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Local Government Taxation and Accountability in Mexico

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Declaration

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Abstract

The taxation-accountability theory broadly states that if governments are dependent on taxation, they will become less corrupt and more accountable to citizens. The need to raise tax revenue is said to spark incentives that lead to mutually beneficial bargaining between government and citizens. Citizens agree to make tax payments in return for more accountable governance and increased influence in government decision-making. Several scholars have shown empirical evidence in support of this taxation-accountability theory at the national level, yet few have studied it at the local government level.

This paper explores this theory in the context of Mexican municipal governments using a mixed methods research approach. It first surveys the relationship between taxation and accountability using econometric analysis and then employs a comparative case study of six urban municipalities that are under considerable pressure to raise their tax revenue. The latter is based on several months of field research conducted in the states of Guerrero, Tabasco, Baja California Sur, Aguascalientes, Yucatán and Coahuila. It reveals the processes that evolve from revenue pressure, whether they lead to tax bargaining, and the extent to which greater accountability can be expected as a result.

The findings provide some evidence of tax bargaining and positive correlations between the importance of taxation in a government's budget and accountability. However, the *causal* link to greater accountability is not straightforward and is greatly hindered by the institutional framework surrounding local government. While implicit agreements between government and citizens showed that equilibrium between taxation and accountability was consistently maintained, restrictions on local power and other institutional factors stood in the way of increased local taxation *sparkling* greater local accountability. These factors may be remedied by reform.

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List of acronyms

| | |
|----------|--|
| AALMAC | Asociación de Autoridades Locales de México (Association of Local Authorities in Mexico) |
| BANCOMER | Banco de Comercio (Commerce Bank) |
| BANOBRAS | Banco Nacional de Obras y Servicios Públicos (National Works and Public Services Bank) |
| CIDAC | Centro de Investigación para el Desarrollo, A.C. (Research Centre for Development) |
| CONAGUA | Comisión Nacional del Agua (National Water Commission) |
| CVP | Censo de Población y Vivienda (Population and Housing Census) |
| ENGSPJM | Encuesta Nacional de Gobierno, Seguridad Pública y Justicia Municipal (National Survey of Municipal Government, Public Security and Justice) |
| FAISM | Fondo de Aportaciones para la Infraestructura Social Municipal (Municipal Social Infrastructure Fund) |
| FENAMM | Federación Nacional de Municipios de Mexico (National Federation of Mexican Municipalities) |
| GATT | General Agreement on Tariffs and Trade |
| GDP | Gross Domestic Product |
| HDI | United Nations Human Development Index |
| IFE | Instituto Federal Electoral (Federal Electoral Institute) |
| IMCO | Instituto Mexicano para la Competitividad (Mexican Institute for Competitiveness) |
| INAFED | Instituto Nacional para el Federalismo y el Desarrollo Municipal (National Institute for Federalism and Municipal Development) |
| INAIP | Instituto Estatal de Acceso a la Información Pública (State Institute of Access to Public Information) |
| INDETEC | Instituto para el Desarrollo Técnico de las Haciendas Públicas (Institute for the Technical Development of the Public Treasuries) |
| INEGI | Instituto Nacional de Estadística y Geografía (National Institute of Statistics and Geography) |
| MLE | Maximum Likelihood Estimation |

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| MMR | Mixed Methods Research |
| NAFTA | North Atlantic Free Trade Agreement |
| NGO | Non-governmental organisation |
| OECD | Organisation for Economic Co-operation and Development |
| OLS | Ordinary Least Squares |
| PAN | Partido Acción Nacional (National Action Party) |
| PEMEX | Petróleos Mexicanos (Mexican Petroleums) |
| PRD | Partido de la Revolución Democrática (Party of the Democratic Revolution) |
| PRI | Partido Revolucionario Institucional (Institutional Revolutionary Party) |
| PRONASOL | Programa Nacional de Solidaridad (National Solidarity Program) |
| SAT | Servicio de Administración Tributario (Tax Administration Service) |
| SEDESOL | Secretaría de Desarrollo Social (Secretariate of Social Development) |
| SHCP | Secretaría de Hacienda y Crédito Público (Mexican Treasury and Public Credit Secretariate) |
| SHF | Sociedad Hipotecaria Federal (Federal Mortgage Society) |
| SNCF | Sistema Nacional de Coordinación Fiscal (National System of Fiscal Coordination) |
| UCEF | Unidad de Coordinación con Entidades Federativas (Coordination Unit with Federal Entities) |
| UNAM | Universidad Nacional Autónoma de México (National Autonomous Univeristy of Mexico) |
| UNDP | United Nations Development Program |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| SIMBAD | Sistema Estatal y Municipal de Base de Datos(State and Municipal Database System) |

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Chapter 1: Introducing taxation-accountability linkages

The notion of a fiscal social contract, which views taxation as the basis of a social contract between the government and citizens, has recently gained ground in the field of international development. It regards taxation as a key bargaining chip around which citizens can demand a representative and democratic government that rules in its interest. Taxation is also the principal driver that motivates governments to cooperate with citizens and respond to their demands. It is now widely assumed that if governments rely more on taxation as a revenue source, they will become more accountable to citizens, they will be less likely to waste and embezzle public funds, and more likely to govern efficiently and effectively, cooperating with and responding to the needs of the broad public. This idea of a (causal) link leading from taxation to accountability¹ is found repeatedly, explicitly or implicitly, in various strands of contemporary literature.

Upon closer examination of the evidence, it becomes clear that the empirical basis to support the application of this notion in modern-day developing countries is surprisingly thin. Our understanding of *how* the linkages between taxation and accountability are expected to work and in which contexts it does or does not remains especially under-researched and under-specified (Moore, forthcoming; Prichard, 2010).

A recent strand of the literature is revisiting the validity of claims about the linkages between taxation and accountability and in how far they may apply in contemporary developing country contexts (Bräutigam, Fjeldstad, & Moore, 2008; Moore, 2007; Prichard, 2010b; Ross, 2004). It notes that it is not clear that these ideas can readily be translated to modern-day developing countries. Instead, they show that taxation-accountability linkages are complex and not in fact automatic but highly contingent on the context (Prichard, 2009).

¹The definition of the term “accountability” is further developed in Sections 1.1 and 1.2.

Both the theoretical and empirical scholarship that has emerged in response to this gap has largely focused on the national government level. There has been little research on how (if at all) such linkages may work at the local government level. If a local government receives more of its revenues through taxation, will this lead to greater local government accountability? If true, this would have powerful implications for development policy. In particular, it would constitute a strong argument in favour of recommending greater tax autonomy for local governments as it could be seen as a solution to problems of corruption, inefficiency and a lack of investment in development and consideration for the collective interest at the local level. Rapid urbanisation and the decentralisation processes that are underway throughout the developing world have made local governments increasingly important as agents of development. Given the increasing importance of local governance, I argue for a closer examination of these relationships at the local level. Compared to the national level, the local level presents its own unique challenges and dynamics. For instance, intergovernmental arrangements come into play and different types of taxes are collected. Such differences merit a separate framework for analysis. At the same time, subnational analysis is a superior context in which to analyse taxation-accountability linkages, as one can explore the relationship while controlling for variables that vary systematically across countries which cross-country studies cannot account for.

This thesis assesses these ideas by exploring the linkages between taxation and governance in Mexican municipalities. It employs mixed methods research, combining both quantitative and qualitative analysis, to reach three main objectives. The first is to show to what extent there are any linkages between local taxation on one hand and local accountability on the other in the Mexican local government context. The second is to show through which causal channels the linkages precisely work. The third is to identify the contextual factors that encourage or limit the linkages from taking hold. From the Mexican local government context, I draw implications about how taxation affects governance at the local level more generally. In doing so, I bring in key insights from the fiscal federalism literature, integrating the ideas of this strand of literature more fully into the international development and political science literature that deals more directly with taxation-accountability linkages.

I argue that while taxation sparks processes leading to greater accountability at the local government level in Mexico, the linkages usually tend to take a nuanced form and they are often broken by factors specific to the local level. Explicit bargaining between local residents and the local government around taxation mostly involved individual persons or firms negotiating down their tax obligation with no wider benefits to the population. Only where taxpayers formed a narrow interest group was it likely for the government to initiate negotiations for mutually beneficial agreements involving promises of greater local government accountability. More common were implicit agreements between the local government and the taxpayers: if the government was perceived as accountable, it collected more taxes and the residents were more willing to pay. If the government disappointed the residents, tax collection efforts were dropped and tax evasion increased. Local government officials were conscious of this link, yet it was difficult to show that their awareness of it alone would motivate them to take steps to increase accountability. They may have seen increased tax intake as just a positive externality of taking those steps, when those steps would have been taken anyway for other (usually political) reasons. The obstacles preventing taxation-accountability linkages from taking hold at the local level in spite of considerable tax revenue-raising pressure are likely to include limited tax revenue and expenditure autonomy at the local level, interference from higher levels of government or other third parties, short time horizons due to brief term limits and the prohibition of consecutive re-election, as well as a lack of transparent accounting.

The remainder of this introductory chapter aims to locate my research within the various strands of literature that have studied taxation-accountability linkages, introduce the main propositions made and review the existing evidence to support them. I then identify the limitations of the literature as it stands and show where I aim to make a contribution.

1.1 Location in the development debate

Claims about the existence of intimate linkages between how a government is financed and governance outcomes have been around for some time. Austrian economist Joseph Schumpeter is widely cited for his recognition at the beginning of the last century that fiscal systems shape social and political outcomes, within his and Rudolf Goldscheid's conception of the study of *fiscal sociology*. In 1918 Schumpeter noted his intuitions about how the fiscal system not only drives a society's evolution, determining how society is ruled and organised, but also shapes the policy choices that may be expected from decision-makers within it:

“In some periods [fiscal measures] explain practically all major events, and in most periods they explain a great deal ... But even greater than the causal is the symptomatic significance of fiscal history. The spirit of a people, its cultural level, its social structure, the deeds its policy may prepare – all this and more is written in its fiscal history [...] Our people have become what they are under the fiscal pressure of the state” (Schumpeter [1918] 1978:7).

The notion that taxation played a central role in the consolidation of democratic institutions in Europe and the United States is widely accepted and appears in numerous historical accounts. Conflicts between rulers and their subjects over taxation are said to have led to an exchange or fiscal contract: rulers granted concessions and made way for the emergence of institutionalised representation of the citizens in return for tax payments. For instance, between the 14th and 16th centuries, the Austrian princes negotiated new taxes with wealthy landlords in order to be able to finance their wars: the landlords agreed to pay in return for greater influence over how the princes spent their tax money (Schumpeter, 1918 [1976]). In 17th Century England conflicts over taxation are said to have led to the evolution and strengthening of Parliament alongside the Crown following the Glorious Revolution (Brewer, 1990; North & Weingast, 1989; Tilly, 1992). The well-known revolutionary phrase “No taxation without representation” made prominent during the American Revolution against British colonial rule has also popularised the notion of an intimate link between taxation and representative government in Western thought (Moore, 2004). Charles Tilly's book *Coercion, Capital and European States AD 990-1992* (Tilly, 1992) has also

been influential in highlighting the importance of bargaining around taxation in furthering the development of democratic institutions and illustrating this with historical cases set in Europe. Each of these shows that agreements around taxation between rulers and capitalists to raise funds for wars brought about or strengthened democratic states.

The theory that taxation causes or contributes to greater accountability was picked up by scholars and policymakers in the field of international development from around the 1980's. In the following paragraphs, I argue that it has found great resonance because, first, it presents a very plausible and intuitive explanation for the failure of developing countries to evolve politically or economically into equitable, growing democracies. It provides an explanation for why resource rich countries have not developed as expected, why aid has not been as effective as hoped, why state-building efforts have not worked, and why decentralisation reforms have not led to promised results. Second, it also conforms to general recent trends in international development theory.

The argument that the *absence* of taxation has impeded democratic development has been evoked most often in literature on the “natural resource curse”. It was first used to explain the Arab oil states’ resistance to democracy (Beblawi & Luciani, 1987; Mahdavy, 1970). Beblawi and Luciani (1987: 73) maintain that rentier states, which depended on natural resource rents for their revenues, as opposed to tax states that depend on extracting revenues from their domestic populations, did not have the incentives that lead to the evolution of democratic institutions elsewhere. They write that a state which is dependent on taxation “must give credibility to the notion that it represents the common good”, whereas states whose external rent liberates them from the need to extract income from the domestic economy, do not. Larry Diamond (2010:98) claims about Arab oil states, “Most are so awash in cash that they do not need to tax their own citizens. And that is part of the problem— they fail to develop the organic expectations of accountability that emerge when states make citizens pay taxes.” These ideas have since been used to justify poor governance in an upsurge of literature on various other resource rich states in Africa and Latin America (Di John, 2010; Karl, 1997). Yates (1996:34) in his book *The Rentier State in Africa* contrasts a resource rich state with a

“normal state that needs to extract revenue from its society, which in turn makes demands on the state for its legitimate right to collect taxes”.

The same notion has also been used to explain failures of foreign aid. Bräutigam and Knack (2004), for instance, write that foreign aid has reduced the incentives for democratic accountability because it decreases government dependence on taxation, thus also reducing the bargaining power of citizens in collective action problems. As governments that receive substantial transfers of aid do not depend on taxes from citizens and businesses, this weakens the development of local pressures for accountability and democratic reform.

In the state-building literature, it has been argued that “an effective state requires a political settlement among elites to collect revenues. This agreement then enables a social contract between the state and its population to pay taxes in return for the delivery of basic freedoms and essential public goods” (Everest-Phillips, 2010). In his paper “Taxation, developmental state capacity and poverty reduction”, Di John (2011:270) writes “taxation is the main nexus that binds state officials with interest groups and citizens. Not only can taxation enhance government accountability, it also provides a focal point around which interest groups (such as producer groups, labor unions and consumer groups) can mobilise to support, resist and even propose tax policies”. Besley and Persson (2011:100) note that, “increasingly this taxation is seen as part of a broader state-building agenda”.

Most importantly for the context of this thesis, it has also been invoked in literature on decentralisation and fiscal federalism. Decentralization reforms, often encouraged and supported by the donor community, have shifted power and responsibilities to local governments throughout the developing world (T. Campbell, 2003; de la Cruz, 2011; de la Cruz, Pineda Mannheim, & Pöschl, 2011; Faguet, 2012; Faguet & Pöschl, forthcoming). Such reforms have held promises of improved governance and accountability for a number of reasons but these promises have not always been met in practice (Faguet, 2012, 2013; Faguet & Sánchez, 2008, 2009; Treisman, 2007). Some scholars have blamed some of the failures on the fact that decentralisation on the expenditure side has not gone hand in hand with decentralisation on the revenue side, resulting in a “fiscal

imbalance" (Tanzi, 2002). The lack of tax powers at the local level are seen to obstruct accountability mechanisms from taking hold (Litvack, Ahmad, & Bird, 1998). The public finance literature on fiscal federalism, which deals with "understanding which functions and instruments are best centralized and which are best placed in the sphere of decentralized levels of government" (Oates, 1999) has often argued that insufficient tax autonomy is what stands in the way of local government fiscal accountability and its responsiveness to residents in terms of expenditure decisions (Bahl & Bird, 2008b; Bird, 1993; Oates, 2005; Seabright, 1996).

These claims, in attributing failures of development to the lack of reliance on taxation, imply a statement about a counterfactual: if modern-day developing country governments (and some also include local governments) would be *more* tax reliant, they would become more accountable to citizens, more likely to provide market-enhancing public goods, and less corrupt than governments that do not (Careaga & Weingast, 2003; Rodden, Eskeland, & Litvack, 2003; Singh & Srinivasan, 2006).

The taxation-accountability paradigm has not only gained ground because it is internally intuitive but it also fits into other trends of thinking in development theory and development economics. One trend is the increasing emphasis placed on improving good governance and accountability. Until the 1990's, international development institutions shied away from mentioning corruption or other governance issues, as this was perceived as an infringement upon the sovereignty of foreign nations. During the past two decades, however, there has been a diametric shift in attitude. Economists and political scientists alike have become increasingly vocal about emphasising the importance of institutional quality and 'good governance' for development (Brinkerhoff & Goldsmith, 2005). As Grindle (2004:525) emphasises, "For many reform-minded citizens in developing countries as well as for academics and practitioners in the international development community, good governance has become as imperative to poverty reduction as it has become to development more generally". Although the list of objectives surrounding 'good governance' is ever-expanding and many sectors in the development industry have been quick to slip their specific priorities into this umbrella concept, there is widespread agreement on its core features (Grindle, 2010). What it generally refers to is governing in a way that is responsive to the needs of the

population, providing public services efficiently and effectively, and adhering to the rule of law. It contrasts with governance that is corrupt, embezzles funds, spends wastefully, ignores the needs of the poor and fails to adequately deliver public services to the general population (Brinkerhoff & Goldsmith, 2005; Grindle, 2010; Kaufmann, 2003; Rodrik, 2008).

A frequently mentioned cornerstone of good governance is 'accountability'. What is meant by accountability? Accountability is an elusive concept that is used in the literature to imply a variety of different ideas and thus merits further clarification. In its most limited notion it refers to answerability or being called to account (Jones, 1992). However, the scope of the term has been extended in a number of directions (Mulgan, 2000), and a variety of types and sub-types have evolved in the literature (Schedler, 1999).

In this thesis, unless otherwise indicated, and for ease of expression, 'accountability' refers to what Keohane (2003:13) terms 'democratic accountability': "a relationship between power-wielders and the broad public", as opposed to hierarchical accountability (in which subordinates are accountable to superiors), or horizontal accountability (in which different branches of government are accountable to one another) (O'Donnell, 1998). I use the term "accountability" to describe a form of governing in which the needs and requests of the broad public are taken into account and responded to and public goods and services are general geared towards improving the lives of the general public, rather than embezzled, wasted or reserved to a minority group. This encompasses three main dimensions: (1) the use of public funds in an efficient and transparent manner (implying limited corruption or embezzlement), (2) the effective delivery of public goods geared towards the broad public, and (3) some degree of citizen influence in decision-making. Rather than being either existent or absent, I view accountability as something that exists as a matter of degrees, with some governments being more accountable than others.

How can accountability be achieved? As Paul (1992:1047) notes, "The traditional public accountability mechanisms, such as expenditure audits and legislative reviews seem unequal to the task of ensuring accountability for public services". Creating anti-

corruption bodies and ever more anti-corruption laws and internal oversight rules has also met little success (Kaufman 2003). Instead, two particular approaches to increasing accountability have gained ground.

For one thing, reforms should drive incentives, as institutions and individuals ultimately respond to incentives more than to ethical guidelines, organizational manuals and rules, or even laws (Kaufmann, 2003; North & Weingast, 1989). The idea is to implement reforms that affect incentives of policy makers, which in turn affect their policy choices and, consequently, development outcomes. Recent scholarship in fiscal federalism, the so-called “Second generation fiscal federalism,” has also been at the forefront of the trend of trying to change government behaviour by creating appropriate incentives. While “first-generation fiscal federalism” analysed intergovernmental arrangements from the perspective of a benevolent dictator, second generation fiscal federalism analyses decisions by subnational government officials based on the incentives they face (Oates, 2005; Pöschl & Weingast, forthcoming; Weingast, 2009).

Second, rather than relying solely on the government to control itself, through horizontal checks and balances or through monitoring by superiors within government, efforts should be made to bring citizens into the accountability relationship, thereby stirring governments to hear and respond to the needs of their citizens, the ultimate beneficiaries of public goods and services (Faguet, 2012; Paul, 1992). As noted by Blackburn, Chambers, Gaventa (2000:1), “we have discovered that participation holds promise [...] for encouraging good—and often local—governance”.

The idea that taxation can change institutions by creating incentives for more accountable governance (particularly by bringing citizens into the accountability relationship), and the idea that institutions of taxation can affect development trajectories thus fits into these trends of thought in development theory and were easily embraced.

In sum, the taxation-accountability paradigm provides an intuitive explanation for failures of development and it squares with other recent trends of thought in development theory. Plus it is substantiated by historical accounts of early modern

European history. But is this enough to assume that increased taxation will also spark increased accountability in other contexts, especially ones that are quite different from historical Europe?

A recent strand of research started to revisit the validity of these alleged linkages between taxation and accountable governance in developing country contexts with a more critical eye (Bräutigam et al., 2008; Moore, 2007; Prichard, 2010b; Ross, 2004). Scholars of this strand note that precise propositions linking taxation to a mutually beneficial exchange and improved governance outcomes remain to be proven in the vastly different circumstances of today's developing world. As Moore (2004:304) writes, "One possible conclusion from all this is that fiscal contract theories derived from European history score more highly on inherent appeal and plausibility than they do on rigorous specification or testing".

They point out good reasons to be sceptical. First of all, the context of the historical events in Europe that they are largely based on was very particular. To subsume that similar outcomes will occur in response to greater taxation in contemporary developing countries is not straightforward (Bräutigam et al., 2008; Moore, 2004). The most widely cited work in showing the importance of taxation in historical cases is Charles Tilly's book *Coercion, Capital and European States AD 990-1992* (Tilly, 1992). Yet Tilly himself explicitly warns against drawing conclusions about his theory for contemporary developing countries (Moore, forthcoming). He stresses the particularity of the situation in Europe in which competition and wars between various groups played a central role in the formation of states, and eventually of democratic states, over the course of centuries after various possible alternative structures failed.

Moore (2004) also revisits the historical accounts of the link in 17th Century England and points out several particularities, warning that possibly decisive preconditions are not present in developing countries. These include (a) a continuous foreign military threat that brought about an urgent need among governments for additional resources, (b) lack of alternative revenue sources beyond tax revenues, (c) the mobile character of assets that could not be easily taxed without taxpayers' consent, and (d) the fact that there were clear positive sum gains for both parties to be reaped from an agreement in

those cases. In developing countries, by contrast, he notes a relative powerlessness of citizens vis-à-vis the state in terms of military power and a relative autonomy of the government from its citizens, especially through the availability of alternative sources of revenue beyond tax revenue. Bräutigam (2008) also argues that the prevalence in developing countries of several factors may complicate the link. She lists, among these, a large informal sector that does not pay taxes, a history of colonial coercion, high levels of inequality, and international influence in fiscal reforms.

Given these theoretical uncertainties, it is useful to review what empirical evidence can be found for the existence of taxation-accountability linkages in developing countries. This is the topic of Section 1.3. Yet before reviewing the empirical evidence, it makes sense to further analyse the theoretical arguments linking taxation and accountability so that it can be better identified which exact propositions have been empirically tested and which have not.

1.2 Theoretical arguments linking taxation and accountability in the literature

In this section I present an overview of the main theoretical arguments found in the literature linking taxation to some governance outcomes. As Moore (forthcoming) points out, in the literature that links taxation to governance outcome, there is not one accepted theory but a variety of arguments and overlapping propositions. While several authors refer to similar ideas, they often in fact imply (1) different causal variables, (2) different outcomes, as well as (3) different causal mechanisms that link the two, often involving a row of consecutive steps or one process or event leading to the next. The objectives are to summarize the most important propositions found in the literature and delineate those that I aim to contribute to. It is also important to clarify the different propositions in order to be able to show, in the following section, which specific claims are supported by evidence and which are not.

Different causal variables

The causal (independent) variable “taxation” can refer to different things conceptually and can be measured in different ways. Moore (forthcoming) distinguishes (1) revenue needs (2) sources, and (3) levels. The historical accounts on which much of this literature is based takes as catalyst (urgent) revenue *needs* (Prichard, 2009, 2010b). This is difficult to identify and especially difficult to measure or code quantitatively.

The majority of the empirical literature on taxation-accountability linkages regards *sources* of revenues as causal and this may refer to the importance of tax revenues compared to other sources of revenues in a government’s overall budget (the ratio of tax revenue to total government revenue) or in the overall economy (the ratio of tax revenue to GDP). Others use the inverse of the ratio: the importance of income from sources other than taxation (natural resources, foreign aid or, at the subnational government level, national government transfers) to show their *negative* relationship to accountability. Finally, others still consider the tax *level* to be causal. This may refer to the absolute levels of taxes that citizens are required to pay, (abrupt) changes in those levels, the imposition of new types of taxes or a new tax system (Gloppen & Rakner, 2002), or tax levels compared to benefits received (Ross, 2004).

The more subtle theoretical literature considers further characteristics and conditions that need to be fulfilled in order for taxation to be causal. For instance, visible and direct taxes are believed to have an effect on accountability while trivial and non-salient taxes do not. These are further discussed below in the conditions required for the linkages to hold.

My focus is on the effects of increased tax autonomy, implying a greater need to raise tax revenue and greater reliance on taxation as a source of revenue at the local government level.

Different outcomes

There are also different ideas in the literature about what outcomes the taxation-accountability paradigm is expected to lead to. These can be grouped into six broad (though partly overlapping) categories:

1. One of the expected outcomes is that taxation will simply lead to increased engagement between the government and citizens, which provides opportunities for positive externalities to arise (such as increased information flows and cooperation).
2. Another set of outcomes deals with increased monitoring of the government. This may include transparency and regulated procedures, reducing restrictions on the media, closer scrutiny of how tax money is spent, or some other form of citizen oversight of the government (Ross, 2004).
3. A third goes further and involves increased citizen influence in government decision-making through institutionalised representation. Samuel Huntington for instance, states this negatively: “The lower the level of taxation, the less reason for publics to demand representation” (Huntington, 1993:65).
4. Some go as far as testing for political change or liberalisation from oppressive autocratic regimes to more democratic ones.
5. Another large set of outcomes involve government expenditures. Some expect expenditure decisions to respond to the needs of the general public. Auty (2001) and Auty and Gelb (2001) imply this when they argue that low taxes and abundance of rents creates a relatively high tolerance by the poor majority for inequitable asset distribution and predatory rent extraction. Others expect it will lead the government to target expenditures to the needs of the taxpayers (Timmons, 2005).
6. Finally, prudent fiscal management is regarded as an outcome. This is particularly the case in the public finance literature, where a major concern is with achieving efficiency in public spending and preventing overspending. Efficient spending is also often equated with responsiveness to local needs and decisions, in line with the principle of fiscal equivalence (Olson, 1969) and the benefit principle (E. Ahmad et al., 2015). Prudent and efficient fiscal

management thus implies transparency and use of public funds in the interest of the general public as opposed to wasteful spending or divergence.

Recognising accountability as a wide, multi-faceted concept, I look for each of these outcomes in the present analysis. I focus in particular on its three dimensions: transparency, effective service delivery, and citizen influence in decision-making. As will be explained in further chapters, when exploring the taxation-accountability linkages quantitatively, I use three proxies for accountability: transparency; an outcome indicator of one of the main public services that local governments in Mexico are responsible for; and electoral competition. In the qualitative analysis I am able to take a broader and more nuanced approach in searching for outcomes of increased accountability.

Different causal explanations

Upon closer examination of the literature, one finds not only numerous different causal variables and different outcomes, but also many different explanations connecting the two (Moore, forthcoming; Prichard, 2010a). I distinguish three main arguments found in the literature:

1. Taxation increases administrative capacity of government
2. Taxation motivates interest in economic prosperity to increase taxable wealth
3. Citizens don't like to pay taxes and governments need to seek compliance

One causal explanation is that taxation increases accountability by increasing the administrative capacity of government. Collecting taxes usually requires collecting information about the population, registering taxpayers, building a bureaucracy to regulate and administer payments, as well as a degree of government presence throughout the jurisdiction (Chaudhry, 1997). This in turn may lead to greater accountability because the government is more engaged with citizens, and its greater organisation and administrative capacity also carries over to its ability to respond to citizen demands more efficiently and effectively. This argument is often mentioned in

the state-building literature, which argues that taxation may be important for state formation more generally (Besley & Persson, 2011; Di John, 2011). Enhanced capacity will improve the government's ability to respond to its people. While this argument does not claim that taxation directly sparks incentives for government to rule in the interest of its people, it predicts that it will have the *capability* of being more responsive to needs.

A second explanation states that if a government is dependent on taxation of businesses or citizens in its domestic economy, this gives it an *economic interest* to increase productivity in its territory in order to secure or raise future earnings (Oates, 1972; Olson, 2002). Having a stake in the prosperity of its population in turn provides the government with incentives to engage with the population, collect information about it, and to respond to its needs, at least to the productive needs of those whom it sees as potential producers of taxable wealth.

Adam Smith (1776 [1904]: V.1.87; quoted in Pöschl and Weingast, forthcoming) in his seminal work *Wealth of Nations* recognised that dependence on taxation motivates the government to govern in the interest of its people and to invest in market-enhancing public goods, explaining that countries where:

“the revenue of the sovereign arises almost altogether from a land-tax or land-rent, which rises or falls with the rise or fall of the annual produce of the land [...] the great interest of the sovereign [...] is in such countries necessarily and immediately connected with the cultivation of the land, with the greatness of its produce and with the value of its produce. But in order to render that produce both as great and as valuable as possible, it is necessary to procure to it an extensive a market as possible, and consequently the freest, the easiest and the least expensive communication between all the different parts of the country; which can be done only by means of the best roads and the best navigable canals.

[Where this is not the case], the sovereign does not feel himself so directly called upon to promote the increase, both in quantity and value, of the produce of the land, or, by maintaining good roads and canals, to provide the most extensive market for that produce”.

The third and perhaps most prominent explanation is that *citizens don't like to pay taxes* and *governments need to motivate them to comply*. Taxation inherently contains an

element of coercion but also heavily relies on a degree of compliance by the taxpayer, what Levi (1988) has termed “quasi-voluntary compliance”. Citizens can resist tax payments through evasion. They can also revolt or protest in response to taxation. The government will try to motivate the taxpayers to pay through some action in return. How this leads to accountability has been argued from several angles.

When citizens do pay taxes, they will be incentivised to scrutinise the government more, hold it to a higher standard and ensure that it uses the money effectively and in its interest. Paying taxes thus incentivises citizens to engage with the government and *demand* accountability. Yates (1996:34) suggests this in his book *The Rentier State in Africa* when he contrasts a resource rich state with a “normal state that needs to extract revenue from its society, which in turn makes demands on the state for its legitimate right to collect taxes”.

The idea is that citizens are more concerned about what the government does with the money they have paid it directly through taxes than what it does with funds from other sources. With regard to the local level, Bird (2010:20) writes, “People care much more about how their ‘own money’ is spent than they do about the efficiency with which ‘other people’s money’ -- such as transfers -- is used”. Thus, “local residents are more likely to hold officials accountable if local public services are financed to a significant extent from locally imposed taxes and charges as opposed to central government transfers” (Bird, 2011:20). By contrast, as Ambrosio and Bordignon (2008: 316) write, “If everything were financed with money coming from outside the jurisdiction, citizens living in that jurisdiction would have very little incentive to check how that money was spent.”

The same logic can be found in Smith (1776 [1904]: V.1.76) where he suggests that only when public services are directly paid for through user taxes, is it possible to avoid wasteful spending because it will motivate residents to keep a check on government spending:

“A great bridge cannot be thrown over a river at a place where nobody passes, or merely to embellish the view from the windows of a neighbouring palace: things which sometimes happen in countries where

works of this kind are carried on by any other revenue than that which they [the users] themselves are capable of affording”.

