximizing top tax rate. This is the tax rate that maximizes revenue from top bracket taxpayers. Determining the revenue-maximizing rate requires balancing the deadweight burden of higher tax rates against the increased revenue. The challenge is determining the tax elasticities of the top income taxpayers. The elasticity depends on both real and economic responses as well as the availability of tax avoidance and tax evasion

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<sup>38</sup> See Vellutini and Benitez (2021) for a detailed description and application of a simplified “transplant-and-compare” method to a large sample of countries. The authors examine some of the limitations of this method, including compliance issues that affect the revenue contribution of the PIT (especially, the challenges in taxing non-wage incomes of higher-income individuals, including passive capital income and active business income. This makes the approach more useful in examining the progressivity of labor income taxation, in a somewhat similar fashion as the SATR analysis presented in this paper.

opportunities. An important insight for PIT design is that where the opportunities for tax avoidance and evasion is great, the optimal tax rate would be lower.

**Table 6. PIT Objectives and Policy Choices**

<b>Objective</b>	<b>Tax Threshold</b>	<b>Types of Income Subject to Tax</b>	<b>Top Marginal Rates</b>	<b>Investment in Tax Capacity</b>
<b>Maximize Revenue</b>	Zero or low, subject to administrative constraints	Broad coverage, subject to compliance constraints	Revenue maximizing rate	Substantial, depending on timeframe
<b>Reduce Income Inequality</b>	Relatively high to exempt low-income individuals	Broad coverage (especial capital income), subject to compliance constraints	Relatively high	Substantial
<b>State-Building</b>	Low, to maximize taxpayer/citizen overlap	Broad coverage, subject to compliance constraints	Relatively high, but lower than the revenue maximizing rate	Substantial

Countries seeking to maximize revenue would make investments in tax capacity to improve enforcement and compliance. These could include adopting or improving reporting and withholding regimes and facilitating electronic or “return-free filing” and improving audit and collection capabilities. Policymakers’ time horizon play an important role as revenue-maximizing strategies (particularly investment in tax capacity) may differ depending on short-term and long-term revenue objectives.

Countries seeking to use the PIT primarily for redistribution purposes would opt for progressive tax rates and a relatively high PIT threshold. Choosing a top marginal rate requires balancing the equity gains from higher taxes on high-income individuals and the efficiency losses from changing work and investment decisions.<sup>39</sup> A relatively high tax threshold would reduce or eliminate the income tax burden of low-income individuals. Effective taxation of high-income individuals requires a broad tax base that includes income for capital and foreign source income as well as effective taxation of sole proprietorships and partnership income (either in the PIT or included in a business enterprise tax covering business income from corporate and non-corporate entities).

It is important not to focus solely on the tax system (or the progressivity of a single tax instrument) in using fiscal policy to reduce inequality. Spending programs can be more effective in reducing inequality than taxes. For many developed countries with effective social spending programs, it likely makes sense to have less progressive (or regressive) taxes to fund progressive spending programs (Kato, 2009). This is for instance the case of GCC countries, where tax revenue is likely to remain small for the foreseeable future.

If countries want to use the tax system to improve transparency and accountability of government, it is desirable to increase coverage of the PIT to increase the taxpayer/voting citizen overlap. Increased transparency of taxes and spending programs and a better understanding on the incidence of taxes and beneficiaries of spending programs will strengthen the fiscal component of the social contract.

MENA countries likely vary greatly in having the necessary preconditions for using the PIT to foster state-building. The role of the PIT in improving government accountability and transparency works best in those countries where the social contract has evolved from political support in exchange for jobs or subsidies for food and petroleum to political support of taxes in exchange for well-designed social programs. In many countries, a key factor in improving the social contract is the growth in the size of the middle-income class who may be

<sup>39</sup> In efforts to reduce income inequality, many developed countries use tax subsidies to increase investment in human capital and to encourage low-income workers to work more. While in the early years of a PIT, having a high exempt threshold may be the most effective means of not taxing low-income workers, in later years, countries can consider using the tax system to subsidize low-income workers.

“willing” to pay more in taxes in exchange for more and better social programs that benefit taxpayers (either directly or indirectly for programs that taxpayers value).

Depending on its design features, a PIT has the potential to improve or weaken the social contract that facilitates state building. A PIT that only taxes workers in the formal sector and government employees will be much less effective than a PIT where those at the top pay, or are perceived to pay, more in taxes (in both absolute and relative terms).

