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The Institutional Foundations of Modern Tax Collection

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Abstract

A prominent strand of recent economic and legal scholarship hypothesizes that third-party information reporting (TPIR) is essential to modern tax collection. The slogan, "no taxation without information," has captured researchers' imagination and is even often presented as self-evident truth. This Article offers a fundamentally different perspective, arguing that the emphasis on TPIR is misplaced. TPIR is used largely in the collection of the personal income tax but not of many other types of modern taxes. Even for the personal income tax, TPIR also has close substitutes which do not involve information transmission to the government. Theoretically, appeals to TPIR are vitiated by the puzzle of payor compliance. And most purported empirical evidence for the effectiveness of TPIR fails to provide causal identification.

I suggest that to better understand the institutional foundations of modern tax collection, we should stop thinking of business firms as "fiscal intermediaries" in a game of deterrence against tax evaders. Instead, it would be more fruitful to conceive of firms as sites of social cooperation under the rule of law. The co-evolution of the business firm and modern regulatory law may have enabled modern governments to practice precisely "taxation without information".

Introduction

Successfully raising tax revenue is a defining mark of the "state capacity" of advanced economies.[1] Building effective tax administration is one of the most urgent tasks facing poorer countries in their pursuit of sustainable development.[2] These ideas have recently fueled extraordinary policy initiatives among many nations. In 2015, the 193 United Nations (UN) Member States reached two comprehensive agreements, the Addis Ababa Action Agenda and the 2030 Agenda for Sustainable Development (UN 2015b, c). Both agendas committed "to enhancing revenue administration through modernized, progressive tax systems, improved tax policy and more efficient tax collection."[3] In the meantime, questions such as "Why do developing countries tax so little?" and "How can developed countries tax so much?"[4] have become the focus of much research in political economy, economic history, public and developmental economics. These intellectual developments can be seen as complementary to the global policy initiatives: if raising tax revenue is indeed crucial to the path to prosperity for all nations in the world, a framework for understanding the institutional foundations of modern tax collection is clearly in order.

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[1] Besley and Persson (2009, 2011); Dincecco (2015); Acemoglu (2005); Bardhan (2016).
[2] Keen (2012); International Monetary Fund (2015); United Nations (2015a).
[3] A slew of major international projects were launched on the sidelines of the Addis Ababa Conference and in its aftermath, involving the coordination of international organizations that previously operated separately in this policy area. See International Monetary Fund et al. (2016).
[4] Besley and Persson (2013, 2014); Kleven (2014).

Much recent research on the underpinnings of the tax collection capacity of advanced economies has converged on a seemingly obvious line of reasoning. To collect tax, the government needs information about the taxable income, transactions, and other tax attributes of taxpayers. But the government is always in a situation of information asymmetry vis-à-vis taxpayers: the latter always have incentives to hide such information. The government's ability to overcome such information asymmetry therefore must be crucial for tax collection. And, scholars seem to believe, the most powerful way by which such asymmetry has been overcome is through third-party information reporting ("TPIR").[5] In the boldest formulation of this idea, Kleven, Kreiner, and Saez (2016) claim that third-party reporting[6] is a defining feature of modern taxation. To support this bold conjecture, a small but "rapidly growing" empirical literaturehas emerged that claims to offer novel evidence for the power of TPIR.[7] The slogan, "no taxation without information" (Pomeranz 2015), not only has captured researchers' imagination but is often even presented as self-evident truth.

Such claims also resonate with a wide range of legal scholars and policy makers, especially in the United States. U.S. policymakers have long been interested in narrowing the "tax gap" (the discrepancy between the tax revenue that is collected and the revenue that ought to be collected). And greater information report has often been considered as a key approach to achieving this goal. Important legislative actions taken in 2009 gave greater emphasis to TPIR.[8] Proposals to further expand TPIR continue to be advanced.[9] Most importantly, the ever-expanding computing capacities of modern digital economies makes the recording and transmission of transactional information to tax collectors easier and easier, which in turn seems to promise more effective government control of taxpayer information.[10]

This paper contributes to these vibrant discussions by offering a contrarian perspective. I argue that much recent research has mischaracterized the role of TPIR, which has also led to increasing confusions about the institutional basis of modern tax collection. To develop this perspective, I first engage in a de-bunking exercise, aimed at exposing weaknesses in the arguments and evidence adduced for the importance of TPIR. I show that:

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[5] As one widely-cited study that purports to provide empirical support for this intuitive reasoning puts it:

> "A fundamental constraint for taxation is that governments need to be able to observe transactions in order to impose a tax on them. A growing literature therefore argues that understanding information flows is central to effective taxation. When governments imperfectly observe transactions, important differences emerge between forms of taxation that are equivalent in standard models of taxation but differ in the information they generate for the government. Third-party reporting, verifiable paper trails, and whistle-blowers are thought to play an important role in facilitating tax enforcement." (Pomeranz 2015)

[6] In this Article, I will use "information reporting," "third-party reporting", and TPIR interchangeably.

[7] The description of this empirical literature as "rapidly growing" is borrowed from Slemrod et al. (2015). For a summary review, see Slemrod (2016). For examples of some widely cited studies, see Pomeranz (2015); Kleven et al (2011); Carrillo et al. (forthcoming); Naritomi (2016); and Almunia and Lopez-Rodriguez (2015).

[8] Since 2011, the IRS has required credit card companies and payment settlement entities such as eBay to report payments made to small businesses. Financial institutions are also now under the obligation to furnish information about the tax basis of securities to taxpayers and the government to determine gains or losses on security sales.

[9] Alm and Soled (2014).

[10] Kleven (2014) ("the gradual transition from cash to credit card transactions may eventually eliminate most tax evasion even for self-employed individuals.")

a. TPIR is largely used in the collection of the personal income tax (PIT), and plays no role in most other types of modern taxes.
b. Although information reporting and withholding are crucial to PIT collection, to portray them as overcoming pre-existing information asymmetries between the government and taxpayers trades on legal artifices.
c. The emphasis on TPIR leaves it mysterious why payors would comply with the tax law. In particular, claims that payor withholding or information reporting generates self-enforcing compliance dynamics is both practically unconvincing and theoretically naïve.
d. Most purported evidence for the effectiveness of TPIR is based on flawed empirical inferences.

These arguments demonstrate that TPIR cannot play the explanatory role that many have assigned it: at least until the present, giving governments effective access to taxpayer information through third parties does not explain the success of modern tax administration. What many are increasingly coming to use as "stylized facts" actually involve grave misconceptions about the basis of modern tax administration. This is the first intended contribution of the Article.[11]

In addition, I suggest that to better understand the institutional foundations of modern tax collection, we should stop thinking of business firms as "fiscal intermediaries" in a game of deterrence against tax evaders. Instead, it would be more fruitful to conceive of firms as sites of social cooperation under the rule of law. If firms enable social cooperation, but do so only with the support of a legal system, then compliance with law in business operations can often be expected. There need not be anything special about compliance with tax law in particular, and any valid explanation of why firms comply with the tax law is unlikely to be distinct from explanations of the phenomenon of business compliance with the law in general. I argue that this explanatory strategy is more consistent with the history of modern taxation—in particular, the fact that labor and workplace regulations were implemented well before the adoption of information reporting—than explaining tax compliance in terms of TPIR. Moreover, it is also more consistent with social scientific theories of social cooperation in general. The second intended contribution of the article is thus to put tax compliance into the context of business compliance with the law in general, and connecting both with the theory of the firm.

The Article proceeds as follows. Part I review some important historical facts that have emboldened economists to hypothesize that TPIR is the linchpin of modern taxation. It then contrasts this hypothesis with a much more cautious view, which holds TPIR to be a derivative phenomenon. Part II offers a series of arguments for the latter view, identifying weaknesses in both the conceptual arguments and empirical evidence for the relevance of TPIR. Part III and IV then contrasts the conceptions of firms as "fiscal intermediaries" and as sites of social cooperation: Part III highlights the inadequacies of the former; Part IV sketches out the latter conception and its promise both in terms of historical plausibility and theoretical coherence. Part

[11] In a companion article, I articulate a new way of looking at the feasibility of TPIR, in terms of when information about the mutual identities of market participants is likely to be transmitted through market mechanisms. This perspective defines the limits of TPIR more sharply and parsimoniously than previous approaches, and suggests that TPIR will tend to be incomplete with respect to business income, and render TPIR an ineffective tool in limiting tax evasion.