This brings us to the idea of tax bargaining, which follows from the above arguments. Because of the incentives that taxation sparks with the government (to increase economic prosperity and to ensure compliance) and with the citizens (to resist taxation and to demand accountability), many predict that what will ensue is bargaining around taxation in order to achieve a mutually beneficial outcome or a “fiscal social contract” in which the citizens pay taxes in return for greater accountability (Moore, 2007).

This is also argued from the angle of the transaction costs that ensuring compliance involves for the government. Since citizens resist taxation, securing compliance is linked with transaction costs and governments spend tax money more efficiently and prudently and less wastefully than money that is not linked with such transaction costs. In the local government context, where non-tax revenue largely consists of transfers from the national government, Tanzi (2010:324) writes:

“Local administrators will be more wasteful in the use of resources received from the national government because, presumably, these resources do not represent a direct local effort or sacrifice”.

Bahl and Linn (1992:428), in their authoritative study of urban public finance in developing countries, also imply this:

“Grants can make local governments less accountable for their fiscal decisions (they may now increase spending without increasing taxes); hence there will be less incentive to improve the efficiency of local government operations and develop innovative methods of delivering public services”.

In this thesis the primary interest is with tax bargaining: to what extent can we expect that taxation sparks incentives that lead to a mutually beneficial bargain in which the government grants some sort of concessions in return for tax payments? I look at whether taxation sparks coercive taxation, tax bargaining or neither. I look at what form tax bargaining takes (implicit or explicit) and whether any outcomes result that amount to increased local government accountability. In the quantitative analysis of this thesis (Chapters 4 and 5), I am restricted to testing for outcomes that may be indicative of

such processes occurring but it is difficult to show which causal mechanism is at work. This is largely left to the qualitative analysis in Chapters 6-8.

One final distinction between propositions merits attention here. Different scholars envision different time horizons for the processes and outcomes to occur. Some take a very long-term view, showing how historical institutions of taxation have influenced the development trajectories of certain states (Berger, 2009; Grabowski, 2008). Several authors have even insinuated that there is path dependence to taxation-accountability linkages. Joshi and Ayee (Joshi & Ayee, 2008) for instance, purport that widening taxation “will spark off a virtuous cycle of taxation and accountability”. This suggests a possible interdependence between taxation and accountability that includes reverse causality in the taxation-accountability relationship: more taxation leads to more accountability but more accountability also leads to greater tax compliance. The two then feed into one another creating positive feedback loops.

Others take a far shorter term view, predicting effects to take hold after decades or years, if not immediately. In the quantitative analysis, I examine immediate effects and effects after 3 years. In the qualitative analysis, I also analyse whether revenue needs spark short-term processes (in the course of 1-3 years) that are consistent with the theory (even if the full effects may only be expected to materialise afterwards). The analysis is therefore restricted to observing results in a shorter timeframe than some of the theoretical literature puts forward.

The theoretical literature contains many theories about how taxation and accountability may be linked. Yet what evidence do we have from developing countries that this causal link works and that it works through any of the causal mechanisms discussed above? This is the subject of the next two sections, which review the large-N and small-N empirical studies on the topic.

1.3 The large-N evidence

In this section I review the quantitative literature that is responding to the need to substantiate the taxation-accountability paradigm with empirical evidence in contemporary developing country contexts. I first look at quantitative studies. As it turns out, robust evidence to show that there are any linkages, let alone causal linkages, between taxation and accountability is surprisingly scarce. Several studies use highly imprecise indicators to measure the variables, either because of data limitations or because of a different theoretical focus. Further studies, while showing relationships, fail to establish causality. Within-country studies that examine these relationships at the local level are both methodologically more reliable and also more relevant for our purposes, but there are surprisingly few of them.

Large-N cross-national econometric studies are widely cited as evidence for the existence of a link between taxation and accountability in developing countries. These regress some measure of taxation as the independent variable on some measure of accountability as the dependent variable. Ross (2004) uses time series cross national data from 113 countries from 1971 to 1997 and finds that an increase in taxes relative to total expenditure is a significant predictor of regime change from authoritarian to democratic. Baskaran and Bigsten (2012) use panel data of 23 sub-Saharan African states from 1990 to 2005 to show that higher taxation is associated with higher quality political institutions. Baskaran (2014) uses panel data of 122 countries from 1981 to 2008 and finds that taxation has a causal effect on democracy and corruption. He uses the year of adoption of the value added tax for taxation as quasi-exogenous instruments to overcome problems of endogeneity and reverse causality that the other studies struggle with. However, because of its availability for more observations, he uses a very imprecise independent variable: general government revenue over GDP (rather than tax revenues to total government revenues).

Timmons (2005) tests the effect of taxation on government responsiveness using a different approach: he tests whether governments are more likely to target their public expenditures to those groups of taxpayers that pay a greater share of the revenues.

Using cross-sectional data from around 90 countries and panel data from 18 OECD countries from 1975 to 1995, he shows that higher taxation on the poor brings about proportionately more government services addressing the needs of the poor (basic services) while higher taxation on the rich leads to more government programs targeted at the rich (property rights protection). He concludes that the costs of enforcing tax compliance provide governments with pecuniary incentives to cater to its specific taxpayers.

There is also a substantial body of cross-national econometric literature linking non-tax revenues (especially natural resource rents and foreign aid) to different governance outcomes. Tax dependence may be regarded as the proportion of tax revenues over total government revenues. Tax revenues thus comprise one part of a ratio and non-tax revenues the other. Changes in the ratio can thus result from either a change in tax revenues or a change in non-tax revenues.

Among the myriad studies on the effects of natural resource abundance on different outcomes, ranging from conflict to economic growth, several of these focus on the effects on governance outcomes such as democracy, public goods provision and corruption (See Rosser, 2006 for a review). While some studies find a negative relationship (Jensen & Wantchekon, 2004; Prichard, Salardi, & Segal, 2014; Ross, 2001), others do not (Haber & Menaldo, 2011; Herb, 2005). Ultimately it has been broadly concluded that the results depend on the institutional context but without further specifying in what ways (Ahmadov, 2013; Andersen & Ross, 2013).

However, the dependent variable in these studies tends to be measured solely in terms of natural resource exports to GDP or natural resource exports over total exports. As Herb (2005) points out, a more useful measure to test the effects of the composition of revenue sources for sparking government incentives would be the amount of rent income over total government income. Only Herb (2005) uses this measure to test political outcomes and results are inconclusive.

Besides the imprecision of the indicators, it is also important to distinguish the effects of taxation (or an absence thereof) from the negative effects of specific non-tax revenues

conceptually as these are not entirely two sides of the same coin. Some non-tax revenues might have specific characteristics, which are different from other non-tax revenues or a simple *absence* of taxation, that are in fact driving the results.

In fact, lack of taxation is only one of many competing causal pathways through which the link between natural resource abundance and negative governance outcomes is explained in the literature. For instance, Beblawi and Luciani (1987) point out that in 'rentier states' very few people are involved in generating the oil wealth and rents are typically paid by foreign countries directly to the government without the citizens' knowledge. This may make them less transparent and more vulnerable to waste and embezzlement. Various scholars emphasise that natural resource rents often comprise abrupt 'windfalls'. This is what may encourage rent-seeking and conflict, as it represents a large prize worthy of fighting over, with detrimental effects on governance (Torvik, 2002). Furthermore, governments may not have the capacity to immediately channel such windfalls into well-founded development projects in a transparent manner. It has also been argued that the overwhelming size of such windfalls compared to the size of the economy may allow the government to strengthen its internal security and repress opposition and popular movements, thereby limiting regime change, democratization and accountability (Ross, 2001).

Similar arguments apply for the literature showing links between dependence on foreign aid, another non-tax revenue, and governance outcomes (Bräutigam & Knack, 2004; Busse & Gröning, 2009; Rajan & Subramanian, 2007). Bräutigam and Knack (2004) for instance write that foreign aid can reduce the incentives for democratic accountability because it reduces the bargaining power of citizens in collective action problems. As governments that receive substantial transfers of aid do not depend on taxes raised from citizens and businesses, this weakens the development of local pressures for accountability and democratic reform. Some of these studies suffer from omitted variable bias since more aid is simply targeted at countries where governance is poor. And again, the results they obtain may be driven by the *negative* effects of the specific non-tax revenues (foreign aid) such as rent-seeking over a windfall. While this may constitute evidence that taxation as a source of revenues is more likely to bring

about positive governance outcomes than other sources, it does not directly provide evidence for bargaining over taxation as a causal factor for increased accountability.

The usefulness of such cross-country statistical comparisons as evidence has often been called into question. They involve comparing dissimilar countries, cultures, and institutions, bringing about a large potential for producing confounded relationships. Critically, data is collected differently in different countries, using varied definitions and categories, and it is often absent or unreliable for many developing countries. Scholars have also struggled with data availability problems for larger panel datasets. Moore (1998) warns in particular of a strong correlation between levels of income and the quality (and availability) of fiscal data that could affect results. The variables used are also often imprecise in measuring the concepts due to data constraints. Furthermore, while many find evidence of associations, most struggle to establish causality.

Within-country econometric studies have the advantage of circumventing some of the challenges of cross-national ones by holding various institutional, cultural and policy variables constant across units (Caselli & Michaels, 2013). They are also more precise as they reveal important differences within countries, which aggregated national level data hides (Beer, 2003). Beyond the methodological advantages, they are also more relevant for the purposes of this thesis as they examine these effects at a subnational level (the focus here), rather than at the national level.

Again, data availability has been a challenge to researchers: municipal level data (especially historical data for panel analysis) is rare to come across in most developing countries and has left the number of such studies correspondingly scarce. To my knowledge they consist of only four studies. First, Hoffman and Gibson (2005) analyse the relationship between taxation and government responsiveness in Tanzania and Zambia. In this paper a cross-section of local fiscal data is used to show that local governments spend proportionately more on public services when they receive more revenues from taxation. Conversely a largely proportion of revenues derived from outside sources, such as transfers from central government or foreign aid, is associated with greater local government spending on salaries and administrative costs. Using only cross-sections, however, they fail to convince of any causality in these relationships.

A second study is by Gervasoni (2010), who examines the effect of different sources of revenue on regime type in Argentine provincial governments. While he finds that fiscal transfers are negatively related to levels of democratization, he finds no association when testing specifically for the effects of taxation. This study does not, however, provide evidence of the link at the local level but at the intermediate, provincial level of government in Argentina.

Third, Berger (2009) shows that different colonial tax institutions in Nigeria have led to contemporary differences in the quality of governance. In particular, in areas where broad local taxes were imposed by colonial Britain, better bureaucratic capacity is observed than where this was absent. It is not entirely clear that it is taxation and not some other factor that was causal over the long trajectory leading to differences in the quality of government today between these areas.

Finally, Gadenne (2013) uses local governments in Brazil as her unit of analysis and finds that increases in the proportion of tax revenues lead to a larger increase in local public health and education services than correspondingly large increases in transfers. She also finds that extra transfers lead to more corruption. She tries to overcome problems of causality by using regression discontinuity.

Several studies have further emerged that attempt to test the effects of natural resource windfalls on political outcomes at the local level, including corruption and political contestation. Again, their relevance is limited for reasons stated above but they nonetheless provide suggestive evidence. The focus is again on the effect of windfall profits from natural resources rather than on the effects of taxation per se, which as mentioned above may be regarded as a special form of non-tax revenues with separate effects. Brollo et al. (2010) find a positive correlation between the amount of oil revenues and local government corruption charges, indicating that the greater the importance of this non-tax revenue, the more likely local governments are to be corrupt. Caselli and Michaels (2013) also test the effects of oil windfalls on corruption, measuring the latter as the gap between local public expenditures and service delivery outcomes. They find that excess revenues from natural resources bring about a larger

“missing gap” between budgeted expenditures and service delivery outcomes, which they interpret as evidence of corruption.

Collectively, the statistical evidence is suggestive that taxation acts as a catalyst for improved governance outcomes in some circumstances. However, it suffers from a host of methodological challenges. It compares highly different contexts and countries with only loosely analogous data that is defined and collected differently in different countries.

The most relevant evidence to the question in this thesis: whether taxation affects accountability at the *local level*, are within-country studies. So far they make up only a very small body of evidence. Of these, one shows a relationship between differences in current local government outcomes in Nigeria with differences in the tax system existent several decades earlier yet fails to show causality. Only two directly attempt to provide evidence for the link between changes in the levels of taxation and governance at the local government level: one in Zambia and Tanzania that uses only cross-sectional data, and one in Brazil. And even with these, the causal mechanism is impossible to identify and the effects of taxation are difficult to separate from other possible causal variables.

Although these quantitative studies have the advantage of a large number of observations for greater reliability of the results, we need to look to qualitative studies for discerning the precise causal mechanisms involved and identifying conditions and contextual factors that affect the link. That is the subject of the next section of this chapter.

1.4 Small-N evidence and related literature

In this section, I first review the qualitative literature that studies the linkages between taxation and accountability, both those case studies that look at the national level and those that deal with the local level. I then review other related strands of literature and show how the topic of this thesis corresponds with them.

Several country case studies provide empirical evidence on how changes in the composition of revenue sources that national governments in the Middle East depend on have led to changes in governance. The most cited of these is Chaudhry (1997) whose detailed historical analysis follows the changes in the composition of government revenues (through fluctuations in oil income in Saudi Arabia and fluctuations in inflows of remittances in Yemen) and traces the effect of these changes on public administration and governance. Her analysis shows that democratic accountability repeatedly dropped in times when revenue sources other than taxation were abundant. More specifically, in times of oil wealth, citizens had little influence over the government's policies. The government could buy loyalty and became increasingly centralised and independent from the wealthy elite or other tribes in the kingdom. Crystal (1995) similarly observes a decline in political power of the merchant classes after oil was discovered and taxation eliminated in Kuwait and Qatar. Brand (1992) analogously shows that when remittances were reduced in Jordan, political liberalisation increased as the government became more reliant on taxpayers and granted concessions in terms of liberalisation in return for their taxes.

Some recent single country studies have also traced the importance of taxation in sparking processes leading to improvements in democratic accountability in Africa. Bräutigam (2008a) sketches out the history of taxation in Mauritius and concludes that export taxation there improved governance by bringing businesses to the bargaining table with the government. This encouraged future public-private trust and cooperation. Eubank (2012) argues that bargaining around taxation explains why Somaliland, not being a recipient of development aid and not having mineral wealth that can be easily captured, formed a democratic government. In need of revenues, the

government fought to take control of a port (Berbera) for its potential tax revenues, which was at the time controlled by a particular clan. This motivated the outbreak of a wider conflict. The ensuing peace negotiations allowed for government control of the port yet in return for the creation of political institutions with inclusive representation of clans different from that of the governing elite. He thereby emphasises that inner-state conflict, and not only inter-state warfare, as in the historical narratives of early modern Europe, can lead to revenue bargaining and presumes that such bargaining would have been unlikely in the presence of foreign aid or natural resource revenues.

Comparative African case studies have also shed light on taxation-accountability linkages. Gloppen and Rakner (Gloppen & Rakner, 2002; Rakner & Gloppen, 2003) explore the relationship between taxation and accountability through an evaluation of tax reforms in Uganda, Tanzania, and Zambia. They assume that accountability or a closer link between the government and its citizens could only be reached to a limited degree, obstructed by the fact that the tax reforms did not focus on direct taxes (which are highly visible to and felt by the taxpayers), saying “a tax system that primarily is based on indirect taxes cannot be expected to yield a so called ‘governance bonus’ or a democratic accountability effect” (Gloppen & Rakner, 2002:3-4). In Uganda, there was resistance to the introduction of the VAT. This first led to arrests and then to a number of exemptions that took many firms out of the tax net. They assume that since it hardly broadened the tax base, as large parts of the economy remained outside the tax net, democratic accountability would not be achieved. Nonetheless, the authors do predict a stronger link in the long term, as resistance to the tax reforms created more organised bodies representing taxpayer groups. Tax issues were beginning to be treated through formal, public organisations rather than through bribery and individual deal-making. They write that, “Business is now acting as a voice” (Gloppen & Rakner, 2002:15).

Prichard (2010b) traces central government tax systems in Uganda, Ethiopia, and Ghana over an extensive historical period and finds evidence that having to raise tax revenue forced the government into implicit and explicit bargaining with society. Popular resistance against taxes had the effect that subsequent governments would only pass new taxes if these were earmarked to public spending programmes. Furthermore,

conflict over taxes caused business associations to strengthen to a point where they were able to influence political change.

We have seen that there is evidence of taxation playing a causal role in democratisation and accountability processes at the national level of government. Through different processes and mechanisms and in several different contexts, tax dependence has brought governments to be more accountable to citizens. But is there evidence of any link at the local level? Three recent qualitative case studies exist that address this question.

Fjeldstad and Therkildsen (2008) study local governments in Tanzania and Uganda and examine the effects of the local poll tax there on accountability. They show that the poll tax in Tanzania and Uganda did not lead to revenue bargaining between taxpayers and the state. The governments enforced the tax through coercion: tax collectors forcefully, arbitrarily and sometimes violently extracted funds from the local population, created great resentment against the tax and sparking revolt. This led rural populations to mobilise politically, but not to engage in any mutually beneficial bargains; instead, they brought the government to abolish local taxation altogether.

Bernstein and Lü (2003, 2008) note similar experiences with local taxation in rural China, where locally elected village governments were granted significant tax powers. According to their findings, tax collection was also coercive rather than consensual: local residents quickly felt overburdened with a constant addition of new, sometimes arbitrary taxes, causing great resentment. Yet instead of protesting or engaging with the local government, taxpayers approached the central government and demanded it constrain the taxing powers of the local government. The central government subsequently tightened its internal controls of the local government and reduced local taxing powers. No direct dialogue resulted between the local government and local residents and no increase in local accountability ensued.

Juul (2006) observes the effects of transferring the poll tax in Senegal in 1996 from the state agent (the *sous-préfets*) to locally elected councillors. This resulted, above all, in a steady drop in tax intake. She focuses on the case of Barkedji Arrondissement and argues

that the shift did not lead to demands for political representation, increased accountability or enhanced feelings of citizenry. The loss of power of the hegemonic Socialist Party and the expansion of multiparty political competition at all levels of government created electoral competition and made the locally elected councillors reluctant to as much as publicly mention taxation, let alone enforce it, particularly during an election year. “From fear of not being re-elected, local leaders seldom raise the issue of tax policy and often depend on indirect taxes for a large proportion of state revenue — with the unfortunate result that there are no discussions of how revenues are collected and used and no taxpayers to hold officials accountable” (Juul 2006:844). She adds that the local governments performed poorly in the delivery of public services (largely due to a corresponding decline of local funds), further discouraging any tax contributions, and therefore also extinguishing any ensuing demands for democratic accountability.

This thesis also draws from and contributes to two further strands of literature. One is the literature on the effects of accountability on tax intake. This literature largely argues that increased accountability increases tax intake because it reduces the transaction costs of taxing. This is because it makes taxpayers comply on a ‘quasi-voluntary’ basis (Levi, 1988) and it builds so-called ‘tax morale’ (Torgler, 2007). That literature is relevant in two ways. First, it shows that residents perceive a link between government accountability (in terms of service delivery) and taxation. However, it doesn’t say much about the further steps: does this, then, lead citizens to prompt governments to improve services and respond to their needs? Is the government aware of this and does it adjust its behaviour accordingly? It may nonetheless be regarded as partially indicative of one of the intermediate steps between revenue bargaining and increased accountability.

Second, it is relevant because it is indicative of reverse causality in the causal puzzle: more accountable governments may be more successful at raising tax revenues so accountability may cause greater tax revenue. Most of this literature is based on behavioural and survey research (Bergman, 2002; Levi & Sacks, 2005; Torgler, 2005). Most prominently, Lieberman’s (2003) survey data from South Africa and Brazil show that people self-report higher willingness to pay taxes where governments are perceived to have a better performance record in terms of public service delivery. Cummings et al. (2009) and, more recently, Paler (2013) use an experimental research design to show

that in Indonesia local residents are more likely to monitor the local government when they believe that their tax money is financing local government rather than windfall rents. Bird, Martinez-Vasquez, and Torgler (2008) show in a cross-section that variations in the quality of governance are correlated with variations in tax revenues to GDP, essentially showing the same effect as the cross-national statistical studies discussed above, but assuming a different causal direction. Cross-country regression analysis has also been conducted to test the effect of regime type on tax intake. Here the evidence is less clear. Cheibub (1998) concludes that there is no difference between (presumably more accountable) democracies and (less accountable) autocracies in their ability to raise tax revenue. Thies (2004) finds that democracies tax more, Fauvelle-Aymer (1999) finds that autocracies tax more and Boix (2001, 2003) shows that democracies have a higher tax intake but only above a certain income level. While the authors have a different causal direction in mind than the one of interest in this thesis, their evidence may be indicative of either. One of the aims of this thesis is to clarify the causal direction and mechanisms that lead to such results in quantitative analysis.

I also draw from the political science literature on democratisation and political change. Explaining political change and variation between levels of democratisation has long been the focus of political science. The late 20th century has seen transitions from authoritarian towards democratic rule in a number of developing countries (Stepan & Linz, 1996). At the same time, the term “democracy” has increasingly been qualified and countries are categorized according to varying degrees of democratization and authoritarianism “with adjectives” (hybrid, mixed, transitional, semi-democracy, illiberal democracy, competitive authoritarianism, to name but a few).

While the bulk of these studies have tended to focus on the national level, classifying a country as a whole, recently more attention has been paid to differences within regions of the same country. According to Gibson (2005), the unevenness of territorial distribution of practices and institutions of democracy within countries has largely been neglected. Yet a growing body of literature is responding to this gap. Several case studies describe subnational authoritarian enclaves within national level democracies have brought attention to this phenomenon (Snyder (1999), Lawson (2000) on subnational authoritarian regimes in Mexico; Chavez (2004) on the provinces of San

Luis and Mendoza in Argentina; Gibson (2005) on the state of Oaxaca in Mexico and the province of Santiago del Estero in Argentina; McMann (2006) studies two provinces in southern Russia – Samara and Ul'ianovsk, and two in Kyrgyzstan – Osh and Naryn).

There is also a growing range of large-N literature seeking to explain differences in levels of democracy across subnational government units of the same country. The factors explored include structural socioeconomic characteristics, such as the levels of per capita income, the level of urbanisation and rate of economic growth (O'Donnell, 1998; Przeworski, 2004). Another explanation is the diffusion of ideas: Kopstein and Reilly (2000) studied this in the context of former communist countries in Eastern Europe and Central Asia, highlighting proximity to the west and isolation in the east to show spatial diffusion of ideas. Gel'man and Lankina (2007) also use diffusion theory to explain the geographically uneven nature of democratisation in Russia, examining how both spatial proximity and contact between model-propagating and model-emulating regions and actors account for variation in democratic institution-building. Others use cultural theories to explain regional differences in democratic accountability. These include different civic traditions (Putnam, 1993), customary laws that provide more channels for citizen participation in decision-making (Díaz-Cayeros, Magaloni, & Ruiz-Euler, 2014), and colonial and religious traditions. Political variables have also been evoked as predictors: Benitez-Iturbe (Benitez-Iturbe, 2008) shows how political competition and the characteristics of parties' main constituencies in specific regions influence the type (public vs .particularistic) and concentration of goods distribution in three Mexican states. Agency, in the form of relations between national and subnational actors and differing degrees of benevolence, ambition and effectiveness of specific local leaders has been posited as further explanations for regional variation in democratic accountability (Gibson, 2005; Snyder, 1999). This thesis contributes to the explanations by assessing the effect of taxation as one of several competing causal factors that affect the levels of democratic accountability across local governments.

This section has reviewed the small-N qualitative literature on taxation-accountability linkages. Several case studies have studied taxation-accountability at the national level in the Middle East and Africa. These provide evidence for taxation-accountability linkages in certain contexts but not in others and also shed some light on the different causal

mechanisms through which such linkages work. Very few studies have examined taxation-accountability linkages at the local level. These include studies in Sub-Saharan Africa that deal with the local poll tax and one study on local governments in China, all of which are set in poor, rural areas. None of these find evidence for taxation-accountability linkages. They predominantly conclude that in poor agrarian settings, taxation is more likely to lead to coercive, rather than consensual taxation, and often brutally violent collection methods, which ended in the abolition of the tax rather than in any mutually beneficial bargain in which government accountability was enhanced. The only study where no coercive taxation was observed is Juul's (2006) study on Senegal. Rather than collecting the poll tax coercively, the locally elected councillors did not collect it at all out of fear of not being re-elected. This section has also shown how this thesis relates to behavioural and survey research on tax compliance and to the political science literature on democratisation and political change.

Conclusion and structure of the thesis

This chapter has shown that the validity of the taxation-accountability paradigm in developing country contexts remains under-researched and under-specified. This is true generally but even more so with regard to local government level analysis. There is no comprehensive framework for analysis of this paradigm in the local context. Furthermore, empirical evidence to support the validity of the propositions surrounding such linkages or to reveal the mechanisms through which they work, and obstacles that may be preventing them, is scarce.

The small-N case studies on taxation-accountability linkages at the local level show little evidence of tax bargaining; instead, they show that revenue needs have often led to coercive taxation or no taxation rather than to consensual tax bargaining. While having the virtues of illustrating causal mechanisms and showing in which context and under which conditions the paradigm holds, these small-N studies lack breadth for making generalizable claims about the relationship compared to systematic statistical studies. However, to date there appear to be only a handful of within-country statistical studies

that test the effects of taxation on accountability (or a measure that can be interpreted as a proxy for accountability) in developing countries, to my knowledge, even though within-country analysis provides a far superior context in which to test this relationship compared to cross-country analyses.

Of these within-country quantitative studies, most claim to show support for a link between taxation and accountability. Hoffman and Gibson's (2005) cross-sectional regression establishes correlation but makes no attempt at establishing causality as it uses only cross-sectional data from a single time period (given lack of data availability). Berger (2009) shows a positive correlation between tax systems of colonial era Nigeria and current levels of local government quality, but also fails to establish causality. Gervasoni's (2010) panel regression focuses on the provincial government level (rather than the local government level) in Argentina. He finds that greater dependence on central government transfers has a negative effect on democratisation, though he observes no significant effect of taxation directly. Gadenne (2013) finds that greater proportions of tax revenue positively affect governance at the municipal level in Brazil. Empirical evidence through large-N studies is thus scarce.

This thesis aims to respond to both the scarcity of evidence for or against the existence of a link at the local government level through a series of within-country regression analyses in a country in which, to my knowledge, this has not yet been tested: Mexico. As opposed to Hoffman and Gibson's cross-section, the regression analyses in this dissertation will make use of panel data, which allows analysis of variation across both space and time and eliminates much potential omitted variable bias through fixed entity and fixed time effects. Compared to Gervasoni's 26 provinces, over a thousand municipalities will be analysed, amounting to far more observations and more reliable results. Only Gadenne's study of Brazilian municipalities competes in terms of method for quantitative analysis.

The methods used in this dissertation surpass previous studies in two additional respects. First, it uses multiple measures of accountability, rather than just testing one aspect of a multidimensional concept. This will allow for a more complete capturing of accountability and an improved ability to draw credible inferences about the relationship between taxation and accountability. Second, the linkages are illustrated and further analysed through in-depth qualitative field research, permitting a more

nuanced understanding of the mechanisms at work and a cross-check of the quantitative results. Third, the proposed study explains the effects both of all local taxes and fees pooled together and of a specific tax type (property tax). As Morrison (2009) points out, most statistical studies on the issue have focused on aggregated taxation at most, despite obvious dissimilarities between different types of taxes and forms of collection.

Beyond these methodological points, the present research aims to push the theory beyond its current frontiers in two ways. First, it presents empirical evidence revealing the causal pathways and conditions involved in taxation-accountability linkages in a new context: that of urban municipalities with electoral competition. Second, this thesis provides a framework for analysing taxation-accountability linkages at the local level of government, integrating ideas from public finance and decentralisation into the political science literature that focuses more directly on taxation-accountability linkages.

The rest of the thesis is structured as follows. Chapter 2 develops the theoretical framework of the thesis and lays out the hypotheses and main research questions. It begins by presenting the general analytical framework through which I view linkages between local taxation and local accountability. It lays out the model generally used for national level analysis: a binary model involving rulers and their subjects. I then elaborate on the key actors involved and their choices in local tier analysis.

Chapter 3 sets the background on the Mexican case, the reasons for its selection for study, and what can be expected in terms of taxation-accountability linkages given its specific context. It first shows how Mexican municipalities fit into a three-tiered federal system and how its powers have changed over time. It then reviews the structure and evolution of Mexican municipalities' tax revenues. This includes a synopsis of Mexico's intergovernmental tax and transfer system and a more detailed background on the most important municipal taxes: the property tax and water charges. It then expound on the untapped revenue potential of Mexican municipalities and how recent events have incentivised intensified tax effort. Finally, it discusses Mexico's democratic transition and how it occurred differentially across municipalities.

Chapters 4 and 5 present new empirical evidence through quantitative analysis of the effect of taxation on accountability. While Chapter 4 sets up the methodology, discussing challenges, explaining the indicators, and presenting the general models, Chapter 5 presents the results of the econometric (panel and cross-sectional) regressions conducted to test those models. It uses data from Mexico's over 2000 municipalities.

Chapters 6, 7 and 8 present evidence from a qualitative comparative case study based on field research in six Mexican municipalities. Chapter 6 clarifies the methodology and case selection criteria. It explains how the mixed methods approach is used to complement and supplement analysis of the quantitative section. It also introduces the research strategy for the case studies and discusses the type of data and variables to be examined to answer the research questions for this part. Chapter 7 analyses the results of field research in three municipalities: Acapulco, Centro, and La Paz. For each case, it sets out what strategy the municipal government has taken in the face of considerable pressure to raise tax revenue. Next, it analyses the outcomes of that strategy and assesses the extent to which pressure to increase tax revenues has sparked bargaining processes that could lead to increases in local government accountability. It also compares the cases, analyses obstacles and addresses questions about the specific context and tax types involved. Chapter 8 does the same for three further municipalities: Aguascalientes, Mérida, and Saltillo.

Finally, chapter 9 summarises the results, combining the evidence from both the quantitative and qualitative analyses to answer the research questions laid out in chapter 2. It then draws more general conclusions about taxation-accountability linkages at the local government level, both to further the theory and to offer recommendations for development policy.

Chapter 2: Theoretical framework for analysing taxation-accountability linkages

A review of the literature in Chapter 1 highlighted two areas in the theory on taxation-accountability linkages that require further research. The first deals with the causal mechanisms that link taxation to accountability and the second is any generalizable framework regarding the context and contingent factors that the link depends on at the local level. While claims about taxation-accountability linkages are made for the local level, few of the political science studies consider the idiosyncrasies of this level of government specifically. Instead, they merely adopt theories about the national level and apply them to the local level.