So where does this leave us in thinking about how weighting different objectives will influence PIT design choices? The major policy design differences among the objectives are in the choice of tax thresholds and the top marginal tax rates. Achieving the objectives of maximizing revenue and state-building call for very low tax thresholds while those emphasizing redistributing income would prefer relatively higher tax thresholds—but not as high as to exclude most taxpayers. In contrast, the objectives of redistributing income and state-building call for relatively high top tax rates while the choice of top rates for maximizing revenue may be lower depending on country-specific factors. The weighting of policy objectives has relatively little effect on other PIT policy choices. All policy objectives would call for broad coverage of types of income subject to tax and for making substantial investment in tax capacity.

## **B. Possible Approaches for Different Countries**

Beyond the key policy parameters outlined above, countries can focus on four key decisions to consider in adopting or expanding a PIT regime:

1. Whether to adopt a semi-comprehensive PIT or a dual income tax regime that applies different tax rates to income from labor and income from capital. This decision is strongly influenced by choices made on taxing passive and active business income. It is useful to assess first where the income tax system stands along the spectrum of comprehensive to dual tax.
2. How to tax active business income of sole proprietorships and partnerships? The two primary options are to tax non-corporate business income under the PIT or to adopt a business profits tax that would apply to all business income without regard to organizational form.
3. How to tax passive income, such as dividends, interest, rents, royalties, and certain types of capital gains? Countries choosing to tax passive income have several options. Such income could be included in the individual's income tax base, similar to labor income, and taxed at progressive rates. A second option applies a separate flat rate to certain types of passive income, which can be the same across all types, or differ by type of capital income—calibrating the rate with the top PIT and CIT is key to effective design. Countries could require the individual receiving the income to pay tax directly or could collect taxes through withholding by the payor—a more effective collection means, especially with the rise in digitalization of information, which makes it easier to collect taxes directly from third parties, and computer networks and platforms.
4. What type of PAYE regime to apply to wages and salaries? The simplest PAYE regime provides for final withholding by employers with few or no adjustments for personal circumstances or other income. At the other end of the continuum, the PAYE regime provides for provisional withholding and employees would still be required to file income tax returns. In the middle are PAYE regimes that allow employers to adjust for personal circumstances and provide for provisional withholding for those employees with substantial income from second jobs or other sources.

In all cases, countries should design tax laws that provide clear guidance to taxpayers and tax authorities about potential tax obligations under the PIT and adopt administrative regimes that make compliance and enforcement as simple and effective as possible.

The remaining part suggests possible PIT design and policy choices along the country grouping used throughout the paper.

**Oil-exporting countries with no PIT**

This group of countries (GCC countries) have the most flexibility in PIT design, with political rather than administrative constraints playing a major role in making PIT design and policy choices. Policy alternatives for this group include:

*Mimic a PIT without a PIT*

This approach taxes personal income under tax instruments other than a PIT. Economists have long recognized that consumption taxes are akin to taxes on labor, given the high correlation between income and consumption—which is strongest for low-income groups. Several GCC countries (Bahrain, Saudi Arabia, UAE, and Oman) have recently adopted VATs and excise taxes on alcoholic and sugar-sweetened drinks, and tobacco. In addition, all GCC countries have adopted (or increased in the past decade) SSCs, which to the extent they are not entirely tied to benefits operate as a flat tax on labor income. The combination of SSCs and a VAT in GCC countries operates as a stealth personal income tax—at least for the majority of individuals with little or no savings. It is difficult to speculate about the policy motivations of these countries to tax income in such a way, but it is likely that political considerations play a role.

GCC Countries can also tax non-labor personal income without a PIT. One relatively easy way to accomplish this objective is to extend the business income tax of sole proprietors and partnerships (including professionals) that applies to non-GCC nationals to GCC nationals in countries where it currently applies (Oman, Qatar and Saudi Arabia), and to introduce a similar tax in other GCC countries.<sup>40</sup> Flat-rate taxes on business income that apply without regard to organizational form are similar to the business tax regime adopted in Mauritania and Djibouti (where they co-exist with a broader PIT).

One advantage of this option in the GCC is that the combination of VAT/SSCs and business profit tax independent of legal form, mimic an income tax that can be progressive, in that individuals with business income could face a higher tax rate on income, relative to individuals earning wage income only. Although this would make the tax system (as a whole) progressive, the potential for greater redistribution would still come from the spending side of the budget—until times are more politically opportune to introduce PITs.

