A Theory of Planned Inefficiency:

How Governments might Optimize Revenues... & Why they Don't

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Abstract

Oftentimes, the political economy of taxation focuses on conflicts between income groups in order to account for variations in tax-levels and tax-progressivity. This focus, however, not only overlooks other salient cleavages, but is unable to explain aspects of taxation, such as tax-mix, for which income-based groups provide neither the most salient, nor generalizable, impetuous for conflict.

My thesis dissertation considers elasticity, rather than income, as a basis of societal conflict. I proceed in two steps, asking: (I) what optimal tax-mix might look like; and (II) why pursuing optimal tax-mix is rarely a prime motive of government leadership.

(I) I contend government leaders should use a strategy of "planned inefficiency" insofar as they seek to maximize the efficiency of the economy at a given level of revenue extraction from the private to the public sector. This is best achieved, I note, by taxing those elements of the economy most inelastic to taxation. (II) Then, using selectorate theory as my overarching theoretical framing, I consider constraints to the pursuit of planned inefficiency. In this manuscript, I focus upon "shocks" to the size of the selectorate. I review how government "capture" and "regime type" influences the size of the selectorate and, in turn, tax-mix decisions. In the concluding chapter, however, I also note how "shocks" to the selectorate's beliefs systems may implicate tax-mix – thus providing the basis for future directions of research.

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Chapter 1

Introduction

My research focuses on the role of government in modern (market) economies, particularly in their efforts to raise revenues. The research was originally motivated by my puzzling over how economic growth could be made consistent with a strong welfare state. By raising tax-dollars through a tax-mix designed to minimize inefficiencies (i.e., deadweight loss), a state could afford more public programs at the citizen's "cut-off" level of taxation (i.e., tax-tolerance). My research evolved to grapple with the political fact that optimal tax policy is rarely the primary motive upon which governments act.

The two-fold argument of my dissertation is simple: first, political leaders must maintain power, insofar as they are to achieve their political agenda; second, in a world of scarcity, a political leader maximizes their utility by implementing the most efficient tax-mix possible within the bounds of not violating the first principle.[1,2] As I shall soon demonstrate, both of these arguments bank heavily upon the elasticities of citizen behaviours to taxation.

The second chapter builds-up the theoretical, public economics, "workhorse" upon which the rest of the book proceeds. I note the seeming paradox that governments might make a part of the economy more inefficient so as to make their economies, as a whole, more efficient. I develop a theory that explains how governments often do well to tax inelastic sectors of the economy (i.e., those transactions that are relatively unaffected by higher tax rates), thereby heightening a "sectoral" inefficiency, so as to relieve tax burden upon sectors that react more elastically (i.e., those transactions that would shrink drastically upon higher taxation). The "holistic" efficiency of the economy might, then, be increased. I coin the strategy's name "planned inefficiency."

My dissertation then shifts into two empirical chapters, all of which consider the politics driving governments towards optimal vs. sub-optimal tax-mix decisions. Planned inefficiency is *possible* in

[1]Efficient tax-mix allows leaders to optimize between maximizing revenues at a fixed level of burden upon the economy and growing the future economy, which they may later opt to tax.

[2]In short, political leaders have propensities to seal-up the leaky bucket of taxation (Okun 2015), but plug only those leaks that their most necessary supports will accept.

the real world, but most often it does not occur. Thus, having explained the efficiency of a tax-mix abiding "planned inefficiency,"[3] I ask: "under what conditions will governments actually pursue this form of optimal taxation?"

Each chapter, thereafter, is framed in terms of "selectorate theory," which enables me to consider how institutional differences across regime types[4] motivate vastly different tax-mix outcomes across countries, even when economic fundamentals point to their optimal tax-mixes being the same.

Definitions

Inelastic: economic actor (e.g., individual, firm or industry-group) unable or unwilling to change their behaviour upon a change in its tax burden.

Planned Inefficiency: maximizing the efficiency of the economy by using government to place outsized tax-burden on those elements that are "inelastic."

Selectorate: those segments of society to whom politicians appeal for support, so as to remain in power; from this, a "*winning coalition*" emerges with notable power over government policy.

Market Failure: specific, decentralized, transactions occurring within the market economy that have inefficient outcomes due to failures in the price mechanism (including externalities, market power, asymmetric information, public goods, etc).

Failure of the Market: inefficiencies due to the costs of the market's prerequisite institutions, requiring a centralized actor to tax, and thus distort, individual decentralized transaction. Such inefficiency is "of the market" as a whole, contra market failures occurring in a particular subset of transactions "within the market."

Theory: Taxation's Political & Economic "Rules of Thumb"

In the following, I consider what advice technocrats within the civil service may layout to politicians. I then note what motives the politicians will consider when putting forth their own plan for taxation. Finally, I note how we citizen's might react, given their own self-interests concerning tax-mix.

Tax "Rules of Thumb" for Technocrats

Doubtless, I cannot capture the level of detail at which civil servant experts debate what slate of taxes would be optimally efficient, since this depends greatly upon economic features of "each and

[3] I.e., increasing the economy's efficiency by sacrificing the efficiency of one of its parts.

[4] Whereby I am theoretically motivated by differences across regime in the breadth of the population whose support is required for a political leader to maintain office.

every" country's economy. I can, however, capture certain rules of thumb, that technocrats would apply to assessing the details of their local context.

The detailed, "local," knowledge technocrats work with is used to make two primary assessments by tax authorities advising political leadership: "in my country, what tax instruments will apply the most broadly and upon the most inelastic of behaviours?" Upon assessment, political leadership may be approached with suggestion of an optimal tax-mix, to minimize inefficiency in the economy upon extraction of revenues.

- **Rule 1:** Tax elements of the economy (whether they be individuals, firms or sectors) that are *least able to alter behaviours* so as to reduce incidence of the tax (i.e., tax inelastic behaviour)[5].
- **Rule 2:** Holding elasticity equal, given the option of taxing a narrow set of economic actors at a high rate, or a *broad set of economic actors at a low rate*, always opt for the latter[6].

The above will be explained in greater detail at a later point in this manuscript. For the time being, however, bear in mind these basic "rules of thumb," which civil servants apply to their local knowledge of economic actors in their state. From their local knowledge of what is broad and inelastic, they can weight a tax-mix accordingly, so as to place the bulk of the burden on behaviours broadly occuring within the economy that, moreover, are most difficult to change.

Tax "Rules of Thumb" for Rulers

Political leaders have a slightly different calculus than career civil servants with a deep technocratic knowledge of policy and local circumstance. Rather, politicians face two, often duelling, motives:

- **Rule 1:** Hold onto the support of a "winning coalition" that can keep you in power. Without power, no other political objective can come to fruition (De Mesquita, Smith, et al. 2005; De Mesquita, Morrow, et al. 2002; De Mesquita and Smith 2011).
- **Rule 2:** Holding support constant, use the most efficient tax-mix possible to attain your decided upon level of revenue. The most efficient tax-mix possible will minimize inefficiencies in the economy, allowing you to optimize between (i) current preferred levels of taxation and (ii) maximized potential future taxation, by enabling economic growth. So long as the leader has a non-zero probability of requiring higher future taxation (e.g., non-negligible chance of war or recession requiring fiscal stimulus), then an efficient tax-mix is the optimal decision.

[5]Herein, technocrats may reference core literature on optimal tax policy, concerning tax-mix, which looks to minimize the inefficiency (i.e., deadweight loss) by taxing in accordance to an economic behaviour's elasticity to taxation (e.g., Ramsey 1927; Atkinson and Stiglitz 2015; Mirrlees 1971; Mankiw, Weinzierl, and Yagan 2009; Salanie 2011; Parry and Small 2005; Mirrlees 2006).