The local level, however, constitutes a very different context with particularities that should not be handled on par with the national level. For one thing, local government obligations and responsibilities are shared with other levels of government. Taxation and expenditure decisions usually form part of an intricate intergovernmental system of (shared) powers and responsibilities. Secondly, the other local power wielders such as organised crime or business leaders have relatively more power vis-à-vis the local government than vis-à-vis the central government and can more easily dominate these. Third, certain tax types are more prevalent at the local level and there is reason to believe that the type of tax involved is important for its effect on accountability. Fourth, there is a closer physical proximity of citizens to their local government than to the central government. Fifth, local taxes exist alongside other taxes (state, national level or even unofficial 'informal' taxes) so the link between tax and government may not be as clearly distinguishable. All of these points may have an effect on how causal linkages between taxation and accountability play out, yet they are left out in the theoretical analysis of the taxation-accountability paradigm. A new analytical framework is therefore needed that identifies the key parameters that affect taxation-accountability linkages at the local level.

This chapter aims to address this gap. In section 2.1 I present the general model of taxation-accountability linkages on which this thesis builds and of the key actors involved. In section 2.2 I discuss the causal pathways that link taxation and accountability. I distinguish two different pathways and discuss the causal sequence of the processes involved. It is here where I begin to land the theory and translate it into concrete testable hypotheses that I aim to address in this thesis. In section 2.3, I review the contingent factors that the literature has pinpointed as determinant for revenue needs to lead to consensual tax bargaining. In section 2.4, I introduce a framework to analyse taxation-accountability linkages at the local level. The conclusion summarises the hypotheses and research questions.

2.1 General approach and key actors

In this section, I present the general analytical framework through which I view linkages between local taxation and local accountability. I begin by laying out the model generally used for national level analysis: a binary model involving rulers and their subjects. I then elaborate on the key actors and their choices in local tier analysis.

A rationalist approach

The theoretical literature on the taxation-accountability paradigm can be divided into two main bodies: first, descriptive historical accounts and political sociology (or structuralist literature) and, second, rational choice literature (Levi, 1999). As Levi points out, the first is useful in that it provides a breadth of descriptive cases that show how taxation was key in bringing about processes of political change and greater accountability in differing contexts; however, it falls short of explaining why the observed results occurred in any generalizable way. The rationalists, on the other hand, build models with generalisable, testable hypotheses. It takes the perspective of

rational, self-interested wealth maximizing rulers, makes assumptions about their preferences and theorises about their strategic choices within a set of constraints. The “second generation” theorists of the tangent fiscal federalism literature also take this approach (Oates, 2005; Weingast, 2009).

Margaret Levi’s *Of Rule and Revenue* (Levi, 1988) has been particularly influential in advancing the rational choice approach in the taxation-accountability school. Levi predominantly considers the incentives and strategic choices of the “rulers”, using an individual level analysis that assumes policymakers to be rational, self-interested wealth and revenue maximisers. Rulers seek to maximise revenues, but subject to constraints. She lists three sets of constraints. The first is their relative bargaining power or control over coercive, economic and political resources. The second is the transaction cost of negotiating agreements and implementing policies. The third is the discount rate: rulers with low discount rates will limit revenue extraction at the point where “further extractions would put future output at risk” (Levi, 1988:32-33). Importantly, she notes that “rulers are not always choosing the policy that produces the most revenue, and the reason lies in one additional factor that affects all rulers: the requirement of maintaining power” (Levi, 1988:18). While Levi sets up this framework as part of an encompassing theory to show how revenue production policies are determined, it has also served as a framework used by various scholars after her to analyse taxation-accountability linkages.

Scholars analysing taxation-accountability relationships generally assume a binary model between the head of the executive (ruler) and taxpayers/citizens (the subjects). Taxation affects the incentives of both the ruler and the subjects to engage with one another and to strike a bargain. The ruler has incentives to maximise revenues and to ensure compliance. The subjects have incentives to revolt, scrutinise where their money is going, and/or ask for something in return. The outcome is increased engagement and a mutually beneficial bargain that benefits both the ruler and the subjects. The strategic choices of the ruler and subjects are usually made within a series of constraints, yet these constraints are usually taken as given without further attention. The historical narratives also use this binary model, yet more strongly emphasise their view of the relationship between rulers and their subjects as a power balance. The need for taxation

can shift the power balance from the ruler to the subjects, as the ruler wants something that the ruled control. Contingent factors may boost or hinder this shift.

The binary model, used by both bodies of literature, while a good starting point for analysis, glosses over some potentially important factors that may make or break the linkages. For one thing, it leaves out other actors with potentially key roles involved in taxation-accountability relationships. Moore (forthcoming) points to two further key actors in the relationship: tax intermediaries (including tax lawyers, accountants, clearing agents, forwarding agents, brokers, among others) and revenue collection organisations. The incentives and actions of these actors also have an important effect on the taxation-accountability relationship. He also argues that greater attention should be paid to the tax collection process, especially logistical and organisational constraints, as well as discrepancies between tax policy and practice, all of which influence how taxes are collected and how the relationship between taxation and accountability will play out.

This thesis follows the rationalist approach: I theorise the strategic choices of key actors (local government actors and individual local residents) in the taxation-accountability relationship, who are assumed to be rational, self-interested actors subject to constraints and responsive to incentives (Section 2.2). However, I focus in particular on the processes that follow from these incentives and what constraints there are in different contexts. I also consider the role of intermediaries in this relationship: further actors that stand between the ruler and the subjects in the tax collection process that affect accountability relations with the local government, as these have often been ignored but are potentially influential.

The key actors

In an analysis of taxation-accountability linkages at the local government level, who is the ruler and who are the subjects? In its simplest form, the relationship is between the local government and the residents in the local jurisdiction. However, it is important to note that neither the local government nor the residents make up a homogenous group.

The circle of those who pay taxes is not usually congruent with the entire local population, nor with the circle of residents that receive the benefits. The local executive is never completely autonomous: other levels of government are involved in decision-making and in the tax collection process. Finally, further actors are involved in the taxpaying process: there may in fact be little direct contact or engagement between the local executive and the general population.

Who are the subjects?

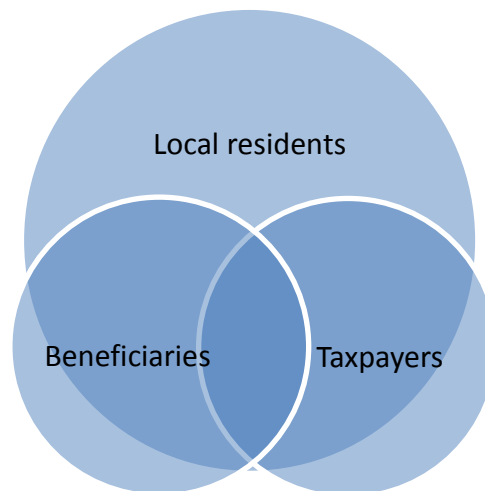
First, let us clarify who “the subjects” actually comprise. As Prichard (2009) shrewdly points out, many scholars speak of “the citizens”, “the polity”, “taxpayers” or “society” as though they were a homogenous group. Yet even in the historical narrative of the taxation-accountability relationship in the formation of democratic states in early modern Europe, those negotiating with the state were usually not a representative group but an elite who demanded powers that perhaps only by chance coincided with benefits for the larger population. Who is to say that in the contemporary developing world a group of residents will push for government concessions that are in the general interest of all residents in that jurisdiction?

Tax bargaining may instead be dominated by small groups of rent-seeking elites (Prichard, 2010a). Handley (2008) observed situations in Ghana and Zambia in which it is a small group of powerful business managers who negotiate tax policy to pursue narrow benefits for themselves rather than encouraging tax bargaining that benefits the broad public as a whole. Best (1976) similarly finds a strong relationship between the incidence of taxation and response to preferences of the powerful in Central America. Timmons (2005) in his quantitative study of the tax-accountability relationship separates taxpayers-citizens into rich and poor. He then analyses whether there is a relationship between the group which predominantly pays the taxes and the group that receives more of the benefits. He assumes that rich citizens are more likely to want the protection of property rights and poor citizens are more likely to want basic services. He finds that when wealthier taxpayers are paying proportionally more, the government spends more on property rights protection and vice versa.

Mahon (2004) on the other hand, who focuses on Latin America, notices that the groups within society who are represented in fiscal matters are not always the same as those who pay the most taxes, but the ones that provide resources at acute critical moments (especially in the run up to elections), implying no relationship between tax incidence and influence in government policy or beneficiaries of government services. There is also a widespread belief among social scientists that government resources are frequently captured by local elites, generally defined as an economically or politically powerful group in society, independent of whether or not they pay taxes. This concern is often cited by opponents of decentralisation (Faguet & Sánchez, 2008; Grindle, 2007). It appears in the Federalist papers (Hamilton, Madison, Jay, & Fairfield, 1787 [1966]) and, in a developing country context, in a variety of case studies, notably by Wade (1982) and Dreze and Sen (1989)(1989), and has been recently shown empirically by a number of authors (Acemoglu, Reed, & Robinson, 2013; J. K. Ahmad, Devarajan, Khemani, & Shah, 2005; Alatas et al., 2013; Bardhan, 2002; Bardhan & Mookherjee, 2006; Khemani, 2010).

It thus becomes clear that those who pay taxes, those who benefit from government concessions and the total local population should be viewed as distinct groups that may only partially overlap, as illustrated in the Venn diagram in Figure 1.

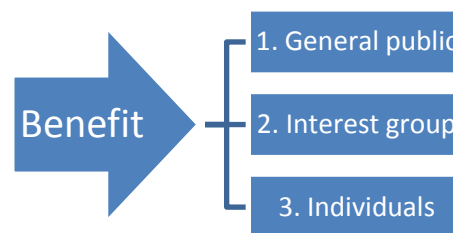
Figure 1 Lack of congruence between taxpayers and beneficiaries



In order to answer the research question of whether taxation has an effect on “accountability”, defined in Chapter 1 as accountability vis-à-vis the local population as a whole, including the poor, as opposed to a minority group of powerful elites, I distinguish, for the purposes of this thesis, three categories of “taxpayers/citizens” who may *benefit* from a bargain with the local government, as shown in Figure 2.

The first is the general public or the majority of residents in the local jurisdiction. This follows the mainstream interpretation of the taxation-accountability paradigm as benefiting the society as a whole, even if those who strike the bargain are in fact only a small group of citizens. Yet I also leave open the alternative possibilities of two further groups benefiting. The second is a smaller interest group of residents; that is, a bargain around taxation may lead the government to grant concessions to specific taxpayer groups, such as those of a certain industry. Brautigam (2008a) for instance describes how farmers associations in Mauritius benefitted from tax bargaining with the government. Finally, the local government may make a deal with specific individuals, granting tax amnesties or special privileges to single taxpayers on a one-to-one basis. This conceptual division into three circles of residents is important so as not to assume that taxation benefits all citizens when it may benefit only individuals or specific groups.

Figure 2 Three beneficiaries of government action



Who is the ruler?

The ruler in local level analysis is broadly the local government. However, an important difference to the central government is that local governments are usually significantly restricted in their powers and autonomy. Local governments are tied into

intergovernmental systems of taxes, transfers, expenditure powers, and other rights and obligations. They tend to be bound into dependency and accountability relationships with these as well as with third party actors.

In the same way that the residents are not one homogenous group, neither is the local government. Like at the national level, local executive action may be restricted by the local legislative. Even within the local executive, there may be different actors with different motives: members of the local tax directorate of the local government, for instance, may have a different agenda than directly elected councillors or mayors. While the first may be striving to reach revenue goals, the latter are likely to be more concerned with winning elections. Local governments may also have less clout than the central government in the face of further non-governmental actors such as religious leaders, business leaders or criminal organisations within the local jurisdiction.

It is important to take note of (a) the power balance within the local government; (b) the power balance between different levels of government in a multi-tiered system; and (c) the role of further non-governmental actors. These factors may either limit or enhance the ability of linking taxation and accountability for a variety of reasons. This is further elaborated in Section 2.3 on the context and constraints of local tier taxation-accountability linkages.

2.2 Causal pathways

I now turn to the causal mechanisms through which taxation is expected to increase accountability. I start by showing how taxation fits in with other factors that influence accountability. I model the expected outcomes of increased taxation and then distinguish two causal pathways. Finally, I distinguish two different forms that a tax bargain may take.

Causal factors for accountability

Taxation is but one of many competing causal variables that affect local government accountability. As discussed in Chapter 1, the literature that seeks to explain differences in levels of democracy across subnational government units is a useful starting point to finding causal variables that affect accountability. This literature points to factors including the geographic proximity to more democratic areas (Gel'man & Lankina, 2007; Kopstein & Reilly, 2000), structural factors such as income levels and degree of urbanization (O'Donnell, 1998; Przeworski, 2000; Przeworski, Stokes, & Manin, 1999), and *a priori* civic traditions (Putnam, 1993; Diaz-Cayeros and Magaloni, 2011) as having a significant effect on variation in democratic institution building across subnational units.

What other factors affect the local government's choice to be accountable? While I focus on taxation as a determinant of local accountability, this is examined in the context of other factors. It is thus necessary to try to isolate the effects of taxation from the effects of other causal variables. The decision of a local leader to be accountable is likely to be a function of the following variables besides tax revenue:

- a. Intra-governmental control: If higher levels of government can control the local government (through conditional funds, laws and regulations, monitoring, etc.) and require the local government to be accountable to the local residents, this can be a channel for accountability (Litvack et al., 1998; WB, 1997). Similarly, the legislative or judiciary may control the local executive (horizontal accountability or external control) through formal rules and oversight arrangements. However, poor information and monitoring systems may make this ineffective and central government priorities may not be aligned with those of the local population (Faguet, 2004; Tiebout, 1956).
- b. Electoral competition: if local residents can remove or reward the local leader through the vote, the local leader is more likely to be accountable to (potential) voters given his or her desire to remain in power (Blair, 2000; Rose-Ackerman, 1999; Stepan & Linz, 1996). Many also doubt that electoral competition can produce accountability because of biased electoral rules, (Arrow, 1963; Riker,

1982), principal-agent problems (Barro, 1973; Myerson, 1993), and clientelism (Cleary, 2010).

- c. Obligations towards third parties: If the local leader feels required to adhere to the demands of other individuals or groups different from the general public (such as private individuals or companies that contributed campaign funds), he or she is less likely to be accountable to the general public.
- d. Resources: improving accountability may require resources and if the local leader lacks these, it may be less willing to spend precious resources to increase accountability to the general public.
- e. History and existent norms: if past leaders have been accountable or if there are institutionalised processes with high standards of accountability in neighbouring areas, the local leader is more likely to be accountable.
- f. Pressure from citizens: The more and better channels for participation, organised collective action, and a politically interested civil society, the greater this pressure is likely to be to make the government more accountable (Faguet & Ali, 2009).

To complicate matters, some of these additional causal factors will be influenced by taxation and vice versa. Tax extraction for instance, may motivate greater pressure from citizens for the government to be accountable. The amount of control by the government may weaken if the local government is less dependent on central government transfers and more on taxation. Several further factors have to do with the context, in particular the institutional constraints surrounding local governments in developing countries. The context and contingent factors are further elaborated in Section 2.3. In sum, isolating taxation from other factors that influence accountability poses a challenge.

Three outcomes of increased taxation

The theoretical literature on the causal relationship between taxation and accountability predominantly uses a narrow set of historical accounts as a basis for its models, both of causality and for the contingent factors that determine outcomes,

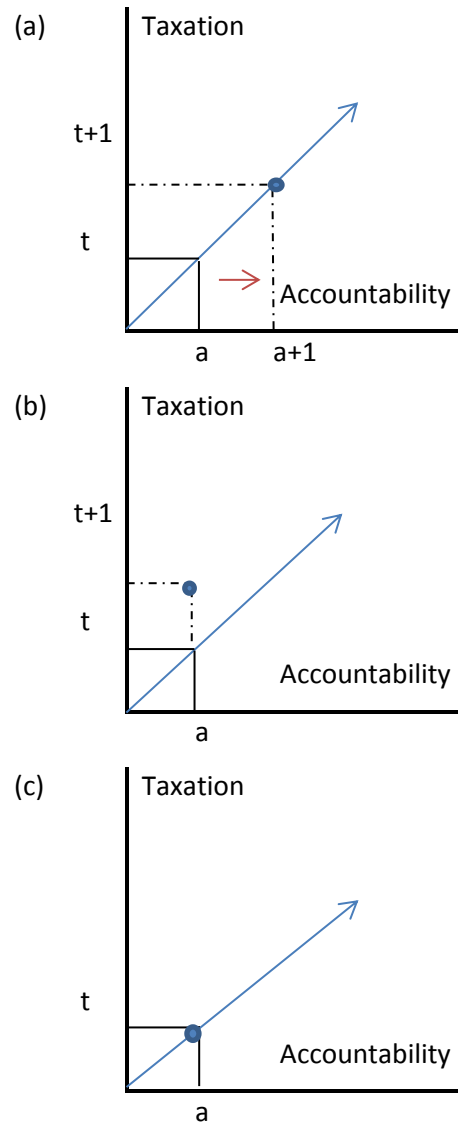
drawing its premises “only in light of English and French experiences or, at best, early modern Europe”, according to Levi (1999:117).

The main problem with its causal models is that they commence with the assumption of the ruler as an autocratic monarch with the ability to exert coercive power over his subjects. The starting point is a domain state with customary or arbitrary taxation, (Kiser & Barzel, 1991; Schumpeter, 1918 [1976]; Tilly, 1992) and the question of interest of these authors is whether urgent revenue needs will lead to one of only two options: that the ruler resort to (a) (an expansion of) coercive taxation or (b) consensual taxation. However, the setting in contemporary developing countries is not one of customary or arbitrary taxation but often one of a lack of taxation. The tax revenue to GDP ratio is typically much smaller in developing countries than in developed countries and tax evasion is pervasive (Alm & Martinez-Vazquez, 2003). Many developing states have not consolidated power in order to exert authority over the entire population in their jurisdictions. Instead, a large informal sector and a lack of coercive power of the state over the entire population are prevalent features (Englebert, 2000; Herbst, 2001; Jackson & Rosberg, 1986). I therefore add a third outcome: no taxation. This can be because the local government is either unable or unwilling to collect taxes despite having de jure tax autonomy and de facto tax revenue needs.

The question asked here is thus whether tax revenue needs will result in (a) a rise in accountability (consensual taxation), (b) a rise in the tax intake without a rise in accountability (coercive taxation), or (c) no rise in either as shown in the graphs in Figure 3 below. Only the first option results in a rise in accountability.

Assuming that the outcome is (a) and a rise in taxation effectively increases accountability, three further theoretical issues are to be clarified with respect to the causal pathways. These are the subject of the next subsections. The first deals with whether the causal pathway is more likely to take a short route with a minimal role for the residents or a long route in which residents play a key part. The second deals with the form of tax bargaining that takes place at the local level: is it implicit or explicit? Finally, the third deals with the causal sequence and possible feedback loops in the taxation-accountability relationship.

Figure 3 Expected outcomes



Short or long path?

As discussed in chapter 1, taxation is believed to link to accountability through tax bargaining, but this involves multiple steps. Taxation may have incentive effects on the ruler and different incentive effects on the subjects. Either or both of these may then

provide incentives for further processes which may lead to tax bargaining. In a final step, tax bargaining may result in increased accountability. There are thus a series of processes linked together in a chain. Identifying the chain (or casual pathway) with all of its links useful for pinpointing where the relationship between taxation and accountability may be broken and where it can be fixed or strengthened.

In Chapter 1, I showed that different scholars have different theoretical pathways in mind when explaining possible causal linkages from taxation to accountability. Some scholars emphasise the incentive effects on the rulers: these will be incentivised to bargain with the subjects over taxation in order to elicit compliance and, possibly, in anticipation of some unfavourable reaction by the subjects if they do not. Others stress the incentive effects that extractive demands by the ruler have on the subjects. This assumes that it is the reaction that taxing sparks with the subjects that brings about opportunities for bargaining and for greater accountability.

It is therefore useful to differentiate two broad sets of causal pathways. One is the **short path**: when local governments want to raise revenues, they immediately take steps to increase accountability. Taxation affects a local government's behaviour directly because it forces it to be concerned with tax compliance in its jurisdiction. It may be anticipating protest or revolt or tax evasion. In order to uphold tax compliance among residents, it will thus simultaneously take steps to show that it is transparent, effective and responsive to demands of the broad majority of local residents. This brings it to be more transparent, to respond to the residents' demands in programmes and projects, and to facilitate citizen participation in policymaking (or at least to create the perception of doing these things).

| |
|---|
| Government raises tax → simultaneously becomes more accountable |
|---|

The second is the **long path**: when local governments (try to) raise taxes, the local residents react, and only through this reaction of the local residents does the government make concessions. While the first is immediate, the second is a slower process that implies a strengthening of citizen ties, social learning, citizen interest in local government and citizen participation.

To be more specific, in this causal pathway taxation affects the ruler's behaviour by first affecting its subjects' behaviour. If the subjects are made to pay (more) taxes, they will take steps to (more carefully) monitor, control and scrutinize the government to assure that public funds are used with prudence and that public services are provided efficiently and effectively. They will approach the ruler to make demands. Citizens may also organise and protest if they don't trust the government with their tax money, feel that the government is not using tax money appropriately or if they feel that the tax obligations present unwarranted exploitation. Whichever way chosen, it is the enhanced citizen engagement in local government that will, in turn, change the behaviour of local governments. Having increased citizen participation in decision-making or increased contact and communication with local residents, local government decisions will be more informed of the needs of the majority. They will also feel more pressure to adhere to those needs to prevent protest by local residents. Thus, taxation will give rise to accountable local governments indirectly by motivating citizen engagement with the local government. Prichard (Prichard, 2009) and (Gloppen & Rakner, 2002), for instance shows how taxation has led to a strengthened civil society and enhanced organisation of civilian interest groups.

| |
|---|
| Government raises tax → Citizens react → Gov't becomes more accountable |
|---|

To be sure, these two sets of incentive effects may work in tandem. While this can be a two way process, it is important to understand how and to what extent these two distinct pathways are at work. At the local government level, which steps are taken by the residents, which steps are taken by the local government? If both pathways are working, who initiates the processes and which predominates? How important is the role of the subjects in "pushing" for a bargain? If they are *not* both at work, where are the bottlenecks?

Finally, I make a distinction regarding the form that tax bargaining takes. As seen in the empirical literature, tax bargaining can take a variety of forms. According to Moore (2008:37-38) the many variants range from "direct and explicit haggling and agreement" to more subtle, indirect "strategic interactions and mutual behavioural

adjustments without direct negotiation”. I delineate two forms: **explicit tax bargaining** and **implicit agreements**, with first falling closer to the beginning and the second falling closer to the end of this range.

Choices of the local residents

While my focus is on the incentives of the local government, these incentives are also constrained by the actions of the local residents. In this subsection I briefly review the choices that local residents have when faced with the obligation to pay taxes. What determines whether they will pay, whether they will evade, and whether they take collective or other action against the tax obligation and demand concessions that benefit the general public?

For the determinants of the decision to pay taxes, it is useful to turn to the literature on tax compliance. The main determinants of tax compliance found in this strand of the literature can be summarised as such:

- a) Ability to pay: when an individual is poor or experiences economic difficulties, he/she is more likely to opt out of paying taxes (Fjeldstad, 2004).
- b) Tax enforcement and administration: if sanctions are severe and the likelihood of being caught are high, people will be more likely to pay their taxes. Also, the more simple and convenient a tax, the more willing people will be to pay.
- c) Perception of accountability: Many authors mention trust in and satisfaction with the government (Ayee, 2007). Fjeldstad (2004:541) for instance lists “trust in the local government to use revenues to provide expected services” as a key determinant. At the local level, one may add that the perception of other levels of government is also a determinant. Particularly if there is no clear division of responsibilities or if there is a strong perceived connection between local and national leaders or institutions (such as if they belong to the same political party, actions by the party or may affect the perception of accountability of the local government. As covered in Chapter 1, several studies have shown an increased willingness by taxpayers to pay taxes if they are satisfied with services (Bergman, 2002).

- d) Perception of fairness of the tax: This refers to fair procedures of tax collection, including that other citizens are also made to pay their share (Fjeldstad, 2004).
- e) Tax-paying culture: Many scholars also write of a culture or “a set of rules, values and relationships” within a society that determines tax compliance. For instance, exposure of non-payment is a source of shame in some places but not in others (Friedman, 2003:8). It may also relate to habit: people continue to do and do not question norms that have been in place over a long stretch of time.

When will the individual have the incentive to take collective or other action against the tax obligation and demand concessions that benefit the general public in a tax bargain? These points are further elaborated in section 2.3 when considering the context that is conducive for tax bargaining to occur.

2.3 Conditions and Context

The taxation-accountability literature has acknowledged that whether tax revenue needs will lead to accountability in contemporary developing countries highly depends on the context and on certain contingent factors. However, there is little research as of yet on what this context needs to entail and what the factors precisely need to consist in. A few scholars have listed potentially key conditions, usually based on a reflection of the specific case under examination. I first consider this literature, drawing from both the structuralists and rationalists. The contingent factors predominantly deal with the *a priori* power balance between the ruler and the subjects. They address the debate of whether increased tax revenue needs are more likely to lead rulers to coercive taxation or to a consensual tax bargain and what conditions make it more likely for subjects to engage with the ruler collectively for a successful tax bargain. Finally, I discuss more technical conditions that deal with the details and logistics of tax collection, drawing largely from the fiscal federalism literature. These concern the type of tax involved, how tax functions are distributed, and how the tax is imposed.

When a bargain is likely to arise

Several scholars have argued that taxation is more likely to lead to a bargain when the bargaining power is in the favour of the subjects. This may depend on several factors, which I have summarised in the following.

1. The first set of contingent factors deals with the power of the ruler. Several arguments in effect deal with the urgency of tax revenue needs. For example, some authors have noted that in the narrative of taxation-accountability linkages in early modern Europe, there is a recurrent context of interstate warfare (Moore, 1998, 2004). The constant threat of war is a consistent theme in Tilly's (1992) accounts of the formation of democratic states in various European countries for example. These authors have indicated their scepticism that the same urgency for revenues that motivated rulers in Europe to strike a bargain with citizens could occur in the contemporary world where interstate conflict is less prevalent. However, Eubank (2012) in his paper on tax bargaining in Somaliland shows that intra-state conflict can equally spark similar bargaining processes.
2. Urgent revenue needs should be coupled with another factor: the degree of dependence on taxes for revenues compared to other sources of revenues. When alternative revenue sources are readily available, such as natural resource rents and foreign aid, which are usually also associated with lower administrative and political costs than taxation, then the government is less dependent on the taxpayers and less likely to enter into a bargain (Bräutigam et al., 2008).

Other contingent factors deal with the power of the subjects vis-à-vis the ruler in the power balance. The logic is that where there is a strong, politically powerful and wealthy capitalist class that can act as a counterforce to the government, bargaining is more likely. This is Tilly's (1992) main premise in his book *Coercion, Capital and European States, AD 990-1992*.

3. Among these, several scholars have listed a mobile tax base as a factor that makes tax bargaining more likely (Bates and Lien, 1985; Tilly 1992; Moore 2004; Moore 2008). Mobile assets are relatively easy to transfer or hide and more difficult for the government to tax. The argument is that when owners of

capital have mobile assets, they are able to hide or move them, making coercive taxation difficult and leaving the government with no option but to enter into a tax bargain that relies on the quasi-voluntary compliance of the asset holders in order to access these revenues. To the contrary, where assets are not mobile, such as in agrarian societies where land forms the tax base, taxpayers cannot easily move or hide their assets, and coercive taxation is said to be more likely (Moore, 2007, 2008).

4. Several others have also argued that the *a priori* existence of institutions of representation is a condition that will make tax bargaining a more likely outcome (Levi, 1988; North & Weingast, 1989). The assumption is that when channels for citizen participation are already in existence and there is a strong civil society or as Tilly (1992:101) writes, where, “the people touched by state action were already connected by durable social ties, then collective action is less costly and a bargain is more likely to be sought”.
5. Some authors further list conditions under which collective action among subjects is more likely. According to Levi (1999) and Tilly (1992) a key condition is the perceived fairness of the tax system. Tilly (1992:101) contends that where, “the state’s demands and actions offended citizens’ standards of justice or attacked their primary collective identities”, for example, resistance would be more likely to compound into mass rebellion.

Barzel and Kiser take a distinct view to the ones listed above, which imply that power is the decisive role that determines coercive vs consensual extraction (Barzel & Kiser, 1997, 2002; Kiser & Barzel, 1991). Basing their research on medieval England and France, they observe that tax payments were linked to specific projects and the rich imposed taxes on themselves as a voluntary investment. Voting was used to make decisions. Rather than seeing it as a zero sum or negative sum game where power is the decisive factor, they see rulers and subjects as “wealth-maximizing business partners” (2002:480). “Mutual benefit was often more important than power” (Barzel and Kiser, 1997:7).

Barzel and Kiser (2002) argue that rather than more powerful rulers, it is more *secure* rulers that are more likely to tax consensually, i.e. those that are not facing an external

or internal threat. They explain that insecurity shortens the ruler's time horizon and leads him to gain from breaking agreements (particularly with those whom they perceive as a threat) and confiscating through arbitrary taxation: "As long as the ruler is secure in his throne, he has no reason to renege" (Barzel & Kiser, 2002:480). Olson (1993) similarly contrasts a secure autocrat that has an encompassing interest to provide peaceful order and public goods that increase productivity of his domain with an autocrat that is only concerned with getting through the next year, whose incentives "are those of a roving bandit and that is what he becomes" (Olson, 1993:571).

I now turn to authors who have focused their analysis on contemporary developing countries for further determinants concerning the necessary context and conditions for the likelihood of taxation leading to increased accountability. Bräutigam et al (2008b) mention that the prevalence of inequality and a large informal sector in many developing countries as possible impediments to any taxation-accountability linkages taking hold there. But what is it about these features that make it difficult for the relationship to hold? It may mean that the majority of citizens is not involved in the ruler-subject relationship so the general public will be unlikely to gain from a bargain. It may also mean that there are greater differences in preferences between the taxpayers (or citizens), making collective action around any issues more difficult and impeding the benefit principle, which will be discussed below. Finally, it may also mean that the tax is more easily regarded as unfair.

With regard to local governments in developing countries, Moore (2008) has concluded that coercive taxation is more likely than consensual taxation in poor agrarian societies. Prichard (2009) lists that the strength of civil society (in particular the influence of elites and the importance of parliament) were important contingent factors for taxation-accountability linkages in Ghana. This echoes the need for powerful subjects discussed above. He also lists the tax type in question, which will be further expanded below.

Others again mention the fairness/abuse argument. Moore (forthcoming) points out that a key factor in determining how the tax is perceived is how it is collected. He posits that when direct, face-to-face interaction between tax assessors/collectors and

the taxpayers is more frequent, this gives the former greater discretionary power over the latter, facilitating corruption and extortion.

The importance of tax type

While many scholars treat taxes as one homogenous item, those on firmer ground have recognised that different types of taxes work very differently in the taxation-accountability relationship (Gloppen & Rakner, 2002). What type of taxes are more conducive to causing linkages and why? Scholars have pointed out several characteristics that taxes may have which determine their effect on accountability.