GCC countries can also adopt schedular taxes on certain types of portfolio income (through final withholding), real property taxes, wealth taxes, and inheritance taxes, as proxies for taxing personal income directly. While various forms of real property taxes already exist in some countries, other forms of taxes on wealth as proxies of income taxes are likely to face similar or bigger political challenges than introducing a PIT. It is therefore more realistic in the medium-term to focus on how to build the tax system toward effective and explicit PITs.

*Starter—or basic—PIT*

A starter PIT is also an option for GCC countries. This begins with a simple PAYE final withholding tax with a high threshold exemption on labor income of public and private employees. It could initially apply a relatively low tax rate that will gradually increase to align PIT and top marginal rates on profits. Policymakers would need to examine the combined tax burden on labor income of a new PIT with existing SSC to calibrate the basic design elements of the PIT (threshold and rates). Countries can combine this labor withholding tax with a tax on business income as discussed above, and final withholding taxes on certain types of passive income.

**Oil-exporting countries with PITs**

For oil exporters that do have a PIT (which are all fragile states, except Algeria and Iran), a gradual approach that considers administrative capacity and political economy factors is likely the most feasible. FCSs face the greatest challenges and have the fewest options for tax reform (Mansour and Schneider 2019). The starting point is to examine the strengths and weaknesses of the current tax regime and assess how political challenges and fragility have disrupted tax collection.

For FCSs needing to reset their tax regime, the likely centerpiece would be a PAYE withholding tax at flat or (few) progressive rates on wages of employees in the public sector and employees of larger employers, including state-owned enterprises. For these countries, it likely makes sense to defer taxing non-wage income under a PIT, with the possible exception of schedular taxes on certain types of passive income (i.e., final withholding taxes on interest and dividends).

<sup>40</sup> IMF (2016) estimates that the revenue yield of a business profit tax for GCC would be around 3 percent of GDP.

The overriding guide for these countries, given administrative capacity and political instability, should be simplicity of tax design and collection. In this regard, countries should eliminate minor taxes that raise little revenue but have substantial administrative challenges and costs, to reduce compliance costs and improve enforcement. This is particularly important for earmarked taxes, which fall on wages or turnover of businesses (incorporated or not), and which weaken the key taxes that should raise the bulk of revenues, including withholding on wages. Equally important is to dispense with exceptions and exemptions from the withholding tax on income, and not provide deductions from the tax base (or tax credit), other than the bracket taxed at zero—which should be calibrated to exclude a given number of individuals from the tax net.

Depending on administrative capacity, countries could consider having local governments take on some taxing and spending responsibilities. This will create a stronger link between where taxes are collected and where the revenues are spent. This also makes sense in the context of asymmetric political fragility across the territory, such as the case of Iraq. In effect, this amounts to vertical tax integration to alleviate the impact of fragility on the role of the central government in providing local services.

Algeria differs from other oil-exporting countries in that its PIT-to-GDP revenue ratio is over 4.5 percent in 2020 (compared to less than 1 percent in 2000). As we noted above, understanding what caused the increased tax revenue and how it relates to the public vs. private sector is key to thinking about how to improve the PIT in Algeria. One area of possible tax reform is improving the tax policy and tax administration related to taxing non-wage personal income under the PIT—i.e., passive capital income and business income of unincorporated businesses.

### **Oil-importing countries**

For oil importers that are not fragile, the revenue contribution from PITs varies greatly. For countries raising substantial PIT revenue, the focus of reforms should be on enhancing PIT neutrality in the taxation of various forms of capital income, and redistributive capacity, in coordination with SSC. In this regard, countries can expand the tax base through more efficient taxation of active business income and passive capital income and limit the use of deductions (which are highly regressive) to achieve certain policy objectives. Where additional revenues are not sought, top (combined PIT/SSC) marginal tax rates on labor income could be reduced to enhance labor market incentives—as Morocco did for instance with its top PIT rate over the past two decades.

For oil-importing countries that tax active business income of sole proprietorships and partnerships under the PIT, it is important to compare relative tax burdens for business income under the PIT and CIT regimes. Here, it may be desirable to reduce or eliminate tax rate differences under the PIT and CIT. As proposed above, countries could consider removing active business income from the PIT and taxing that income under a business profits tax (that applies to all business income regardless of organizational form).

The PITs of several oil-importing countries are de facto dual income tax regime that tax labor income at progressive tax rates but tax (generally through withholding) most forms of income from capital at different rates ranging from 0 to 20 percent. Moving toward a formal dual income has the advantage of eliminating differential tax treatment for different types of income from capital.