[6]Herein, a technocrat in the civil service might cite practical policy briefings from International Organizations (e.g., Mankiw, Weinzierl, and Yagan 2009; OECD 2010) or such classics (of optimal tax policy) as: Atkinson and Stiglitz 2015; Mirrlees 1971; Mankiw, Weinzierl, and Yagan 2009; Salanie 2011; Parry and Small 2005; Mirrlees 2006.

By abiding the second principle, political leaders can bolster the greatest present and future (potential) revenues, at maximum economic growth[7] – but they are only rational to do this insofar as they won't lose power in the process.

Tax "Rules of Thumb" for Citizens

All citizens benefit by government spending on public goods; many also benefit from targeted transfer programs. How much any one citizen benefits from state spending, however, is not just what he "gets out," but what he must also "put in." At a first cut, a hypothetical "all powerful" citizen, say a dictator, could minimize their tax burden by selecting tax instruments for which they would not incur any incidence. A wealthy dictator might, for instance, remove the capital gains tax, if the bulk of their earnings come from their stock portfolio, while bumping up taxes on income and consumption – if these are relatively small as a share of his earnings.

However, to truly maximize upon the equation – of personal benefits from spending while restricting personal costs of taxation – an all-powerful citizen must also consider how to maximize revenue taken from everybody else. Over a long time horizon, maximizing revenues requires using efficient tax-mix, so as to ensure the continued economic growth necessary for a larger future tax-base to arise. Hence, an individual prefers tax-instruments that, not only can be avoided personally, but which applies both broadly and inelastically to the rest of the population.

The motive to shift taxation off of one's self and onto others references an "*incidence effect*": to what extent can I get myself out-from-under a particular tax instrument, while putting it upon others. The preference for taxes I can avoid is mediated by a preference for taxes that will be *as inelastic as possible, upon the greatest number of others possible.* Herein lies an "*efficiency effect*": to maximize (long-term potential) taxation, one must select an efficient tax-mix, so as to not unnecessarily slow down economic growth through inefficiencies induced by tax code.[8,9] Naturally, attaining efficiency may require forgoing some incidence, since others in the population likely share your "inelasticies," which might make those for whom the tax is elastic too "narrow" of a base.

- **Rule 1: the *incidence effect*** Holding constant the efficiency of the tax code, a citizen prefers the tax-mix which minimizes personal incidence.

[7]Even in circumstances where government is small, so long as there is a non-zero possibility of the state requiring greater future revenues, then efficiently taxing the economy, today, is sensible, so as to maximize future economic growth (at levels of today's extraction), since a larger economy offers the basis to raise higher future revenues.

[8]By selecting an efficient tax-mix, a maximum of revenue is extracted at a given level of burden (inefficiency, deadweight loss) upon the economy.

[9]For an individual to accomplish this outcome, ideally, means finding a tax you alone can avoid, but which no other individual can. This tax would apply broadly – to every element of the economy, but one's self – and inelastically – with complete unavoidability and no chance at altering economic behaviours to orient away from the tax, but for one's self. Of course, in reality a citizen need "buddy up" with others to form a winning coalition and, thus make concessions to other's tax preferences (unless this citizen is truly "all powerful").

- **Rule 2: the *efficiency effect*** Holding constant the incidence a citizen faces, he prefers the tax-mix that minimizes inefficiencies so as to (i) maximize revenues extracted upon selecting a level of burden upon the private economy; and, relatedly, (ii) to maximize economic growth (upon which potential future extraction depends), at the selected level of extraction today.

In short, the citizen abides the maxim: "I prefer a tax code that is as *elastic as possible for myself*, while being *as inelastic as possible for as many others as possible* across the rest of the population." Accepting marginally more incidence may be worthwhile, insofar as the incidence effect is at least as great upon the rest of the population (causing efficiency effects to offset incidence effects).

Of course, in reality, while a citizen wishes to reduce their taxes, rarely are they all-powerful. Generally, they need to form a (winning!) coalition with others in the population. Even in autocracies a dictator needs supporters, though they are few in number relative democracies. This autocrat's narrow support-base will implement tax instruments that have little incidence for themselves, while hitting the rest of the population both broadly and inelastically. In democracies, the winning coalition is quite broad. Hence, many individuals must work together – and compromise with each other – to shift incidence onto those outside their coalition. Being large in number, however, this winning coalition needs to consider the macroeconomic consequences of their preferences (i.e., of their implementing an inefficient tax-mix of notable deadweight loss upon the economy)[10]. Hence, citizens will need to select a trade-off of incidence and efficiency, which will be in greater tension the larger the size of the winning coalition[11].

Types of Taxes & Their Main "Targets"

Numerous tax-instruments exist, which political leaders may use in varying proportions (of total revenues). Any given tax will affect some, more entrenched in the taxed behaviour, than others. Different states will also have different levels of competency to administer tax instruments. Generally, "hard to administer" taxes have higher compliance in the developed than the developing world, which accounts for some variation in tax-mix across countries (e.g., Besley and Persson 2010; Besley and Persson 2014; R. M. Bird 1992). Naturally, some individuals will be better placed to avoid these complex taxes than others (and may, as a result, support their implementation).

While many "taxonomies of taxation" exist, the most common classification in the literature distinguishes direct from indirect taxes. Direct taxes are paid by individuals (directly) to the government collection agency, thus preventing any opportunity for the tax's incidence to be shifted onto anyone other than the payee. This includes income taxes, property taxes, employee contributions

[10] If a tax instrument is elastic for the majority, for instance, then the tax base is narrow: to raise required revenues will require higher tax rates, which will further distort economic behaviours from their optimum, ultimately shrinking the economy and the basis on which revenues can be raised.

[11] As large coalitions emerge, they may need to accept incidence when the elasticities of their behaviours to taxation are largely homogenous across the population.

to state pensions / social security, etc. Indirect taxes are collected through intermediaries, often businesses, before being paid to the government; their incidence may, thus, be shifted onto others (such as a business's consumers). Primary cases of indirect taxation includes Value-Added Taxes (of which their are many subtypes, such as the Goods and Services Tax), in addition to tariffs and excise ("sin") taxes.

In this work, I consider certain taxes moreso than others. I wish to speak briefly to the "elasticity profiles" that exist across societies, whereby some cannot help but engage in taxed behaviours (i.e., high cost of altering economic behaviours), whereas others might change their behaviours so as to avoid it (i.e., they already avoid the behaviour outright, or can easily – "at low-cost" – change-out the taxed behaviour for an alternate behaviour). Notably, I will focus upon three tax-instruments:

- *Income Taxes*: while citizens of developed countries may take for granted their government's ability to collect this complex tax, for much of the developing world, governments are evaded by large informal sectors. For workers who either (i) only work informally or (ii) can switch into informal work with relative ease, the tax is tremendously "elastic." In contrast, for many holding a (coveted) formal sector job, avoiding income taxation is not feasible. Those in the informal sector may stand to benefit greatly, in the short term, by increasing *rates* of taxation on incomes, while relieving taxation upon instruments they would not be able to avoid.

- *Value Added Taxes*: while complex, VATs have the benefit of collecting revenues from businesses (which are relatively few) rather than "each and every" individual citizen. While some small actors in the economy, such as street vendors, may evade paying the final "Goods and Services" tax on their final sales, the state still collects taxes on the bulk of the product's value-added, which occurs through "backwards-linkages" on the supply chain: manufacturers, wholesalers plus importers (and the corporate entities providing goods/services essential to the vendor's business and household "overheads," including utilities, computing products, communication and financial services, etc.) will be taxed on their component of value added, that the seller's final price must (indirectly) account for (R. Bird, Gendron, et al. 2007; Hoseini and Briand 2020). Hence, VATs are only partially evadable through informality.