V briefly discusses some of the policy implications of the arguments in Parts I-IV. A brief Conclusion follows.

I. Information Reporting: The Linchpin of Modern Taxation?

Scholars who view taxation as a core component of modern state capacity give great emphasis to the facts that richer countries tax more, and any given country tends to tax more as it gets richer.[12] In a recent, influential paper, Kleven, Kreiner and Saez (2016) (abbreviated below as "KKS") show that these patterns are driven entirely by countries' adoption of what they call "modern taxes". They include in the definition of "modern taxes" personal and corporate income taxes, the value-added tax (VAT), and payroll taxes and social security contributions. By contrast, "traditional taxes" are defined as all other taxes, including property taxes, inheritance taxes, excise and sales taxes, custom duties, etc. Examining data from 2005 regarding 29 OECD countries and 43 non-OECD countries, they show that there exists a clear positive correlation between (i) GDP per capita and (ii) the ratio of revenue from modern taxes to GDP, but there is no correlation between GDP per capita and the ratio of revenue to GDP from traditional taxes.[13] Further, using data for 14 advanced economies over a 160-year horizon, they show that again, the growth in tax revenue in these countries over time is driven entirely by growth in "modern taxes", with no long-run increase in "traditional taxes".

KKS offer an interpretation for these historical patterns that has gained great popularity. They postulate that in any country, the growth of tax revenue is constrained by the enforceability of taxes, which depends on the availability of taxpayer information to the government. All "modern taxes" are basically taxes in respect of which the "enforceability constraint" has been loosened or overcome, through the mechanism of "third-party reporting". By this latter term, KKS mean arrangements whereby firms act as intermediaries to collect information about other taxpayers and transmit such information to the government.[14] They argue that when firms get sufficiently large, they are more likely to act reliably as such intermediaries, because the risk of firms' being caught cheating increases as firm size grows. In KKS's theoretical model, the growth of firm size is driven by production technology, abstractly defined and assumed as exogenously given. Therefore, roughly speaking, the growth of firm size in an economy causes "third-party reporting" to become more reliable, which in turn causes taxes to become more enforceable, and the optimal level of taxation more achievable.

That large firms tend to be more compliant with the tax law (and other types of law) is a common observation. What KKS's theory adds is the contention that this matters for the capacity of governments to collect tax revenue because it helps solve a pre-existing problem of information asymmetry, i.e. the government's lack of information about ultimate taxpayers such as individual income-earners. Other scholars have recently offered explanations of modern tax compliance in a similar spirit: that is, they first postulate information asymmetry as the most

[12] KKS, 219; Besley and Persson (2013), 56; Besley and Persson (2014), 102-103; Kleven (2014), 77-78.
[13] KKS, 223 (thus "the relationship between taxes and development across countries is driven by a stark variation in tax *structure* across countries." Emphasis in the original)
[14] This thesis is also advanced in Kopczuk and Slemrod (2006).

important kind of enforceability constraint for taxes, and then identify exogenously given types of economic development that relax such constraint.[15]

However, while the purported centrality of TPIR to modern tax compliance has become commonplace, careful reflection suggests that the above evidence is actually consistent with a very different view, according to which the use of TPIR is quite limited in tax administration in advanced economies. For example, there is no obvious way in which the corporate income tax is enforced through TPIR. Corporations report income and deductions largely on the basis of their own accounting records.[16] The VAT, which is a large source of revenue in most countries, also does not involve information reporting.[17] Under the VAT, firms charge tax on goods and services sold to other firms and to individuals, and firms engaged in businesses may claim tax credits for the tax that they have been charged on input purchases. Firms then remit any net VAT amount—tax charged on sales minus input tax credits—to the government. However, firms generally do not transmit information about payments to and specific transactions with vendors and customers to the government, but instead aggregate transaction information into lines on simple tax returns.

The prevalence of TPIR is really most pronounced in the personal income tax (PIT) context, and only for wage and passive investment income. These types of income represent a very substantial portion of the PIT base in the U.S. and elsewhere, and therefore TPIR may appear to be thoroughly built into the tax. But that is not in fact the case. The practical and political difficulties of extending TPIR beyond the contexts of employment and passive investment income are of long standing.[18] The most important examples of such extensions are the requirement in the U.S. to report business payments made to independent contractors providing services, and the much more recent requirements for credit card companies and other payment settlement entities to report sales settled by non-cash means.[19] But such practices are unusual even among other OECD countries[20] and their effectiveness is also controversial.[21] Few would disagree that TPIR with respect to individual business income is largely incomplete.[22]

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[15] Jensen (2015) claims that because developed countries have larger sectors of formal employment, they are able to make greater use of TPIR (with respect to wage income), and therefore more successfully overcome the information asymmetry vis-à-vis taxpayers. Gordon and Li (2009) argue that since tax collection depends on audits and the effectiveness of audits depends on the existence of paper trails, the level of development of a country's financial sector will substantially determine the country's capacity of tax collection. Gordon and Li view financial institutions primarily as the depository of information to which the government may have access, rather than intermediaries that automatically transmit such information to the government. However, the literature on TPIR has treated Gordon and Li's work as reaching kindred conclusions.

[16] In the U.S., payments to corporations are specifically exempt from information reporting requirements. U.S. Treasury Regulations §1.6041-3(p)(1); §1.6049-4(c)(1)(ii)(A).

[17] KKS acknowledge this point, but refers to the fact that the VAT creates a paper trail. The existence of a paper trail does help audits, but it does not automatically provide the government with any information before an audit. Pomeranz (2015), Carrillo et al. (forthcoming) and some other recent work loosely imply that the VAT involves information reporting, but such implications are certainly incorrect. See Schenk et al. (2015) and Ebrill et al. (2001) for basic discussions of VAT mechanisms.

[18] See Desai (2014); Thorndike (2006, 2009, 2013).

[19] I.R.C. 6041(a) and §6050W.

[20] Canada, for example, does not have either type of requirements.

[21] Slemrod et al. (2015).

[22] See Bankman (2007); Slemrod et al. (2015).

To summarize, TPIR is not relied on for collecting the corporate income tax, VAT, and the tax on individual business income, while it is used with respect to individual's wage and passive financial income. Even in the United States, which relies on PIT revenue to a much greater extent than other OECD countries, sales and property taxes and corporate income taxes (none of which relies on TPIR) generate about 36% of total government revenue.[23] Another 24% of total government revenue comprises social security contributions, and as discussed in Part II.A, at least half of this revenue (and maybe the entirety of it) can be characterized as not involving information reporting. Thus emphasizing TPIR seems to privilege, without obvious justification, (certain elements of) the PIT. A much more neutral characterization would instead be that it is business organizations that play essential roles in collecting all modern taxes: they are intermediaries in respect of several types of taxable individual income, but are taxpayers in their own right in respect both of taxable individual business income and of other taxes.

This, however, is not how scholars—not just economists but also legal scholars—have written about TPIR. The standard view is that, first, TPIR is crucial for tax collection on wage and passive financial income, and second, the practical limitations on TPIR for other types of (individual taxable) income may be overcome, when the cost of compliance can be sufficiently reduced. If this is correct, the present limitations of TPIR are a matter of mere detail, while the power of TPIR is the more basic "stylized fact" that is significant for social science. I now offer arguments that undermine this standard view.