## **V. Conclusions**

In most developed countries, PITs play an important role in raising revenue, reducing inequality, and fostering greater bargaining between citizen/taxpayers and governments. In contrast, in many developing countries, PITs raise little revenue, play little or no role in reducing inequality, and are not part of the political discourse. In MENA, with a couple of exceptions, PITs are at the far end of the spectrum of revenue and political irrelevance.

The prospects and possibilities of MENA countries either adopting a PIT or strengthening an existing one depend greatly on the time horizon of policymakers and their enthusiasm for using the PIT for redistribution and state-building or making the PIT more equitable by narrowing the relative PIT burdens between the high taxes on labor in the formal sector and the much lower taxes on other sources of income. For policymakers focusing on short-term revenue needs and having little interest in using PITs for other purposes, then the likely preferred

option is to raise revenue under existing VATs and excise taxes and address inequality and redistribution through targeted social spending programs.

For policymakers with a longer-term perspective, PITs can play a significant role in a country's tax regime. Countries have to start somewhere. Small steps taken in the next few years may increase the likelihood of a more robust PIT in the future.

As for possibilities, countries in the MENA region vary greatly. They differ economically, politically, and demographically, and they have taken different approaches to raise revenue to fund government operations. In some MENA countries, PITs are an important part of the tax system, while in other countries PITs play little or no role. This great diversity means that countries will make different choices as to whether to adopt a PIT regime or to strengthen existing PIT regimes.

The starting point matters greatly. Countries without PITs have the greatest flexibility in designing PIT regimes. Countries with robust regimes have different opportunities to improve the scope of the PIT than countries with less effective PIT regimes. Countries also will differ on the objectives of a new or improved PIT. Countries using the PIT primarily to raise revenue will make different tax design decisions than countries using the PIT to reduce inequality or to foster state building—a much more difficult objective to set in the MENA region.

This paper has examined how the PIT has evolved in the MENA region over the past two decades. While PIT revenues have remained stagnant, the taxation of individual income has changed significantly. First, top marginal tax rates on labor and business income of individuals have declined substantially. This trend started in the 1980s, when tax rates were very high in MENA countries, and mirrors rate reductions found in advanced, developing, and transitional economies throughout the world. Over the same period, there have been few changes in the taxation of passive capital income, and the revenue potential from this source remains low throughout the region (estimated at less than 1 percent of GDP on average and concentrated in oil-importing non-fragile states).

Second, SSCs are applied in all MENA countries; they have increased over the past two decades and some countries have introduced additional payroll taxes, albeit at low rates. Generally, there is a weak link between contributions and social benefits received. In the GCC region, where VATs now exist, the combination of SSCs and VATs is economically equivalent to a flat tax on labor income in the formal sector and will greatly influence how these countries will shape the taxation of personal income in the future.

Third, while levels of income and wealth inequality have increased throughout the region over the past two decades, PIT progressivity remains relevant only at low-income levels, and partly due to this, largely irrelevant as a revenue tool. The combination of reduced tax rates, very low or absent taxation of income from capital and business activities, and the increase in SSC (on average over the past two decades, 2 percentage points for the employee share and 2 points for the employer share), result in tax systems that do little to shift the tax burden to those with higher incomes and raise more revenue.

Finally, throughout the region, constraints on tax reform are more likely political than administrative and are inexorably tied to decisions on maintaining or increasing funding for government spending programs. The political challenges vary greatly among MENA countries. Changing the social contract (including the fiscal component) is challenging in all countries but may be even more difficult for those MENA countries that provided government services and subsidies at no or low costs and that may lack the necessary institutions to foster tax bargaining between taxpayers and governments.