First, the tax needs to be visible to the taxpayer (Bird & Vaillancourt, 1998). More visible taxes are more likely to evoke a reaction by the taxpayer than ones that are siphoned off indirectly. If the tax is visible to the taxpayer, it is more salient and more likely to cause resistance by those who are meant to pay. For instance, a sales tax that is internalised in the sales price may go unnoticed to buyers just as indirect social security contributions that are automatically deducted by an employer from a worker's wage. To be sure, it is not the tax type alone but the way it is typically collected that can affect its visibility and salience. The property tax is usually a highly visible tax given that it is usually collected as an annual lump-sum. Cabral and Hoxby (2012) show that when property taxes are instead mixed in with other items in a mortgage bill (tax escrow), taxpayers are less likely to notice the tax or any increase in the tax and therefore less likely to hold a grudge and revolt against the local government as a result.

Second, the tax must amount to a burden for the taxpayer or, as Gloppen and Rakner write, the tax needs to be "felt" by the taxpayer. Bahl and Bird (2008a:4-5) similarly stress that the tax must be "large enough", meaning that "minor levies and nuisance fees don't measure up".

Third, the tax needs to be broad-based and 'earned'. Grabowski (2008:31), for instance, argues that different taxes (resulting from different agricultural models) influenced a divergence in long-run development paths between Latin America and East Asia. In

Japan, Taiwan and Korea, the government relied on a broad based, 'earned', (as well as direct and visible) land tax that penetrated the countryside while in Latin America governments have relied heavily on export taxes with a narrow tax net. Export taxes, unlike the land tax, are also easy to collect and do not involve the same effort or outreach to the broad population. Given these differences in the characteristics of the taxes applied, East Asia has developed into a place with more equitable growth and broad-based services to the general public while Latin America saw comparably greater inequality and a lack of accountability towards the majority of the population.

Fourth, taxes should adhere as much as possible to the benefit principle (Lindahl, 1919; Wicksell, 1896 [1958]). The benefit principle generally states that tax payments should be guided by the benefits that accrue to taxpayers. More specifically, for an optimal provision of public goods, the greater the overlap between those on who the incidence of the tax falls and those who receive the benefits, the better (E. Ahmad et al., 2015; Bird, 2013). Taxes may be earmarked for specific purposes that benefit a specific portion of the population. Yet most taxes go into a common pool and may even be shared between government levels for various purposes or spill over to other jurisdictions entirely. The more of an overlap between taxpayers and beneficiaries of the tax money, the more efficient the tax (or price for the public good) and the greater accountability will be. This is closely related to the principle of fiscal equivalence (Olson, 1969), which states that the circle of buyers should equate exactly the circle of sellers to determine the optimal price of the public good.

Following the same logic, accountability diminishes if a tax can be "exported" to non-residents (Bahl & Bird, 2008a:11). For example, business taxes could target non-resident businesses or property transaction taxes could be designed to fall on non-resident foreign investors. For maximum accountability, a tax should thus *not* be exportable to non-residents.

Assignment of tax functions

The fiscal federalism literature assesses which tax powers are best assigned to which level of government. While the chief concern is with finding which tax is best collected at each level following goals of efficiency and equity, recent scholars of fiscal federalism have paid increasing attention to the effects of different tax assignments on subnational government accountability. While, again, “accountability” often refers to financial accountability and a check on spending or overspending, many of the concepts and ideas overlap with a wider definition of the term used here as defined in Chapter 1.

Several authors note that while devolving tax powers to local governments has the potential to make local governments more accountable, this is conditional on the tax powers and functions assigned to the local government (E. Ahmad et al., 2015; Bahl & Bird, 2008b; de la Cruz et al., 2011). In particular, “All the accountability virtues of subnational taxation depend on local governments both having the authority to decide how much revenue they raise and being openly responsible to their own citizens for doing so” (Bahl & Bird, 2008a:8). They go on to say that what is needed is *responsibility at the margin* for financing the expenditures for which they are politically responsible. The most important function is being able to decide the tax rate. Bahl and Bird (2008) also more generally emphasise the importance of local autonomy in order to make tax decentralisation effective for enhancing accountability. “Unless subnational governments are given some degree of freedom with respect to local revenues, including the freedom to make mistakes (for which they are accountable to their citizens), the development of responsible and responsive subnational governments is likely to remain an unattainable mirage” (Bahl and Bird, 2008: 10).

Another factor often mentioned in the fiscal federalism literature is that the tax and transfer system and fiscal policy cannot allow for soft budget constraints. Several authors in particular stress the negative effects of bailouts by the central government (Rodden et al., 2003; Ter-Minassian, 2015, 1997), incentivising waste and splurging on expenditures that do not link to the common good.

A final point is the need for clarity of responsibilities between levels of government (E. Ahmad, 2010; Cornelius, Eisenstadt, & Hindley, 1999). If the subjects are unsure about which of the rulers (i.e. levels of government) are responsible for what, it is difficult for them to judge or respond in a way that taxation and accountability can be linked.

2.4 Research questions and key considerations for the local context

So far in this chapter, I have taken apart the taxation-accountability relationship, discussing the approach taken, the key actors involved, and several more of its pieces regarding the causal pathway and context. I now bring these pieces together and present the research questions to be addressed in this dissertation, as well as the hypotheses that I aim to test. I also briefly introduce the methods used to do so.

The principle research questions

The main research question is whether or not there is a positive relationship between taxation and accountability at the local government level in Mexico, and in particular how far one can make causal claims about taxation (fiscal autonomy and tax revenue needs) *leading to* increased accountability.

Second, what is the causal pathway? This entails a variety of sub-questions about the mechanism through which taxation might lead to accountability. Following the distinctions made in Section 2.1, I ask whether tax revenue needs spark the local government to tax coercively, to enter into consensual tax bargaining, or to drop taxation altogether. If tax bargaining occurs, what form does it take: explicit or implicit agreements? Next, is taxation more likely to lead to greater accountability through the short path (simultaneously with a minimal role for residents) or the long path (with a

time delay between taxation and accountability and a greater involvement of residents)?

Third, what obstacles stand in the way of the link from occurring? Here it is important to examine the context. I consider the intergovernmental framework surrounding local governments. How do its powers, compared to those of other levels of government, impede the relationship? How does the role of other actors involved (intermediaries or third party actors) affect the relationship? I then explore the claim that a context of democracy is required for the taxation-accountability relationship to work. This has been put forth in the fiscal federalism literature, as mentioned in Section 2.3. Finally, I consider the tax type. This involves finding which the most important taxes are at the local government level and what their properties are. In particular, is the tax visible and salient? Does it adhere to the benefit principle? Does it tax mobile assets? Also, how are tax functions distributed between different levels of government?

The empirical work in this dissertation is separated into two parts: a quantitative part (Chapters 4 and 5) and a qualitative part (Chapters 6, 7, and 8). Quantitative regression analysis is the method used to explore correlations and look for evidence of possible causation leading from taxation to accountability. I also use quantitative tools to make attempts at answering questions about the pathway, context of democracy and tax type. While a large-N analysis is useful for finding broad correlations, I rely on qualitative field research to get closer to more nuanced answers about the causal mechanisms, processes and contextual factors. Each of the two parts begins with a more detailed discussion of the methodology and research strategy taken.

Key considerations for local level analysis

In this subsection, I present a more general framework for local level analysis of taxation-accountability linkages and what it needs to entail. I argue that the key considerations to look at in asking if taxation leads to accountability are the degree of revenue dependence, the degree of tax powers local governments have, and the degree of their power to benefit residents and to carry out their part of mutually beneficial tax agreements.

Degree of revenue dependence in an intergovernmental tax and transfer system

The taxation-accountability linkages require that local governments be dependent on tax revenues. It is this dependence that sparks incentives to engage in a bargain with (potential) taxpayers. However, strong dependence on taxation may be more difficult to attain at the local government level than at the national level. Just as national level governments in developing countries have alternative sources of revenues to tax revenues, notably natural resource rents, foreign aid, or foreign loans etc., that hamper dependence on taxation, local governments also have other revenue alternatives. Local governments are usually financed to an even greater extent through sources other than taxation.

Given that tax revenues and other “own revenues” do not usually suffice to pay for all the services that local governments are responsible for, they tend to be financed through some combination of fiscal transfers from the central government and own revenues. In so many developing countries, decentralization processes have expanded spending powers to subnational governments without a corresponding expansion of own revenue raising powers, the so-called vertical imbalance between expenditures and revenues (Bahl and Bird, 2008: 11). Transfer dependence is high and local tax-to-GDP ratios are notoriously low in almost all developing countries. The Philippines, Colombia and Brazil are notable exceptions where the ratio of taxes to local government revenue is over 30% (Bahl and Bird, 2008: 5).

Raising revenues through taxation is also associated with political costs for subnational governments. While own revenues give local governments independence from the centre, they are more costly to collect, both economically (because of the administrative costs they imply) and politically (imposing taxes is unpopular among the electorate), the latter particularly if the local leaders are popularly elected in a context of electoral competition. Local taxation may also drive out residents or business or discourage settlement in the specific jurisdiction. It is argued that tax competition is more likely at the local level because it is easier for residents to move from one local jurisdiction to

another, “voting with their feet”, than it is to move between countries (Tiebout, 1956; Salmon 1986).

Between receiving transfers from the central government and raising taxes, subnational governments may thus prefer receiving transfers as a source of revenue than bothering with tax revenues. In receiving transfers, subnational governments draw from the common pool and can free ride on the tax effort of others. Several authors have shown empirically how transfers “crowd out” taxation (Cabrero Mendoza, 1995; Raich Portman, 2004). Central governments have also done their part to keep taxes centralised. Maintaining power over revenue sources and giving out (often earmarked) transfers allows the central government to maintain control over subnational governments (E. Ahmad & Brosio, 2008a, 2008b).

However, the extent to which tax dependence is created is largely influenced by the exact tax and transfer system. Transfers to subnational governments are typically set by a formula that comprises a series of weights for different criteria, including economic and demographic characteristics, such as income and population. The transfer formula can encourage or discourage tax dependence. When transfer formulas include tax effort as a criterion, allowing local governments to retain a bonus for the revenues they collect at the margin in the form of additional transfers, this encourages local tax effort and tax dependence, as the more they increase their tax collection, the more transfers they will receive. However, central governments often attempt to correct horizontal imbalances by allocating more transfers to poorer regions who are unable to raise as many own revenues. This may produce the opposite effect, destroying any dependence by the local government on own revenues.

Revenue dependence is also hampered when local governments can pass their debts on to the next administration, or when they can expect bailouts from the central government or borrow easily from the market (Burki, Perry, & Dillinger, 1999; Haggard & Webb, 2004; Rodden et al., 2003). It is thus important to view the tax and transfer system as a whole.

Degree of power to tax

The binary model outlined above assumes that taxpayers pay taxes directly to the ruler. Yet raising tax revenues requires a row of different functions and the rights and obligations for each can be (and with regard to local taxes usually are) split between different levels of government and sometimes third party actors (Bahl and Bird 2008a: 7). These rights and obligations include introducing new taxes, determining and administering the tax base, deciding on the tax rate, assessing the tax imposed on the taxpayers, enforcing the tax, and keeping the revenues. Even when a tax is considered a “local tax”, the functions of the local government tend to be shared or split between levels of government and can be further split with one level making the decision but requiring the approval of another level. Freedom of the local government to determine, for instance, the base and rate may also be limited in bands or set by guidelines (E. Ahmad & Brosio, 2008a).

This is a limitation because if the local government is not seen to be the one who is politically responsible for any changes in the tax obligations imposed on the residents, it becomes more difficult to establish a link between taxation and accountability. Clarity of responsibilities and adequate information are also needed to establish that link (E. Ahmad, 2010).

Which functions are most important for allowing taxation-accountability linkages to take hold and why? According to Bahl and Bird (2008:10), “unless local governments have some significant degree of freedom to alter the level and composition of their revenues, neither local autonomy nor local accountability is meaningful”. They expand saying that “some degree of rate flexibility with respect to a significant component of the local revenues seems essential if a tax is to be both adequately responsive to local needs and decisions and an instrument to make local leaders more accountable to their citizens.”

Who collects the tax, and who therefore is in direct contact with the taxpayers, is also important (Moore, forthcoming). While tax intermediaries are more rare at the local level than at the national level (Moore, forthcoming), tax farming is common:

governments assign a private third party the task of collection in return for retaining a part of the revenues. Tax collection organisations may “enjoy considerable legal coercive power over citizens” (Moore forthcoming). When there are third party tax collection agencies, local residents may strike deals with the agencies but not with the local government. For example, Fjeldstad (2001b) explains how overly enthusiastic tax enforcement through an independent tax collection agency, separate from the local government, led to brutally violent, coercive collection in Tanzania.

Degree of power to negotiate in tax bargaining process

For the taxation-accountability relationship to take hold, local governments need to be able to have some degree of power to respond to demands of the residents, affect expenditures, or otherwise credibly follow through on a tax agreement with its residents. However, in a multi-tiered context, local governments are usually limited in their decision-making powers by higher levels of government. Roles and responsibilities also vary greatly between countries (King, 2007). While some have a substantial degree of autonomy over specific sectors, others are mere agents of higher levels of government. This means that local governments may have little power to affect large projects that make a difference to people’s lives.

Furthermore, local governments do not tend to have exclusive decision-making power even over their own “subnational expenditures”. Rights and responsibilities over different functions and sectors are divided between different levels of government. The use of the revenues may also be earmarked for specific purposes. This again limits the manoeuvrability by the local government to respond to needs and demands of its residents (Díaz-Cayeros & Martínez-Uriarte, 1997).

Beyond constitutional or contractual division of functions and responsibilities, local governments may also be constrained in their decision-making powers because of their dependence on others (both higher tiers of government and non-governmental third party actors) for re-election, future career trajectories, and funding. In a context of popularly elected local leaders, for instance, aspiring and incumbent mayors may be dependent on the residents of the local jurisdiction to be elected. Yet they may also be

dependent on their (local or national) political party to be selected onto party lists for positions in the local executive as well as for future career opportunities. Candidates and incumbents may also receive funds from their party (which may be organised at the local or national level), from special interest groups (such as business elites, property owners, construction companies, criminal organisations or other third parties), both in the run-up to the election and during their administration. These funds may be tied to favours or predetermined policies. The local executive may feel pressure to cater to the demands of either of these. All of this limits the scope of decisions and the ability to offer concessions to residents in a tax agreement.

Conclusion

In this chapter I have provided a framework through which to view the linkages between taxation and accountability at the local government level. Following the literature, I model the linkages as involving two primary actors: rulers and their subjects. However, I highlight that it is important to specify who exactly these key actors are and how other actors influence the relationship.

Expanding on the causal mechanisms that link taxation and accountability, I emphasised that taxation as a causal variable needs to be regarded in a wider context of other variables that affect the incentives of the local government to be accountable. Having considered various explanations that link taxation to accountability in Chapter 1, I have made a distinction in Section 2.2 between two specific causal mechanisms: a short and a long path towards greater accountability. Both involve tax bargaining as an intermediate step in a multi-stage process. I distinguished two forms of tax bargaining: direct explicit tax bargaining and more subtle, implicit tax agreements between the local government and local residents.

However, these incentive effects may *not* lead to a rise in accountability but instead to a rise in tax intake with no corresponding rise in accountability or in a failure to increase

the tax intake altogether. The outcomes depend on several contextual factors including the autonomy of the local government, the context of democracy, the distribution of tax functions, and the tax type.

The most important difference to the national level is that analysis of taxation-accountability relationships at the local level are complicated by intergovernmental relations. It is necessary to assess how the local government fits into a wider arrangement of powers and functions in order to be able to predict the strength of taxation-accountability linkages. By modelling accountability relations as being determined largely by the design of intergovernmental relations, I drew largely on the literature on fiscal federalism in an attempt to reconcile this strand of literature with the political science literature on taxation-accountability linkages.

I have also presented the research questions, which can be summarised as follows:

1. Is there a (causal) relationship between taxation and accountability?
2. What is the causal pathway?
 - a. Does pressure to raise revenues lead to coercive taxation, consensual taxation or no taxation?
 - b. What form does the tax agreement take (explicit or implicit)?
 - c. What pathway is followed (the short or long path)?
3. What contextual factors affect the relationship?
 - a. Obstacles: what obstacles might prevent the relationship from working?
 - b. Context of democracy: is the link stronger in a context of democracy?
 - c. Tax type: in how far are typical local taxes conducive to the relationship?

Chapter 3: The context around local governments in Mexico

This chapter has three main purposes. The first is to give an overview of the institutional structure of Mexican municipalities and the intergovernmental framework in which they operate. This institutional context surrounding the municipalities, the extent of their local autonomy, revenue dependence, and tax handles available to them should give a preliminary sense of what can be expected from local taxation-accountability linkages in Mexico. The second purpose is to show the evolution of tax revenues and accountability over the time period under study in the quantitative part of this thesis (1989-2009): there has been significant variation in both tax revenues and accountability over time and there is great heterogeneity among municipalities, making the Mexican case particularly interesting for studying taxation-accountability linkages. The third purpose is to set the context for the fieldwork, the results of which are presented in the qualitative analysis in Chapters 6-8. Fieldwork was conducted in 2012-2013 during a time in which municipalities were under significant pressure to increase their tax revenue. This is because their main other source of revenue, central government transfers, had steadily diminished in the wake of a global financial crisis and dropping oil production, while debt was consistently on the rise.

This chapter is organised into four sections. In Section 3.1 I show how Mexican municipalities fit into a three-tiered federal system and how its powers have changed over time. I review Mexico's processes of decentralisation and discuss the degree of local autonomy. In Section 3.2 I review the structure and evolution of Mexican municipalities' tax revenues. This includes a synopsis of Mexico's intergovernmental tax and transfer system and a more detailed background on the most important municipal taxes: the property tax and water charges. In the third section I expound on the untapped revenue potential of Mexican municipalities and how recent events have incentivised intensified tax effort. Section 3.4 paints a picture of Mexico's democratic transition during the last few decades. This gives an idea about the changes in accountable governance in the country as a whole, both through demands from citizens

and mandates from above. I also review some of the theories that account for differences in accountability across municipalities.

Throughout this chapter I try to show how the Mexican case is typical in the universe of cases and highlight where it is unique. I also show how the particular context of the Mexican case fits into the theoretical framework. That is, I lay out the extent to which the Mexican context is conducive for sparking taxation-accountability linkages subsuming Mexico's institutional context under the principles laid out in the theoretical framework in Chapter 2. The data for this chapter is based on secondary literature, documentary evidence such as fiscal data and legal documents, and key-informant field interviews.

3.1 Municipalities: the third tier of Government

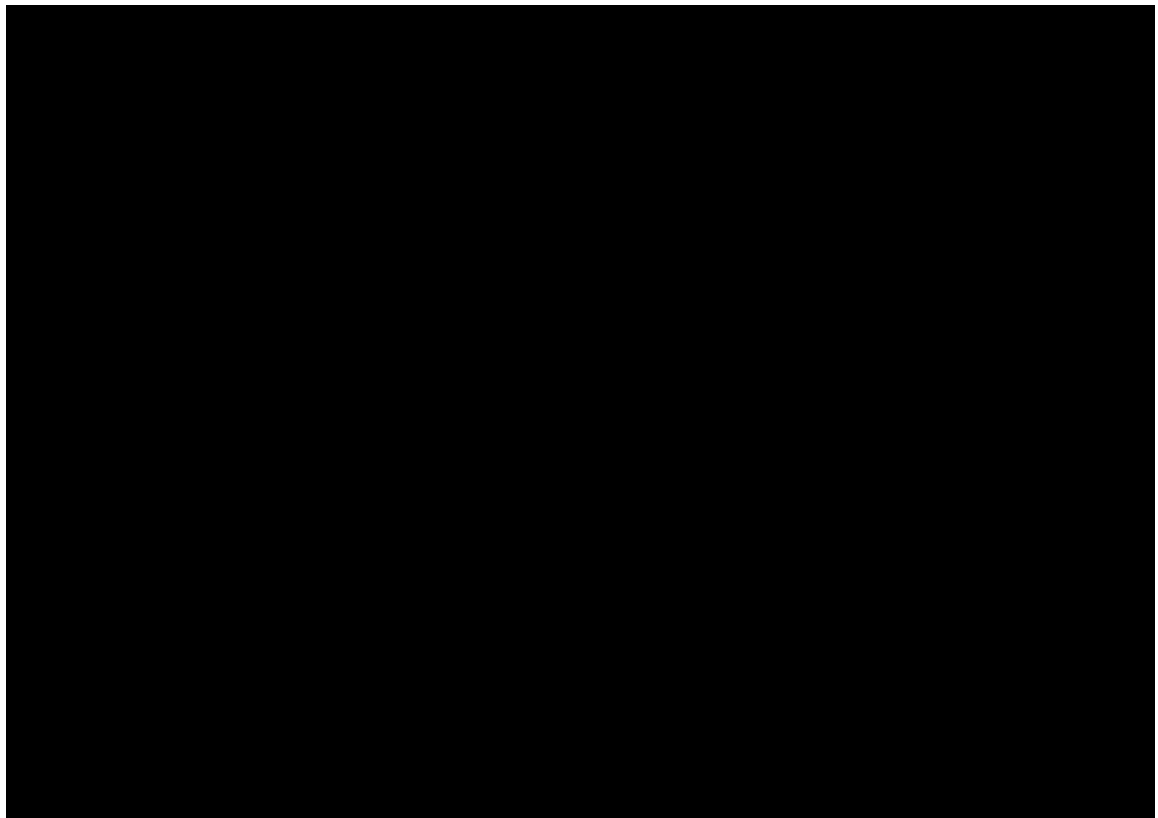
In this section, I review the institutional framework of local government (municipalities)² in Mexico. I begin with an illustration of the diverse panorama of Mexican municipalities and their structure. I then show how constitutional amendments have moved Mexican municipalities from being agents of higher levels of government into a level of government in its own right. This involves an overview of municipal powers and functions and of the processes of decentralisation over the past few decades. I end with an assessment of local government autonomy and intergovernmental relationships.

Municipalities in Mexico are a construct of the Spanish colonists first introduced by the conquistador Hernán Cortés in 1519. Their importance, however, was greatly reduced during most of the 20th century as the Mexican state was increasingly consolidated and centralised. The Constitution of 1917, which followed the Mexican Revolution and is still

² While “*local*” in Mexico refers to the state level, this text uses “local” interchangeably with “municipal”, the third tier of government. “Subnational” refers to both state and municipal tiers of government.

in force today in an amended form, separated the government into two legal orders: the federation and the states. The states in turn were to use municipalities as mere organisational and administrative agents. For most of the century, municipal mayors “belonged” to state governors (Grindle, 2007:25). Only in the 1980s and 1990s did decentralisation reforms bring increasing powers and responsibilities to the municipal level, eventually raising their status to a third legal order of government. Mexico is now considered a federal country with three tiers of government: federal, state and municipal. There are 32 federal entities (31 states and one federal district) as shown in Figure 4 and approximately 2450 municipalities as shown in Figure 5.

Figure 4 Mexico’s federal entities

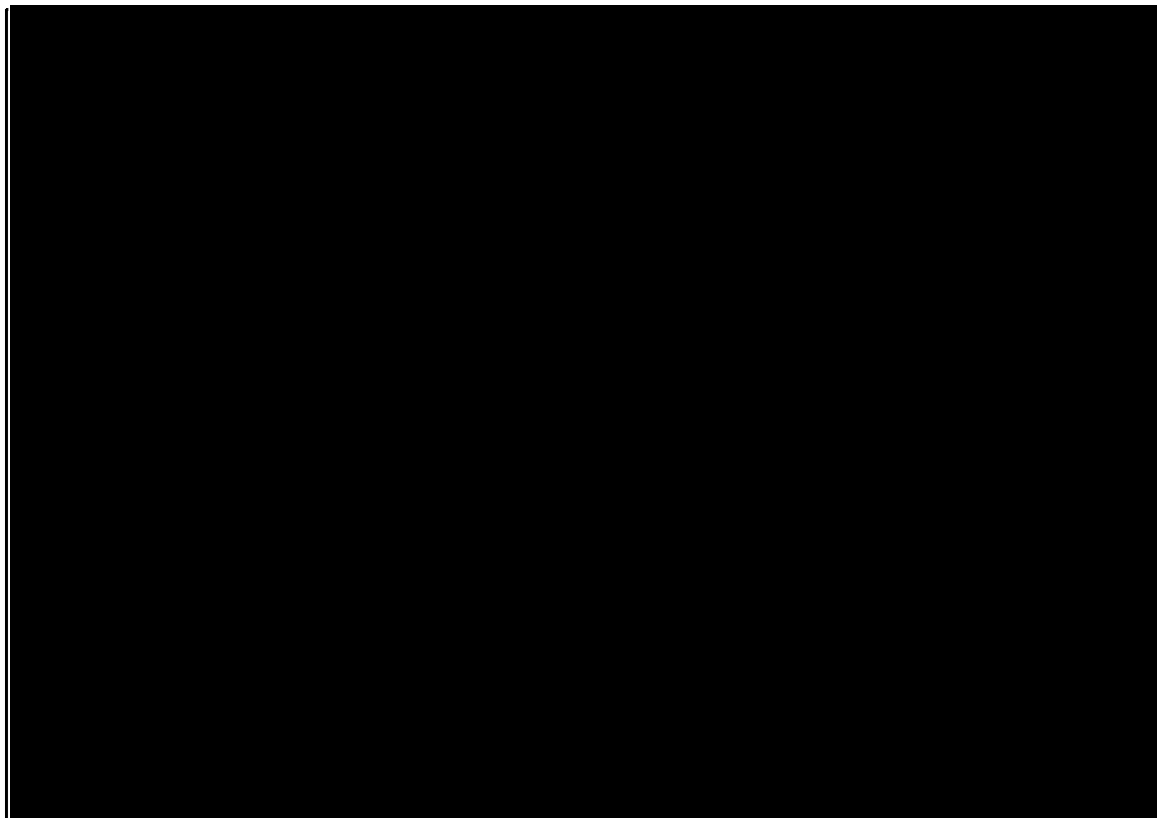


Source: <http://www.mapasparacolorear.com/mexico/mapa-mexico.php>

The municipalities are highly heterogeneous in size and level of development. On average one municipality has around 40,000 inhabitants but there is great variation in their populations, ranging from 102 inhabitants to 1.8 million (INEGI; Gonzalez Anaya and Revilla, 2012). Geographically, their size varies from a municipality in Tlaxcala of

only 4.3 square kilometres to one in Baja California that spans 52,000 square kilometres (Grindle, 2007:37). Some municipalities have a human development index (HDI) comparable to that of Sierra Leone and others to that of Portugal (Gonzalez Anaya & Revilla, 2012; interview 89; PNUD, 2014; UNDP, 2014). Mexico in general, while a middle income country in terms of its aggregate GDP has tremendous regional disparities and its GINI coefficient is high at 47.2 (WB, 2014). The histogram in Figure 6 below shows how average annual per capita income in a municipality varies from under 1500 to over 33,800 pesos according to UNDP data for 2005.

Figure 5 Mexico's municipalities

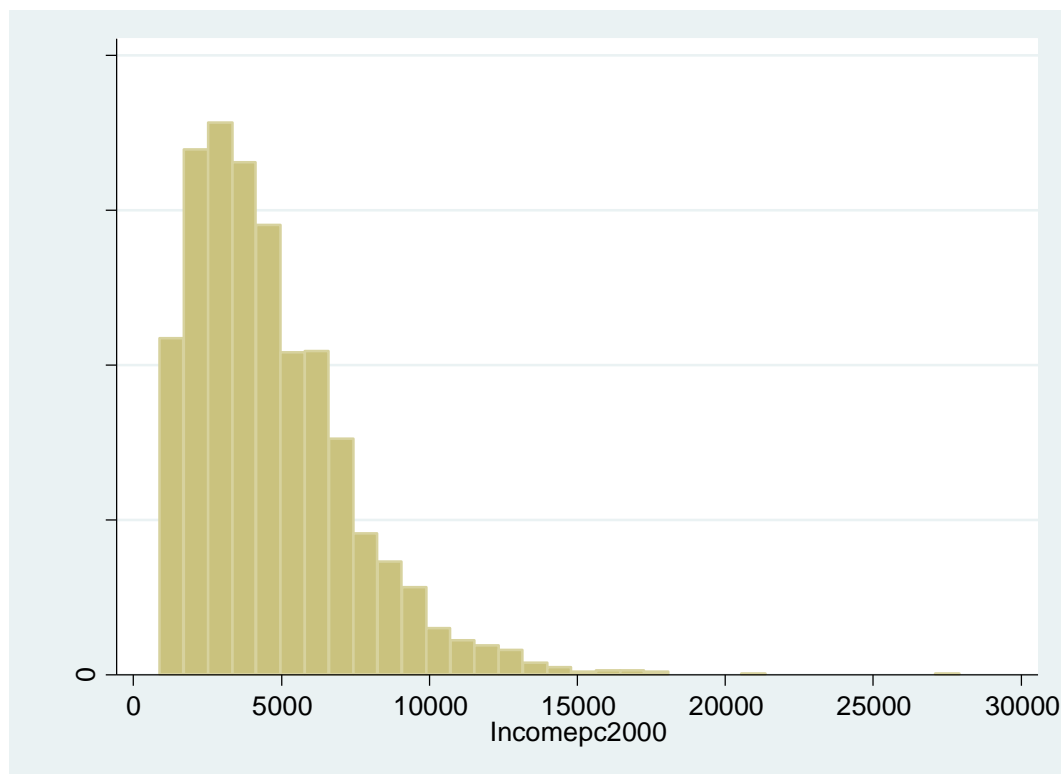


Source: <http://www.mapasparacolorear.com/mexico/mapa-mexico.php>

Municipal budgets range from approximately \$4.2 million to \$4.1 billion, a ratio of 1:1000 (Gonzalez Anaya & Revilla, 2012). On one side of the spectrum are large cities or municipalities that are part of even larger megacities. On the other side of the spectrum are small and poorly equipped rural municipalities. While over 75% of the population live in urban areas (WB, 2014), the vast majority of municipalities are rural (Rowland, 2007). The former revenue director of the Federal Ministry of Finance was exaggerating

when he said that some of the smaller local governments consisted of nothing more than “a couple of guys and a telephone” (interview 90), but the description is not far off. The President of the Association of Local Authorities in Mexico (AALMAC) claims that over half of municipalities can hardly cover the basics let alone invest in public works (Quezada Contreras, 2013). Many of the small municipalities were created for reasons of self-determination more than representing any agglomeration of people or economic activity.

Figure 6 Histogram of average per capita income by municipality



Source: PNUD, 2005

The structure of the local government is defined in Article 115 of the Constitution of 1917. The local council or *cabildo* is the highest authority of the municipal government or *ayuntamiento*. It is led by the mayor (*presidente municipal*) and councillors (comprising comptrollers (*síndacos*) and other councillors (*regidores*)). Local residents elect the mayor and councillors in popular elections from party lists in single-constituency elections. Their term periods are typically three years and consecutive re-election is prohibited. The composition of the *cabildo* is usually determined by

proportional representation but the mayor and members of her running team/party normally occupy over half of the seats in the local council, granting minimal presence of opposition parties. This institutional construct gives the mayor considerable power as it is difficult to overturn any of the ruling party's decisions: it is regarded a "strong-mayor" system (Moreno Jaimes, 2007, 2008; Rowland, 2007). In practice, the mayor tends to have particularly strong executive powers within municipal management.