  Another major "societal cleavage" that emerges across citizens grouped by their "elasticity of behaviours," concerns individual savings rates. For those who save large portions of their income, the tax is avoided relative those who consume their full earnings.

- *Property Taxes*: generally applied as a percent of land (& dwelling) value that an individual occupies, these taxes have a strict "ceiling" upon the extent to which they can be avoided: people need shelter built upon land; its occupation, most importantly, is tremendously difficult to hide. Property taxes have been studied for their minimal distortions upon economic

decision-making (Cabral and Hoxby 2012; McCluskey, Plimmer, and Connellan 2002). Hence, this tax offers tremendous potential efficiencies, particularly for developing countries struggling to collect income taxation. While income taxes are outright (by definition) avoided by the informal sector – and VATs are partially collected (except value-added on final mark-ups) – property taxes have the potential to be collected in full. Nonetheless, their use today is minimal, despite the potential to split tax-incidence between the formal and informal sector[12].

Below, I list a selection of tax-instruments. While contributing to general revenues, these instruments split incidence unevenly across the population, given that some are "inelastic" to the taxation (i.e., it would be hard or costly for them to shift away from the behaviour that is taxed higher), while others are not (i.e., relatively "elastic" groups, whose engagement in the taxable behaviour can only be reduce at great personal costs).

Types of taxes, their incidence, & potential for avoidance (given low state capacity).

Type	Tax Instrument	Behaviour Targeted	Inelasticity "Soaked"	Evasion
Direct	Income Tax (IT)	Formal Sector Income	Formal Workers	High
	Progressive IT	High Income Levels	High Earnings	High
	Property Tax	Use of Land/Dwelling	Property Users	Low
Indirect	Value Added Tax	Consumption	Consumers	Medium
	Excise Taxes	"Sins"	"Sinners"	Low
	Tariffs	Imports	Importers	Low

A Historical Vignette: the VAT in India

An ancient, albeit imperfect, democracy, India holds the world's largest elections. It also has the world's largest informal sector (by raw headcount). Shockingly, despite the amount of income successfully hidden from the government, India disproportionately raises revenues through income taxation. Technocrats know this to be inefficient: the tax base is narrow, since so few are in the formal sector. Moreover, for those on the cusp of entering formal labour, the high income tax rates (needed to make up for the narrowness of tax base) can induce an "elastic" behaviour of ducking back into informality. (If, that is, they do not perclude formal sector jobs from arising in the first place!) Nonetheless, attempts to raise government revenues through a tax instrument that splits incidence more equally (between the formal and informal sectors), the VAT, was thwarted for decades. Indeed, the VAT's eventual use in India only occurred in those provinces of *least* political competition, where

[12] As I will suggest, today a societal battle occurs, whereby the informal sector seeks to shift property taxation, which they cannot avoid, onto income taxation. Historically, this battle was waged in Europe between traditional landowners (the nobility) facing-off against "new wealth" (i.e., wealthy individuals whose landholdings are minimal, but have extensive wealth in their accumulation of human and physical capital).

democracy had a autocratic flavour (Chaudhuri and Dasgupta 2006). Otherwise, political leaders considering VATs have eventually balked in light of mass protests, particularly from street vendors. While vendors can often avoid collecting a VAT from their clients, their own margins are thin, whereas they still need to pay the VAT on their purchases from manufacturers and wholesalers, eating into their potential profit margin[13].

In short, while informal sector workers can avoid taxation on labour, they cannot dispel with purchases from the formal market altogether – their "zero" tax incidence on income would be "non-zero" on consumption. Politicians, seeking to hold onto power in a democracy, proved responsive to this broad coalition of voters in India's most democratic settings, while ignoring – and thus taxing *inelasticially and efficiently* – in those districts most undemocratic in character (or, in any case, least electorally competitive).

A Historical Vignette: the Income Tax in Prussia

In the aftermath of the Industrial Revolution, many states with relatively strong, democratically representative, legislatures made to continue taxation of old-wealth – generally of property, but also with many creative ventures, such as a per "windows and doors" taxes on private estates in the United Kingdom and France. Oftentimes taxation of property may be efficient; however, it is important to note that through the 1800s, governments were beginning to extend their size (as a % of GDP) all-the-while land and agriculture were becoming a narrower economic base (again, as a % of GDP): new taxes with broader bases needed to be considered to maintain tax-mix efficiency, given old-wealth's shrinking (relative) economic role. The relatively powerful aristocratic class in Prussia, the *Junker*, however, proved able to drive legislation in favour of taxing new wealth, in the form of income (while working to block legislation extending/increasing taxes on forms of old wealth, such as property). For the Junker, in alliance with the Crown, their concentrated narrowness gave incentive to ensure the state receive its revenues from the population broadly, while ignoring their small subgroup (Mares and Queralt 2015). Though entirely out of narrow self-interest, a happy coincidence of efficient tax-policy resulted, with taxation on a shrinking base in the economy (land and agriculture) shifted onto an increasingly broad base in the economy (labour and capital profits). As with many other autocratic settings, a narrow ruling coalition ensures efficient taxation upon the broad masses, so as to ensure government revenues are raised without causing undue economic distresses – which would hurt, for many in the elite, their bottom-line: including profits delivered from favourable macroeconomic conditions and the potential future tax-revenues of the Crown. In short, the elite as a narrow selectorate was able to both shift tax-mix and attain an efficient, broad-based, tax-mix via inelastic taxes on the masses.

[13]Note that a largely parallel case, concerning democratic leaders relenting upon a technocratically advised VAT, occured in Ghana (see, for instance, Terkper 1996).

Background

The following section considers the many pieces that, together, explains the theory at stake. I present my dissertation's rationale, before considering the two main components of my theoretical argument: "failures of the market," from which planned inefficiency arises; and selectorate theory.

Rationale: the Forgotten Other Half

While the role of the state in the economy is something of an "old hat," to date most political science literature has focused upon the expenditures half of the equation (i.e., spending). Most notably, expenditures are the focal point of research on the welfare state. To the extent that revenues are studied, it is largely as an "equal and opposite" reaction to the politics of state spending; in other words, once we figure out the politics of how much the state is going to spend — often couched in terms of demand for redistribution[14], rents[15,16] and public goods[17] — we can then infer the demanded "levels of taxation" as, say, percent of economic activity. Commonly, we see this as a simple equation: revenues equal the politically determined (i.e., winning coalition's) demand for spending on public goods + redistribution + rents (e.g., corruption).

$$EXP = REV = PUBLIC\_GOODS + REDIST + RENTS$$

Crucially, relative my purposes, much literature has used the above formula to ask what government revenues look like given the very different winning coalitions of democracies relative autocracies (Hausken, Martin, and Plümper 2004; Mulligan, Gil, and Sala-i-Martin 2004; Besley 2006). However, being derived from the study of "demand for state spending," the revenue literature focuses on tax-levels, much to the exclusion of studying tax-mix; in other words, the study of how much money is raised, rather than how it is raised[18]. Moreover, studies of redistribution look to the progressivity of the income tax (by studying marginal rates across income brackets), asking whether the lower,

[14]Consider, for instance, on democracies: Boix et al. 2003; Hinnerich and Pettersson-Lidbom 2014; Moene and Wallerstein 2003; Brunner and Ross 2010; Stasavage 2005; Aidt and Jensen 2009. Autocracies also receive some treatment: Albertus 2015; Albertus and Menaldo 2014; Acemoglu and Robinson 2013

[15]Notably, on autocracy, see Acemoglu and Robinson 2013; democracy sees treatment by: Downs 1957

[16]While redistribution and rents are both drawn from the public purse to provide "non-market" compensation to select individuals, redistribution (unlike rent) is marked by (i) assignment to individuals through broad rules, rather than to particular individuals who are selected based on personal relations to political leaders; and (ii) process legitimacy, rather than exploitation of holding control over said process (including to reinvent or circumvent).