## References

- Alvaredo, Facundo, Lydia Assouad, and Thomas Picketty. 2018. "Measuring Inequality in the Middle East 1990-2016: The World's Most Unequal Region?" *The Review of Income and Wealth*, Vol. 65, Issue 4, pp. 685-711.
- Assaad, Ragui. 2014. "Making Sense of Arab Labor Markets: The Enduring Legacy of Dualism." *IZA Journal of Labor & Development*, Vol. 13, Issue 6, pp. 1-25.
- Bahl, Roy W. 1971. "A Regression Approach to Tax Level and Tax Ratio Analysis." *IMF Staff Papers*, Vol. 18, No. 3, pp. 570-612, Washington, DC: IMF.
- Beer, Sebastien, Mark Griffiths and Alexander Klemm. 2023. Tax Distortions from inflation: What are they? How to deal with them? Working Paper 23/18, IMF: Washington DC
- Benedek, Dora, Juan Carlos Benítez, and Charles Vellutini. 2022. "Progress of the Personal Income Tax in Emerging and Developing Countries." WP/22/20, Washington, DC: IMF.
- Benedek, Dora, Ernesto Crivelli, Sanjeev Gupta, and Priscilla Muthooru. 2014. "Foreign Aid and Revenue: Still a Crowding Effect?" *FinanzArchiv*, Vol. 70, Issue 1, pp.67-96.
- Besley, Tim, and Torsten Persson. 2014. "Why Do Developing Countries Tax So Little." *Journal of Economic Perspectives*, Vol. 28, No. 4, pp. 99-120.
- Breceda, Karla, Jamele Rigolini, and Jaime Saavedra. 2009. "Latin America and the Social Contract: Patterns of Social Spending and Taxation." WPS4604, Washington, DC World Bank.
- Bird, Richard M., Jorge Martinez-Vazquez, and Benno Torgler. 2014. "Societal Institutions and Tax Effort in Developing Countries." *Annals of Economics and Finance*, Vol. 15, pp. 301-351.
- Bird, Richard M., and Eric M. Zolt. 2015. "Fiscal Contracting in Latin America." *World Development*, Vol. 67, pp. 323-335.
- Bird, Richard M., and Eric M. Zolt. 2011. "Dual Income Taxation: A Promising Path to Tax Reform for Developing Countries." *World Development*, Vol. 39, Issue 10, pp. 1691-1703.
- Bird, Richard M., and Eric M. Zolt. 2005. "Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries." *UCLA Law Review*, Vol. 52, pp. 1627-1695.
- Bourgingnon, François. 2018. Spreading the Wealth. *Finance & Development*, March 2018, Washington, DC: IMF
- Bräutigam, Deborah A., Odd-Helge Fjeldstad, and Mick Moore. 2008. "Taxation and State-Building in Developing Countries: Capacity and Consent." *Cambridge University Press*.
- Brun Jean-François, Gérard Chambas, and Mario Mansour 2014. "Tax Effort of Developing Countries: An Alternative Measure." In *Financing sustainable development by addressing vulnerabilities*. Edited by M. Boussichas and P. Guillaumont, Economica.
- Brun, Jean-François, and Maïmouna Diakité. 2016. "Tax Potential and Tax Effort: An Empirical Estimation for Non-resource Tax Revenue and VAT's Revenue." *Études et Documents*, No. 10, CERDI.
- Cagé, Julia, and Lucie Gadenne. 2018. "Tax revenues and the fiscal cost of trade liberalization, 1792-2006." *Exploration in Economic History*, 70, 1-24.
- Chu, Ke-young, Hamid Davoodi, and Sanjeev Gupta. "Income Distribution and Tax and Government Social Spending Policies in Developing Countries." WP/00/62, Washington, DC: IMF.
- Crivelli, Ernesto, and Sanjeev Gupta. 2014. "Resource blessing, revenue curse? Domestic revenue effort in resource-rich countries." *European Journal of Political Economy*, Vol. 35, pp. 88-101.
- Chelliah, Raja J., Hessel J. Baas, and Margaret R. Kelly. 1975. "Tax Ratios and Tax Effort in Developing Countries." *IMF Staff Papers*, No. 22, pp. 187-205, Washington, DC: IMF.
- Congressional Budget Office. 2021. *The Distribution of Household Income, 2018*, Washington, DC.