II. Information Reporting as a Derivative Institution

To properly evaluate the significance of TPIR, four basic facts, to which the existing literature has given inadequate attention, must be taken into account. First, where it is applied in modern tax collection, TPIR often has close substitutes that would not support the claim that taxation is conditioned on the transmission of taxpayer information to the government. In light of these substitutes, the dependence of tax administration on information transmission is an illusion. Second, the appeal to TPIR leaves it mysterious why payors would comply with reporting obligations instead of colluding with payees. Third, although some evidence for the effectiveness of TPIR is routinely cited, such evidence arguably fails to identify causal effects. Fourth and finally, far from being a *sui generis* administrative device, TPIR depends for its effectiveness on a wide range of economic conditions and policy and legal choices.

A. The illusion of information transmission

The effective use of information reporting in the income tax context is observed mainly for wage and passive financial income. Reflection suggests that these components of the individual income tax base are distinctive in the following way: third parties—namely payors of wage, dividend, interest, etc.—possess both near-complete information about the specific items of income and control over their payment.[24] But for any item of income such that there is a payor

[23] OECD (2016) (computations based on 2013 and 2014 data).
[24] In Part II.D infra, I argue that it is specific economic conditions and legal conventions that enable the individual income tax base to be built from these types of income.

that possesses both complete information about it and control over its payment, information reporting is only one among several ways in which the government can collect tax.

One clear alternative is final withholding. Under the final withholding systems adopted in many European countries today, for example, employers simply deduct tax from wage payments to employees, and employees would not have to file income tax returns themselves.[25] Similarly, banks paying interest and corporations distributing dividends simply withhold tax on interest and dividend payments at flat rates, without the need for individual taxpayers to report the receipt of such payments. Under final withholding, even though the recipients of income are nominally the taxpayers, they generally have no compliance obligations in respect of the income subject to withholding. Any information transmitted to the government simply helps the latter to determine whether the payors have performed withholding correctly. Thus it is not really the case that third parties transmit information to the government to help the latter monitor the compliance of ultimate taxpayers.

There is in fact a more complete substitute for information reporting. For any item of income that could be subject to final withholding, an equivalent tax can be imposed simply as an excise tax on the payer. In the U.S., a contemporary example of this is the "social security taxes" imposed by the Federal Insurance Contributions Act (FICA) portion of the Internal Revenue Code. Under the FICA tax regime, "taxes with respect to employment" consist of an "excise" tax on employers[26] and an "income" tax on employees,[27] each of which is a percentage of the employees' wages. While the income tax on employees is required to "be collected by the employer of the taxpayer, by deducting the amount of the tax from the wages as and when paid," the excise tax on employers is simply paid by employers themselves. However, from the perspectives of the employer and of the government, this distinction between the excise (employer) and withholding (employee) portions of Social Security contribution is merely nominal. They involve exactly the same calculations and remittance actions by the same parties, namely employers. It is also generally believed that they have the same economic incidence. Thus although one *could* think of the withholding tax (the "employee portion") as involving third party reporting (i.e. by the employer) on the taxable wage of an ultimate taxpayer (i.e. the employee), this characterization is in applicable to the identically administered excise tax.[28]

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[25] For a comparative review of the practice of final withholding on wage income and financial income, see U.S. Department of Treasury (2003).
[26] I.R.C. §§3111-3113.
[27] I.R.C. §§3101-3102.
[28] In fact, the equivalence—from an enforcement perspective—between a final withholding tax and an excise tax on the payor featured prominently in the history of the tax systems. The first U.S. withholding tax, enacted by the 1862 Revenue Act, was applicable to (i) the interest from railroad company bonds and the dividends from railroad company stock, (ii) dividends paid by banks, trust companies, savings institutions, and insurance companies, and (iii) salaries of federal government employees in excess of 600 dollars per year. Desai (2014), 873-876. The nominal taxpayers for the tax—the persons on whom the tax was imposed—were the payors, not the recipients, of interest, dividends and salaries. Therefore, whether to label the 1862 tax an excise tax on payors or an withholding tax on payees is a choice involving little substance. Even more tellingly, the Civil War dividends tax led to the proposal in 1894 of the first corporate income tax: because in the nineteenth century corporations generally distributed most of their earnings as dividends, the corporate income tax was little different form a tax on dividends. The corporate income tax, that is, can be seen as a mutation from a withholding tax on dividends. Although one could think of the corporate income tax as involving information reporting on shareholders, it is uncommon to literally refer to it as

The underlying point is this. Once a certain tax base is determined, whom the statute designates as the taxpayer, payor or recipient, is to a considerable extent a legal artifice.[29] Where a "third party" possesses both complete information regarding an item of income belonging to the tax base and control over that item of income, then that third party can itself be made into the taxpayer with respect to such element of the tax base. There would be no need to provide information about a different taxpayer. If two taxes are enforced in the same way, but in terms of legal terminology there is a "third party" under one tax but no "third party" under the other tax, the "third party" aspect of this way of enforcing tax is clearly superfluous.

Now, consider the question why a government would choose, in connection with any item of income, information reporting with respect to the recipient rather than excise taxation with respect to the payor. The answer is generally that there is some personal circumstance—be it progressive tax rates that depend on the recipient's total income (i.e. not just income from particular payments or payors), credits and deductions, personal expenses, and so on—to which the payors do not have easy access. Therefore such private information would have to come from the recipients themselves. Insofar as such private information is not provided to the payors, excises or final withholding are not feasible, and accurate tax collection depends on compliance by the ultimate income recipients themselves. But this is just to say that the adoption of information reporting as opposed to withholding/excises is precisely *premised upon* the incompleteness of information possessed by payors (third parties), it is not a solution to the incompleteness of information held by the government. The fact that information reporting becomes relevant only when the tax law permits private information to be relevant undermines the pretense that there is some necessary, pre-existing information asymmetry—for example, between the recipients of wages, salaries, and dividends, on the one hand, and the government, on the other—which information reporting reduces or overcomes. Information asymmetries and information reporting are two sides of the same coin.

B. The puzzle of payor compliance

There is a different, more basic, reason why information reporting offers an inadequate explanation of compliance—even in the context of taxing individual wage and financial income. An obvious difficulty such an explanation faces is: what account for compliance on the part of the "third parties" that perform information reporting and/or withholding? What, for example, prevent employers from regularly colluding with employees in under-reporting wages, and bargaining with employees for the benefit of the tax savings from such underreporting?[30] Such

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such. But this point also works the other way: although one does not usually think of social security withholding on wage earners as an excise tax on the employer, one certainly could, just as the Internal Revenue Code explicitly labels the portion of FICA taxes imposed on employers.

[29] The equivalence between a withholding tax on the recipient of a payment and an excise tax on the payor is a well-known aspect of tax design and has many illustrations not only in the U.S. but also in the tax systems of other countries. A contemporary example of a tax on wage income imposed on employers is the Australian fringe benefits tax, imposed on employers for in-kind compensation for employees. Each of South Africa, Sweden, France, and Belgium has enacted taxes on corporations on their profit distributions that are the equivalent of withholding taxes on dividends.

[30] See, Yaniv (1992). Kumler et al. (2013)

collusion is widespread today in developing countries. It is also prevalent in the informal sectors in developed countries: in the U.S., for example, the level of compliance with the "nanny tax" is perceived to be low and has remained so for many years. It is in fact quite visible even in the formal sectors of developed countries: many employers and employees push the envelope on what counts as non-taxable fringe benefits, on the basis that the IRS is unlikely to conduct audits. Given that there are rarely other "third parties" monitoring the "third party" required to perform information reporting, why does the latter comply with tax law?

A typical answer given to this question is that employers can claim deductions for wage payments, which lower the employer's income tax liability. The employee and the employer thus have "adverse interests", or "opposing incentives", with respect to reporting wage payments: while the employee stands to lose from employer reporting, the employer gains from it. Information reporting is therefore "self-enforcing". It is also often assumed that this reasoning applies to other types of payments.[31]

However, while this answer may be plausible in certain contexts, it both lacks empirical generality and is theoretically naïve. In terms of empirical validity, the answer may seem to have appeal in the U.S., where personal income tax rates have been relatively low and the nominal corporate income tax rate high since the 1960s. Therefore employer's wage deductions may often save more tax dollars than the tax liabilities of employees. However, the effective tax rate of U.S. corporations can often be far lower than the nominal tax rate,[32] and may well be lower than the individual income tax rate applicable to many employees. And in many OECD countries, the effective tax rate applicable to wage income (especially when payroll taxes or social security contributions are considered) far exceeds the corporate income tax rate applicable to employers. Therefore the net potential tax saving from non-reporting of wage income is quite significant.