The mayor appoints department directors within the local government (such as for treasury, public works, policing, transparency, etc.) who report directly to her (Rowland, 2007:202). While there is a professionalised career civil service at the national level (*Ley del Servicio Profesional de Carrera*), there is none at the municipal level. The existence of a professionalised bureaucracy that remains across administrations is therefore rare. When the mayor changes, there is a tendency for her to re-staff the administration even beyond the department directors. There is a high turn-over of municipal employees often implying an inability to accumulate expertise.

The municipal government tends to be the only and most powerful local body at the local level. Only in some instances do shared landholding structures (*ejidos*) in rural and semi-rural areas, or agencies or committees sporadically established by national or state programs compete with the local government in terms of influence over local issues and governmental powers (Rowland 2007).

An exception to the general structure laid out above is found in a minority of mostly small, rural municipalities in the south of Mexico with predominantly indigenous populations in which local governments apply a different governing system involving community councils or councils of elders, shared responsibility for service delivery among members of the community, and a different method of electing leaders through the so-called uses and customs system (*usos y costumbres*) (Díaz-Cayeros et al., 2014).

Decentralisation

A Constitutional Amendment that entered into force in 1983 on the initiative of President Miguel de la Madrid (1982-1988) gave municipalities greater budgeting and

spending autonomy. Prior to decentralisation reforms, most public revenues and expenditures were centralised. The amendment passed the control of all property related taxes (the property tax as well as other taxes and fees based on changes in land valuation including fractioning, division, merging, transfer of ownership, and improvements) to the municipalities. Prior to 1983, property taxes had been divided between all three levels of government: federal government taxed the acquisition of property, states collected the property tax (*predial*), and municipalities were left with fees and licences for construction (Loza, 2006). Granting all property based taxes to the municipalities gave them an own revenue source of potentially great significance for further local autonomy.

The amendment also gave municipalities regulatory power and allowed them to freely administer their own revenues and to prepare their own budgets (although they required approval by the states). The constitutional amendment also granted municipalities authority over public services including water, sewage, public lighting, cemeteries, public markets, slaughterhouses, garbage collection, parks and gardens, public security, transit, street cleaning, roads, environment, zoning, urban development, and land use planning, and granting construction permits and licenses.

Additional amendments in the late 1980's and 1990's further clarified expenditure powers and expanded municipal responsibilities, deleting references to states and emphasising municipalities' exclusive access to fees and taxes for the services they provide. Faculties and responsibilities not explicitly assigned to the municipalities by law are the domain of the state or federal government. However, the Constitution stipulates shared responsibility over other tasks between municipalities and other levels of government including in primary education and public security. For instance, while states are principally responsible for health and education, municipalities are responsible for overseeing primary education and school building construction. All three levels of government are responsible for poverty alleviation and the implementation of social programmes. Responsibilities for spending on infrastructure and transportation also overlap across all three layers of government (Sánchez, 2013).

The division of responsibilities between levels of government is not always straightforward, as is common in multi-tiered federal systems. Even the division of responsibilities explicitly assigned to municipalities is not always clear (such as what is covered by “environment”) and shared responsibilities across the three levels of government provide even greater scope for duplication of effort, turf wars, and avoidance of responsibility by all levels. In fact, state governments have often usurped municipal domains (Rowland, 2007). With a lack of clarity of responsibilities, local residents may therefore have difficulty in distinguishing which level of government has performed its duties well or poorly (E. Ahmad, 2010). For the Mexican case, while Cleary (2010) argues that local residents are very well aware of the main functions of local government in Mexico, Chong et al. (2010) use evidence from surveys conducted in three states (Jalisco, Morelos and Tabasco) to show that only about half of respondents correctly identified municipalities as responsible for such key functions as provision of clean water, sewage, and public lighting and many instead marked the state governor or president as primarily responsible.

It should be noted that the Constitution does not differentiate rural and urban municipalities or separate them by size: the Constitution grants all municipalities the same faculties and responsibilities. It does, however, make special provisions for the Federal District, which is neither a state nor a municipality, but no longer covers even half of the population of the Mexico City Metropolitan Area that has spilled across its boundaries into other states and municipalities (Rowland 2007).

To fulfil their newly defined responsibilities, local governments received increasing federal transfers since the 1980's. The average amount of revenue controlled by the 55 largest municipalities more than doubled in real terms between 1976 and 1994 (Rowland, 1998). Total municipal expenditures then grew by 115% in real terms between 2000-2009 (Gonzalez Anaya and Revilla, 2012). In all municipalities the transfer amounts have held an upward trajectory, constituting an increasing part of total local revenues. More on the evolution of local transfers and other revenues will follow in the next section (Section 3.2).

Several programs and policies were put in place to strengthen local governments. Under President Carlos Salinas de Gortari (1988-1994), an organisation was set up to strengthen the administrative capacity of local governments (what is now called the *Instituto Nacional para el Federalismo* - INAFED). President Ernesto Zedillo's (1994-2000) strong push for decentralisation in his "New Federalism" agenda also included initiatives to strengthen local government. Capacity-building initiatives were again maintained by President Vicente Fox (2000-2006) and Felipe Calderon (2006-2012).

Autonomy with limitations at the local government level

Local governments in Mexico, labelled "free" (*libres*) in the Constitution of 1917, have become a third legal order of government and experienced a great expansion in their importance for the lives of Mexicans. Yet municipalities in Mexico remain limited in their autonomy to make independent decisions and to affect the development of their jurisdictions.

Combined expenditures of all municipalities are only 25% that of states and about 10% that of the federal government. Only a small proportion of the tax revenue paid by Mexicans are local taxes. The most important taxes (value-added and income taxes) are collected by the federal level. Tax revenues of states and municipalities combined accounted for about 3% of total tax revenues and only 0.7% of GDP in 2009 (Revilla, 2013; Sánchez, 2013).

An increase in transfers does not necessarily increase the local governments' decision-making power. As Rowland (2007) writes, "the rise in federal government transfers means a larger proportion of funds with political and policy strings attached". Ear-marked transfers in particular, which began to rise in the second half of the 1990's limit local governments' ability to make decisions about how it uses the funds and how it responds to local preferences rather than to central government mandates. However, while in theory the specific-purpose transfers are to be spent on government mandated items, the former vice minister of revenues and his deputy write that in practice conditionality is weak and "it is generally known that subnationals have leeway in using these transfers" (Gonzalez Anaya and Revilla, 2012:26). Also, given that public

accounting is not homogenised with different local governments using different methodologies and classifications, expenditures are opaque, enabling additional discretion in the use of transferred funds.

According to Snyder (1999:300), “municipal presidents, although formally elected, were virtually ‘employees’ of the governor, chosen by him and removable at his discretion” and pinpoints the early 1980’s as when this structure began to crack. However, states still maintained considerable power over municipalities. The constitution also stipulates that state congresses can dissolve municipal governments (though this has rarely occurred in practice), that they must approve municipalities’ budget proposals, and that they can step in and take over municipal functions if a municipality is unable to handle them on their own (Rolwand, 2007).

The tax powers are also not absolute. While the municipal governments can propose new taxes and tax rates, these changes require the approval of the state congress. This limits the local government’s political responsibility for the tax obligations it imposes. The short term limits and prohibition of consecutive re-election also limit the power of municipalities. They are unlikely to invest in and complete projects with long-term gains. Furthermore, the federal government strongly regulates the capacity of municipalities to borrow money (more on this in the next section).

The short term periods of three years (compared to the state governors’ terms of six years) and the prohibition of consecutive re-election don’t leave a lot of time to plan and follow through with projects and programs. It creates a high discount rate that discourages investment in the future. It is also difficult to learn the skills of the job in such a short time: the learning process takes time.

In fact, the deliberate intention of limiting local governments’ power may be what has kept local term periods so short. The previous government’s assistant to the Vice Minister (Revenues) of the Federal Ministry of Finance considered it impassable to revoke the prohibition of re-election of mayors, stating as his reason that the state congresses (who would have to approve any constitutional amendment by a two-thirds majority) would never agree to it. He explained that the states are quite content to keep

mayors' powers in check so that they don't threaten their own power (interview 89). With more time in power, mayors would be able to accumulate political capital through policy-making accomplishments and patronage (Montero & Samuels, 2004). It was only under the PRI government that came to power again in 2012 that this was attempted and passed as they had a larger majority and bigger political clout. The change is due to enter into force in 2018.

Yet the reluctance on the part of higher levels of government to expand local government autonomy stems from a number of considerations beyond political competition. A prerogative of the federal ministry is to prevent overspending at the local level to lead to a fiscal crisis and subsequent macroeconomic problems. There has been a lingering fear of fiscal deficits, particularly after the Tequila Crisis in 1994-95, leading the federal government to impose tightened regulations on local governments' borrowing and hold tight reigns in terms of their financial decision-making (E. Ahmad & Brosio, 2008b; Revilla, 2013).

When subnational governments are unable to meet their debt payment obligations, this can create negative spill overs for the federal government and other subnational governments. Even if it is not responsible, the federal government may face the political consequences of the local government having to cut local services or increase taxes (Trillo, Cayeros, & González, 2002). If the local government defaults on its debt, this could affect access to credit for other municipalities and it could affect the financial system. There is also a distrust of local governments to use public funds appropriately and effectively, given many instances of poor capacity and misuse of funds (further discussed in Section 3.4) which again has made higher levels of government wary of releasing too much power and control to local governments.

3.2 Overview and evolution of municipal level revenues in Mexico

I now turn to a more in-depth discussion on local revenues and the inter-governmental tax and transfers system. Municipal governments use three broad sources of funding to finance their activities: (1) transfers, (2) own source revenues and (3) debt. The current system of intergovernmental tax and transfers arrangements was introduced in 1980 through the creation of the National Fiscal Coordination System (SNCF) which emerged as a pact between the states and the federal government. States voluntarily ceded their taxing powers to the federal government, which then introduced a centralised value-added tax and income tax, in exchange for a fraction of revenue-sharing federal grants (Gonzalez Anaya and Revilla, 2012). Transfers were increased to both states and municipalities and municipalities were also given increased tax powers.

Sources of Revenue

1. Transfers

Transfers, the greatest source of municipal revenues, are usually directed from the central government to the states. The states then distribute them on to the municipalities in their respective jurisdictions. While federal laws decide on the formulas that divide shared funds between states, it is the state congresses that generally decide how funds for their respective municipalities are distributed. They tend to create their own respective formulas which are usually codified in state laws but federal provisions demand that states must share revenues with municipalities, sometimes under specific guidelines (Courchene & Diaz-Cayeros, 2000).

The transfers can be divided into revenue sharing *participaciones*, and earmarked *aportaciones*, which are reserved for special purposes. *Participaciones* are non-earmarked and formula-based. They consist of various funds itemized in line item

(*ramo*) 28 of the federal budget. The allocation formula for *participaciones* (from the general fund of shares or *Fondo General de Participaciones*) has been adjusted over the years but broadly around 45% of the fund is to be divided between the states on an equal per capita basis and another 45% is based on the initial amounts that were transferred before the SNCF was introduced. Oil rich states traditionally received larger funds. The remainder is “compensation”, inversely related to the first two (Courchene & Diaz-Cayeros, 2000).

The *aportaciones* (consisting of *ramos* 26 and 33) are conditional special purpose grants. *Ramo 26* funds (once known as PRONASOL) are “social development funds”. They played an important role in the poverty alleviation program *Solidaridad* during President Salinas’ administration (1988-94) and according to Bruhn (1996) were highly discretionary and manipulated for electoral purposes (Courchene & Diaz-Cayeros, 2000; Harvey, 1999). In 1996 *Ramo 26* was increased for decentralisation and citizen participation programs but from 1998 most of the funds from *Ramo 26* were then shifted to *Ramo 33*, termed “federal grants for federal entities and municipalities” (Sour, 2004). It has been said that *Ramo 33* was introduced in 1998 by the PRI party to alleviate fiscal pressure on its constituents as it was losing its grip on power towards the end of the 1990’s (Moreno, 2003).

Ramo 33 funds are targeted (to states) to finance education and health and (to municipalities) to finance basic local infrastructure programs of local choosing. The main funds for municipalities are FAISM and FAFM. FAISM (Fund for contributions to municipal social infrastructure or *Fondo de aportaciones para la infraestructura social municipal*) is earmarked for basic social infrastructure. The fund is allocated to states using a formula based on poverty levels and other factors. States are required to pass funds on to municipalities based on similar criteria. FAFM (Fund for contributions to strengthen municipalities and the Federal District or *Fondo de aportaciones para el fortalecimiento de los Municipalidades y el DF*) is earmarked mainly to strengthen public security and repay debts (E. Ahmad & Brosio, 2008c).

2. Own revenue

Municipal own source revenues are those of most interest here. They predominantly comprise taxes and fees, but also include revenues from fines, sanctions, letting, leasing and renting.

Municipalities have limited decision-making power in terms of which taxes to levy. They may propose changes to rates or bases or the introduction of new taxes but this requires approval by the state congress (Castañeda & Pardinas, 2012). The two most important sources of municipal own revenues are the property tax (*impuesto predial*) and water charges (*derechos de agua*). These are discussed in greater detail below.

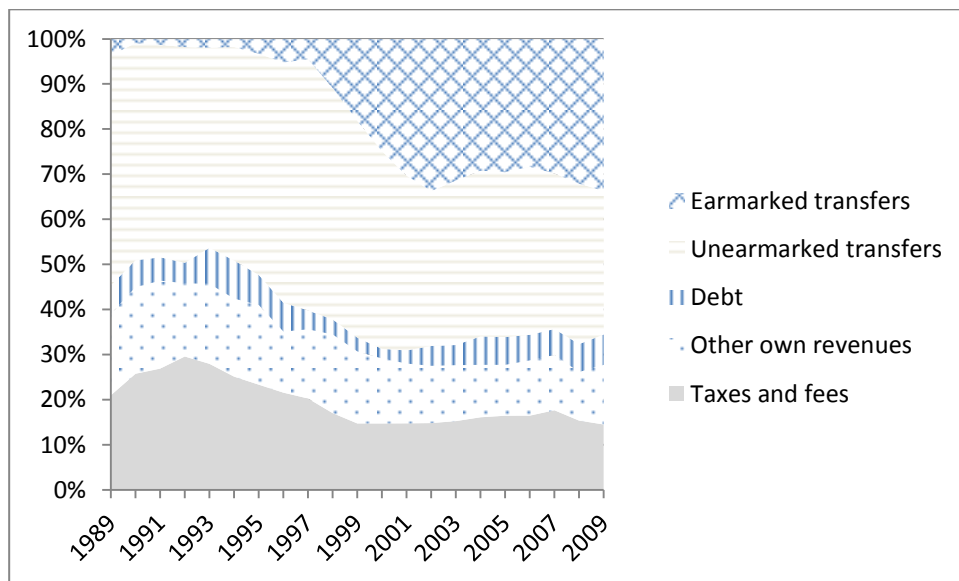
There is much variation over time in the importance of taxes and fees as a source of local government revenues as seen in Figure 7 further below. Before 1983, taxes and fees were the most important source of total municipal revenues. After that, federal transfers (*participaciones*) became increasingly important, leaving own revenues to make up only around half of local government revenues on average. From 1991 to 1994 this trend was reversed and powerful efforts were made by municipal governments to increase taxation; however, following the subnational financial crisis of 1995 these efforts were dropped and the federal government started a massive program of special purpose grants (*aportaciones*) to the lower tiers of government (Giugale & Webb, 2000). Federal transfers steadily increased with a change to the Fiscal Coordination Law in 1998 and the proportion of own revenues shrunk from almost 80% in the beginning of the 1990's to just over 30% in the 2000's (SHCP, 2008). Figure 7 shows the evolution of municipal revenues from 1989 to 2009.

Several scholars have shown that the rise in transfers has had a negative causal effect on municipal tax effort. Sour (2004) uses data from 155 Mexican urban municipalities and finds this negative effect especially in the largest municipalities of 1 million or more inhabitants. Raich-Portman (2004) and Canavire-Bacarreza and Zúñiga Espinoza (2010) also finds evidence of diminished tax effort following increased government transfers among municipalities in the states of Puebla and Sinaloa respectively. In an attempt to remedy this, in 2008 the federal government introduced economic efficiency criteria in

the revenue sharing formula that reward municipal tax effort (specifically intake of property taxes and water utility fees) with a greater share of *participaciones*.

While such incentives were introduced in a number of states, in only 6 states (40% of municipalities) does the tax effort criterion predominate in a way that it provides a real incentive to municipal leaders. In other states, it is rendered void or cancelled out by other criteria (Peña Ahumada & Wence Partida, 2011). The Federal District, for example, made notable strides in improving property tax revenues, experiencing an 18.7% increase between 2010 and 2011 (and also in improving revenues from water fees). However, it has experienced a decline in population over the same period as residents have moved outwards into surrounding municipalities outside of the limits of the Federal District (while often still commuting in for work), its reward in transfers was miniscule given that population has a greater weight in the transfer formula (interview 91).

Figure 7 Evolution of municipal revenue



Source: INEGI/SIMBAD

There is also great variation *across* municipalities in terms of tax revenues. As Moreno (2003:7) explains, this is explained to a great extent by the size of the economies of the respective municipalities but not entirely. Quintana Roo and Campeche, for example, are of a similar size and population but vary tremendously in terms of tax collection.

Campeche and Tamaulipas collect the same per capita revenues but Campeche's GDP is twice the size of Tamaulipas'. The ratio of tax revenues to total revenues in Mexico also varies enormously from 0.001% to 91% across municipalities and the range of average annual tax revenues per capita varies from 0.01 to 5206 pesos (SIMBAD, 2012). This is shown in Table 7 in Chapter 4.

3. Debt

The third source of finance is debt. Municipalities have been granted but limited access to credit and *participaciones* are generally used as collateral to securitise debt. Such prudential rules to prevent national fiscal crises have kept municipal debt low (E. Ahmad & Brosio, 2008c:10; Trillo et al., 2002), never exceeding 10%, until very recently in 2012-13 (Castañeda & Pardinás, 2012). However they also limit greater investments by the municipal governments through borrowing. More on the recent debt crisis is found in the section 2.4.

The main tax types

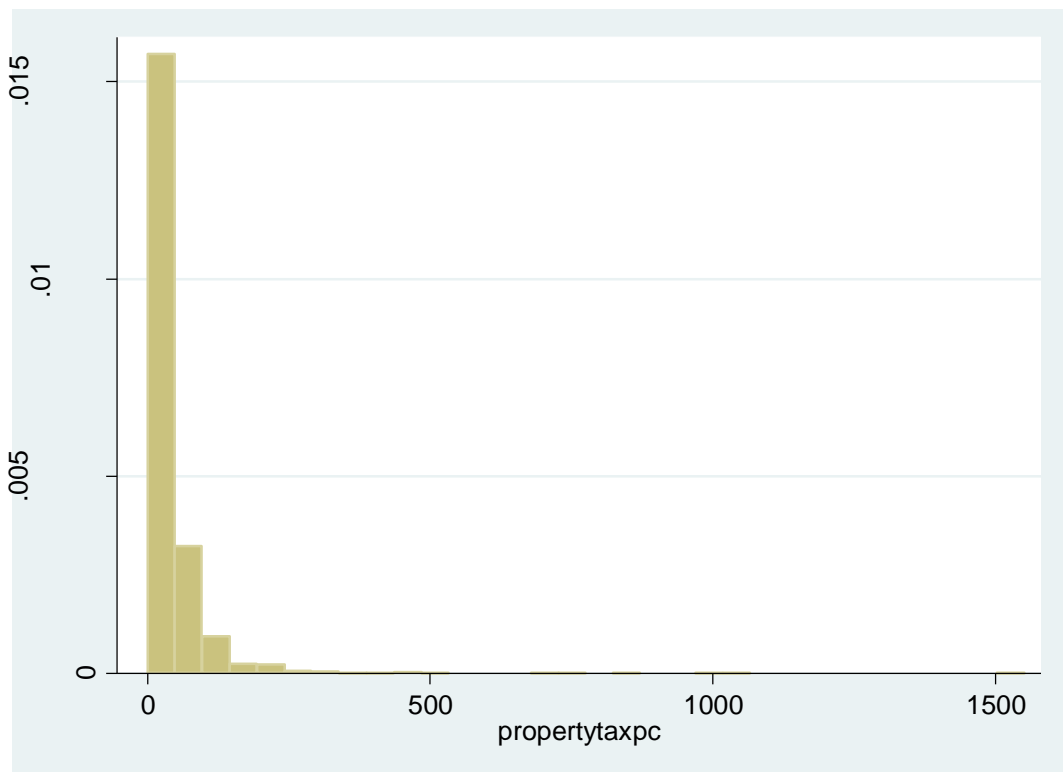
The most important municipal level own revenues in Mexico are the property tax (*impuesto predial*) and water charges (*derechos de agua*). I therefore give some background on these taxes, how the tax functions are distributed and their variation across municipalities. The effects of property tax will also be tested separately in the quantitative analysis.

1. The property tax

The property tax is applied on residential and commercial land and improvements (including buildings) through ad-valorem rates, with a few exceptions, notably Mexicali where only the land is taxed (site value taxation). It comprises around 60% of municipal tax revenues and 30% of own revenues on average (SIMBAD, 2012).

There is much variation among Mexico’s approximately 2,400 municipalities in terms of property tax intake as seen in Figure 8. Table 1 also shows this with data by state. The Federal District, for example, collects MX\$ 1,023 per person annually in property tax, while Tlaxcala, Chiapas and Oaxaca collect between MX\$ 45 and MX\$ 47 per person (SIMBAD, 2012). Over 520 of the municipalities (at least 22%) did not collect any property tax revenues at all (or at least did not report any) during 2011. In contrast, around 80% of the total property tax in Mexico is collected by just 100 municipalities (4%). The rest is spread out in between these extremes (SHCP, 2008).

Figure 8 Histogram of property tax per capita by municipality, 2000



Source: INEGI SIMBAD, 2005

The property tax assessment processes usually start with classifying land according to its location, amenities, use, and sometimes a comparative sales analysis. The valuation of each land plot and improvements is enshrined in the cadastre or property registry. The cadastre also specifies the location, physical characteristics, dimensions, value, and land use of land plots and identifies ownership, possession and other rights and

obligations connected to the plots, among other data (E. Ahmad et al., 2015). The cadastral values assigned to land plots and buildings are used to determine the property tax, the tax on acquisitions of property, construction fees and licenses, tax on works contracts, on improvements of property, etc., all of which correspond to municipality tax powers, according to Article 115 of the Constitution.

Municipalities can suggest property tax rates and value tables of land and improvements but the state congress then needs to approve these through State Revenue Acts and State Tax Codes. How the property valuation is determined and who has the authority to assess the tax varies between municipalities (Gonzalez Analaya and Revilla, 2012). According to the Constitution, the municipalities are in charge of administering the cadastre, collecting the tax, monitoring compliance and imposing sanctions. However, the Constitution also allows municipalities to enter into agreements with the States whereby the latter take charge of some of the functions related to property tax administration. In practice, many municipalities have opted to allow states to maintain control of the cadastre (E. Ahmad & Brosio, 2008b). Others, beginning with the largest municipalities, have taken over all functions themselves (Rowland, 1998). In around 10 states decentralized “autonomous” cadastral institutes have been created, though few if any of these operate under complete (administrative, technical, legal and financial) autonomy separate from the state government (Interview 9, Mexico City, February 2013). Also, a few municipalities have experimented with outsourcing collection to private firms in return for a commission (tax farming) (Interview 92).

Table 1 Property tax data by state, 2011

| | Property tax revenues (pesos) | Number of properties | Property tax revenue to properties | Population | Property tax revenue to population |
|----------------------------|--|---------------------------------|---|-------------------|---|
| TOTAL | 30,339,350,523 | 27,578 | 1,100,129 | 76,939,189 | 394 |
| Aguascalientes | 197,749,319 | 322 | 614,128 | 1,243,865 | 159 |
| Baja California | 937,195,243 | 856 | 1,094,854 | 3,320,259 | 282 |
| Baja California Sur | 301,744,468 | 176 | 1,714,457 | 697,611 | 433 |
| Campeche | 122,138,120 | 196 | 623,154 | 852,719 | 143 |
| Coahuila | 549,125,249 | 753 | 729,250 | 2,852,479 | 193 |
| Colima | 226,823,323 | 198 | 1,145,572 | 675,589 | 336 |
| Chiapas | 224,199,670 | 855 | 262,222 | 5,004,853 | 45 |
| Chihuahua | 1,151,427,620 | 917 | 1,255,646 | 3,478,181 | 331 |
| Durango | 195,372,024 | 388 | 503,536 | 1,671,288 | 117 |
| Federal District | 9,067,908,555 | 2,703 | 3,354,757 | 8,865,660 | 1023 |
| Guanajuato | 1,271,011,117 | 1,281 | 992,202 | 5,672,299 | 224 |
| Guerrero | 455,067,616 | 608 | 748,466 | 3,448,766 | 132 |
| Hidalgo | 275,830,241 | 612 | 450,703 | 2,763,875 | 100 |
| Jalisco | 2,130,990,553 | 1,960 | 1,087,240 | 7,578,608 | 281 |

| | | | | | |
|------------------------|---------------|-------|-----------|------------|-----|
| Mexico | 3,990,657,795 | 3,784 | 1,054,614 | 15,633,788 | 255 |
| Michoacán | 586,590,666 | 1,067 | 549,757 | 4,419,787 | 133 |
| Morelos | 349,934,845 | 485 | 721,515 | 1,824,843 | 192 |
| Nayarit | 156,432,701 | 295 | 530,280 | 1,122,323 | 139 |
| Nuevo Leon | 1,683,058,212 | 1,250 | 1,346,447 | 4,846,552 | 347 |
| Oaxaca | 173,837,826 | 693 | 250,848 | 3,873,609 | 45 |
| Puebla | 565,877,853 | 1,293 | 437,647 | 5,929,562 | 95 |
| Queretaro | 693,845,865 | 450 | 1,541,880 | 1,935,393 | 359 |
| Quintana Roo | 989,628,217 | 356 | 2,779,855 | 1,454,603 | 680 |
| San Luis Potosi | 326,989,246 | 547 | 597,787 | 2,644,781 | 124 |
| Sinaloa | 887,905,132 | 707 | 1,255,877 | 2,811,088 | 316 |
| Sonora | 739,656,208 | 697 | 1,061,200 | 2,766,046 | 267 |
| Tabasco | 197,176,956 | 494 | 399,144 | 2,317,554 | 85 |
| Tamaulipas | 580,219,250 | 845 | 686,650 | 3,386,493 | 171 |
| Tlaxcala | 57,470,833 | 301 | 190,933 | 1,218,843 | 47 |
| Veracruz | 729,433,229 | 1,645 | 443,424 | 7,788,294 | 94 |
| Yucatán | 253,448,032 | 478 | 530,226 | 2,022,956 | 125 |
| Zacatecas | 270,604,539 | 368 | 735,338 | 1,517,348 | 178 |

Sources: Population and GDP: Revenue Laws of the Federal Entities, 2013; Revenue data as presented by Federal Entities in 2012.

Given that real property is immovable, it is considered a tax that is low in mobility; that is, it allows different municipalities to set their own rates without leading to the magnitude of tax competition or relocation effects of other taxes such as the income tax or the VAT. Furthermore, it is considered a benefit tax as its value is (at least in part) a reflection of municipal services, such as street cleaning, garbage collection, road maintenance, and public lighting. This tax may be exportable to non-residents in cases where non-residents own much of the property in the jurisdiction. Given its large tourism sector, accounting for an estimated 7-8% of GDP since 1993, foreign owners and the tourism industry may own large amounts of properties in certain municipalities in Mexico. In fact, among the municipalities that account for the largest tax income are Los Cabos and Cancun, paid largely by foreign firms in the tourism sector (Gonzalez Anaya & Revilla, 2012).

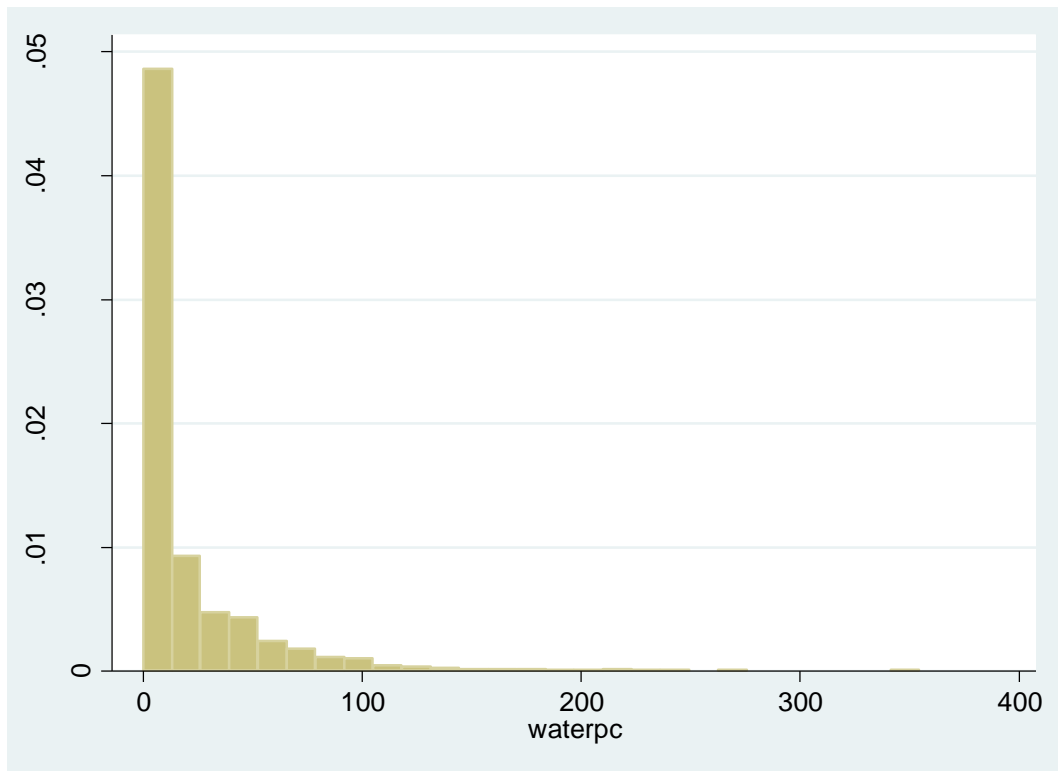
Like elsewhere with the property tax, it requires payment independent of a property transaction and may thus hit those particularly hard who do not have steady income flows. Given widespread tax evasion and informal land occupation, it is possible that only few are burdened with paying a large amount of the municipalities' total tax intake. Given the lack of universality, this may affect the perception of equity of the tax.

2. Water charges

For the purposes of this thesis, I follow Moore (forthcoming) in using a political definition of taxes incorporating all payments from the subjects to the ruler, thus including water charges. Water charges make up the second most important revenue source over the observed time period. In 2009 36 billion pesos were collected in revenues from this source. Overall, the revenue from water charges do not suffice to cover the costs of supplying water (Sánchez, 2013:21). Yet, like property taxes, revenues from water charges also show great variation over time and among municipalities. The histogram in Figure 9 shows the variation among municipalities in average water user fees per person. Water charges rose significantly after the Tequila Crisis in 1994-5 until 2005, surpassing property tax revenues in importance. Nine states saw increases of over 200% in water revenues over that period (Hidalgo, Puebla, Zacatecas Tabasco, Yucatán, Michoacán, Queretaro, Tamaulipas, and Aguascalientes), while the municipalities in another ten states consistently performed well below the

national average (Tlaxcala, Nueva Leon, Sinaloa, Chiapas, Morelos, Jalisco, Nayarit, Chihuahua, Colima and Baja California). Only four states (Baja California, Jalisco, Mexico and Nuevo Leon) and the Federal District are responsible for half of the total water charges collected (SHCP, 2008).