- De Mooij, Ruud and Gaëtan Nicodème. 2008. "Corporate tax policy and incorporation in the EU." *International Tax and Public Finance*, 15: 478-498.
- Diamond, Peter, and Emmanuel Saez. 2011. "The Case for a Progressive Tax: From Basic Research to Policy Recommendations." *Journal of Economic Perspectives*, Vol. 25, No. 4, pp. 165-190.
- Dutzler, Barbara, Simon Johnson, and Priscilla Muthoora. The Political Economy of Inclusive Growth: A Review. In *How to Achieve Inclusive Growth?* Edited by V. Cerra, B. Eichengreen, A. El-Ganainy, and M. Schindler. Oxford University Press, 2021.
- Engel, Eduardo, Alexander Galetovic, and Claudio Raddatz. 1999. "Taxes and income distribution in Chile: some unpleasant redistributive arithmetic." *Journal of Development Economics*, Vol 59, Issue 1, 155-192.
- Fenochietto, Ricardo, and Carola Pessino. 2013. "Understanding Countries' Tax Effort." *IMF Working Paper* No. 13/244, Washington, DC: IMF.
- Gaspar, Vitor, David Amaglobeli, Mercedes Garcia-Escribano, Delphine Prady, and Mauricio Soto. 2019. "Fiscal Policy and Development: Human, Social, and Physical Investment for the SDGs," *Staff Discussion Note 10/03*, Washington, DC: IMF.
- Gaspar, Vitor, Laura Jaramillo, and Philippe Wingender. 2016. Political Institutions, State Building, and Tax Capacity: Crossing the Tipping Point. *Working Paper* 16/233, IMF: Washington, DC.
- Gerber, Claudia, Alexander Klemm, Li Liu, and Victor Mylonas. 2019. "Income Tax Progressivity: Trends and Implications." *Oxford Bulletin of Economics and Statistics*, August.
- Gale, William G., Melissa S. Kearney, and Peter R. Orszag. 2015. "Would a significant increase in the top income tax rate substantially alter income inequality?" *Economic Studies at Brookings*, September.
- Haber, Stephen, and Victor Menaldo. 2011. "Do Natural Resources Fuel Authoritarianism? A Reappraisal of the Resource Curse." *American Political Science Review*, February pp. 1-26.
- Hettich, Walter, and Stanley L. Winer. 2003. "The Political Economy of Taxation: Positive and Normative Analysis When Collective Choice Matters." *Working Paper No. 02-11*. Carleton University.
- International Monetary Fund. 2022. "Revenue Mobilization for a Resilient and Inclusive Recovery in the Middle East and Central Asia." Departmental Paper, Washington, DC: IMF.
- International Monetary Fund. 2022. *Fiscal Monitor: Tackling Inequality*, October 2017, Washington, DC: IMF.
- International Monetary Fund. 2016. "Diversifying Government Revenue in the GCC: Next Steps." Paper prepared for the Annual Meetings of Ministers of Finance and Central Bank Governors, October 26, Riyadh, Saudi Arabia.
- International Monetary Fund. 2017. *Fiscal Monitor, October 2017*. Washington, DC: IMF.
- Jewell, Andrew, Mario Mansour, Pritha Mitra, and Carlo Sdravovich. 2015. "Fair Taxation in the Middle East and North Africa." *Staff Discussion Note 15/16*, IMF: Washington, DC.
- Levi, Margaret. *Of Rule and Revenue*. University of California Press, 1989.
- Lindert, Peter. 1996. "What Limits Social Spending?" *Explorations in Economic History*, Vol. 33, Issue 1, pp. 1-34.
- Lindauer, David, and D Velenchik. 1992. "Government Spending in Developing Countries: Trends, Causes, and Consequences." *The World Bank Research Observer*, Vol. 7, Issue 1, pp. 59-78.
- Lotz, Joergen R., and Elliott R. Morss. 1970. "A Theory of Tax Level Determinants for Developing Countries." *Economic Development and Cultural Change*, Vol. 18, No. 3, pp. 328-341.
- Lustig, Nora, Luis F. Lopez-Calva, and Eduardo Ortiz-Juarez. 2013. "Deconstructing the Decline in Inequality in Latin America." WPS6552, Washington, DC: World Bank.
- Kato, Junko. 2009. *Progressive Taxation and the Welfare State: Path Dependence and Policy Diffusion*. Cambridge University Press.

- Mansour, Mario. 2015. "Tax Policy in MENA Countries: Looking Back and Forward". *IMF Working Paper 15/98*, Washington, DC: IMF.
- Mansour, Mario, and Jean-Luc Schneider. 2019. "How to Design Tax Policy in Fragile States." How-to Note Series, NOTE/19/04, Washington, DC: IMF.
- Moore, Mick. 2004. "Taxation and The Political Agenda, North and South." *Forum for Development Studies*, No. 1-2004.
- Peters, B. Guy. 1991. *The Politics of Taxation: A Comparative Perspective*. B. Blackwell.
- Piketty, Thomas, and Emmanuel Saez. 2013. *Optimal Labor Income Taxation*. In *Handbook of Public Economics*; eds. Alan J. Auerbach, Raj Chetty, Martin Feldstein, and Emmanuel Saez; North Holland.
- Pritchard, Wilson. 2010. "Taxation and State Building: Towards a Governance Focused Tax Reform Agenda." *IDS Working Paper 341*, Brighton: Institute of Development Studies.
- Purfield, Catriona, Harald Finger, Karen Ongley, Bénédicte Daduel, Carolina Castellanos, Gaëlle Pierre, Vahram Stepanyan, and Erik Roos. 2018. "Opportunities for All: Promoting Growth and Inclusiveness in the Middle East and North Africa." *Departmental Papers* No. 18/11, Washington, DC: IMF.
- Ross, Michael L. 2011. "Does Oil Hinder Democracy?" *World Politics*, Vol. 53, Issue 3, pp. 325-361.
- Sheve, Kenneth, and David Stasavage. *Taxing the Rich: A History of Fiscal Fairness in the United States and Europe*. Princeton University Press.
- Steinmo, Sven. 1993. *Taxation and Democracy: Swedish, British, and American Approaches to Financing the Modern State*. Yale University Press.
- Tait, Alan A., Wilfrid L. M. Gratz, and Berry J. Einchengreen. 1979. "International Comparisons of Taxation for Selected Developing Countries." *IMF Staff Papers*, No. 26, pp. 123-156, Washington, DC: IMF.