Holding information reporting to be self-enforcing is also theoretically naïve because it assumes that the parties to the transactions (both the party that must declare income and the party that claim expense deductions) are subject to similar effective tax rates. But when this is the case, the government precisely collects no net revenue from the transaction: the inclusion by the payee is cancelled by the deduction by the payor.[33] It is when parties are not subject to the same tax rates that the government can collect net revenue from a transaction, but then, only transaction costs and the failure to reach and maintain collusive bargains stand in the way of collusion. This problem—the pervasive incentives for payor-payee collusion—is relevant even if final

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[31] Payors are also subject to penalties for failing to withhold or report to the government. However, with low audit rates, the expected value of such penalties may be very low. While there are far fewer employers than employees in any economy, the number of employers is generally still too great for tax authorities realistically to maintain a high rate of audit coverage. Indeed, the audit rate for parties required to perform information reporting is not known to be higher than in other areas of tax administration. Therefore a high probability of detection through audits cannot be what explains payor compliance.

[32] See Yaniv (1992), 315 (citing a study showing that in 1982, the average effective tax rate of U.S. corporations was 13.1% when the statutory tax rate was 46%). There are also many situations where payments of income taxable to payees are not deductible or generate minimal benefits to payors: e.g. dividends and personal expenditures.

[33] "Self-enforcing" mechanisms thus ironically allow the government to raises no net revenue where they operate.

withholding, excise taxation, or any other alternative to information reporting is adopted. It is thus of fundamental significance in theorizing about compliance, and mist be taken seriously.[34]

C. Lack of causal identification

The following fact is routinely touted as evidence for TPIR's effectiveness of for securing compliance. In the U.S. and a number of other countries, tax administrators study the "tax gap" by conducting audits designed to precisely measure the compliance level of a representative sample of the population. Among individual taxpayers whose returns are examined, the compliance rate is much higher for wages and passive financial income than it is for self-employment income. Since wage and passive financial income is usually subject to TPIR while self-employment income is not, it is argued, higher compliance is produced by TPIR.[35] Such inferences are, however, highly unreliable. Specifically, it is rarely possible to disentangle the use of TPIR from two types of confounding factors, which may undermine both the internal and external validity of the inferences. These two factors are (a) the nature of the (individual) income and (b) the nature of the payor.

Consider the first. As suggested in Part II.A supra, TPIR is particularly tailored to wage and passive investment income. Yet governments can often secure compliance with tax collection with respect to these types of income without relying on TPIR. For example, most financial transactions create paper (or digital) trails, and such documentation trails, as opposed to TPIR, may induce compliance with respect to passive financial income. None of the studies based on individual taxpayers' returns tries to distinguish the effect of TPIR from the effect of paper trails.[36] Similarly, as argued earlier, tax can be effectively collected from wages and financial income through withholding or, equivalent administratively, payor excise taxation. There has been no study to show that TPIR is *more* effective than withholding or excise taxation (or, where withholding and information reporting are simultaneously implemented, that the latter is effective independently of the former.) This implies that no evidence has been produced that "but for" TPIR, the level compliance could not be as high as is actually observed.[37]

Consider the next the nature of the payor. In one study analyzing Danish taxpayer data, Kleven et al (2011) found that after controlling for *both* whether an item of income is subject to TPIR *and* whether it is likely to be audited, the effect of firm size still has a significant impact on the rate of tax evasion. They infer from this that "collusion between taxpayers and third parties may be important in small firms" even in Denmark. This suggests that firm size may matter for compliance independently of the use of TPIR. By contrast, there has been no study investigating the distinct effect of TPIR while holding firm size constant. This is no doubt partly due to the fact that the main studies testing the effectiveness of TPIR are based on individual taxpayer returns, and therefore can typically control only for the characteristics of the individual taxpayers.

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[34] As KKS and Yaniv (1992) both do.

[35] Phillips (2014); Kleven et al (2011); Slemrod (2007).

[36] The distinction is important: a paper trail is useful only conditional on the government's decision to audit taxpayers, while TPIR itself precisely would affect the making of that decision.

[37] Contrast this with the claim made in Kleven, supra note **Error! Bookmark not defined.** (at 79), that it has been shown "empirically that tax enforcement is successful if *and only if* third-party information covers a large fraction of taxable income" (emphasis added).

Purported evidence for TPIR's effectiveness that is not based on individual tax return data is even more problematic. For example, some point to the fact that economies with larger formal employment sectors have higher tax-to-GDP ratios (Kleven 2014). Yet these are likely to be economies with greater presence of large firms, which are responsible for paying for the bulk of wages. The compliance of such firms, as opposed to TPIR per se, may be the reason for the high level of observed compliance with respect to wage income. The fact that much tax revenue is collected through taxes not involving TPIR further weakens the credibility of claims about TPIR's relevance.

D. Preconditions in delineating the tax base for information reporting

I stated earlier that wage and passive investment income (such as dividend and interest) tend to involve payors that possess complete information about the income. This is a crucial condition for information reporting to work: when the dollar amounts of market transactions do not directly reflect income, the discrepancy between amounts subject to information reporting and taxpayers' taxable income reduces the utility of information reporting.[38] But it is important to note that even for wage and passive investment income, this condition is far from being automatically satisfied. Instead, it is the product of specific economic conditions, tax policy choices, and conventions and norms sustained by tax law. These legal and economic conditions are at least as fundamental to successful tax collection as information transmission itself.

To begin, as a basic fact about modern employment relationships, most employers bear the expenses incurred by employees in carrying out their duties. This is reflected in the income tax laws in most developed countries: generally, there are few employment expense deductions allowed against employment income; unreimbursed employment expenses directly paid by the employee are relatively rare. The significance of formal employment for the modern income tax thus is not just that it introduces an intermediary, the employer, into tax enforcement against individual employees. Instead, it fundamentally enables the delineation of (the largest component of) the individual income tax base in the first place. It would be inaccurate to portray formal employment as increasing the enforceability of tax against some pre-existing tax base.

In fact, even formal employment alone seems sufficient for TPIR (or withholding) to work. There are many types of personal expenses that are larger for employees than for individuals who do not work (e.g. commuting, clothing, and childcare expenses). But such expenses are generally treated as personal and non-deductible expenses under the modern income tax. Work-related personal expenses are instead taken into account in developed countries through deductions or exemption thresholds for standardized amounts, which are independent of the actual amounts individual taxpayers spend. This basic policy choice also seems to be a precondition for gross cash wage payments to be made fully taxable, or for it to be possible for the employer to make a direct computation of the taxable amount in wage payments.

But such a policy again works only under specific conditions. For example, wages need to be sufficiently high to leave a large tax base even after standard deductions. Otherwise

[38] Lederman (2010).

standard deductions would largely erode the individual income tax base. Here it is notable that developed countries with large revenue intake can run substantial programs of redistribution targeted at low-income households, which permits standard deductions to be set very low, sometimes even below the poverty line (as in the U.S. and in Canada). By contrast, developing countries that lack substantial programs of redistribution must set standard deductions high relative to average income, lest the legitimacy of the income tax as based on the ability to pay be undermined.[39] In other words, the very delineation of the wage income tax base—in such ways as to enable TPIR—is the product of complex social institutions.