[17]Notably, on autocracy, see Olson 1993; Acemoglu and Robinson 2013; Tsai 2007; democracy sees treatment by: Olken 2010; Feld and Matsusaka 2003

[18]Some studies do, however, note the need to use more income taxation upon reaching high levels of government spending, as in the developed world vs. the developing.

middle or upper class bears the heavier brunt of the burden[19,20]. Herein, the question is asked, from which *income group* does the money come from.

The lapse in studying who, beyond income percentile, public revenue comes from is unfortunate for two reasons. First, of academic completeness: surely, curiosity demands knowing why variation exists across states in their tax-mix, not just tax-levels (and tax-progressivity). And, sure enough, research (albeit limited) argues that the "politics of taxation" has unique machinations, distinct from the "politics of spending"[21]. As I shall contend, this likely revolves around the elasticities of behaviours towards taxation, on which relatively little is said in a political economy literature largely focused upon incomes. Secondly, of missed opportunity to aid society: tax-mix decisions will: (i) affect who bears the burden of taxation (thus, some tax-mixes might better align with a "theory of distributive justice" than others) and, moreover, (ii) implicate the efficiency by which revenues are raised (thus, allowing the state to offer either a fixed-level of goods & services at lower tax-levels or, alternatively, to provide more provisions at a fixed-level of economic burden).

Herein lies a possible answer to a puzzle of the political economy literature, by virtue of yet another: the Free Lunch Puzzle (FLP) explained via the Robin Hood Puzzle (RHP)[22]. On the one hand, contra expectations, states offering generous welfare provisions are seemingly not paying for it with inefficiencies in the economy (the FLP); on the other hand, contra expectations, democracies with high levels of redistribution are those already relatively equal before government transfers take place (the RHP). In considering tax-mix, I suggest the puzzles may be explained as such: the winning political coalitions of societies that are relatively equal, in democracies, are also those inclined towards demanding relatively efficient tax-mixes; in turn, redistribution being, dollar-for-dollar, cheaper (given taxes being raised in an efficient manner), makes higher levels of it more socially desirable. I theorize that relatively equal societies have, on average, citizens with relatively similar "elasticity-profiles." As such, they accept taxes that are inelastic — and thus efficient — since (i) there is no notable "minority" (in terms of elasticity profile) to "soak" with inescapable taxes and (ii) they know that most everyone else, just like them, must also pay the inelastic taxes. In short, "tax-shifting" (off one's self and onto another) becomes difficult, if not impossible; certainly, it does not reap enough reward to merit the consequent inefficiency. Consequently, an efficient

[19]To some, it is merely the middle-class to do well by democracy (Stasavage 2005), whereas others paint a mixed picture of democracy's redistributive picture depending on electoral system (Iversen and Soskice 2006), including one recent work noting that the middle class may not be excempt, despite their privileged position as the "median" voter in the political economy literature (Hays 2016)

[20]To be complete, the assessment generally tries to isolate net transfers, of each group's tax contribution (cost) minus its received transfers (benefits).

[21]Notable exceptions, which consider tax-mix politics, includes: Peters 1991; Levi 1989; W. Hettich and Winer 2005; Mares 2006; Steinmo 1996; moreover, the literature has paid notable attention to the issue, specifically, of corporate taxation (e.g., Felix 2007; Bretschger and F. Hettich 2002; Swank and Steinmo 2002; Genschel, Lierse, and Seelkopf 2016), inheritance taxation (e.g., Scheve and Stasavage 2012) and property taxes (e.g., Brunner, Ross, and Simonsen 2015); for an overview of the political economy literature on tax-policy generally – including levels, progressivity and mix – see Gould and Baker 2002; Kiser and Karceski 2017.

[22]See, for example, Lind et al. 2005; Lindert 2004; Kaufman 2009; Lindert 2003.

tax-mix makes redistribution "cheaper," incentivizing the population to also be more generous. Because relatively few democracies have such "homogenous elasticity profiles," my theory may help explain why democracies are not as generous to the poor (vs. autocracies) as predicted by an array of scholars[23]. Unlike autocracies, which can target the most inelastic tax-mix because leaders do not need broad-based support, the efficiency of a democracy's tax-mix is contingent upon a very rare circumstance.

In this way, I might explain both the Robin Hood problem (i) across democracies of varying equality, but also (ii) in terms of the puzzle of why democracies do not redistribute more than autocracies — whereby autocracies may force broad coalitions of (effectually "non-voting") citizens with inelastic taxes.

Distinguishing Market Failures from Failures of the Market

The following two subsections consider an important distinction: market failures, which references specific transactions, and failures of the market, which references the very institutional basis for the market to support any transactions at all.

Market Failures

In a society that uses the market (i.e., decentralized transaction) as the default mode of organizing economic production, market failures provide economic justification for "exceptions to the rule;" namely, a role of government in the market. Market failures occur when the price mechanism cannot function properly (i.e., not bringing marginal private costs/benefits to equal marginal social costs/benefits). These include cases whereby markets: do not produce competition (hence, market power arises)[24]; fail to reveal necessary information for risk assessment (moral hazard or information asymmetries)[25]; cannot price all costs inherent to the transaction (externalities)[26]; or fail to arise altogether (non-market mechanisms, including firms and public goods, needed to reduce transaction costs [27]. In such cases — of market transactions marred by a particular types of failure — we must consider whether government intervention (albeit with inefficiencies of its own) will reduce the economy's inefficiency overall. Thus, government may involve itself in particular *subsets of transactions* occurring *within* the market.

[23]Including the original models of Meltzer and Richard 1981 & Downs 1957, but note the contrary empirical results (for example, from Stasavage 2005).

[24]E.g., Schumpeter 2013; Baran 1966

[25]E.g., Akerlof 1978

[26]Pigou 2013; Kahn 1966

[27]E.g., Ronald Harry Coase 1995; Ronald H Coase 1960; Williamson 1979; Grossman and Hart 1986

Failures of the Market

Overlooked in market failure approaches, I focus upon the expense of providing and maintaining a society with the market's prerequisite institutions. These basic institutions are not specific to any one particular transaction but, rather, are of a "public goods" nature: thus, they provide benefits to all (i.e., the market as a mode of organizing economic transaction), *but* depend upon a centralized authority to raise the funds necessary to provide them. This will require taxation and, thus, implicate inefficiencies across the economy. Herein, inefficiencies are not simply "of government," but "of the market" itself. In this manner, the myth of the free market is made clear both literally and figuratively: literally, it does cost money to operate a market economy; and figuratively, a centralized authority — with fiat powers — is a prerequisite to the operation of a market economy. An effective government plans where to assign these inefficiencies of the market, so as to minimize the negative effects overall: a concept I term "planned inefficiency," to which I shall come back shortly.

Broadening the Range of Selectorate Theory

Selectorate theory helps to explain why many social phenomena unfold differently between dictatorships and democracies — and between variations of type within each category — by pointing to differences in the size and qualities of "winning coalitions" across societies; in other words: whose support must a political leader keep in order to retain office (De Mesquita, Smith, et al. 2005). The characteristics of this coalition, including its proportion of the total population and their socioeconomic traits, will determine what policy concessions a leader must offer to maintain their support (i.e, to keep them "in-the-fold") so as to continue ruling.