Figure 9 Histogram of per capita water user fees by municipality, 2000



Source: INEGI, SIMBAD

How are functions distributed with regard to water charges? As part of decentralization reforms, water management was reformed through the National Water Law adopted in 1992 (*Ley de Aguas Nacionales 1992*). Together with subsequent laws and amendments, it decentralised water management from the federal government to the states and municipalities and opened the way for private sector management of water services via municipal government concessions (Wilder, 2008). The decentralization of the water system was unevenly implemented and resulted in various different arrangements (Wilder & Romero Lankao, 2006:1986). It can be directly administered through the municipality, through a decentralised organism, through concessions to the private sector or any mixture of these three (ARegional, 2013). In some states (such as Estado

de Mexico) municipalities have entered into agreements allowing the state government to collect water charges (Sánchez Gavito Portilo, 2011). Those have tended to be the best managed while many of the decentralised water supply companies have gone bankrupt (Gonzalez Anaya and Revilla, 2012).

The north contributes 30% of charges and enjoys the most water service coverage despite that it receives only 10% of Mexico's rainfall, suffering water scarcity and periodic droughts (while covering 20% of land surface area). The south, by contrast, contributes only 10% of water charges despite that it receives over 50% of rainfall (and covers 30% of the land surface area) (Wilder & Romero Lankao, 2006:1981). This suggests that the benefit principle does apply, i.e. there is somewhat of a rough match between users and payers of the service in practice as well as in theory. However, all over Mexico, water fees are well below the costs required to deliver the service (Sánchez, 2013; interview 6)(Sanchez, 2013; Interview 6). Plus over 80% of water is used by the agricultural sector, which is exempted from water charges. These facts in turn limit the application of the benefit principle in practice.

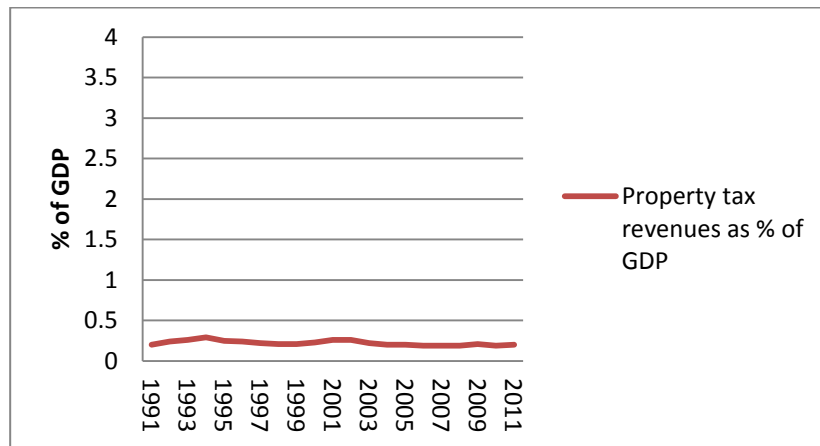
3.3 Tax revenue potential and sudden revenue needs

Having tax powers devolved to them does not mean that subnational governments will make any use of these (E. Ahmad et al., 2015). In this section I show that municipalities have great unexploited revenue potential and that the 2008-2009 global financial crisis and other recent events has created pressures for them to make greater use of their tax handles, particularly the property tax. This sets the context for the qualitative case comparison in Chapters 6-8 which looks at urban local governments with urgent tax revenue needs.

Revenue potential

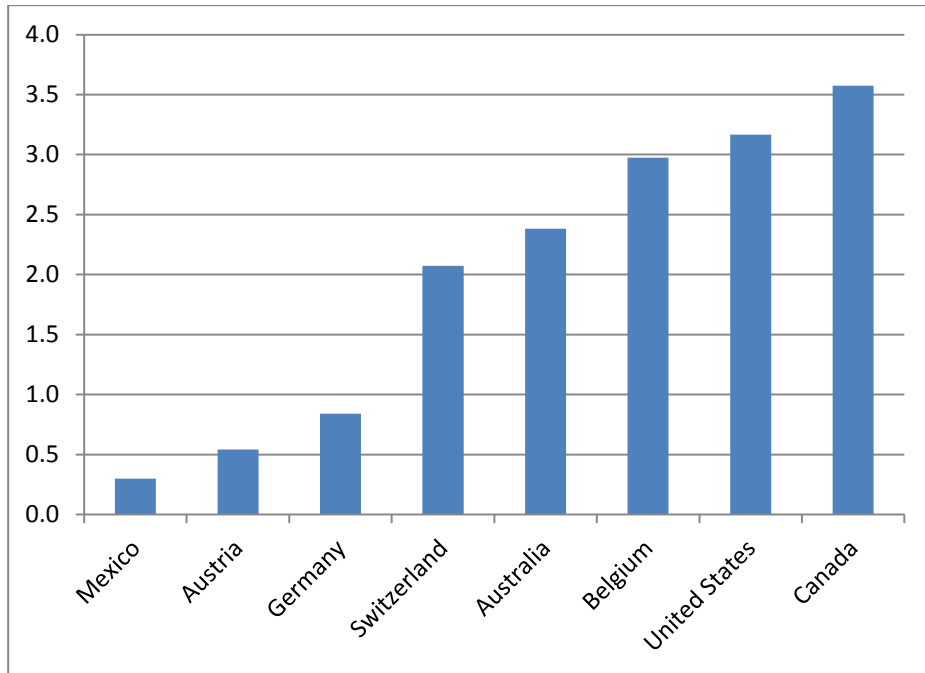
The property tax is a revenue source with particular potential but has remained notoriously low throughout the past twenty years, averaging approximately 0.1% of GDP until 1999 and 0.2% since then (SIMBAD, 2012). Not only does this place Mexico at the bottom of the list among OECD countries; it is also low in comparison to other Latin American countries: Argentina collects 0.4%, Brazil 0.5%, and Chile 0.7% of GDP in property taxes (Peña Ahumada & Wence Partida, 2011:90).

Figure 10 Property Tax Revenues as a Percentage of GDP, 1991-2011



Source: INDETEC, 2012

Figure 11 Taxes on property in the federal OECD countries as percentage of GDP, 2010



Note: The data include all taxes on property, not only the property tax.
Source: OECD Statistics

Why have property tax revenues remained so far below their potential? Many local governments have failed to update their land registries. A major obstacle to property tax intake is outdated or flawed cadastral information. There are numerous “hidden” or omitted land plots and constructions that do not show up in the cadastre, largely due to a lack of updating. This is particularly relevant for sprawling urban municipalities that have experienced high levels of immigration and construction. For example, a recent cadastral modernization program led by BANOBRAS, the Mexican development bank, in Carmen, Campeche resulted in a rise of 54% in the number of land plots (from 53,713 to 82,890 plots). Taxing these additional land plots that were formerly left out of the tax base is part of the reason for a rise of 120 % in tax revenues from 25.8 million pesos in 2008 to 67.0 million pesos in 2011 (BANOBRAS, 2012). Very few municipalities have undergone such cadastral modernization programs to date.

Furthermore, cadastral valuation is far below market values, despite the fact that the Constitution requires that they be comparable (Article 115 of the Constitution and

Transitory Article V). Rough estimates of the discrepancy between cadastral values and market values have been made in 12 states. These vary greatly among states and among municipalities within the same state, with urban municipalities usually faring considerably better. On the high end, the equalization has purportedly reached up to 100% in Nayarit, 87% in the capital municipality of Aguascalientes (70% in the other municipalities of the state of Aguascalientes), 80-85% in Estado de Mexico, and 80% in Guanajuato, while in others, the figure is estimated to be far lower. It is at 50% in Morelos and Tamaulipas, 40% in Colima, 30% in Oaxaca, and 10-20% in Tabasco. San Luis Potosi, Puebla and Guerrero fall into a middle range at approximately 65% among the states that have produced such estimates. The Federal Mortgage Society (SHF) estimates cadastral values to be approximately 60% below market values (INDETEC, 2012).

Another issue is that pending payments had not been pursued and non-compliance is not sanctioned. Estimates of the difference between registered property accounts and paid accounts have been conducted by a number of states, showing an average self-compliance rate of 71% (see Table 2.6 below). However, the reliability of these estimates appears suspect, particularly for those that presume 100% compliance. Such data has been hard to come by and largely kept secret as municipalities allegedly fear that if the extent of non-compliance is made public, even fewer people will pay their tax obligations. Experts at the Institute for the Technical Development of Public Finances (INDETEC, 2012) believe compliance to be closer to 50%. Using their estimates, there is revenue potential of almost \$8 billion pesos just from pursuing tax arrears (without updating cadastral information and values) (see columns in blue in Table 2.6).

Tax rates vary from one state to the next and from municipality to municipality. For example, a rate of 0.9 mills (0.09%) is applied on land and improvements in San Luis Potosi, 1.1% in Aguascalientes, 1.8% in Puebla, and 5% mills in Baja California. Most are below international standards (of around 2%) suggesting some potential in raising the tax intake by raising rates.

The causes for these problems are to some extent administrative and financial. Managing a cadastre efficiently requires relatively sophisticated tools, technology, and

know-how. It requires a capable staff with regular and specialized training and processes that promote administrative efficiency and innovation. There are numerous municipalities (particularly the small and rural) that do not have the technical or human capacity, nor the financial resources available for efficient cadastral management or collection. They are neither equipped to manage and update cadastral information nor to administer and pursue property tax payments.

However, the reason for the low property tax intake is largely considered as having to do with tax effort on the part of the local government. Municipal governments in Mexico have made little effort to raise taxes in the past as this is politically unpopular and more difficult than the alternative revenue sources of receiving federal and state transfers or borrowing money (Morones Hernández, 2012:84).

The property tax is politically unpopular because it is more visible than other taxes. It is a direct tax that is usually paid in the form of an annual lump-sum payment. While it represents a potentially large revenue source, there are far fewer political costs implicated in simply receiving federal or state transfers.

Table 2 Level of compliance with the property tax as estimated by states, 2010

| Federal Entity | Number of registered accounts | Number of accounts paid | Difference (Paid minus unpaid accounts) | Level of compliance (number of accounts) | Level of compliance- INDETEC estimates | Level of lost revenues - INDETEC estimates |
|----------------------------|--------------------------------------|--------------------------------|--|---|---|---|
| Aguascalientes | 464,333 | 349,701 | 114,632 | 75% | 55% | 56,075,858 |
| Baja California | 1,214,145 | 713,893 | 500,252 | 59% | 19% | 510,313,273 |
| Baja California Sur | NA | NA | NA | NA | NA | NA |
| Campeche | 259,135 | 125,446 | 133,689 | 48% | NA | NA |
| Coahuila | 1,122,259 | 1,061,473 | 60,786 | 95% | 38% | 231,541,190 |
| Colima | 289,350 | 234,814 | 54,536 | 81% | 28% | 100,953,628 |
| Chiapas | 675,110 | 465,431 | 209,679 | 69% | 52% | 77,561,494 |
| Chihuahua | 1,260,756 | 743,984 | 516,772 | 59% | 30% | 600,936,411 |
| Durango | 767,012 | 378,652 | 388,360 | 49% | 40% | 82,318,123 |
| Federal District | 2,082,105 | 1,413,868 | 668,237 | 68% | 69% | 1,978,590,737 |
| Guanajuato | 1,609,442 | 1,474,426 | 135,016 | 92% | 62% | 329,125,733 |
| Guerrero | NA | NA | NA | NA | NA | NA |
| Hidalgo | 1,120,360 | 561,801 | 558,559 | 50% | 37% | 127,624,897 |
| Jalisco | 2,818,471 | 2,015,211 | 803,260 | 72% | 35% | 1,011,770,015 |
| Mexico | NA | NA | NA | NA | 72% | NA |
| Michoacán | 1,416,107 | 1,176,049 | 240,058 | 83% | 46% | 227,682,765 |
| Morelos | 530,844 | 530,844 | - | 100% | 51% | 120,314,631 |
| Nayarit | NA | NA | NA | NA | NA | NA |

| | | | | | | |
|------------------------|-------------------|-------------------|------------------|------------|------------|----------------------|
| Nuevo Leon | 1,786,241 | 989,673 | 796,568 | 55% | 30% | 800,963,142 |
| Oaxaca | 914,439 | 885,262 | 29,177 | 97% | 49% | 67,154,449 |
| Puebla | 1,852,186 | 616,312 | 1,235,874 | 33% | 32% | 261,823,961 |
| Queretaro | 568,852 | 443,035 | 125,817 | 78% | 30% | 323,339,551 |
| Quintana Roo | 456,258 | 396,620 | 59,638 | 87% | 45% | 427,281,033 |
| San Luis Potosi | 880,773 | 880,773 | - | 100% | 31% | 146,342,159 |
| Sinaloa | 947,861 | 947,861 | - | 100% | 61% | 249,343,736 |
| Sonora | 1,143,299 | 600,502 | 542,797 | 53% | 77% | 97,257,516 |
| Tabasco | NA | NA | NA | NA | NA | NA |
| Tamaulipas | NA | NA | NA | NA | NA | NA |
| Tlaxcala | 523,251 | 226,231 | 297,020 | 43% | 91% | 4,036,600 |
| Veracruz | 2,127,899 | 1,523,757 | 604,142 | 72% | NA | NA |
| Yucatán | 634,128 | 512,177 | 121,951 | 81% | 57% | 88,712,431 |
| Zacatecas | 874,070 | 828,983 | 45,087 | 95% | 67% | 66,128,020 |
| TOTAL | 28,338,686 | 20,096,779 | 8,241,907 | 71% | 48% | 7,987,191,355 |

Source: Figures in black: Estimates reported by states; figures in blue: INDETEC, 2012.

There is also considerable potential for increasing revenues from fees, particularly for water services. An OECD (2012) study reports that, according to the National Water Commission of Mexico (CONAGUA), 25% of water supply is not being paid for. Public institutions are exempted from paying water charges and evasion is high. There are also many illegal water connections. The OECD study finds that there is also considerable room to increase tariffs. Water tariffs are the lowest among OECD countries and contribute to overexploitation of water. The study also emphasises that greater bill collection would make an enormous difference. Like with the property tax, municipal leaders have not wanted to make the unpopular move of raising the tariff on a basic service for their residents. Changing this situation, however, is particularly difficult as federal subsidies are provided with conditional use to make up for cost shortcomings in water provision, making it unlikely that municipalities will raise tariffs or scale up their collection efforts (Sánchez, 2013:22).

Sudden revenue needs

These alternatives have been greatly limited and pressure has risen for municipalities to begin making use of their previously unexploited tax instruments. The federal government has been particularly vocal in urging larger urban municipalities with great revenue potential to make use of their property tax powers and that they shall not be bailed out (García, 2013). The municipalities have been further motivated to increase tax revenues because of recent adjustments to the transfer formulas that reward tax effort with greater federal and state transfers (Peña Ahumada & Wence Partida, 2011:90).

In the aftermath of the financial crisis of 2009, many municipalities are now attempting to step up their tax effort and abruptly increase their tax revenues. Several have recently found themselves (or continue to find themselves) in dire financial circumstances. While municipal debt has been consistently growing, fiscal transfers from the federal government, their main source of revenues, have not (interview 3; interview 5; SIMBAD, 2012). This came as a result of stagnating oil revenues (to which federal transfers are tied) and a general economic downturn in recent years, following

recession of its main trading partners and a slowdown in tourism, exacerbated by reports of drug violence and swine flu. Poor municipal financial management magnified what became a chronic debt problem as many outgoing municipal administrations left high debts for their successors to grapple with (Martinez, 2013; Rea, 2012; Tzuc, 2012).

Many municipalities expected to be bailed out by the federal government; however, a stricter bailout policy was effectuated, subsequent to national outrage at mismanagement of local funds and to prevent spillovers of financial difficulties (Reforma, 2012). Making matters worse, credit agencies such as Moody's and Standard & Poor's heavily downgraded their qualifications for most municipalities they rate, complicating their access to long-term credit, raising borrowing costs, and diminishing the interest of investors in financing their projects (Arteaga, 2013; interview 3; interview 4; Soto, 2013). Growing short-term debt, compounded by a lack of alternative revenues, has placed great pressure on many municipal governments to ramp up their tax revenues.

This acute situation provides a unique opportunity to study the processes occurring following a determination of local governments to raise tax revenues. This is exploited in the qualitative case comparison of six municipal governments who are under pressure to raise their tax intake in Chapters 6-8.

3.4 Transitions resulting in a patchwork democracy

In this section I give an overview of the democratic transition that occurred over the time period studied in the quantitative analysis of taxation-accountability linkages (1989-2009) in Chapters 4-5. This is an important part of the backdrop as one might expect that the major transitions in democratic governance have contributed to changes

in accountability over time. I also review the literature on different explanations for variation in accountability between local governments.

At the beginning of the period under analysis, Mexico was still dominated by a single hegemonic party, the Institutional Revolution Party (PRI) of the time. The PRI ruled Mexico since 1929 and its power is considered to have peaked in the 1980's. Termed a "perfect dictatorship" by Peruvian writer Mario Vargas Llosa, the regime upheld a façade of a liberal democracy, holding regular elections, but monopolising access to elected office. It used elections to obtain information about dissidents, smother opposition, gain legitimacy and further consolidate power (Magaloni, 2005, 2006). The party controlled the leading sectoral, professional, and civic groups of the country (Lawson, 2000:268). Oil rents from the state-owned oil company PEMEX and import-substitution industrialisation further meant an extensive and powerful government with a key role in industrialisation, economic development, and in the provision of welfare programs. Throughout, corruption was a key feature as access to public positions and opportunities for personal benefits were used to maintain loyalty and support. The media was also largely monopolised and neglected to actively scrutinise government activities (Bailey & Paras, 2006).

This situation changed substantially over the years thereafter. Opposition to the PRI regime mounted and led to an increasingly organised civil society and increased citizen demand-making (Cleary, 2007). This was egged on by several events. First, the aftermath of the 1985 earthquake in Mexico City showed that local communities and citizen groups proved to respond faster and in a more organised manner than the government, prompting further citizen activism. Anger mounted at government corruption and incapacity to deal with issues like pollution and public safety (Tavera-Fenollosa, 1999). The media became a stronger voice in keeping a check on the government. Federal programs to enhance citizen participation were introduced to ensure greater accountability. An economic opening also occurred, starting with Mexico's participation in the GATT in 1986 and continuing with the adoption of the North American Free Trade agreement (NAFTA) in 1994 and various other bilateral and multilateral trade agreements, along with a boost in privatisations. There has also been ongoing urbanisation as rural populations migrated to cities. Various international

organisations, such as Transparency International and the Organization of American States, and the literary and arts world also did their part in bringing attention to corruption and promoting democratic governance in Mexico. All of this led to increasing sensitivity to the issue of corruption and demand for accountable governance among the population. Prolonged negotiations over the years between the government and oppositions resulted in reforms that opened space for opposition parties, culminating in a turnover of power when Vicente Fox of the opposition PAN party was elected president in 2000.

Although the old single party regime broke down, the process of democratisation remained far from complete (J. T. Hiskey & Bowler, 2005). As Bailey and Paras (2006:62) write, “Corrupt practices persist into the new democracy”. Even the legitimacy of the 2006 presidential elections was highly contested and believed to be a return of “electoral ‘alchemy’”. [...The] size of electoral vulnerability to clientelism and vote-buying remained larger than the margin of victory” (Fox, 2007:3). Beyond national elections, as Lawson (Lawson, 2000:267-8) writes, “democratization has not proceeded at the same pace across all regions or spheres of government. As a result, Mexico’s political order comprises a series of authoritarian enclaves in which the old rules of the game still operate” and includes local fiefdoms among the “autocratic residue”. Hiskey and Bowler (J. T. Hiskey & Bowler, 2005:57) similarly write along similar lines: “Somewhat subsumed by these national-level changes, however, were significant subnational differences in the extent to which democracy had indeed arrived in Mexico. In some areas of the country, the democratization process was well underway long before the election of Fox, while in others it had barely begun”.

The new government passed a federal transparency law in 2002 (La Ley Federal de Transparencia y Acceso a la Información Pública Gubernamental 2002). The law required states to draft their own transparency legislation, which should also cover obligations for municipal governments, and set up state transparency institutes. Each state eventually did so, some sooner than others.

At the municipal level, although local leaders have been popularly elected since as far back as the beginning of the 1900’s, elections were not considered free and fair for most

of this time period (Cleary, 2010; O'Donnell, 1999). In fact, it was not until the 1980's that actual electoral competition came about at the municipal level and parties besides that of the national ruling PRI stood any chance of winning (Beer, 2003; J. Hiskey & Canache, 2005; Magaloni, 2006). In 1979, reforms increased the ability of opposition parties to be represented in local government and introduced proportional representation in elections for municipal councils. Still, between 1979 and 1987, opposition parties won only 135 municipal elections of over 5000 held during those years (Cleary, 2010). Only from the end of the 1980s onwards did opposition parties become an effective threat to the dominating party at the local government level and many scholars tend to regard this as the onset of democratization in Mexico (Cleary, 2010; O'Donnell, 1999). This transition at the municipal level was faster than at the state and federal levels. The first opposition state governor was elected in 1989 (one PAN candidate in Baja California) and the first opposition president was only elected in 2000, as mentioned above.

The experiences of different municipalities, however, vary tremendously: while some have been lauded as models for accountable governance (especially Aguascalientes and Monterrey), others are accused of corruption, malfeasance, and a general lack of accountability and responsiveness to local needs (Grindle, 2007:1-2). There is well documented evidence of great variation in possible proxies for accountability of the local government. For instance, while most municipalities entered the 1980s with low coverage of local public services such as water and sanitation, many achieved momentous improvements at addressing the basic service needs of their residents while others did not (Cleary, 2010). According to Fox (2007:2), "Mexicans' widely documented lack of trust in government reflects their actual experiences—which in turn indicate their limited capacity to hold those in power accountable" and he observes particularly scarce accountability in rural municipalities. Much has been written on the persistence of local authoritarian enclaves and caciques (Gibson, 2005; Lawson, 2000; Snyder, 1999). In fact, Fox (2007) considers the term "enclaves" inexact considering their substantial geographic scope.

Decentralization reforms that occurred alongside democratisation were also expected to have an effect on municipal government accountability (Grindle, 2007). Since the

beginning of the 1980's, municipalities have received a row of new resources and responsibilities in terms of urban infrastructure and public service delivery. Yet, again, results in terms of accountability and responsiveness have been mixed. Rowland, in a case study of six Mexican municipalities similarly finds mixed experiences of exercising larger budgets to benefit local citizens, concluding that, "Larger municipal funds do not necessarily translate into better service provision." Grindle (2007) in a study of 30 municipalities also finds that decentralization reforms have produced cases of both well and poorly performing municipalities.

What explains this variation? Grindle (2007) hypothesises the variation of municipal performance in terms of four key factors: (1) the degree of political competition ; (2) state entrepreneurship or the ideas and strategic choices of agents in public positions; (3) public sector modernisation through incentives from above, trainings, the introduction of new technology, etc.; and (4) citizen activism or the extent to which citizens are mobilised to participate and demand accountability.

While the emergence of competitive politics has been heralded as pushing accountability and being effective in bringing citizen needs to the attention of the government in Mexico, others have contested this view. Moreno-Jaimes (2007), for instance, uses empirical evidence from 1990 to 2000 to show that competitive elections in Mexico do *not* produce more responsive governments. Cleary (2007), using data from 1989 to 2000, similarly shows that electoral competition has no effect on municipal government performance.

What obstacles to accountability have been identified? First, vote buying and election rigging have been noted to continue to be obstacles (Fox, 2007). Arroyo and Sanchez Bernal (1996) similarly identify clientelist political promises made in the run up to elections. Second, accountability relationships may be stronger to the mayor's party than to the voters. Many municipal leaders see their job as a show case of their management and leadership capabilities vis-à-vis party bosses who nominate candidates for future positions, and as a way to attain popularity for their future career. As Rowland (1998) writes, "In Mexico, municipalities have traditionally been the jumping-off points for those wishing to move to higher office, but these posts were seen

as part of a career strategy (principally to prove loyalty to one's political team) and a temporary assignment at most". Third, limited information has also been identified as an obstacle: data on the use of municipal resources is paltry and monitoring is sporadic. This makes it difficult for local residents to evaluate municipal performance. Fourth, many municipalities lack the basic administrative infrastructure to respond to citizen demands (Grindle, 2007).

Fifth, the non-consecutive re-election of mayors combined with short term limits has been claimed to lead to a situation in which the "day-to-day governance in municipalities is in the hands of short-lived political representatives rather than a professional civil service" (Cleary, 2007:285). Denying citizens the ability to sanction or reward local leaders through the vote, the prohibition on consecutive re-election is also considered to stifle accountability (Grindle, 2007). However, mayors may be re-elected after three years have gone by and their party may be re-elected immediately and there often tends to be much pressure on the mayor to ensure the party is re-elected.

The prohibition of re-election among mayors is not widespread (to my knowledge the only countries where mayors are prohibited from re-election are Colombia (La Semana, 2010, 2012) and El Salvador and it is being debated in Peru (La Republica.pe, 2013). Yet, although it is particular, in other countries where immediate re-election *is* allowed, local mayors faced with electoral competition often have similarly high discount rates and a time horizon that usually does not surpass the next elections. As Bahl and Linn (1992:118) write in discussing the high discount rates of local government officials, "It is important to note in this connection that fiscal planners the world over are notoriously short-sighted".

In effect, over the time period studied in the quantitative analysis (Chapters 4 and 5), a democratic transition occurred in which some municipalities presumably became more accountable to citizens, while others have remained autocratic enclaves. The variables used as proxies for accountability, the disparities between municipalities and their varied evolution over time will be shown in greater detail in Chapter 4.

Conclusion

Having experienced an increase in resources and responsibilities, local governments in Mexico are responsible for services that are immediate to the needs of society, including water, drainage and public security. As Fernández-Fernández (2012) of UNAM writes, “the work of the municipal government is the first thing that people see”. Yet while some municipalities are lauded for their good work, others are corrupt, mismanaged, and neglect the needs of their local residents. The variation in local government accountability in Mexico has been explained by a number of factors in the literature. What is the effect of taxation among these factors? What might we expect of taxation-accountability linkages given the Mexican context?

Subsuming the Mexican context presented in this chapter from the theoretical points laid out in Chapter 2, we have the following situation.

1. First in terms of the degree of revenue dependence: local governments have relatively substantial own revenue sources available to them. However, as typical for local governments all over the world, they also have access to alternative revenue sources, particularly federal transfers. Bailouts have likewise been frequent and borrowing has been made possible, though within limits. However, incentives for tax effort introduced in transfer formulas around 2008 are believed to have motivated tax revenue dependence.
2. In terms of degree of power over taxation: local governments have potentially significant tax handles including the property tax and charges for service provision. While they generally have the ability to decide on the base and rate and they assess the tax, changes to these and the introduction of new taxes needs to be approved by the state congress. Regarding the property tax, the Mexican Constitution stipulates that all tax functions surrounding the property tax pertain to municipalities; yet in practice, several (particularly small municipalities) have shifted administration of the cadastre and/or collection to other institutions. However, the most important function, setting the tax rate, is

generally done by municipalities but, again, needs to be approved by the state congress.

3. In terms of their degree of power to negotiate a bargain: Mexican municipalities are limited in their scope of decision-making and in their ability to make concessions in a bargaining process. State and federal government spending is far greater and more capable of changing the lives of the local residents than that of the municipal government. Plus their short term periods do not provide a great scope for new projects and long term investments.
4. Whether there is clarity of responsibilities is also debatable: like in any multi-tiered government system, there is some overlap or confusion between constitutionally assigned functions. However, there is also evidence that local residents are relatively well aware of the most important areas of responsibility of the local government.
5. Regarding the most important two tax types, they are (a) highly visible, especially the property tax; (b) the tax intake may be low in international comparability but the tax may in some circumstances mean a considerable burden for compliant taxpayers, particularly to low-income residents; (c) the property tax is earned as it requires considerable effort on the part of the administration to collect. This is perhaps less so for water charges depending on whether or not the municipality collects them directly or via a decentralised agency or private firm; (d) both are relatively broad-based: the property tax targets residents but the tax may also be passed down to renters. However, there is also large informal land ownership not covered in the cadastre. Regarding water charges, they are more broad-based, if collected; (e) both generally adhere to the benefit principle in theory though with some inconsistencies in practice; (f) the tax bases are immobile and not easily exportable to non-residents except where foreign ownership of properties is high.

6. Regarding an “enabling environment” of democracy, there is evidence of much variation in electoral competition, responsiveness to needs and other performance indicators both over time and across municipalities.

We thus have some factors that, at the outset, would limit taxation-accountability linkages and others that would promote them.

Mexico provides an interesting case for analysing taxation-accountability linkages for a number of reasons. For one thing, as shown in this chapter, there is traceable cross-sectional and time variation in terms of the independent variable (taxation). The distribution of total municipal revenue sources has evolved as has the importance of the main municipal tax revenues, both across time and space. The variation in tax intake between municipalities and in tax dependence between and across municipalities has been shown in the previous sections (see especially Figure 7). At any point in time over a 20 year period, we see that some municipalities are more reliant on taxation than others.

We would also expect great cross-sectional variation in the dependent variable (accountability) given the uneven democratic transition reported on in the secondary literature. The precise variation in the variables will be shown in the next chapter (Chapter 4). A political and economic opening occurred since the 1980's, in which some municipalities became more democratically accountable, while others did not. Much has been written on the persistence of local authoritarian enclaves and caciques and there is also well documented evidence of great variation in service provision over the observed years (again shown in Chapter 4). This also promises great variation in accountability variables. While most municipalities entered the 1980s with low coverage of local public services such as water and sanitation, many local governments achieved momentous improvements at addressing the basic service needs of their citizens while others did not. This evolution, coupled with the fact that Mexico is one of the few developing countries that publicises comprehensive fiscal data at the municipal level of government from 1989 onwards for most of its over 2400 municipalities, provides opportunities for analysing the evolution of accountability and responsiveness of municipalities based on their tax dependence across a large number of municipalities. I take this on through quantitative panel regression analysis in Chapters 4 and 5.

Mexico also results particularly interesting for comparative case analysis as the field research could be conducted over a time period in which many municipalities were attempting to abruptly increase their tax revenues. The reasons for this stem from a sudden cut-off of alternative revenue sources due to a global financial crisis and changes in national government policy among other events. Given the large unexploited local revenue potential, this allows observing at first hand the strategies pursued by local governments attempting to substantially raise their tax intake by making use of previously neglected tax handles, which is done in the case comparison in Chapters 6-8.