Indeed, even the treatment of dividend, interest, and other passive investment income as fully taxable (and therefore making TPIR effective) should be seen as the result of policy choices and legal conventions. Early U.S. income tax law devoted extensive attention to dividing investment receipts into the categories of the "fruit" and the "tree": regularly recurring payments represent the fruit that is fully taxable, while large, non-recurring payments represent the "tree" that is taxable, if ever, only when there is a disposition.[40] Such a distinction—as well as related legal distinctions and metaphors such as income v. corpus, income interest v. remainderman—have little basis from the perspective of modern finance: any stream of expected payment, at whatever intervals and in whatever amounts, should be seen as an asset that generates its own income.[41] But these distinctions and metaphors have become the foundations of conventions that allow third-party payments to fully correspond to taxable income. If these conventions were to be abandoned, the utility of TPIR would likely be diminished.

All of these considerations suggest that information reporting is far from being a *sui generis* device enabling tax collection to succeed in the wage and passive income context. Instead its effectiveness is contingent on many policy choices. If there is causation in this area, it is more plausible to regard it as lying between the large tax base of wages and financial income in advanced economies, on the one hand, and the collection of revenue from such income, on the other. When a large wage and financial income tax base is absent, information reporting could have little use. Even when such a tax base is present, legal and policy conventions need to evolve to make information reporting useful. But once such conventions are developed, other collection mechanisms such as final withholding or payor excise taxation may be deployed instead of information reporting. The differences among these different collection mechanisms do not map onto differences in enforcement. Therefore the "third party" aspect of information reporting cannot constitute genuine causal mechanism.

III. Firms as "Fiscal Intermediaries": An Inadequate Conception

Contrary to previous postulates that TPIR is an essential tax collection device that enabled developed countries to raise high levels of revenue,[42] I have portrayed third-party

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[39] This may explain a number of empirical regularities discussed by Jensen (2015), who shows that across countries, the personal exemption amount under individual income taxes tends to move down the income distribution as a country's per capita increases.

[40] See, e.g., Irwin v. Gavit, 268 U.S. 161 (1925); Helvering v. Horst, 311 U.S. 112 (1940).

[41] See Chirelstein and Zelenak (2012), 29-39, 70-75, 257-263.

[42] E.g., KKS; Pomeranz (2015); Kleven (2014).

reporting as a derivative institution, incapable of explaining tax compliance by business firms and frequently substituted by other administrative devices in the history of modern taxation. Nonetheless, I believe one fact that previous scholars have identified may still hold the key to understanding modern tax collection: namely, the centrality of business firms to the modern tax administration (be it the withholding of individual income, payroll, or retail sales taxes, or the payment of the corporate income, value added, and other business taxes). The main question, though, is how to conceptualize the causal connection between firms and tax compliance.

The prevailing view is that firms act as "fiscal intermediaries": they collect and remit taxes, as well as provide information about other taxpayers, to the government.[43] Firms generate tax-related information to the government in two ways. First, by providing information directly to the government about the taxable income and taxable transactions of employers, investors, and customers, they preclude the possibility of not reporting such income or transactions by the latter taxpayers. Second, firms maintain accounting and transaction records, which represent information that is not automatically transmitted to the government but which the government may use in conducting audits. Through both mechanisms, firms act as depositories of accurate taxpayer information which the government can access. This substantially increases the probability of detection of non-compliant behavior, and therefore dramatically improves the deterrence effect of penalties on non-compliance.

It is worth pointing out that this conception of firms as passive depositories as well as mechanical intermediaries of transactional information is very unusual—it has no counterpart—in legal and social scientific scholarship about business firms outside the study of taxation. It is in fact rather explicitly tied to the classic deterrence theory of tax compliance. Under the Allingham and Sandmo (1972) model, a taxpayer decides whether to engage in tax evasion by weighing the expected benefits of evasion against expect costs from being caught and penalized. It has been widely observed that by itself, this simple model of the choice about whether to evade taxes seems unable to explain the high level of tax compliance observed at least in developed countries: the actual levels of penalties, audits, and evasion detected during audits in real life are all far too low to lead a rational individual considering only these factors to decide against tax evasion.[44] Nonetheless, scholars have suggested that the Allingham and Sandmo model can be salvaged if one "puts firms into [the theory]".[45] When firms both automatically provide information to the government and maintain information relevant to audits, then the probability of detection of tax evasion (conditional upon an audit being carried out) is increased. Moreover, when there are fewer firms than individual taxpayers, the audit rate for firms is higher than for individuals, which also increases the probability of detection.

Yet as our earlier discussion anticipated, this effort to reconcile the Allingham and Sandmo model with the observed high levels of tax compliance in the real world merely begs a further question: why do decision-makers in firms—owners, managers, and employers— choose not to evade tax? In most countries, the population of firms is still large relative to the number of tax auditors, which means that the general probability of detection of tax evasion by firms would

[43] See, e.g., KKS; Bird (1996); Kopczuk and Slemrod (2006), 130.
[44] See Andreoni et al. (1998); Slemrod and Yitzhaki (2002); Lederman (2003).
[45] Kopczuk and Slemrod (2006).

still be very low. Is there any device that renders firms intent on evasion “unable to cheat”? If not, then the Allingham and Sandmo model still cannot be reconciled with the levels of (firm) tax compliance observed in the world. Something else must explain observed firm compliance.

One of the latest attempts to solve this puzzle is found in the KKS study. KKS analyze a firm’s “decision” not to evade tax as the feasibility for employers and employees to maintain an equilibrium of collusion: if everyone in the firm can agree to and honor a bargain to cheat on the taxes that the firm is required to remit, and to divide up the firms’ consequent cash savings, then the firm will evade taxes. They argue that such equilibrium would be difficult to maintain under two types of circumstances. First, individual disgruntled (or morally conscientious) employees create a small probability that the collusion would be reported and detected, and such probabilities would become sufficiently large when the firm is sufficiently large.[46] Second, the government can offer monetary awards for whistleblowing to employees who otherwise would have been willing to collude in the firm’s tax evasion. KKS in effect offer an analog of the Allingham and Sandmo model for firms: the probability of detection of evasion behavior crucially depends, not on audits conducted by the government, but on disgruntled employees or whistleblowers.

Unfortunately, this account is just as problematic as the traditional account of individual tax compliance decisions. To begin, although whistleblower programs operated by tax and other regulatory agencies have attracted attention in recent years, their role in the history of tax and other areas of regulatory enforcement has been minimal.[47] Even today, whistleblower programs are viewed as complements to regulatory agencies’ audit operations, allowing the government to discover violations that would otherwise be difficult to uncover,[48] rather than as a mechanism imposing more systematic constraints on taxpayers and other regulated subjects than audits themselves. It is simply implausible to claim that whistleblower programs undergird the transformation of public finance in the 20th century witnessed in most advanced economies. Moreover, while it is commonly observed that larger firms tend to be more compliant with tax law and other legal requirements, firm size in itself does not preclude fraudulent activity: recent reports of large-scale frauds at Volkswagen and Wells Fargo offer vivid reminders of this fact.

In the (vast) legal and social scientific literature on tax compliance,[49] the inadequacy of the Allingham and Sandmo model has led to a variety of theories about why individuals may be motivated to follow the tax law.[50] It is not the intention of this Article to review or even

[46] KKS does not provide any simulation to specify how many employees a firm needs to have for evasion to be infeasible.
[47] See, e.g., Saunders (2011) (quoting tax historian Joseph Thorndike as reporting that payments to whistleblowers in the history of U.S. taxation “tended to be small and rare because IRS officials were uncomfortable with ‘bounty hunting’”); Henning (2016) (a whistleblower program was only recently adopted by the U.S. Securities and Exchange Commission); Thomas (2016) (advocating the adoption of a whistleblower program by banking regulators).
[48] See Henning (2016) (for example, rewards for whistleblowers are increased in areas of agency priority).
[49] See Luttmer and Singhal (2014) and Slemrod (2016) for recent reviews. For earlier reviews, see Andreoni et al. (1998); Slemrod and Yitzhaki (2002).
[50] The inadequacy of the deterrence theory of compliance in other areas of publicly-enforced law has led to similar explorations in alternative theories. See, e.g., Vandenbergh (2003).

summarize this variety of theories. I will instead note two features of the literature. First, theories that are presented as major alternatives to the Allingham and Sandmo model tend to postulate psychological features of individuals that are not captured by that model.[51] However, to my knowledge, none has attempted to "put firms into [the theory]" in the way that scholars (such as KKS) aiming to salvage/expand the Allingham and Sandmo model have done. In other words, only scholars interested in reformulating the Allingham and Sandmo model have given significance to the regular empirical association between the presence of business firms and higher levels of tax compliance. Yet at Part I discussed, such empirical regularity seems unmistakable and forms part of the conventional wisdom of what makes tax administration effective. Of course, conventional wisdoms may be mistaken (as I have argued is the case for the belief about the importance of TPIR), but they may also be robust and offer important theoretical insights.