The size of the selectorate is the proportion of the population whose support can viably contribute to a politician remaining in power; the size of the winning coalition is the proportion of the population whose support the politician ultimately needs to hold power, which is a subset of the selectorate. For instance, voters make-up the selectorate in democracies, but depending on the system, the winning coalition may be 50% (two-party systems) or a fraction of that in the case of vote-splitting (multi-party systems). Autocracies, on the other hand, may rely on a negligible percent of the population for both its selectorate (e.g., the oliogarchs and generals) and winning coalition (e.g., a subset of the oliogarchs and generals, who are perhaps played off each other).

To generalize, because societies have very different rules structuring the selection of political leaders, they have very different selectorates & winning coalitions, thus procuring very different social outcomes via policy as leaders offer advantageous terms in order to hold onto a "winning coalition" amongst members of the "selectorate." Crucially, the winning coalition in an autocracy is much smaller than in a democracy (which is not to deny that there is great variation within both

categories also). Leaders in democracies must gather far broader coalitions of support so as to stay in office, relative leaders of autocracies, who doubtless need powerful allies, but allies relatively few in number as a proportion of society's population.

Explaining How Leaders React to "Failures of the Market" with Selectorate Theory: Determinants of Optimal Tax-Mix

This manuscript concerns itself with a concept, which I term "planned inefficiency." Planned inefficiency provides an account of how governments should act insofar as they seek to maximize the efficiency of their tax-mix (i.e., as per normative public economics). Herein, I argue that governments would implement a tax-mix whereby the final marginal dollar raised through each instrument is selected so as to maximize "revenue per dollar of economic distortion" upon the economy as a whole[28]; crucially, this may be achieved by taxing those elements & behaviours of the economy that are most inelastic to taxation, while being most broadly held across the population.

However, public economics is not always borne-out by political reality. I speak to the political realities that shape whether political leaders are likely to pursue such a policy or, rather, to forgo efficiency of tax-mix for political support. This is done using a framework of selectorate theory. In later chapters, I consider how changing the size of the selectorate will implicate tax-mix decisions[29].

I observe that institutional characteristics that serve to "broaden" the selectorate will generally lead to more efficient mixes of "targeted" forms of taxation (i.e., upon specific industries)[30]; however, and perhaps surprisingly, I will also observe that "broadening" the selectorate leads to *less* efficient mixes of "broad-based" forms of taxation. Crucially, a narrow selectorate – as in an autocracy – would see a small number of leaders motivated to tax the population broadly in an efficient manner, so as to raise revenues while still growing the economy (and, thus, potential future revenues). They would see no point in "leaving free money on the table," by taxing the population inefficiently. A broad selectorate – as in a democracy – would see large numbers of citizens (i.e., voters) asking how they might shift tax-burden off themselves and onto some other elements of the economy (n.b., after all, they still benefit from the government's spending on universal programs and public goods). An inefficient tax-mix results, as the broad winning coalition demands elastic instruments in return for their support to political leaders. The broad coalition may accept this inefficiency, as the narrower "losing coalition" of the economy gets "soaked" with paying disproportionately for

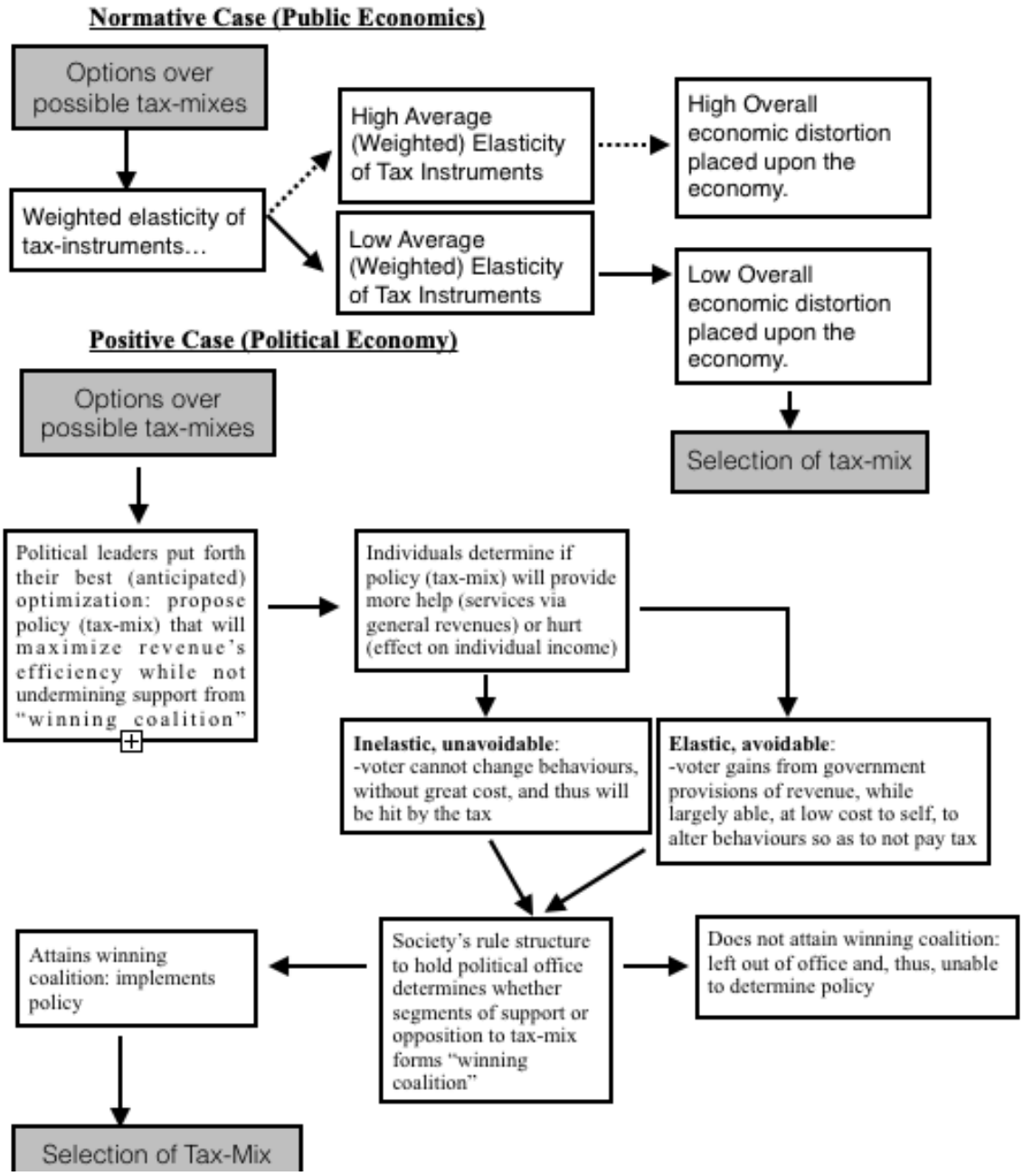
[28]Hence, efficiency may be defined as minimizing the social costs of withdrawing a given amount of economic resources (i.e., currency) from the private market.

[29]Crucially, the efficiency of tax-mix is effected by choices to under or over utilize a specific instrument as a percentage of overall tax revenues.

[30]Indeed, my theory's focus upon elasticities may not only explain where governments get their revenue from, but whom they associate most closely with in terms of government-industry ties; e.g., extractive industries, protected financial sectors and utilities, all of which are highly inelastic, as their businesses will continue upon being taxed, potentially heightening the government's incentive to enforce limited competition.

the state's budget, thus "putting free money on the table" for this winning coalition.