## Annex I. List of MENA Countries and Sub-groups

Country Code	MENA	Oil-Exporting	Oil-Importing	Fragile
AFG	Afghanistan		Afghanistan	Afghanistan
DZA	Algeria	Algeria		
BHR	Bahrain	Bahrain		
DJI	Djibouti		Djibouti	Djibouti
EGY	Egypt		Egypt	
IRN	Iran	Iran		
IRQ	Iraq	Iraq		Iraq
JOR	Jordan		Jordan	
KWT	Kuwait	Kuwait		
LBN	Lebanon		Lebanon	Lebanon
LBY	Libya	Libya		Libya
MRT	Mauritania		Mauritania	
MAR	Morocco		Morocco	
OMN	Oman	Oman		
QAT	Qatar	Qatar		
SAU	Saudi Arabia	Saudi Arabia		
SOM	Somalia		Somalia	Somalia
SDN	Sudan		Sudan	Sudan
SYR	Syria		Syria	Syria
TUN	Tunisia		Tunisia	
ARE	United Arab Emirates	United Arab Emirates		
YMN	Yemen	Yemen		Yemen

Note: Somalia, Sudan, Syria, and Afghanistan were excluded from the sample analyzed in this paper due to data constraints.

## Annex II. Determinants of PIT Revenue

The methodology for estimating the economic and policy factors associated with changes in PIT revenues follows Benedek, Benitez, and Vellutini (2022). We estimate the following equation, using a lagged instrumental variable two stage least squares to address the simultaneity problem, and robust standard errors to correct for heteroskedasticity:

$$pit_{it} = \alpha + \beta \cdot e_{it} + \gamma \cdot p_{it} + \mu_{it}$$

where  $pit$  is PIT revenue in percent of GDP,  $i$  and  $t$  are, respectively, country and time subscripts,  $e$  is a vector of economic variables,  $p$  is a vector of tax policy variables, and  $\mu$  is an idiosyncratic random and uncorrelated error term.

Economic variables include the following (with brackets showing expected sign of correlation):

- The natural logarithm of GDP per capita (positive): A measure of the level of economic development, which is typically positively correlated with PIT revenues—as income levels increase, so do PIT revenue in percent of GDP, provided that PIT design allows for capturing this growth. This variable could also capture other state characteristics such as quality of institutions and corruption levels, but this is not always the case—for instance, oil wealth could be negatively correlated with PIT revenues and positively correlated with corruption.
- The public wage bill in percent of GDP (positive): A measure of the public sector employment size, which is relatively easy to tax. This measure captures only what is accounted as government wages in governments' financial operations tables and may not include wages of state-owned enterprises and other quasi-public entities.
- inflation (positive): Inflation can be positively correlated with PIT revenues when taxpayers are pushed into higher tax brackets due to increases in the price level. Most countries do not index their tax brackets to inflation (Beer, Griffiths, and Klemm 2013).
- Agricultural or primary sector value added in percent of GDP (negative): A measure of the hard-to-tax, and often exempt, sector of the economy.
- Self-employment in percent of total employment (negative): Self-employed are hard to tax in developing and transition economies. The higher their share of total employment, the lower PIT revenue are expected.