Second, many scholars have formulated theories and empirically tested hypotheses about tax compliance as though tax compliance is a self-contained social problem.[52] Although some legal scholars have argued that people comply with the tax law simply because there is a social norm of complying with the law,[53] this is not an approach generally followed. Instead, scholars tend to study individual preferences and attitudes specifically towards tax compliance, as if paying tax has become a deep-rooted part of our psyche.[54] Yet modern taxation directly affecting the obligations of mass populations of individuals has been practiced in most countries for barely a century.

These features of the existing literature imply that existing theories of tax compliance may have neglected two institutional foundations of modern tax collection. The first is the business firm, which performs most of the compliance obligations under all modern taxes. Ironically, those scholars who have stressed the business firm's significance in tax compliance have at the same time conceived of it in such as a way (i.e. as a mechanical information depository and transmission device) as to give it very limited explanatory power. The second is the modern legal system, as embodied by institutions that play legislative, regulatory, enforcement, and adjudicatory functions, and as animated by the social norm of compliance with the law. The key to understanding tax compliance may precisely lie in understanding how individual behavior is mediated by these two types of institutions. I now describe how such an explanation would work.

IV. Firms as Sites of Social Cooperation Ordered by Law

Consider the postulate that in modern (i.e. industrial and post-industrial) economies, most business firms operate, for the most part, in compliance with the law. If this is true, then the important social scientific question will be why it is true—what has brought about the state of

[51] See, e.g., Cowell (1990).
[52] Kirchler (2007, 2015); Kirchler et al. (2008).
[53] See Posner (2000).
[54] See, e.g., Andreoni et al. (1998); Grasmick and Bursik (1990); Grasmick and Scott (1982); Alm and Torgler (2006).
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affairs it describes. But let me clarify first what the postulate means and what follows from it, if it is true.

The claim that most modern business firms mostly comply with the law is meant to convey the following two ideas. First, most firms operate in ways that are constrained by a wide range of legal rules and norms. That is, a firm makes its decisions while heeding most of the requirements of contract law, tort law, property (including intellectual property) law, and other relevant bodies of private law. It also attends to the relevant requirements of various bodies of regulatory law, such as those regarding public and workplace safety, labor and employment, environmental protection, financial prudence and disclosure, and so on. This does not mean that the firm is necessarily perfectly compliant with the law. Far from it. Volkswagen may systematically install illegal "defeat devices" in its diesel engines to dodge the Environmental Protection Agency's emission tests. But this could happen while the company at the same time conscientiously follows all kinds of other legal requirements imposed by Germany and the United States. In other words, for many firms that purposely engage in one type of illegal behavior or another, they nonetheless are acting in compliance with a wide range of other applicable laws. They do not cheat "wherever they can", in the sense of exploiting every opportunity of earning an expected profit by violating the law.

Second, while some firms act in dodgy ways in respect of many legal requirements, it may be plausible to classify these firms into several categories. To begin, there are the very small firms—indeed in economists' use of the term, a "firm" could be a sole business proprietor. A small firm's behavior would not be distinguishable from the behavior of its few individual owners or employees, and there is little intra-firm organization or coordination. Alternatively, a frequently law-dodging firm could be large, but we expect to be one that is otherwise uncompetitive in the market it operates: it needs to cheat wherever possible just to survive.[55] Finally, there are of course firms that are formed deliberately to commit fraud or other crimes. However, if we put this last type of firms aside, and take into account only small firms and firms under intense competitive pressure, the following seems to be true: few firms are organized with the expectation that it would deliberately profit from the violation of all laws that are profitable to violate, and few firms grow and remain competitive by profiting from illegal activities. This is what I mean by the claim that most modern business firms mostly comply with the law,

Having explained the meaning of the claim, I now explain one crucial consequence of it. The claim implies that most modern business firms would not make decisions about tax compliance in the way that KKS' model suggests: they do not decide to comply with the tax law only when an internal collusive bargain about how to divide the spoils of tax evasion cannot be sustained. Instead, complying with the tax law, likely complying with other bodies of laws, is the default option. If a firm is generally compliant with the law, then compliance with the tax law should simply be expected. Specific firms may be engaged in non-compliance with the tax law at specific times, but such behavior is to be explained in the same way as one would want to explain why Volkswagen decided to install its "defeat devices", and why Wells Fargo pushed its employees towards fraudulent practices. In other words, when the baseline expectation is

[55] See Cai and Liu (2009); Shleifer (2004).

compliance, specific instances of non-compliance are what require explanation, not the multitude of instances of compliance.

Here, it should be noted that KKS' model has a common structure with the Allingham and Sandmo model of individual tax compliance: the taxpayer, whether a firm or an individual, always confronts a meaningful choice between complying and not complying with tax law, and it would choose to comply only when the expected penalty for non-compliance is large enough. Moreover, this choice is conceived in a way that could characterize choices about whether to comply with any other body of law: as long as the expected rewards of non-compliance outweigh the expected punishment of non-compliance, non-compliance should be observed. The empirical postulate above about modern business firms' general tendency towards law compliance precisely contradicts the premise of these theoretical models.[56] It claims instead that modern business firms are generally law-abiding, or at least enough of them are for tax and other regulatory systems generally to function.

But making this postulate is not the end, but only the beginning, of social scientific inquiries. The important social scientific question is not why, given the default choice of cheating, most (large) firms don't cheat on their taxes. It is rather why these firms may not even consider cheating on their taxes—why cheating is not their default choice. A number of theoretical and historical considerations suggest that there may be genuine answers to this question.

The first consideration is that economic theories of the firm generally indicate that firms form in order to earn some economic rent.[57] If there is no economic rent to be made, one can simply purchase and sell in the market and there is no need to form a firm.[58] However, if firms are generally formed with the purpose of earning rent given market prices, then there is no need for firms already formed to further exploit profits from violations of the law. While some illegal activities can be conducted only through firms (e.g. certain Ponzi schemes, VAT carousal fraud, etc.), most illegal activities can be pursued without forming firms. Therefore, if a firm is formed not in order to profit from illegal activities, but with the purpose of earning rents from other identified opportunities, then it would not be surprising if the firm does not maximally exploit opportunities arising from illegal behavior—that is simply not its purpose.

[56] There is an obvious analogue of this objection to the KKS model for the Allingham and Sandmo model. The latter model is famously inspired by the economic model of crime in Becker (1968). However, Becker did not set out to explain why ordinary people do not commit crime by his economic model: his economic theory of deterrence is intended only to apply to criminals. Allingham and Sandmo, on the other hand, conflate the ordinary taxpayer deciding what to enter on his tax return and a criminally-minded person ready to cheat on his taxes where possible. That is to say, they elide the distinction between the ordinary person and the criminal in depicting the rational choice about tax compliance. Whether this is a plausible depiction of the average taxpayer's psychology is controversial. The argument I make in this Part does not require one to take a position directly on this controversy.

[57] See generally Archibald (2005) (reviewing theories of the firm and the role of quasi-rent in such theories); Williamson (1996) (firms are distinguished by firm-specific assets that generate quasi-rent); Mahoney and Qian (2013) (using a theory of rent-generating market frictions to explain the existence of the firm).

[58] Coase (1937).