Chapter 4: Methodology for nation-wide quantitative analysis

While the previous chapter assessed what can be expected of the linkages between taxation and accountability at the local level given the Mexican context, this chapter and the following chapters explore the relationship through novel empirical research. This chapter and the next explore the relationship quantitatively through large-N econometric regression analysis, presenting new econometric tests of within-country relationships between taxation and accountability. While this chapter sets up the methodology and estimation strategy, the following chapter presents the results and discusses the findings. The chapters thereafter will then use qualitative analysis to further explore the relationship and to delve more deeply into some of the research questions that could not be answered using quantitative methodology.

Statistical and econometric methods can show whether predicted relationships hold, on average, across a wide range of units. They can tell us about the existence of patterns or regularities while mitigating the difficulties of external validity and bias of small-n case studies. They have been particularly influential in pushing the recent academic discussion around the relationship between taxation and accountability. However, while seemingly straightforward in testing simple deterministic relationships between variables, more caution is needed when applying such methods to more complex causal processes and relationships that are contingent on a variety of different interdependent factors as those linking taxation to different governance outcomes.

The existing quantitative scholarship claims to show evidence of a positive causal relationship between taxation and accountability. However, much of this work suffers from several methodological and data problems which may call the validity of the conclusions into question. Furthermore, some of the results of those focusing on local taxation, which claim to show a positive causal relationship between some measure of taxation and some proxy for accountability, just like at the national level, contradict results from qualitative case studies which do not find such a relationship. This may be

the result of imperfect methods and data and/or of the context of the countries in which the tests were conducted, as they differ from those selected for case study analyses. These points merit both reviewing previous quantitative literature, particularly the data and methods used, as well as testing the relationship anew in a different context.

In this chapter, the first section (4.1) presents the methodological challenges of testing the relationship between taxation and accountability quantitatively. It includes a review of methodologies used in existing quantitative literature on the relationship. It then explains the methodology that I use to explore the relationship quantitatively myself, taking Mexican municipalities as the unit of analysis. In sections 4.2 and 4.3 I operationalise the key variables that I will use in my regression models, some of which I construct. Section 4.4 contains the estimation strategy and discusses how I have aimed to overcome some of the risks that could threaten the internal validity of the results. The final section concludes.

4.1 Methodological challenges of testing the relationship quantitatively

Econometric studies are widely cited as evidence for the existence of a link between taxation and accountability in developing countries. These regress some measure of taxation as the independent variable on some measure of accountability as the dependent variable. The most prominent are cross-national time series cross section regressions that find positive relationships across countries between measures of taxation and democracy (Baskaran, 2014; J. Mahon, 2005; Ross, 2004), the quality of political institutions (Baskaran & Bigsten, 2012) and corruption (Baskaran, 2014). At the subnational level, Hoffman and Gibson (2005) use data from Tanzania and Zambia to find that local governments spend proportionately more on public services when they receive more revenues from taxation. They also find that a larger proportion of revenues derived from outside sources, such as transfers from the central government

or foreign aid, is associated with greater local government spending on salaries and administrative costs. Gervasoni (2010) finds a negative relationship between fiscal transfers (the flip side of tax revenues in the budgets) and the degree of democratisation among Argentine provinces (though no relationship when testing for the effects of provincial tax revenues specifically). Finally, Gadenne (2013) uses local governments in Brazil as her unit of analysis and finds that increases in the proportion of tax revenues in the government's overall budget lead to a larger increase in spending on local public health and education services than correspondingly large increases in transfers. She also finds that extra transfers lead to more corruption.

However, as Prichard (2010b) notes, as there are strong reasons to be sceptical about the validity of these conclusions due to various problems with data and methods employed. Measuring this relationship entails a variety of challenges. Scholars have needed to grapple with a lack of comparable data and challenges of operationalising elusive variables. They have struggled to resolve endogeneity problems in their models and to establish causality. They have also needed to make considerable compromises between theoretical and methodological soundness in their decisions on which regression analysis techniques to employ. This section details these issues in light of the existing quantitative work on this topic.

Problems with data and datasets

Empirical work testing taxation-accountability relationships have largely suffered from data problems, largely due to a scarcity of availability of required data. Cross-national econometric studies in particular are plagued by poor data quality and inconsistency of data sources (Prichard, 2010a:657). Critically, fiscal data and other variables used in the model specifications are collected and recorded differently across countries, using varied definitions, categories, and measurement techniques (Kittel, 2006; Prichard & Leonard, 2010). For instance, what counts as tax revenues and what does not varies considerably between accounting practices across countries. Ross (2004), Mahon (2004), Baskaran (Baskaran, 2014) and Baskaran and Bigsten (Baskaran & Bigsten, 2012) rely on fiscal data from sources including the OECD, the International Monetary Fund's Government Finance Statistics and the World Bank's World Development

Indicators. Especially the last two datasets have a large number of missing variables so scholars therefore merge not only data between the datasets but also from before and after changes in the methodology used to construct the variables (Prichard, 2010b). In an effort to construct panel datasets with a greater number of observations, these studies have compromised heavily on the comparability of the data, undermining data quality to an extent that it can seriously affect the interpretability of results (Kittel, 2006:651).

One is more likely to find greater homogeneity between methods of collecting and definitions of variables used in within-country studies. Moreover, within country studies are more precise than cross-country data as the latter is highly aggregated, hiding important differences within countries (Beer, 2003).

Large datasets are required in order for the estimators to be efficient and unbiased, particularly to run panel regressions. At the cross-country level, Ross (2004) uses time series cross national data from 113 countries from 1971 to 1997. Baskaran and Bigsten (2012) use panel data of 23 sub-Saharan African states from 1990 to 2005 and run the tests for 31 countries but for only two years (2001 and 2002) using a different dataset. Subnational level analysis holds potential for a far greater number of observations as subnational entities can massively outnumber the world's sovereign countries, many of which do not provide quality data. However, subnational level historical data over many years for time series analysis is also difficult to come across in most developing countries and has left the number of such studies limited. One of the three relevant studies at the national level, Hoffman and Gibson's (2005) analysis of the relationship between taxation and government responsiveness at the local level in Tanzania and Zambia, uses data from district expenditure frameworks and local budget data for only one year because of data scarcity, amounting to a mere cross section of 45-50 observations. The second of the three subnational studies is that by Gervasoni (2010) which studies the relationship using data on 22 Argentine provinces between 1983 and 2003, yielding regressions with only 102 observations. Only Gadenne (2013) uses a very large dataset. Her data on Brazil's over 5000 local governments from 1997 to 2007 enable regressions using over 50,000 observations. Thus, when countries do provide local level data over many years, and the country has many municipalities, the number

of observations in subnational studies can greatly exceed that used by cross-national analyses, yielding more reliable results.

A problem that remains even in large longitudinal datasets is that they may still contain many missing observations. The units for which data are missing are likely to be non-random, causing sample selection bias. Moore (1998) warns in particular of a strong correlation between levels of income and the quality (and availability) of fiscal data that could affect results. It is likely that less accountable governments may be more likely to have missing data than more transparent and accountable ones.

Difficulties operationalising the variables

A further problem with the data is that the variables used are imprecise in measuring the concepts they try to capture. The first challenge is how to measure the independent variable, taxation. Most of the qualitative historic accounts on taxation-accountability linkages refer to tax revenue *needs* as sparking accountability but these are difficult to measure. Taxation is therefore usually operationalised in terms of tax intake levels or the proportion of tax intake compared to the revenue intake of other sources such as, in the subnational context, transfers from the central government. Several scholars use the proportion of tax revenues to GDP, with the long pathway in mind as the causal mechanisms, in which taxation affects accountability by affecting the *incentives of the residents*.

However, taxpayers may be affected not only through level of taxation or changes in the level of taxation, but these levels in comparison to the services provided by the government or the quality and performance of the government. If the quality of government drops, but tax levels remain the same, theory suggests that this may spark resistance from residents just as much as when the quality of government remains the same but taxes rise. Ross uses both tax/GDP and taxation/expenditures to try to capture this cost-benefit hypothesis: that it is not just about the level of taxation but the level of taxation compared to benefits received that catalyses a reaction by taxpayers, which leads to accountability. Yet the quantity of expenditures says little about the quality of

the government or the services provided. A more precise measure for observing the effects of tax dependence on the *incentives of governments* would be through a measure of its share of tax revenues compared to other sources of government revenues.

At least as challenging is how to measure accountability. Problems defining this broad and elusive term are accompanied by equally great problems in measuring it. Scholars have therefore used different proxies that only loosely indicate different aspects of the concept, such as some measure of constraints on power and electoral contestation to indicate the level of subnational democracy (Gervasoni, 2010), the proportion of expenditures targeted towards investment or public services (Gadenne, 2013; Hoffman & Gibson, 2005), and some measure of corruption (Gadenne, 2013).

Endogeneity problems: spurious and simultaneous causality

Beyond data problems and the problems of operationalising the variables, there are endogeneity problems in testing the relationship between taxation and accountability. As with any analysis of observational data, endogeneity bias may affect results if either spurious or simultaneous causality are present.

The most pressing problem is that of simultaneous causality. While taxation and accountability may be correlated, does causality run backwards as well as forwards? Does taxation lead to accountability or does accountability lead to taxation? Theory in fact explicitly states that both should be true. Because greater government accountability is expected to lead to greater tax compliance (and thus tax intake), government leaders are incentivised to be more accountable. This is further buttressed by studies showing that citizens are more willing to pay taxes if they perceive their government as accountable (Bergman, 2002; Levi & Sacks, 2005; Torgler, 2005).

Spuriousness would be present if an omitted variable (or confounding factor) explains both taxation and accountability. The usefulness of cross-country statistical comparisons as evidence has often been called into question because they involve comparing dissimilar countries, cultures, and institutions, bringing about a large

potential for producing confounded relationships. Within-country econometric studies have the advantage of limiting this problem to some extent by holding various institutional, cultural and policy variables constant across units (Caselli & Michaels, 2013), yet the risk remains.

Another issue is that testing this relationship requires making assumptions about the temporal relationship between taxation and accountability. In Chapter 2, I identified two main pathways through which the causal relationship is expected to work (the long and short path). Through the long path, the government raises taxes (either gradually or abruptly). This leads to a reaction by the residents, and a subsequent bargain with the government in which the latter makes concessions to be more accountable. This implies a rise in taxation that precedes a rise in accountability. Yet the theory provides little guidance as to how long the lag should take and the lag may differ from one entity to the next. Ross (2004), who acknowledges these ambiguities, settles on using 3-year, 5-year, and 10-year time lags, expecting taxation to precede accountability by some years.

Through the short path, a rise in accountability occurs simultaneously with a rise in taxes as the government may feel it needs to make concessions and be more accountable in parallel (or even prior) to embarking on an increase in taxation. This would imply a positive relationship with no lag.

A final issue in trying to establish causality is that even if relationships are found, they are not necessarily evidence of the causal mechanisms that the authors presuppose. Only if, for example, we show that a rise in taxation leads to protest and protest leads to greater accountability, would we be closer to showing that the causal mechanism or theory is the one that the results are supporting. Yet the relationships are usually only looked for between the first event and the final outcome, ignoring the intermediate steps and processes in between.

Challenges of model specification

Control variables are needed to hold constant factors that could lead the estimated causal effect of interest to suffer from omitted variable bias. Factors such as local government modernisation and human capacity of the local government may be correlated with both taxation and accountability. Yet this data is not always available. Plus, in the studies with small datasets, a trade-off needs to be made between additional controls and reducing the degrees of freedom by adding more variables.

Analysing panel data or time series cross sectional data (that is, data on countries or subnational governments across several years) has come to be considered the superior method for testing this relationship. Panel regressions allow making inferences about the relationships from the different experiences of the many municipalities as well as from their evolution over time. It also allows controlling for a host of unobserved and possibly confounding variables: exogenous shocks common to all units at certain times or unit effects that persist across time. Panel data also usually contain more degrees of freedom and more sample variability than cross-sectional data, thereby improving the efficiency of the estimates. However, panel data also introduce several problems of their own.

The problem with typical social science panel data is that repeated observations on the same unit or different units during the same time are seldom independent from one another (Beck, 2001; Beck & Katz, 1995, 1996, 2011). Instead, one tends to find the following properties that make the OLS errors wrong:

1. Serial correlation of errors (this involves the temporal properties of the panel data: errors are not independent from one year to the next);
2. Panel heteroscedasticity of errors (subpopulation of units consistently have errors with different variances from others).
3. Contemporaneous correlation (correlations between units because of common exogenous shocks).

Serial correlation may occur in tax data as an overestimation in one year may conceivably carry over and lead to an overestimation in the next year. Panel heteroscedasticity of errors may occur as for instance governments with high tax intake may have consistently higher errors than governments with low tax intake. Contemporaneous correlation is also conceivable in the data used here: the errors may, for instance, be the same between local governments of the same state because of common accounting.

The panel regression methods suggested by Beck and Katz (Beck, 2001; Beck & Katz, 1995, 1996) had become the accepted econometric standard for testing relationships of this kind in comparative political economy (Plümper, Troeger, & Manow, 2005). The suggested technique is to run OLS regression on panel data with a lagged dependent variable plus unit and time dummies on the right-hand side of the equations and to use panel corrected standard errors. These methods are hoped to mitigate the potential violations to OLS standard assumptions for panel regression that errors of the equation are homoscedastic with constant variances and are not correlated over time.

However, since then others have pointed out the additional risks that these solutions create. Achen (2000) and Plümper et al. (2005) warn against the use of the dependent variable lag on the right-hand side of the equation as it suppresses the explanatory power of other independent variables in the regression. The choice of year for the time-lag also greatly influences results. Kristensen and Wawro (2003) advise using fixed effects with robust standard errors instead of the lagged dependent variable for these reasons, especially when analysing relatively small-t datasets.

The use of fixed effects has also not always been theoretically justified (Plümper et al., 2005). Kittel and Obinger (Kittel & Obinger, 2003:41) regard this as “ill-advised” since the main interest in most of the political science analyses that use it is precisely to analyse whether the institutional variables capture the cross-sectional variation in a way that makes the unit dummies superfluous. Unit dummies can suppress most of the theoretically interesting cross-sectional variance in the data while fixed time effects absorb most of the theoretically interesting time-series variance in the data (Huber & Stephens, 2001; Plümper et al., 2005:328). In particular, they “completely absorb

differences in the *level* of independent variables across units” (Plümper et al., 2005:331). It therefore also precludes explaining any variance of the dependent variable that existed prior to the year the dataset begins. This is of great importance here as level effects are part of the theoretical explanation of the hypotheses tested. The pure reliance on *changes* in levels is theoretically problematic.

With these methodological challenges in mind, the following three sections explain the variables and estimation strategy and model specifications used in this thesis to explore the relationship between tax reliance and accountability among Mexican municipalities.

4.2 Operationalising the variables 1: Transparency and Drainage coverage

Accountability, the dependent variable in the equation, will be measured by three different proxies: (a) the level of transparency (***Transparency***); (b) basic public service outcomes in terms of providing drainage services to the municipal population (***Drainage coverage***); and (c) whether or not elections are competitive (***Electoral competition***). By using several different proxies for accountability, I try to cover more of the multiple dimensions of this broad concept within the limits of available data rather than just one or two as in previous works. The first proxy (a) is an outcome measure that indicates effort on the part of the government to be open and render accounts to its residents. The second is an outcome measure of government performance and responsiveness to the residents. These proxies and how they are constructed are further elaborated in this section. The final proxy (c) will be detailed in section 4.3. A summary table of all three variables, their description and sources is found at the end of the chapter (Table 8).

Transparency

The first proxy is *Transparency*, an indicator for allowing public access to government activities and financial accounts. A potential problem to keep in mind with this variable as proxy for accountability is that, even if the government does publish accounts, this information may be falsified or misrepresented. Nonetheless, it is assumed here that a government with relatively higher transparency compared to other municipalities is an indicator of a government with relatively higher accountability.

To construct this transparency indicator, I examine five survey responses from the National Survey of Government, Public Security and Justice.³ The survey was directed to municipal leaders and staff in 2400 municipalities from 19 October to 11 December 2009. The fact that the responses come from the municipalities themselves and not from a third party may bring about doubts regarding their truthfulness. Other transparency surveys measure the municipalities' compliance with financial reporting obligations to higher levels of government or to financial institutions. These have the advantage that it is not the municipality that evaluates itself but the disadvantages that, first, the proxies are more indicative of accountability towards the government or to financial institutions rather than to the populace and, second, only a small number of urban municipalities have been evaluated.⁴ I construct a transparency indicator based on survey questions that better capture transparency vis-à-vis the local residents and which covers far more municipalities. The survey questions selected are (a) which of six mechanisms are in place for citizens to access public information ("Mech" ranging from 1 (none of them) to 7 (all of them)),⁵ (b) through which forms of diffusion is information

³ The 2009 National Survey of Municipal Government, Public Security and Justice (Encuesta Nacional de Gobierno, Seguridad Pública y Justicia Municipal 2009) was conducted by INEGI within the National Subsystem of Information on Government, Public Security and Justice (Subsistema Nacional de Información de Gobierno, Seguridad Pública e Impartición de Justicia (SNIGSPIJ)).

⁴ These include indicators by the Instituto Mexicano para la Competitividad S.A. (IMCO) and the Comisión Nacional Bancaria y de Valores (CNBV).

⁵ The mechanisms are (i) a legal framework that regulates access to public information, (ii) a public servant responsible for attending requests on public information, (iii) a system for receiving and attending to

made available to the public (“Avail” ranging from 1 (it is not made available) to 5 (it is made available through all listed forms of diffusion)),⁶ (c) how frequently is public information updated (“Frequ” spanning 1 (never updated) to 3 (updated on at least a monthly basis)),⁷ (d) what information is publicized and freely accessible (“Info” ranging from 1-4),⁸ and (e) whether transparency and anti-corruption programs are in place (“Progr” ranging from 1-2). The distribution of responses to each of the items is shown in Table 3.

Each of these variables measure transparency in a slightly different way and I want to extract what is common to all of them in order to get at the core of the concept, possibly replacing the four original indicators with one ‘transparency’ variable. To do this, I apply latent variable analysis. This allows me to investigate interrelationships between the observed responses in order to determine whether they can be explained by one construct, an unobserved latent variable. It then allows me to assign scores to each municipality for the latent variable depending on its responses (Bartholomew, Steele, Galbraith, & Moustaki, 2008:209).

requests on public information, (iv) a system or process of organization, protection, and maintenance of public archives, (v) a training program to public servants on the rights and obligations of access to public information, (vi) others.

⁶ The possible responses for methods of making information available are: (i) websites of the municipality, (ii) print media, (iii) electronic media, and (iv) other.

⁷ The original questions have a choice of 10 responses: (1) weekly or more, (2) twice a month, (3) monthly, (4) every two months, (5) every three months, (6) every four months, (7) every half year, (8) annually, (9) do not update the information, and (10) do not know. I record the "do not know" responses as missing observations.

⁸ The options for which information is publicized are (1) Municipal Development Plan, (2) Government reports and/or public accounts, (3) income information, (4) budget (original, modified, actual), (5) public debt, (6) organic structure and directory, (7) wages and salaries of the local council, (8) acquisitions (programs, contracts, providers), (9) public works (10) expenditures on accessories or donations, (11) concessions and permits, (12) beneficiaries of programs (13) audits (14) (15) changes in ground use, (16) manual of processes and/or services, (17) other, (18) none, (19) don't know. I turned this into an indicator in which 1 means it publicizes four or less of these, 2 means it publicizes between 5 and 8, 3 between 9 and 12, and 4 between 13 and 16. I left out "other" and again treat "don't know" as missing observations.

Table 3 Distribution of the item responses for transparency

| Item | Number of responses for each number on the scale | | | | | | |
|--|--|---------------|-----------------|-----------------|-----------------|----------------|----------------|
| (a) How many mechanisms are in place for citizens to access public information (MECH) | 1= 347 (16%) | 2= 98 (5%) | 3= 539 (25%) | 4= 312 (15%) | 5=289 (13%) | 6=257 (12%) | 7=302 (14%) |
| (b) The what extent is public information made available (AVAIL) | 1=307 (14%) | 2=114 (5%) | 3=1022 (48%) | 4= 437 (20%) | 5= 264 (12%) | | |
| (c) How frequently is public information updated? (FREQU) | 1= 432 (20%) | | 2=564 (26%) | | 3=1148 (53%) | | |
| (d) Which information is publicized? (INFO) | 1=551 (26%) | 2=533 (25%) | 3=549 (26%) | 4=511 (24%) | | | |
| (e) Are transparency and anti-corruption programs in place? (PROGR) | 1=904 (42%) | | | 2=1240 (58%) | | | |

The advantage of latent variable analysis over simply summing up the scores is that this method allows for measurement error by specifying a probabilistic rather than deterministic relationship between the item responses and the latent variable. This is a more valid method given that these items will be imperfect indicators of the latent construct. It also permits investigating in how far each of the item responses is diagnostic of the latent variable. I can then drop items or assign different weights to them depending on how revealing they are of the construct ‘transparency’.

The most common method of latent variable analysis is to simply carry out factor analysis. However, this approach uses a linear factor model which assumes that the observed variables are continuous variables. Given that in this case we are dealing with ordered categorical response variables, not continuous variables, this would give biased estimates of the factor coefficients (loadings) if applied to the categorical data. While

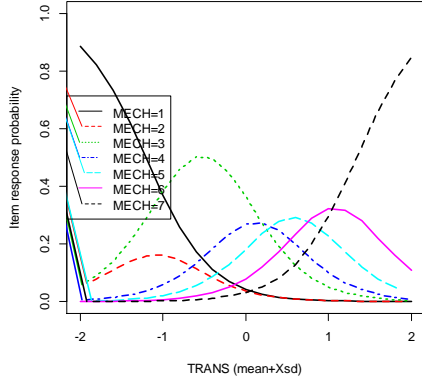
many researchers use regular factor analysis nonetheless, the more appropriate method is latent trait analysis, which is closer to the research frontier and requires more specialized software (Bartholomew et al., 2008:243). Latent trait models (a.k.a. Item Response Theory) use (multinomial) logistic regressions to specify the relationships between the categorical item responses and the continuous latent trait(s).

The latent trait model's parameter estimates can be used to determine the weights assigned to the different survey response items. The slope coefficient (or loading) reveals in how far the item enables us to discriminate between respondents on the latent trait. The higher the loading, the greater the discrimination; that is, the more information the item gives us about where on the scale the municipality lies, the greater the weight it should be given. If an item has very low discrimination, or has an opposite sign to that of the others, one may consider dropping it from the model. The constants or intercepts in latent trait models are difficulty parameters. The difficulty tells us the probability of the median municipality giving a response in that specific category. Ideally you would have items with a range of different difficulty levels in any one scale (Stares, 2012).

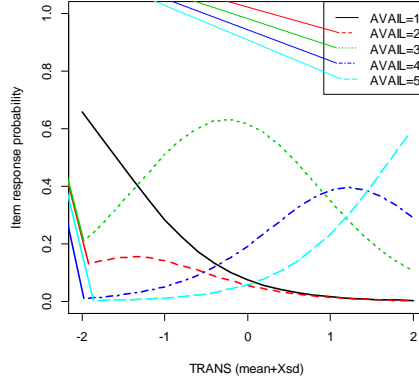
I use two different types of software: R and MPlus. R allows me to plot category response functions in graphs in order to check that discrimination and difficulty merit keeping all of the categories. Once I am satisfied with the selection of response categories, I use MPlus software as this allows me to calculate factor scores for each municipality based on its response categories. Using R software, I plot the category response functions from fitted probabilities so that the suitability of the response items can be seen at a glance. These are shown in Figure 12 below. For each item, we can see the discrimination of the item by observing the angle of the slopes of its response curves (the steeper the slope, the greater the discrimination). We can see the difficulty by observing the location of the curve in the plot (the higher the curve rises in terms of the x-axis, the greater the difficulty). Essentially, what we don't want to see are flat lines that are almost parallel to one another as this would mean low discrimination and low difficulty.

Figure 12 Item response functions

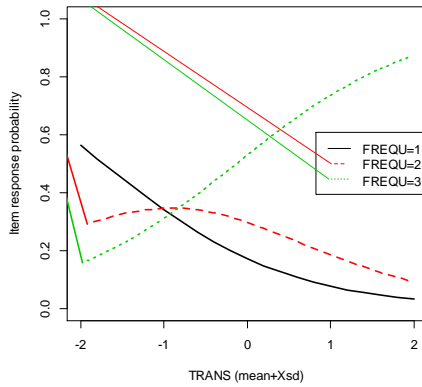
(a) Mech



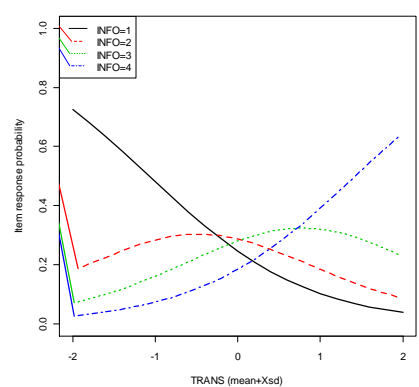
(b) Avail



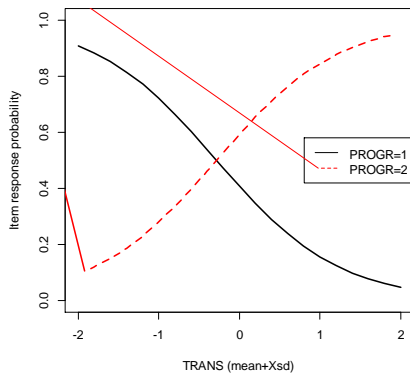
(b) Frequency



(d) Information



(e) Program



Ideally, as the municipalities' scores on the latent trait ('transparency') rises, the odds of their response to the specific question should also be higher and vice versa. This was not the case for INFO, as categories 1, which had only a small number of responses was higher than 2. In order to achieve this, I combined the responses from 1 and 2 into one category (1), reducing the numbers of the scale from 5 to 4. All the observable manifest variables now increase as the municipality's score rises.

Now that the model has been fitted, I can obtain predicted values for transparency for each of the municipalities (factor scores). These are basically weighted sums of the observed variables. This single indicator will then serve as the dependent variable proxy for accountability in the regression models that test for the effect of taxation. I use Mplus software to obtain factor scores for each municipality on the 'transparency' construct. The higher the score, the greater is the degree of transparency in the municipality. These factor scores can now be used as a single dependent variable for regression analysis to test the relationship between taxation and transparency. Municipalities with higher taxation are expected to have higher levels of transparency. As this survey data on transparency is only available for one year, no panel regression is possible.

Table 4 Summary of *Transparency* variable, 2008

| Time | Variable | Obs | Mean | Std. Dev. | Min | Max |
|--------------------|---------------------|------------|-------------|------------------|------------|------------|
| 2008 cross-section | <i>Transparency</i> | 2127 | 0.02 | 0.88 | -1.973 | 1.944 |

Drainage coverage

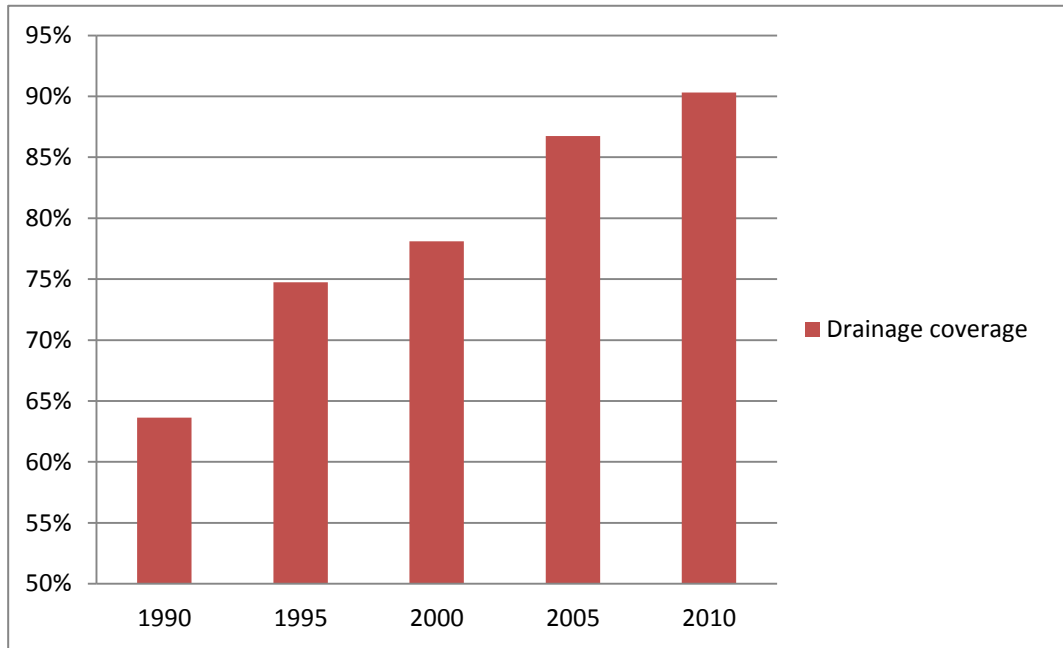
The second proxy for accountability is an outcome measure concerning local basic service provision. In prior research on Mexico, Cleary (2010) uses improvements in water and drainage coverage as indicators of responsive local governments during the

1980's and 1990's. Water and drainage are among the prime responsibilities of local governments for which they are exclusively responsible and tend to feature as the central issues in local politics (Cabrero Mendoza & Nava Campos, 1999). These are services covering the basic needs of the broad public. Given that they are among the most basic services for any resident, I regard responding to these basic needs by trying to attain full coverage as responsiveness of the local government to the needs of its residents and an indicator of one of the key aspects of accountability: responsiveness (See Chapter 1.1). The variable ***Drainage coverage*** is used here for the percentage of the municipal population that receives drainage services. The data is taken from the national censuses on population and housing (CPV), which gives the percentage of households living in housing with drainage per municipality, available since 1990 at five points in time (1990, 1995, 2000, 2005 and 2010). The reasons I don't use water services are twofold. First, coverage has been much higher from the beginning of the period under observation, with almost all municipalities reaching over 80 percent of households with water services, thus yielding little variation in the data. Second, there was a change in the survey question terminology which creates an inconsistency between the 1990, 1995, and 2000 surveys on one hand and the 2005 and 2010 surveys on the other. Given that I have data only for

Nationwide there is a general upward trend in households with drainage coverage (See

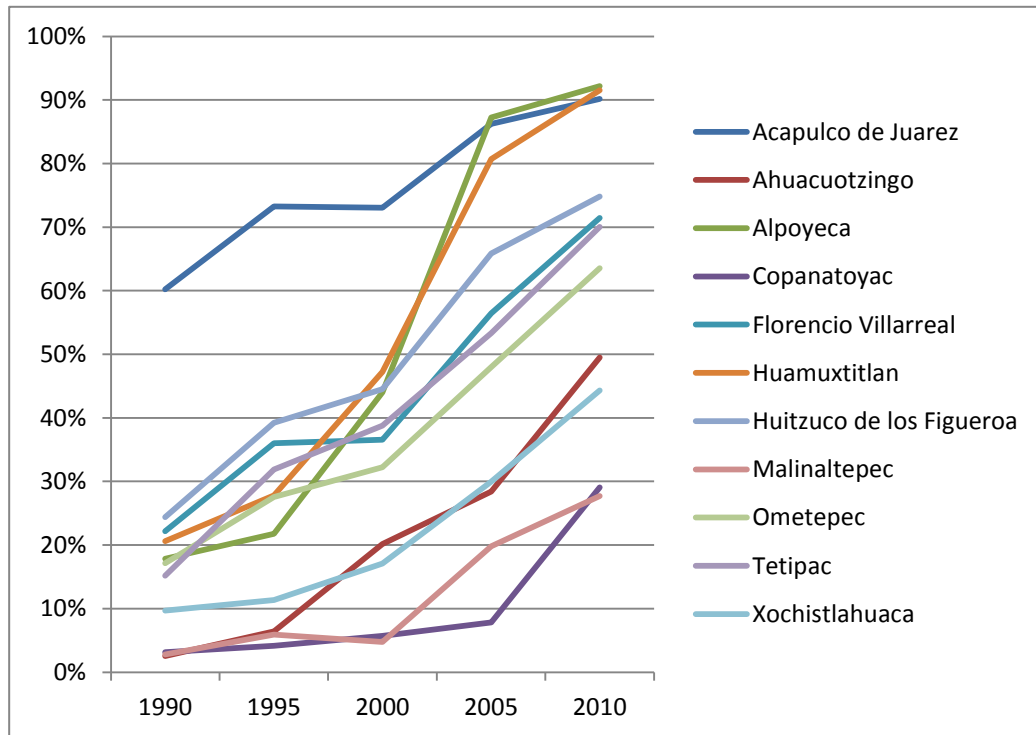
Figure 13). There is much variation in coverage between municipalities, such as in the provision of drainage services in Estado de Mexico shown in Figure 14. While some municipalities made remarkable progress, others have not. Municipalities that started the period under observation with high service coverage are left with little room for improvement over the period under observation. Keeping in mind that only changes and not levels are being considered in fixed effects models, I rerun the analysis using only municipalities that started off with less than 50% coverage and track their progress.