Policy variables include the following (again, with expected sign of correlation shown in brackets):

- Exempt (or taxed at zero) income bracket, in percent of GDP (negative): all else equal, the higher the exemption threshold, the lower are PIT revenues in percent of GDP.
- The top income bracket, in percent of GDP (negative): This is the income level, in percent of GDP, at which the highest tax rate kicks in—and therefore, its effect depends on the rate structure. The highest this ratio, the lowest are PIT revenue. This relationship would be expected to be strong in MENA countries, where capital income is lightly taxed, and therefore wages must reach high levels for the top tax rate to apply.
- The lowest non-zero tax rate (positive): A very low rate implies less revenue relative to a higher rate.
- The top tax rate (positive): A high top rate implies more revenues relative to a lower rate.

We control with country-specific dummies for the deductibility of SSC from the PIT base, oil importers, and non-fragile states. Other controls used include corporate income tax revenue in percent of GDP (ambiguous), to account for policy choices, such as raising more from CIT than from PIT and tax planning through incorporation—in which case the expected sign is negative—or to reflect changes that positively affect all tax sources such as improvement in tax administration—in which case the expected sign is positive—and the difficulties to disentangle the economic meaning of PIT and CIT, relative to their accounting classification.

Data on tax revenues are from Mansour (2015), and updates following the same methodology, which disentangles as much as available revenue from non-renewable resources (oil, gas, and mining) from non-resource (tax and non-tax) revenues. These data are taken from IMF article IV consultations, where countries report their fiscal data to the IMF, following (broadly speaking), the IMF's GFS classification. Personal income tax rates and tax brackets are taken from the PIT database maintained by the IMF's Fiscal Affairs Department; these data are collected from various sources, including: IBFD; PWC Worldwide Tax Summaries Online, and countries' tax laws. Economic variables are from the IMF's World Economic Outlook database.

The results are reported in the table below. Invariably to the specification used, per capita GDP, the public wage bill, and the top marginal tax rates are all significant, and all other variables are not, except for the primary sector value added, which is (weakly) significant in specifications (3) and (4), with an unexpected positive sign. These two specifications also suggest that isolating fragile and oil-rich countries, tend to increase the importance of the effect of the top tax rate, relative to that of public sector wages and GDP per capita. This suggests that the top tax rate (a policy parameter) play a more important role in the revenue yield of the PIT in non-fragile oil-importing countries.

### Policy and Economic Determinants of PIT Revenue in MENA: 1990-2020

Variables	PIT Revenue in % of GDP			
	(1)	(2)	(3)	(4)
GDP per capita (log of constant USD)	2.089*** (0.70)	2.420*** (0.83)	1.640** (0.76)	1.919** (0.87)
Primary Sector Value Added (% of GDP)	0.206 (0.160)	0.271 (0.166)	0.369* (0.223)	0.425* (0.221)
Self-employed (% of total employment) (ILO estimate)	0.030 (0.067)	0.021 (0.062)	-0.015 (0.073)	-0.023 (0.067)
Public Wage Bill (percentage Of GDP)	0.419** (0.176)	0.427** (0.177)	0.342*** (0.130)	0.349*** (0.131)
Inflation, Consumer Price Index (annual change in %)	0.174 (0.186)	0.164 (0.179)	0.151 (0.152)	0.142 (0.147)
Exempt Income to GDP per Capita	0.582 (0.392)	0.375 (0.393)	0.644 (0.401)	0.469 (0.436)
PIT Lowest Positive Rate	1.496 (8.661)	0.191 (8.409)	0.829 (8.757)	-0.276 (8.340)
PIT lowest positive rate x Exempt Income to GDP per capita	-8.518 (7.024)	-6.968 (6.583)	-5.066 (6.241)	-3.744 (5.832)
PIT Top Marginal Rate	10.55** (5.227)	9.839* (5.023)	14.14** (7.188)	13.55* (7.058)
CIT Revenue (% of GDP)	0.103 (0.159)	0.0621 (0.181)	0.11 (0.155)	0.0756 (0.174)
Top PIT Bracket to GDP per Capita	0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Ratio Exempt Income to Top PIT Bracket	-0.424 (2.872)	0.416 (2.964)	-1.073 (2.620)	-0.364 (2.760)
SSC Deduction Dummy	-2.542 (1.815)	-2.737 (1.830)	-2.846 (1.821)	-3.011 (1.892)
Oil Importer Dummy		0.528 (0.464)		0.446 (0.454)
Non-Fragile States Dummy			-1.994 (1.884)	-2.000 (1.914)
Constant	-24.08*** (8.227)	-27.00*** (9.238)	-18.61** (7.575)	-21.07** (8.582)
Number of observations	69	69	69	69
R-squared	0.786	0.797	0.810	0.815

Notes: Robust standard errors in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



**PUBLICATIONS**