While not the focus of this manuscript, I also note, in closing, that the selectorate's preferences are informed by perceptions, beliefs and values. I consider how the selectorate's motives matter. Citizens find inelastic taxes more palatable when: (i) the government is perceived as competent, thus increasing the tax-payer's "bang for the buck;" and (ii) when "elasticity profiles" of a population are homogenous, thus preventing the winning-coalition from "soaking" the losing-coalition with taxes that only they can avoid. I also note, in concluding, how we might leverage selectorate theory to inform our design of governing institutions so as to maximize the efficiency of tax-mix, whilst not giving up upon institutions we deem virtuous, such as those of liberal democratic governance.



Outline of the Manuscript

The following chapter proceeds in two stages. (1) Concerning public economics: I consider the public economics of tax-mix, so as to explain what an efficient tax-mix might look like. From this analysis, I suggest a strategy, named "planned inefficiency," that might be adopted by political leaders in order to maximize their economy's efficeincy at a given level of revenue extraction (e.g., taxes as a % of GDP). (2) Concerning political economy: I then note reality, whereby optimal tax-policy is rarely the prime motive. I ask: "under what conditions will governments actually pursue this form of optimal taxation?" Each chapter thereafter is framed in terms of "selectorate theory," which enables me to consider how institutional differences across regime types motivate vastly different tax-mix outcomes across countries, even when economic fundamentals point to their optimal tax-mixes being the same.

To execute on the first stage, I build a strategy government leaders might follow to attain optimal tax-mix, named "planned inefficiency." Based upon Ramsey taxation, this strategy suggests that leaders *ought* to tax the most inelastic elements of the economy, *insofar as they aim* to maximize the economy's efficiency (Ramsey 1927). Herein, I offer the public economics workhorse on which the manuscript proceeds. The theory is normative – meaning I design how leaders ought to act if they are to rationally pursue the ends I have chosen for them: maximizing the economy's efficiency. Leaders are, in short, made to be benevolent dictators. In short, my theory of planned inefficiency explains how governments might do well to tax inelastic sectors of the economy (i.e., those transactions that are relatively unaffected by higher tax rates), thereby heightening their inefficiency, so as to relieve tax burden upon sectors that react more elastically (i.e., those transactions that would shrink drastically upon higher taxation).

To execute on the second stage, I consider how the selectorate – from the political economy literature – implicates the optimality of tax-mix decisions. While I demonstrate a benevolent dictator will always use planned inefficeincy, politicians – first and foremost – must retain a winning coalition from their society's selectorate: political leaders maximize upon the principle of optimal taxation *subject to the constraint* of taxing in a manner that retains their rule. The consequent role of the selectorate could be considered from two angles: first, considering the size of the selectorate (as a proportion of society's total population) and, second, the motivations of the selectorate. For the purposes of abating sprawl in my dissertation, I focus strictly upon the former – selectorate size – in this manuscript.

To recapitulate, the manuscript's second chapter builds out the "public economics workhorse," which is then applied to political economy's selectorate theory. Upon these two pieces, the rest of the book proceeds. The ensuing chapters consider the politics driving governments towards optimal vs. sub-optimal tax-mix decisions. In other words, having demonstrated the case for "planned inefficiency" (i.e., increasing the economy's efficiency by sacrificing the efficiency of one of its parts),

I ask: "under what conditions will governments actually pursue this form of optimal taxation?" Each ensuing chapter is framed in terms of "selectorate theory," which enables me to consider how institutional differences across regime types[31] motivate vastly different tax-mix outcomes across countries, even when economic fundamentals point to their optimal tax-mixes being the same.

In reviewing the effects of selectorate size on tax-mix, the third chapter, named "A Theory of Taxation," continues on the theme that political leaders must maintain the support of those who "select" them into power. Whereas in autocracies this is a rather small proportion of the population, in democracies it is quite large. To amass support in democracies, political leaders forgo "planned inefficiency" by avoiding tax-mixes that heavily draw on taxes that are unavoidable (or inelastic) to large segments of the population, on whom their support depends. As such, democracies see inefficient tax-mixes. Using a database on tax-mix and imputations measuring the size of the informal sector, I evaluate how a growing informal sector affects the usage of income taxes in the context of democracies, with broad selectorates, contra autocracies, with narrow selectorates. Consistent with my theory, I find democracies inefficiently tax income in the context of rising informality, whereas autocracies do the opposite. Tests of mechanisms are performed by testing *rates* of income taxation, which are set by policy (i.e., marginal tax rates across income brackets). Additionally, I perform a difference-in-difference analysis, whereby I find that sudden changes in regime from democracy to autocracy leads to "tax-flips," i.e., ruptures in tax policy consistent with my theory's predictions[32]

The fourth chapter, then, considers what happens when the selectorate is narrowed due to the state being "captured" – lacking what Peter Evans calls "embedded autonomy" (Evans 2012). When politicians, whether autocratic or democratic, can access the necessary resources to retain power through the few instead of the many, or where corruption runs rampant, we can translate this to a narrowed selectorate (because politicians rely on relatively few gatekeepers to hold onto power). Whereas government leadership should seek to tax inelastic sectors (firms and industries) within the economy, captured governments are obstructed from doing so, since those most inelastic industries/firms are exactly those to respond with the greatest efforts to capture the state (e.g., bribery/lobbying). Using the World Bank Enterprise Surveys, a multi-level model tests my hypotheses that (i) those firms/industries that are relatively inelastic to taxation demonstrate disproportionate lobbying and bribery efforts; and (ii) inelastic firms/industries will face lower tax rates in those states most liable to capture or corruption. Of consequence, upon being captured,

[31] Whereby I am theoretically motivated by differences across regime in the breadth of the population whose support is required for a political leader to maintain office.

[32] As the informal sector grows in democracies, the usage of income taxation increases — which the informal sector entirely avoids, whereas taxes that do affect the informal sector, including property and sales taxes, tend to decrease as a share of government revenues. Checks of mechanism reveal increased income tax rates, confirming a policy avenue through which income taxes as a percent of revenues increases. Moreover, sudden changes of regime, whereby democratization or backslide occur, coincides with "tax-flips" resulting consistently with predictions.

governments fail to tax exactly those industries that would react the least negatively to being taxed – thereby failing to attain a state of "planned inefficiency."

In concluding, I summarize my theoretical contentions, predictions and findings, after which I consider future directions of research. First, I note how the selectorate may be *motivated* to accept inelastic taxes in their life. I explain that perception of government competence, arguably, will lead the selectorate to allowing more inelastic forms of taxation, if they expect the government to do well with the revenues raised. Second, I consider how tax payers may accept inelastic taxes if everyone else is equally stuck with inelastic taxes. Herein, I explain how the Robin Hood puzzle might be explained via the Free Lunch puzzle. Pointing to Scandinavian states, I observe how baseline equality – especially in terms of a "thick" middle class – often creates "homogeneous elasticity profiles," which create incentives for voters to accept inelastic taxes in return for their efficiency benefits, because they know that everyone will be "stuck" with the bill (not just themselves). As such, homogeneity prevents democracies from implementing inefficient tax-mixes meant to accomplish tax-shifting (thus lending greater weight to the efficiency-effect than incidence-effect upon voter motives).

Finally, as a final touch, I consider how adjustments to democratic institutions might work where altering the selectorate's motives (via perceptions of confidence or reconstructing "elasticity profiles" to be more homogenous) is too difficult due to structural features of the economic and political landscape. I consider, for instance, creating a (semi-autonomous) "tax-mix authority" similar to central banks: elected representatives set the revenue and distributional objectives of society, but then leave the specific proportioning across tax-instruments to technocratic professionals. In this manner, a compromise solution may be struck between attaining economic efficiencies and maintaining the power of a democracy's electorate.