A second consideration, which is both theoretical and historical in nature, is that much of the modern legal system is concerned with how to divide up the rent earned by firms among the contributors to the firm—employees, lenders, equity investors, suppliers and customers.[59] This is what corporate and other organizational law is about.[60] It also forms an important part of the substance of employment, labor and securities law. That is to say, social cooperation that is centered on a firm inherently presupposes ways of dividing up the surplus from cooperation, and the legal system appears to have been deeply involved in facilitating this division and thus enabling firm-centered cooperation. In other words, firm-centered social cooperation is a paradigmatic form of "legal order"—social cooperation mediated by legal norms.[61]

Naidu and Yuchtman 2015's recent study by of labor market institutions in 19th-century United States vividly illustrates this consideration. They examine a part of U.S. history (1850 until the early 1920s) when labor markets were still largely unregulated.[62] They first show that firm-specific rents were frequently observed in urban American labor markets.[63] They then argue that the existence of rents in the labor contract created space for bargaining and conflict between employees and employers: strikes became sharply more frequent in the late 19th century and early 20th century, often involved physical coercion against replacement workers, and were correlated with higher workers' wages. On their side, employers occasionally called in the police and military to break strikes, but more frequently and equally effectively sought judicial injunctions to end strikes. In other words, even before the advent of labor and employment regulations, both the coercive apparatus of the state and judicial institutions were called upon to resolve intra-firm conflicts. Subsequent labor and wage regulations that began to be adopted at the state level in the early 20th century and at the federal level as a result of the New Deal are clearly more permanent legal institutions that allowed firm-centered social cooperation to continue.

This narrative may afford greater generalization: reliance on the legal system—and in particular on the regulatory apparatus of the state—may be essential to the growth of the modern business firm as we know it. Compliance with legal rules and norms, and monitoring the compliance of other parties, are intrinsic aspects of the modern business firm as an institution. From this perspective, the basic reason that large firms are more likely to be compliant is not that the probability of motivated whistleblowers is higher in them (or that they have greater external visibility). The potentially more important reason is that the firms grew larger because they were profitable, and the participants in them are more interested in the orderly division of profits than the disorder implied by cheating (on taxes and other regulatory matters). While the keeping of business records and proper accounting practices form a part of this cooperative process, their main benefit for tax compliance may arise not from facilitating effective audits by the government, but from the fact that they allow participants in a firm to monitor one another in assessing whether the expectation of fair divisions of profits is fulfilled.

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[59] See, e.g., Aoki (1984) (modelling how managers facilitate cooperation game among capitalists and workers to achieve institutional rent).
[60] Foss et al. (1999).
[61] Hadfield and Weingast (2014).
[62] Some European countries had already adopted labor regulations at the time. Forbath (1991).
[63] When firms experienced positive output price shocks, their employees earned wage premia, relative to other employees with very similar skills in the same urban labor market.

This conjecture seems consistent with history of modern taxation in different industrial economies. In the United States, the adoption of the "mass income tax" began in 1939 and the withholding of income tax on wage payments—the administrative institution that scholars previously focused on—began in 1943.[64] Both were pre-dated by the adoption of withholding of social security taxes in 1935. To track the roots of income tax compliance in the United States, therefore, one needs to explain why business firms complied with the social security excise on employers and with the even earlier legal requirements (enacted in 1909) to pay corporate income taxes. Previous tax legal scholarship has suggested that the corporate income tax was conceived from the beginning as at least in part a device for regulating large U.S. corporations, and this regulatory impulse was also manifest in corporate and anti-trust law developments of the time.[65] But just as relevantly, corporations and employers in general had already been subject to other forms of regulation, to facilitate the formation of American financial and labor markets. By the time the corporate income tax was put in place, whether or not to comply with the law was presumably neither a new question nor one that businesses can easily give a negative answer to, if they were to continue to operate at all.

In other countries that adopted the income tax either at the same time as or earlier than the United States, labor and other regulatory law generally applicable to firms also well preceded tax law. Although little historical scholarship is available on this topic, it is likely that voluntary compliance with tax law was observed quite early on, regardless of the penalties threatened and audit capacity of the time.

In summary, it seems that as a matter of actual history, two interrelated institutions might have represented the central components of the foundation of modern tax collection. The first is the business firm. The second is the set of legal rules and norms that developed from the 18th to the 20th century that accompanied the growth of the corporate form: organizational law, anti-trust and securities regulation, and labor and employment law, in addition to the ever-present bodies of contract, property, tort and other private law. Because the operation of most business firms was inseparable from the implementation and following of legal orders, the decision to comply with the tax law was a natural one for firms to make. Upon these foundations, both business taxes and taxes imposed on individuals but remitted by businesses evolved, with withholding, third-party reporting, other administrative devices, and legal doctrines that guide the use of such devices all emerging simultaneously. Self-reporting, audits and other methods of enforcing the tax law were always important to tax collection, just they were important to securing compliance with other types of law applicable to firms. But most firms in most circumstances may also have displayed a substantial degree of voluntary compliance, insofar as the laws they followed enabled social cooperation in the context of the firm in the first place.

Three features distinguish the foregoing account of modern tax compliance from previous accounts. First, the explanation is *institutional*: it makes reference to specific institutions, social practices, and legal norms. By contrast, much of the social scientific literature on tax compliance,

[64] Notably, the previous version of wage withholding, introduced in 1860, involved the withholding only by the federal government as employer, not business firms.
[65] See, e.g., Avi-Yonah (2004); Bank (2001).

like the Allingham and Sandmo model, is psychological and predicts social behavior from assumptions about individual psychology (the only institutions assumed are tax return filing, auditing and the imposition of penalties). The benefit of the institutional approach is that it allows us to focus on explaining why rational, self-interested individuals may engage in cooperation in specific contexts, instead of explaining why they are generally willing to cooperate.

Second, while other scholars have also emphasized the importance of the firm as a crucial institutional component of modern tax compliance, under the account given here, there is much more going on in firms than the keeping of business records and accounting books potentially of interest to tax auditors. Instead, firms are places where members of society actively cooperate under regimes of law. Instead of gaming the system where they can, individuals pursued profit and bargained for rent within the confines of law. This approach has strong support from economic theories of the firm, and potentially allows the psychological theories of compliance to be enriched by the rich theoretic and empirical literature in organizational economics.

Third, the account captures the intuition of many that there is nothing special about tax compliance per se, vis-à-vis compliance with other aspects of the law: they should be explainable by the same motivations. However, instead of postulating general pro-social, norms-respecting motivations for individual taxpayers, the account suggests that they will be motivated to act this way, in respect to many types of law, in the context of the firm. It is worth noting here that using TPIR to explain modern tax compliance would provide one with no purchase in explaining most others types of compliance with the law. As suggested above, the conception of business firms as passive and mechanical depositories and transmission devices for taxpayer information has no analogue in other literature. Seeing business firms as institutions within which individuals can cooperate in an indefinite range of ways while being regulated by an indefinite range of legal norms, by contrast, not only constitutes a generalizable theory of tax compliance but also gives such theory greater plausibility.

V. Policy Implications

A. Implications for Developing Countries

There is no doubt that in any country, when the level of tax compliance is low, tax collectors thirst for taxpayer information. It is thus hard to overstate the appeal to developing countries of the notion that high-tax, advanced economies have designed institutions for transmitting and making use of massive amounts of taxpayer information. If such information gathering devices can be adopted, they would be effective substitutes for voluntary compliance. Taxpayers would have no choice but to obey the law. A technological approach to tax administration would then help many poor countries overcome the weaknesses of their institutions.

As much as recent scholarship on TPIR has encouraged this notion, it is fundamentally untenable. Promoting the forms of TPIR that are commonly adopted in developed economies is unlikely to dramatically enhance tax administration capacity in developing countries, for the following reasons. First, the standard forms of TPIR adopted by developed countries apply to the collection of the personal income tax on wage and passive financial income. But all available evidence suggests that developing countries already deploy similar administrative devices—especially withholding—for such tax base.[66] It is thus very unlikely that developing countries are not attuned to the wide use of withholding and TPIR for the personal income tax in developed countries. Instead, the problem is much more likely that they have far smaller tax bases comprising wage and passive financial income. The important question is then whether TPIR has proven to be useful, in the experience of developed countries, outside the context of these particular components of the personal income tax. The answer is unfortunately no: TPIR has had only limited application in the individual business income context, and its utility for increasing compliance in such a context is still open to debate.[67] In addition, developed countries rarely use TPIR in connection with other important modern taxes. It would clearly be a mistake to infer from the fact that wage and personal financial income constitute larger tax bases in developed countries to the conclusion that developed countries use TPIR in a wider variety of ways than (or in substantively different ways from) developing countries.[68]

As argued earlier, developed countries to a very large extent rely on businesses to withhold, remit, and pay most taxes. Voluntary business compliance lies at the foundation of TPIR, not the other way around. When businesses comply with the tax law, the government can afford to be somewhat indifferent about whether information on individual taxpayers is collected or analyzed. Tax administrators from developing countries are in fact likely to be quite familiar with this logic. Developing countries generally rely far less on the personal income tax and social security contributions for revenue than developed countries; the corporate income tax, VAT, turnover taxes, and other business taxes collectively represent a much greater portion of the tax take. One could thus say that business firms are the main source of revenue for developing countries. What, then, differentiates between tax administrations in poorer and in richer countries—what, from the perspective of law enforcement and compliance, explains the striking difference among them captured by political economists?

This Article has suggested the following answer. The growth of business firms in developed countries has been closely intertwined with the regulatory state, in that the latter has played a crucial role in facilitating the division of economic profit within business firms. Within the institution of the modern firm, rational, self-interested individuals are able to engage profitably in a whole range of economic cooperation, in key part because they can rely on regulatory mechanisms to ensure that the benefits of cooperation are divided in ways that are

[66] Robinson and Slemrod (2012), in a study based on OECD data, concluded that poorer countries use withholding, information reporting, and identity-matching *more*, not less. Similar studies done by the IMF also suggest that many developing countries heavily rely on withholding. See, e.g., IMF (2015) (receipts from the person income tax in developing countries come almost entirely from wage withholding on large enterprises and public sector employees), and IMF (2011), 41 (advance collection on imports is common in Africa).

[67] Slemrod et al. (2015). Moreover, such limitation may have universal explanations (e.g. in terms of when market participants keep mutual identities) invariant to developmental contexts. See Cui (2017). Carrillo et al (forthcoming) argue that in developing countries, TPIR may be ineffective due to its incompleteness, and taxpayers can always evade on the margins that are hard for the government to verify. They thereby imply that this is not the case in developed countries, which is incorrect.

[68] Developing countries may make less use of TPIR as opposed to withholding, insofar as their governments are less likely to make non-observable characteristics of taxpayers determinative of tax liabilities.

bargained for. For this reason, participants in the firm are often willing to commit resources to compliance with regulations and the law in general. This dynamic has evolved to a point that firms generally do not consider non-compliance with tax law as their default option. What distinguishes richer and poor countries, therefore, is that in the former there are more firms that operate in this mode, both because of the greater development of markets and because of the deeper involvement of governments in sustaining these markets.

Such an analysis clearly implies that the effectiveness of tax administration depends on factors that fall outside tax administrators' control. Improving tax administration must of necessity be viewed in a holistic manner. While information gathering and enforcement aimed at producing deterrence are always important, tax collection will also inevitably be a matter of relying on, contributing to, and, importantly, not disruptive of social cooperation centered on business firms that is ordered by legal and regulatory systems. Deterrence cannot substitute for voluntary compliance. Therefore one must be cautious about adopting any instrument of deterrence if it would undermine voluntary compliance. This provides new support to the idea that rule of law norms are important to tax administration.[69]

B. Implications for the U.S. and Other Developed Countries

Third-party information reporting, only to a slightly lesser extent than withholding, has become a deeply entrenched feature of PIT administration in the United States and other advanced economies. The expansion of TPIR in the U.S. in 2010 to include broker reporting of the tax basis of securities and credit-card and electronic settlements of merchants, although still largely unrivaled by other countries, is not altogether surprising. Not only do the costs of the new reporting requirements now seem acceptable and not overly onerous, the issuance of 1099-Ks and similar forms will likely to be embraced by an ever-growing population of taxpayers, as the forms help taxpayers to keep clear records and thereby reduce compliance costs.

None of the arguments in this Article is meant to suggest that the U.S. should roll back any specific type of TPIR that it currently adopts, or to deny that TPIR may have assorted benefits for taxpayers. Nor do I advocate against any specific way of expanding the scope of TPIR. There are likely to be natural limits of TPIR, expansion beyond which may generate substantial jumps in compliance costs.[70] But the magnitude of such costs will clearly depend on the technologies available. If, for example, few American consumers and businesses use in the cash or even credit cards in the future, but instead rely on newer technologies (such as Blockchain) to execute payments, it may be that even instantaneous transactions will begin to leave digital trails that would identify the transacting parties and the amount and nature of transactions. Should the IRS want to collect such information to limit under-reporting of business income by self-employed individuals, it would probably be able to do so more easily (and with less political resistance) than today.

But such speculations about how future technology might reduce tax evasion are misguided, for at least two reasons. First, it is highly likely that new technologies will transform

[69] See Evans et al. (2011); Cui (2015).
[70] For further discussion, see Cui (2017).

markets and economies, leading to substantial changes in the tax policy instruments that societies adopt. In other words, the main tax bases in future economies will likely be different from the tax bases today. To imagine how future technology might solve tax administration problems that exist only relative to the tax bases we have today is an odd form of futuristic exercise. Second, unless technology by itself could guarantee large-scale social cooperation, it seems implausible to imagine that in future societies there will not be criminals, free-riders, and norm violators. Presumably, technologies are developed to enable most cooperative humans to reap greater cooperative gains. They are not designed to make non-cooperation impossible. Therefore, criminal and free-riders will find new ways to cheat, and it will be completely irrelevant that they cannot cheat by exactly the same means as they do today.

Overall, that is, tax administration in the future (for those who care to think about it) will depend on a wide range of social institutions and circumstances, just as, as this Article has argued, 20th century taxation has relied on the business firm and modern regulatory law. To improve tax administration today, one need to better understand what are the most relevant factors determining compliance today. This Article has arguably suggested a very different direction in which to look relative to prior scholarship.

Conclusion

The arguments of this Article aim to enable one to see how modern governments can practice "taxation without information". This is exactly the opposite of how some recent political economy scholarship (and much conventional wisdom within legal scholarship) suggests to be the basic logic of modern taxation. With no institutional foundation, it may be true that there can be "no taxation without information". But modern taxation is precisely not devoid of institutional foundation. The co-evolution of business firms and systems of regulatory law in industrial economies is likely to have laid very robust foundations for compliance with the law, which enabled the United States and many countries to quickly increase their levels of taxation in the 20th century, sometimes within the space of a few years, at a time when modern computing technology was still at its infancy.

Modern taxation involves massive social cooperation: governments are put in place on the basis of systematic transfers of wealth. The deterrence model of tax compliance purports to explain taxpayers' participation in such social enterprise by how they might be punished for free-riding. If social cooperation in general can be explained simply by reference to how free-riders are deterred, the social sciences would be in a very different place from where they stand today.[71] Conversely, if the emergence of social cooperation in human societies cannot be explained by simple detection and punishment mechanisms, it is not clear why government and taxation should constitute an exception. From this perspective, the Allingham and Sandmo theory of tax compliance is clearly inadequate. But merely identifying psychological attitudes that characterize normal, compliant taxpayers in advanced economies also does not do justice to the historical, cross-country, and even within-country variations in the level of tax compliance. The

[71] For a recent review of the social scientific literature on human cooperation, see Roemer (2015).

understanding of tax compliance—and arguably of compliance with modern regulatory law in general—must be more firmly grounded in the understanding of a wider range of institutions.

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