Overview

Thesis Background: a theory of planned inefficiency reveals benefits of taxing "inelastic" components of the economy (individuals, firms or industries).

Thesis Objective: theorize & test political constraints preventing planned inefficiency from being realized in practice, using selectorate theory. Notably, corruption and autocracy are shown to narrow the selectorate, making more inefficient "narrow forms of taxation," but more efficient "broad-based forms of taxation."

Chapter 1: note the puzzles of political economy that I wish to solve, briefly summarize my theoretical solutions and then provide a road-map of the manuscript's chapters.

Chapter 2: provides a "public economics" theory of planned inefficiency, before shifting into a "political economy" theory of restraints preventing optimal policy outcomes, inspired by selectorate theory.

Chapter 3: using imputations of informal sector size, I observe how the informal sector acts to "soak the formal sector" in democracies where leaders want this large voting bloc to satisfy their need for a broad selectorate; in contrast, autocratic leaders will implement tax-mixes difficult for the informal sector to avoid. As such, autocracies avoid "informality traps" and the inefficiencies of a broadly avoidable tax-mix.

Chapter 4: using World Bank Enterprise data, I argue that a state's vulnerability to corruption leads to powerful, inelastic, sectors: (i) acting on incentive to narrow the selectorate; and (ii) attaining favourable tax policy, to the harm of the economy's efficiency.

Chapter 5: Rounding out the thesis, I consider lessons of selectorate theory to designing institutions that are normatively desirable while, also, favourable to attaining outcomes of planned inefficiency.

Thesis Significance: To redress a gap in the literature, by focusing on (i) tax-mix rather than tax-levels and (ii) providing possible solutions to counter-intuitive findings, including of the Robin Hood and Free Lunch Puzzles; moreover, argues how democratic institutions might be designed for more favourable outcomes of both distributive justice and efficiency.

Chapter 2

A Theory of Revenues: Planned Inefficiency & the Elasticity Wars

This chapter spells-out the theoretical contentions of my dissertation project. To do so, I explain (i) the public economics theory of planned inefficiency and (ii) the political economy theory of the selectorate. I then consider their intersection, whereby (iii) the very efficiency of a tax instrument able tap inelastic behaviours, is exactly what drives away citizens from being accepting of such taxes.

While a citizen as all-powerful leader (an ideal-type autocracy) implements taxes inelastic unto all others (but elastic to himself), a citizen as "instrument of the voter's will" leader (an ideal-type democracy) must cede elastic tax instruments for their winning coalition of supporters – thus implementing taxes that are only inelastic upon a relatively narrow base (the losing coalitions). The taxes are, consequently, inefficient.

The paper will proceed in steps, providing the following reflections and extrapolations on the aforementioned theories. [With (1) and (2) below melding-in the literature overview]

1. Rationale
   (a) The three dimensions of taxation (for economists and political scientists): tax-levels, tax-progressivity & tax-mix
   (b) Why so little literature on tax-mix? And why does tax-mix matter?
   (c) Filling the tax-mix gap within the politics literature: what has already been said, vs what I have to say: speaking explicitly about the unstated *common thread* tying together many individual studies: *elasticity*
2. Listing of studies on particularistic tax-mix decisions. My threading them together via a theme of elasticity:
   (a) Democracies: Gas tax in UK ($2x$ their optimal rate) VS. US ($1/2x$ optimal rate). Different elasticity (of driving) between populations causes outcome (Parry and Small 2005)

(b) Democracies: India's troubles taxing the informal sector. Causes excess taxation of income, but insufficient taxation of consumption (Chaudhuri and Dasgupta 2006)

(c) Autocracies: Prussia's taxation of income in response to rising industrial sector (Mares and Queralt 2015)

(d) Contrast of Democracy & Autocracy: Case studies of Lesotho and Rwanda to illustrate the importance of sequencing. Establishing unpopular taxes during times of autocracy. (D'Arcy 2012)

3. My theory:
   (a) Planned Inefficiency Explained
   (b) Selectorate Theory Explained
   (c) The Intersection of Planned Inefficeincy and Selectorate Theory Explained
4. My Predictions/Hypotheses:
   (a) Broad-based Tax Policy on Citizens
      i. P_1: Narrow selectorates (e.g., autocracies) implement efficient tax-mixes via using tax-instruments on broadly inelastic (& narrowly elastic) behaviours
      ii. P_2: Broad selectorates (e.g., democracies) implement inefficient tax-mixes via tax-instruments on broadly elastic (& narrowly inelastic) behaviours
      iii. H_1: As democracies (autocracies) gain more informal workers, they tax income (property & consumption) more than property & consumption (income) (CH 3)
      iv. H_2: Democratiztion (democratic backslide) in the context of large informal sectors leads to increased income taxation (decreased income taxation), but increased property & consumption taxation (decreased property & consumption taxation) in the context of small informal sectors (CH 3)
   (b) Targeted Taxes on Industrial Sectors
      i. P_3: State's with "embedded autonomy" place disproportionately high taxes on firms and industrial sectors that react inelastically.
      ii. P_4: State's liable to capture face a narrowed selectorate that presses for favourable tax policy.
      iii. P_5: Having the most to lose, inelastic firms/industry sectors make the greatest lobbying/bribery efforts of the state.
      iv. H_3: State's with (out) records of capture respond to lobbying/bribery efforts with reduced taxation (no response) (CH 4)
      v. H_4: Inelastic firms and industrial sectors make the largest efforts to capture (e.g., bribery and lobbying) (CH 4)

Chapter 3

A Theory of Taxation & Democracy's Informality Trap

This chapter continues on the theme that political leaders must maintain the support of those who "select" them into power. Whereas in autocracies this is a rather small proportion of the population, in democracies it is quite large. The allies of dictators share an incentive to "soak" the masses with inescapable (and thus efficient) taxes, so as to fund the state (including, for instance, rents for the elite)[1]; in contrast, the same strategy of "soaking the masses" does not work when politicians need "mass support" to win free and fair elections. To amass support in democracies, political leaders forgo "planned inefficiency" by minimizing taxes that are unavoidable (or inelastic) to large segments of the population, on whom their support depends. As such, democracies see inefficient tax-mixes.

Empirically, I test this theory by assessing how politicians, situated in different regimes, tax their informal sectors (for whom income taxes are easily avoided relative alternate forms of taxation). Using a database on tax-mix and imputations measuring the size of the informal sector, I evaluate how a growing informal sector affects the usage of income taxes in the context of democracies, with broad selectorates, contra autocracies, with narrow selectorates. Consistent with my theory, I find democracies inefficiently tax income in the context of rising informality, whereas autocracies do the opposite. Tests of mechanisms are performed by testing rates of income taxation, which are set by policy. Additionally, I perform a difference-in-difference analysis, whereby I find that sudden changes in regime from democracy to autocracy leads to "tax-flips," i.e., ruptures in tax policy consistent with my theory's predictions[2]

[1] Additionally, the efficiency of taxation maximizes revenues at a minimum of burden upon the private sectore economy, from which elites are also likely profit.

[2] As the informal sector grows in democracies, the usage of income taxation increases — which the informal sector entirely avoids, whereas taxes that do affect the informal sector, including property and sales taxes, tend to decrease as a share of government revenues. Checks of mechanism reveal increased income tax rates, confirming a policy avenue through which income taxes as a percent of revenues increases. Moreover, sudden changes of regime, whereby

Hypothesis:

Political leader's must maintain the support of those who "select" them into power. Whereas in autocracies this is a rather small proportion of the population, in democracies it is quite large. To amass support in democracies, political leaders forgo "planned inefficiency" by not implementing tax-mixes rich in those taxes that are unavoidable (or inelastic) to large segments of the population, on whom their support depends. As such, democracies see inefficient tax-mixes.

Methods:

Using a database on tax-mix and imputations measuring the size of the informal sector, I evaluate how a growing informal sector affects the usage of income taxes (as a % of Government Revenue) in the context of democracies relative autocracies. Tests of mechanisms are performed by testing rates of income taxation, which are set by policy. Additionally, I perform a discontinuity analysis, whereby I find that sudden changes in regime from democracy to autocracy leads to "tax-flips," i.e., ruptures in tax policy consistent with my theory's predictions.

Model 1: Fixed Effects Baseline Model

- DV: Income, Sales & Property Taxes (as % of Government Revenues) (ICTD/UNU-WIDER 2017)
- IV: Interaction of Regime Type (PolityIV) with Informality (% of GDP) as measured by Medina and Schneider July, 2017
- Controls: Use of Fixed Effects for Country & Year

Model 2: Mechanism

- DV: Marginal Rates of Income Taxation (i.e., % every additional dollar of income is taxed at median declared incomes) (Studies 2017)
- IV: Interaction of Regime Type (PolityIV) with Informality (% of GDP) as measured by Medina and Schneider July, 2017
- Controls: Use of Fixed Effects for Country & Year

democratization or backslide occur, coincides with "tax-flips" resulting consistently with predictions.

Model 3: "Tax Flips"

- DV: Difference between Pre-Regime Change a Post-Regime Change: (i)Income, Sales & Property Taxes (as % of Government Revenues) (ICTD/UNU-WIDER 2017); (ii) Marginal Rates of Income Taxation (i.e., % every additional dollar of income is taxed at median declared incomes) (Studies 2017)
- IV: Interaction of Δ Regime *Transition* (PolityIV) with Informality (% of GDP) as measured by Medina and Schneider July, 2017
- Controls: Use of Fixed Effects for Country & Year

Results:

As the informal sector grows in democracies, the usage of income taxation increases — which the informal sector entirely avoids, whereas taxes that do affect the informal sector, including property and sales taxes, tend to decrease as a share of government revenues. Checks of mechanism reveal increased income tax rates, confirming a *policy avenue* through which income taxes as a percent of revenues increases. Moreover, sudden changes of regime, whereby democratization or backslide occur, sees "tax-flips" occur consistently with predictions.

Significance:

In democracies, as informality increases alongside income taxation, the formal sector bears a greater share of tax burden relative the informal sector. Given the latter's size, this demonstrates democratic political leaders securing votes (n.b., this phenomena does not occur in autocracies). This (perhaps tacit) agreement between political leaders and informal sectors of great size points to a potential trap whereby democracies are liable to get stuck with large informal economies.

Chapter 4

State Capture's Narrowing of the Selectorate: "Targeting" Taxes & Tax-Relief across Industrial Sectors

This chapter considers what happens when the selectorate is narrowed due to the state being captured – lacking what Peter Evans calls "embedded autonomy" (Evans 2012). When politicians, whether autocratic or democratic, can access the necessary resources to retain power through the few instead of the many, or where corruption runs rampant in political and bureaucratic circles, we can translate this to a narrowed selectorate[1].

Whereas government leadership should seek to tax inelastic sectors (firms and industries) within the economy, captured governments are obstructed from doing so, since those most inelastic industries/firms are exactly those to respond with the greatest bribery/lobbying efforts. After all, firms that behave inelastically to taxation have the most to lose when taxes are raised: stuck behaving as they did before, their profit margins are fully hit – without ability to easily reduce production or shift into behaviors beyond the targeted tax instrument. Further yet, many inelastic industry's have protected profits, providing the wealth with which the state may be rented-out for a "quid pro quo."

Using the World Bank Enterprise Surveys, I build a multi-level model to test my hypotheses that (i) those firms/industries that are relatively inelastic to taxation demonstrate disproportionate lobbying and bribery efforts; and (ii) inelastic firms/industries will face lower tax rates in those states most liable to capture or corruption. Of consequence, upon being captured, governments fail to tax exactly those industries that would react the least negatively to being taxed – thereby failing to attain a state of "planned inefficiency."

[1]Here, this occurs because politicians rely on relatively few gatekeepers to hold onto power and/or democratic processes are circumvented by politicians with civil servants

Hypothesis:

- (1) Having the most to lose, firms/industries that are most inelastic to taxation, respond with the greatest bribery/lobbying efforts.
- (2) Government leadership seeks to tax inelastic sectors (firms/industries) within the economy, but this strategy is obstructed the more vulnerable government is to capture [since factor (1) leads to inelastic firm/industries making the greatest effort to take advantage of this vulnerability].

Methods:

Using the World Bank Enterprise Surveys, I evaluate how industries relatively inelastic to taxation demonstrate disproportionate lobbying and bribery efforts in states where the government has poor performance in corruption metrics, relative those industries elastic to taxation.

Model 1: Are bribery efforts determined by elasticity to taxation

- Level-1: Firms; Level-2: Industry; Level-3: Country
- DV: Self-Reported Corruption (WB Enterprise Surveys)
- Treatment. Interaction of: (a) industry-elasticity (ordinal variable) based on access to monopolistic or resource rents (e.g., utilities; petroleum; country-by-country assessment of trade protection for select industries – e.g., retail banking) as determined by myself; AND (b) Government proclivity to capture, as measured by the VDEM indicators of accountability (e.g., v2x_accountability), corruption (e.g., e_wbgi_cce; v2excrptps; e_v2x_pubcorr_3C), and administrative competence (e_wbgi_gee; Quality of Government Dataset).

Model 2: Do Efforts to Capture Work

- Level-1: Firms; Level-2: Industry; Level-3: Country
- DV: Pre-tax Corporate Income - Post-tax Corporate Income
- Treatment. Interaction of: (a) Self-Reported Corruption (WB Enterprise Surveys); AND (b) Government proclivity to capture, as measured by the VDEM indicators of accountability (e.g., v2x_accountability), corruption (e.g., e_wbgi_cce; v2excrptps; e_v2x_pubcorr_3C), and administrative competence (e_wbgi_gee; Quality of Government Dataset).

Anticipated Results:

Using a multi-level model I expect to find that those industries, and firms within industries, that are most inelastic to taxes will be (i) most opportunistic (engaging in bribery) upon being situated in a country with a government liable to corruption to lobby and bribe; (ii) will face low tax rates relative elastic industries and their industry-contemporaries in states not liable to corruption.

Anticipated Significance:

Planned inefficiency suggests a government should have relatively high tax rates upon those industries, and firms within, that will react most inelastically to taxation. Of consequence, such societies' lack efficient tax-mix policies.

Chapter 5

Conclusion

Primarily, the conclusion will seek to summarize my (i) theory; (ii) its primary predictions; and (iii) the main findings of the empirical chapters. Then, I will speak to future directions of research. These are two-fold.

First, I note that whereas the selectorate's proportion of the total population mattered as the "treatment" variable within this manuscript, it is also important to consider what effects a shock to the beliefs of the selectorate could have (again, as the "treatment"). I note how selectorate belief in the (i) competence of government and (ii) homogeniety of elasticity profiles, can both contribute to the synching of democracy with a more efficient tax-mix.

Secondly, insofar as the selectorate's beliefs in government competence are immovable and the elasticity profiles of the population cannot easily be changed, I explore an alternate option. Institutionally, I note how many democracies have made arms-lengths institutions, which must act on a constituional mandate, but have tremendous policy-setting power within. I suggest that an arms-length tax-mix authority could, in acting like a central bank, administer an efficient tax-mix whilst abiding democratically elected politicians demands for a given *level* of taxation and extent of *progressivity*.

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