Figure 13 Percentage of the Mexican population receiving drainage services, 1990-2010



Source: Population and Housing Surveys (CPV) 1990, 1995, 2000, 2005, 2010

Figure 14 Drainage service coverage in selected municipalities of Estado de Mexico, 1990-2010



Source: Population and Housing Surveys (CPV) 1990, 1995, 2000, 2005, 2010

Table 5 Summary of *Drainage coverage* variable, 2005

| Time | Observations | Mean | Std. Dev. | Min. | Max. |
|--|---------------------|-------------|------------------|-------------|-------------|
| 2005 cross-section | 1866 | 0.73 | 0.23 | 0 | 0.995 |
| 5 period panel (1990, 1995, 2000, 2010) | 9235 | 0.58 | 0.30 | 0 | 0.998 |

4.3 Operationalising the variables 2: Electoral competition and Taxation

In the previous section, I presented the first two proxies for accountability. In this section, I present a final indicator for accountability: electoral competition. I then show how I measure the main independent variable: taxation.

Electoral competition: dependent and independent variable

Viewed by much of the political science scholarship as the main tool for citizens to achieve accountability, electoral competition provides voters with a mechanism to constrain political power, to influence policy decisions and to increase government responsiveness to their needs. Voters can sanction representatives that abuse their power or are not sufficiently responsive and reward performance they deem satisfactory (Przeworski et al., 1999). They can choose between different campaign platforms and select parties or individuals that they believe will be most representative of their interests. Furthermore, within an electorally competitive environment, already

during the campaigning process, one can expect that the incumbent is more likely to be scrutinized and local residents approached to communicate their needs than in an environment with no serious opposition.

As discussed in Chapter 3, while popular elections of municipal governments had been held in Mexico since the beginning of the 20th century, these have not always been competitive in the sense of allowing for an effective possibility of contest (Magaloni, 2006). Instead, one sole party, the Institutional Revolution Party or PRI won at least 95% of all municipal elections from the party's inception until the late 1980's. While celebrating the outward ritual of elections, the PRI did not allow a competitive electoral environment to flourish, crushing opposition through a range of tactics including electoral fraud, corruption, and, at times, violence (J. Hiskey & Canache, 2005). Thus, even though elections may have been held in each municipality throughout Mexico, only beginning in the 1980's did some municipalities begin to see a transition to a situation of *de facto* electoral contest. While during the 1990's many municipalities opened up to a democratic electoral process, others did not (Cornelius et al., 1999; Fox, 2007; J. T. Hiskey & Bowler, 2005; Lawson, 2000).

The objective here is to exploit the evolution over time and the variance between municipalities of electoral competition in order to test whether municipalities with higher taxation are also more likely to have electoral competition (sooner) compared to those where municipal taxes were relatively less important. The assumption takes two angles. On the one hand, in municipalities in which residents pay more taxes, residents are more likely to demand accountability in the form of electoral competition. On the other hand, a municipal government that is more accountable (or at least wants to appear as such, even if it may end up rigging results), will be more likely to allow for electoral competition in order to show that it is accountable to its residents, thereby eliciting compliance with tax payments. In other words, like the proxies presented in section 4.2, it may be an indicator of the short or the long path to accountability, if the relationship to taxation is positive. Yet I also assume that if there is no relationship between taxation and electoral accountability, it would be doubtful that the link works through the long path given that this proxy is also an indicator of engagement between

the residents and the government through a relatively promising instrument of citizen influence on local government accountability.

I use this proxy not only for an indicator of accountability but also one of citizen influence (an indicator that the long pathway to accountability may be at work) and, in further model specifications, I use it as a control variable as a proxy for a context of democratisation. This will be further explained in the estimation strategies in Section 4.4.

Electoral competition has been measured in a variety of ways in the scholarship. Gervasoni (2010) calculates 1 minus the proportion of votes won by the incumbent for the case of Argentine provinces. Alternatively, party alternation may be used as an indicator (Przeworski, 2000). Laakso and Taagepera (1979) count the number of parties competing in the electoral race. For Mexican municipalities, Broid Krauze (2010) calculates the difference of votes between the winner and the runner-up to measure electoral competition, while Hiskey and Canache (2005) use the first PRI loss in a municipality as indicating the onset of electoral competition, as it shows rather conclusively and perceptibly that one-party rule has come to an end. Hiskey and Canache's is a highly conservative indicator in terms of accepting a municipality as having electoral competition (and suitable for their spatial diffusion model that looks for a more perceivable, symbolic turn-over event) yet ignores lack of competition through domination of other political parties. Finally, Cleary (2010) uses a dichotomous measure, coding a municipality as electorally competitive if opposite parties receive more than 20% of the vote.

Here Cleary's indicator will be used, denoted as ***Electoral Competition***, as what I intend to measure is more the competition in itself as a sign of an effort at obtaining or showing accountability, rather than an end to the incumbent's grip on power. Furthermore, it is a clear and unequivocal measure and easier to interpret than Gervasoni's or Broid's continuous variable. The threshold of 80% victory margin is extreme enough to leave little doubt about a lack of a serious electoral opposition and it is empirically suitable to a case of a dominating autocratic party system which over time begins to democratise.

There are several potential problems regarding the ability of this variable to measure accountability. First, some interpret a lack of electoral competition as satisfaction with the incumbent. Similarly, in the market, when one firm dominates a large market share, this may be regarded as satisfaction with the producer and its products and not necessarily as evidence of a monopoly or oligopoly. However, in the Mexican context, keeping in mind that prior to the 1980's the party in power at the national level won almost every single election in each of over 2400 municipalities, scholars view municipalities in which opposition parties are not competing as a situation of continued authoritarianism and lack of a serious opposition; that is, a lack of electoral competition rather than as satisfaction with the status quo (Beer, 2003; Cleary, 2010; Fox, 2007).

A second potential problem with using electoral competition as a proxy for accountability is that, even if elections are competitive, they may not function as an effective instrument for enhancing accountability. They are held infrequently and often decided by factors that have little to do with the politician's performance. In Mexico, the ability of electoral competition to function as a mechanism for accountability is weakened as Mexico's constitution bars the consecutive re-election of municipal presidents (Grindle, 2007). This limits the residents' ability to express approval or disapproval of the incumbent and gives municipal presidents less incentive to maintain the support of the public once elected (although there may be pressure to ensure the party is re-elected). It should be noted, however, that the municipal president may be re-elected after the following term, there is high pressure for their party to be re-elected, and seeking higher office in the party is often made dependent on this.

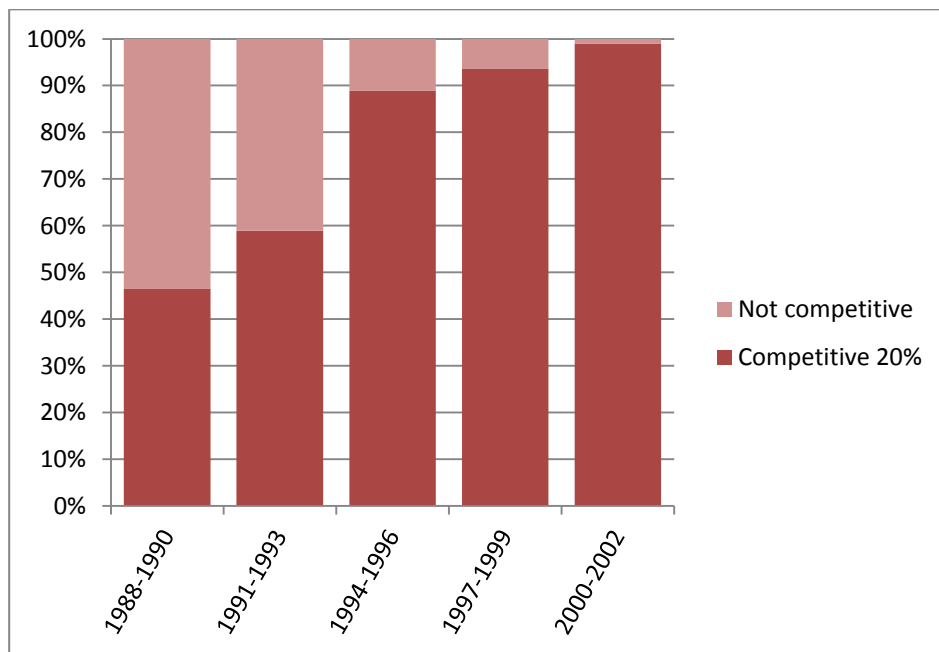
Finally, there is always the possibility that citizens demand more accountability in response to taxation, but instead of succeeding to form political opposition, any attempts are repressed by the government. The data will not show such failed efforts. However, the objective here is not so much to detect demand for accountability but actual improvements in accountability.

While electoral competition may not guarantee accountability, my assumption is that it is still far more likely to create pressure on a local government to perform, to generate

information about voter preferences, and to present the residents with a choice of policy options, than if there were no competing parties to scrutinize it or threaten its power. Thus, even if the government doesn't act on promises or demands, this is still a suitable indicator to differentiate municipalities in which people demand accountability or the government tries to show that it is accountable, from municipalities in which no such effort is made.

Municipal level electoral data is available since 1989 until the present from the think tank CIDAC (*Centro de Investigacion de Desarrollo, A.C.*). It specifies the number of votes attained by each party in the elections, votes cast and registered voters. Local elections are held every three years in almost all municipalities (in some they have been held every four years). This yields five time periods with great variance from 1988-1990 to 2000-2002, before almost 100% of municipalities enjoyed electoral competition or electoral democracy.

Figure 15 Percentage of municipalities with electoral competition, 1988-2002



Source: CIDAC/IFE

Table 6 Summary of Electoral competition variable

| Time | Obs | Mean | Std. Dev. | Min | Max |
|--------------------------------------|------------|-------------|------------------|------------|------------|
| All time periods (1, 2, 3, 4, and 5) | 9204 | 0.80 | 0.40 | 0 | 1 |
| Time period 1 | 1236 | 0.46 | 0.50 | 0 | 1 |
| Time period 2 | 2253 | 0.59 | 0.49 | 0 | 1 |
| Time period 3 | 1957 | 0.89 | 0.31 | 0 | 1 |
| Time period 4 | 1782 | 0.94 | 0.24 | 0 | 1 |
| Time period 5 | 1976 | 0.99 | 0.10 | 0 | 1 |

Taxation: the main independent variable

My measure of taxation is local tax revenues over total local government revenues (***Tax/Total***). It aims to measure the importance of and/or reliance on taxation compared to other revenue sources in the local government budget.

The numerator in the measure, “Tax”, combines local tax revenues (*impuestos*) and revenues from local fees and charges (*derechos*) into a single variable, following Moore’s (forthcoming) definition of taxes as a transfer of revenues from the subjects to the ruler. Like taxes, fees are a monetary contribution by local residents to the local government for providing municipal services. The data used are municipal income data from SIMBAD (2012), spanning from 1989 to 2009.

In a further expansion, I compare the strength of the effect of the property taxes versus other own revenues. I test this separately given that the property tax given that it has particular characteristics compared to other tax types (it is a highly visible tax paid directly to the local government) and it is the most common tax instrument that is found at the local level, worldwide.

There are several caveats that merit discussion. For one thing, *Tax/Total* does not precisely capture the extent of actual tax revenue needs and dependence. A local

government may need tax revenues but find itself unable to collect them: this won't show up in the data. The indicator is instead a measure of the importance of taxation in the overall budget. That is what is being tested here.

I had considered using a measure of taxes per capita to capture the tax paid by a resident in the municipality on average. This measure would be more targeted in capturing the effect that taxation has in sparking residents' incentives. One problem with this is that it ignores any benefits that the municipal residents are obtaining in return for tax payments. Any change in tax payments would need to be seen in congruence with other taxes paid and benefits received by the taxpayer. For example, if a rise in taxes is accompanied by the introduction of targeted social transfers from the central government directly to residents, such as through *Oportunidades*, the incentives to demand accountability may not be as strong as when it is accompanied by nothing. One way to try to compensate would be a variation of this measure: tax revenues per capita over the proportion of payments by the government on investment expenditures, following Ross's (2001) cost-benefit hypothesis.

Yet the main problem with either of these is that it is impossible to differentiate who or how many people are paying taxes and how much. They are both average measures that hide differences between residents in the municipality. A municipality in which a handful of large businesses pay the bulk of the tax while everyone else evades could have the same average per capita tax revenue and the same proportion of tax to total revenue as a municipality in which every resident pays a relatively high amount compared to their own income. We also don't see rises in tax rates but only actual tax intake.

The measure of tax importance used here (*Tax/total*) is therefore more adequate in measuring the incentive effects on the local government (and on the local residents only by extension following a response to those incentives by the local government). The variable is summarised below in

Table 7. Table 9 at the end of this chapter also summarises the variables and data sources.

Table 7 Summary of taxation variables

| Time | Variable | Obs | Mean | Std. Dev. | Min | Max |
|-------------|------------------|------------|-------------|------------------|------------|------------|
| 1989-2009 | <i>Tax/total</i> | 41807 | 0.09 | 0.09 | 0.00 | 0.99 |
| 2003 | <i>Tax/total</i> | 2021 | 0.06 | 0.07 | 0.00 | 0.59 |

Data problems

Besides the difficulties of the data capturing the concepts that they are meant to, there are further potential problems with the variables used. First, it is possible that there is misrepresentation of data through fiscal gimmickry and creative accounting (Alt, Lassen, & Wehner, 2014). Some accounting definitions are ambiguous or have been misunderstood or manipulated to mark the same information in different items. For instance, it is known that many municipalities hide payroll expenditures in other items of the budget. Debts are also hidden in a way that they appear off-budget altogether and I thus do not make use of expenditure data. Furthermore, since 2008, transfers were to take into account tax effort. It is thus possible that municipalities may exaggerate their tax revenue data from 2008 onwards in order to receive more transfers.

Second, there are many missing variables in the dataset. This may lead to sample selection bias as the less accountable municipalities and the municipalities least equipped to collect taxes will also be the ones with the most missing data. This means that results may be biased in a way that municipalities that have both poor taxation and poor accountability will not be taken into account, therefore possibly weakening the relationship between taxation and accountability.

Now that I have established how the main variables of interest are to be operationalised and what data is used, in the next section I will discuss how I use them in different regression models in order to test the relationships of interest.

4.4 Estimation Strategy

Having described the methodological challenges of testing the relation between taxation and accountability quantitatively in Section 4.1 and having shown how I operationalised the key variables of interest in sections 4.2 and 4.3, I now turn to the estimation strategies. This section first lays out five hypotheses that I aim to test and shows the models that will be used to test them in a general form. I then expand on the control variables to be included in the models. The model specifications will be presented in a more specific form in Chapter 5, together with the results.

Five hypotheses and how they will be tested

I aim to test five hypotheses:

1. Correlation: Municipalities where *Tax/total* is higher also have higher accountability.
2. Causation: Greater taxation leads to greater accountability.
3. Pathway: Taxation leads to greater accountability through the long path (with a time lag) vs. the short path (simultaneously).
4. Context of democracy: The relationship between taxation and accountability is stronger in a context of greater democratisation.
5. Tax type: Property taxation leads to greater accountability.

Hypothesis 1: Correlation

The first hypothesis, in which I seek to establish whether municipalities in which *Tax/total* is higher also tend to be the more accountable ones, involves simple tests of association. I run simple tests of correlation as well as cross-sectional regressions that take the following general form:

$$y_i = \beta_0 + \beta_1 X_i + u_i \quad (4.1)$$

where the dependent variable y_i is accountability (or one of the three proxies for accountability explained in sections 4.2 and 4.3), X is the main regressor ($Tax/total$), and u_i is the error term, for each municipality i .

Hypothesis 2: Causation

I then proceed to explore whether a *causal* relationship can be observed: does taxation lead to accountability?

How have other studies grappled with the endogeneity problems and establishing causality of taxation in the relationship? Of the three relevant studies at the subnational level, one uses only cross-sectional data (Hoffman & Gibson, 2005). This relies on controls to prevent spuriousness but otherwise fails to show causality. The other two use a time lag to represent the temporal differences and use panel regression with fixed effects. The cross-national studies with large time panels also use the controversial lagged dependent variable on the right-hand side of the equations (J. Mahon, 2005; Ross, 2001).

Three studies (among both the subnational and cross-country studies) use instrumental variable (IV) regression to overcome endogeneity problems. Baskaran (2014) uses the year of adoption of value added tax for taxation as quasi-exogenous instruments to overcome problems of endogeneity and reverse causality in his cross-national regression. At the subnational level, Gadenne (2013) uses a fuzzy regression discontinuity approach (the discontinuity being the change of fiscal transfer rules) and instrumental variable (IV) regression (the instrument being the amount of transfers that municipalities should theoretically receive according to the fiscal rule). Gervasoni (2010) primarily tests transfers per capita and argues that in the Argentine case, academic accounts assure that they are not determined by lack of democracy or lack of tax capacity. Yet he proceeds to use instrumental variable regression, using population as an instrumental variable which is correlated with transfers but not with accountability.

I attempt to eliminate endogeneity problems using control variables, panel data regression with fixed effects and IV regression, and by testing for reverse causality. Given the disagreement in the literature on the best methodology and the trade-offs between methodological soundness and theoretical usefulness, I use several all of the main models suggested.

I want to make sure that the correlation is not spurious and driven by other variables that may be correlated to both taxation and accountability. This would lead to omitted variable bias, which makes the OLS estimator inconsistent even in large samples. I thus add a vector of control variables, indicated by C , to the equations. These control variables include *Development*, *Budget*, *Rural*, *Governor*, *North*, and *State* and will be further detailed below. As they are not all available over all years, the panel regressions include only Budget and Governor (but control for fixed effects as explained below).

To further control for other intervening factors, I consider using fixed effects. In deciding whether to use fixed effects, I run F-tests and Hausman tests. When I do use them, I also use panel corrected standard errors. Several of the control variables are only available for one year, meaning that they cannot be included in the panel regression models. However, these largely measure effects that do not vary over time and are thus controlled for using a fixed effects model. Combined entity and time fixed effects will eliminate omitted variable bias arising both from unobserved variables that are constant across municipalities and from unobserved variables that are constant over time. As mentioned above, it also precludes looking at the effect of *levels* of taxation, focusing only on *changes* in levels. The models will take the following form:

$$y_{it} = \beta_1 X_{1it} + \beta_2 C_{it} + \alpha_i + \lambda_t + u_{it} \quad (4.2)$$

where y is a proxy for accountability, X_1 is the measure of taxation (*Tax/total*), C is a vector of control variables that includes *Budget* and *Governor*; α are entity (municipality) specific or unit fixed effects; λ are the time fixed effects, and u is the error term.

A further method of reducing the risk of omitted variable bias, errors in variables (measurement errors in the regressors) and simultaneous causality is to apply IV regression. A valid instrument must be relevant (in the sense that variation relates to variation in taxation) and exogenous (it must be associated with taxation yet not with accountability, therefore isolating that part of taxation that is uncorrelated with the error term). The coefficient is then estimated through two stage least squares, where the first stage decomposes taxation into two components: the component that is correlated with the regression error and the component that is uncorrelated with the error:

$$X_i = \pi_0 + \pi_1 Z_i + v_i \quad (4.3)$$

where π_0 is the intercept, π_1 is the slope, and Z_i is the exogenous instrument (the uncorrelated component) and v_i is the error term (the correlated component). OLS is applied and the predicted values are then used for the second stage of the regression:

$$y_i = \hat{\beta}_0 + \hat{\beta}_1 \hat{X}_i + \beta_2 C_i + u_i \quad (4.4)$$

Hypothesis 3: Pathway

To establish causality following the long path, I follow Ross (2001) and scholars after him by using a lagged specification that assumes that taxation precedes accountability. I specify the models in an effort to mitigate the problems of omitted variable bias by adding control variables. For a 2-year time lag, I test the effect of taxation in year $t-2$ on accountability in year t . This strategy makes the assumption that tax dependence precedes accountability and that this order of events is evidence of taxation being causal to accountability. This is not unproblematic given the feedback loops in the relationship. It also requires making an assumption about the lag lengths for which there is little guidance in the theory. This length may in fact differ from municipality to municipality. I select 2 year lags for *Transparency* and *Electoral competition*, but a 3 year lag for *Drainage coverage* as I would expect that improved drainage would take slightly more time to implement than changes in transparency or electoral competition.

The models above are thus also tested including a time lag as such for the cross-sectional and panel regressions respectively:

$$y_{it} = \beta_0 + \beta_1 X_{it-2} + \beta_2 C_{it} + u_{it} \quad (4.5)$$

$$y_{it} = \beta_1 X_{1it-2} + \beta_2 C_{it} + \alpha_i + \lambda_t + u_{it} \quad (4.6)$$

Hypothesis 4: Context of Democracy

To test whether the relationship between taxation and accountability is stronger in a context of greater democracy, I control for the level of democracy. I construct the variable *Democracy* following Vanhanen's (2004) democracy measure who bases his measure on the assumption that competition and participation are the two most important aspects of democracy, in line with Dahl (1971) who similarly considers public contestation and the right to participate to the two crucial theoretical dimensions. Vanhanen calculates 'competition' as the percentage of votes received from parties other than the winning party. For 'participation' he uses the percentage of the population which actually voted over the total population. These percentages are each multiplied by one hundred and then multiplied to one another to yield a democracy score. I follow Vanhanen in using the same calculation, except that for 'participation', I am able to use the percentage of voters of all eligible voters rather than the entire population (which was not used by Vanhanen as this data is not available for all countries in his country level analysis, but it is available for Mexican local elections). I call the variable *Democracy*. I interact this with the tax variable by multiplying *Democracy* by *Tax/total* to create *Dem*Tax*. The aim is to test whether the relationship between taxation and accountability is stronger in a context of greater democratisation. The model takes the following form:

$$y_{it} = \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 (X_{1it} \times X_{2it}) + \beta_4 C_{it} + \alpha_i + \lambda_t + u_{it} \quad (4.7)$$

where X_1 is *Tax/total* and X_2 is *Democracy* and the β_3 is the coefficient on the interaction term *Dem*Tax*.

Hypothesis 5: Tax type

I replace the tax revenue variable *Tax/total* in the above models with a measure of property tax revenues over total local government revenues. That is, X1 in the previous formulas goes from being *Tax/total* (where the numerator comprises revenues of all the municipality's revenues from taxes and fees) to *Property tax/total*.

Control variables

To mitigate omitted variable bias as far as possible, control variables are added to the regression models. While time invariant controls are not necessary in the panel regressions because fixed effects take care of these, they do need to be included in the cross-sectional regression models. In deciding which control variables to include, I consider factors that may affect both taxation and accountability. I largely follow the existing subnational quantitative literature (Gadenne, 2013; Gervasoni, 2010; Hoffman & Gibson, 2005) by including structural characteristics of the jurisdiction, political factors to account for partisan support from higher tiers of government, and cultural factors.

Structural factors

Modernization theorists have argued that structural socioeconomic characteristics, such as poverty, urbanization and economic growth serve as key predictors of democratic consolidation (O'Donnell, 1998; Przeworski, 2000), which is related to accountability. Remote, poor municipalities with less educated populations are expected to have less access to media and information about higher standards of electoral competition, transparency and basic services and there is likely to be more vulnerability to oppression by the government. In his case study on accountability in Mexico, Fox (2007) shows how accountability is particularly scarce in poor, rural, and underdeveloped municipalities.

Structural factors are also key predictors of tax revenue collection (Broid Krauze, 2010). More developed and wealthier municipalities are likely to have wealthier residents and a more sophisticated bureaucracy and tax administration than less developed municipalities. Wealthier residents would have a greater ability to pay higher fees and rates.

In order to control for structural factors, I include three variables. The first control variable is the level of development, measured by the variable *Development*. This is operationalised through the UNDP's municipal human development index for Mexico, available for the years 2000 and 2005. This index combines health indicators, such as the infant mortality rate, education indicators such as school enrolment, and poverty measures from a combination of census and income survey data (De la Torre & Moreno, 2010).

I also include two further structural variables. One is *Budget*, which measures the total municipal government revenue available to the local government per capita. This is used as an indicator for administrative capacity of the municipality. To calculate it, the overall local government revenue is divided by the population for each municipality.

Finally, the variable *Rural* measures the percentage of the population that lives in a rural locality. It uses data from the population and housing surveys, available every 5 years from 1990 to 2010. Rural municipalities differ from urban ones in various ways that could affect both taxation and accountability. Rural municipalities tend to have less sophisticated bureaucracies and the unit costs of monitoring tax compliance tend to be higher as residents are more dispersed. Urban areas tend to have higher land values, which are the basis for the most important local government tax: the property tax. Salaries tend to be higher so the ability of people to pay taxes tends to be higher also. This indicator may be related to accountability because cities tend to attract a greater concentration of human capital and universities and therefore ideas surrounding accountability which are lacking in rural areas. Since urban areas may bring a higher concentration of votes, parties may be more likely to focus their electoral campaigns in

urban rather than rural areas. This may affect how parties campaign and mobilize voters (Verba, Nie, & Kim, 1978), which in turn may affect electoral contest and organised opposition to corrupt or oppressive local government practices. Finally, it may also be easier to provide public services like drainage to urban households than to scattered rural ones.

Political factors

Whether the municipality belongs to the same political party as the state government may have an effect on both the degree of accountability and the level of taxation. In a multi-tiered federal system, higher levels of government may strengthen their political allies or weaken opponents at lower tiers of government. They may undermine or help efforts to restrict or expand both accountability and taxation. Benitez-Iturbe (2008), for instance, shows that co-partisanship with the governor has significant effects on the distribution of public goods in Mexican municipalities. I construct the variable **Gov**, representing governor co-partisanship, as a dummy variable which is 1 when the governor of the state in which the municipality is located is of the same political party as that of the municipal president. I use electoral data from Mexico's Federal Electoral Institute (*Instituto Federal de Elecciones*, IFE), available through CIDAC (*Centro de Investigación para el Desarrollo, AC*).

I also include a **State** dummy to control for state laws and norms that affect both taxation and accountability in the same state. State laws exist on transparency and there may also be state-specific norms governing space for electoral competition or initiatives of state institutions to cooperation in providing services. Likewise, there may be state specific tax rates and state administrative assistance with local taxation.

Cultural factors

Differences in cultural values and practices have also been used to explain differences between regions both in accountability (Díaz-Cayeros et al., 2014; Putnam, 1993) and tax intake (especially cultures of tax compliance) (Ayee, 2007; Torgler, 2005). Gervasoni (2010), for example, controls for the number of European-born Argentinians in a province as this population is assumed to self-regulate a different tax-paying culture and different standards of accountability.

The north of Mexico, bordering the United States of America, may be more influenced by the culture around taxpaying and accountability of its northern neighbour. More frequent travel and interaction between citizens of the two countries in this part of Mexico may be more likely to make residents of the northern states more informed and demanding about higher standards of accountability, government performance, and service delivery. There is also said to be a greater taxpaying culture and culture of law abidance because of harsh desert conditions that make reliance on one another more crucial than in other parts of the country (interview 88). I therefore construct the variable **North**: a dummy variable that is 1 if the municipality is located in a state which borders the United States and 0 otherwise.

I considered two further factors. The first is **Indigenous**, based on population and housing census data showing the percentage of the population that is indigenous in the municipality. This variable may be associated with both levels of taxation and accountability. Municipalities that comprise mostly indigenous residents in Mexico are known to be more marginalised from any government influence and basic services (Hernández Navarro, 1999), services are provided through community services rather than the government, and some have their own electoral rules (*usos y costumbres*). Also, tax payments are often made in kind through community service rather than in monetary form.

Some of these control variables have much in common with one another. In selecting which ones to include in the model, I include them one by one, forwards and backwards, to find out which ones make the most significant difference while also preventing multi-

colinearity. Table 10 at the end of this chapter summarises the control variables and data sources.

Conclusion

In this chapter I have discussed the methodological challenges involved in testing the taxation-accountability relationship quantitatively as well as some of the problems contained in the current literature on the topic. These include problems of data availability, dataset quality, missing data, operationalizing the variables, methodological problems that hinder internal validity of the results and problems of linking theory to method.

To measure accountability, I try to mitigate the problem of capturing a broad, multi-faceted concept through the use of three different proxies that measure its different dimensions. I use three proxies for accountability, namely (a) the degree of transparency constructed through survey response data using factor analysis; (b) an outcome indicator on the coverage of local drainage services; and (c) electoral competition. I try to counter endogeneity problems of spurious and simultaneous causality by using control variables (including structural socioeconomic, political, and cultural factors), fixed effects panel regression models, and IV regression. I also discussed problems of missing data and data quality.

Having laid out the models and estimation strategies to test the various hypotheses set out in the theoretical chapter, the next chapter shows the precise model specifications in greater detail and discusses the results.

Table 8 Summary of dependent variables

| Name of Proxy | Description | Years | Source |
|----------------------------------|--|------------------------|---|
| (a) <i>Transparency</i> | Constructed from five survey responses | 2008 | ENGSPJM (La Encuesta Nacional de Gobierno, Seguridad Pública y Justicia Municipal 2009) |
| (b) <i>Drainage coverage</i> | Percentage of households in the municipality that have drainage services | 1990, 1995, 2000, 2005 | Censos y conteos de Población y Vivienda (Population and Housing Censuses) |
| (c) <i>Electoral competition</i> | Winning party won by less 90% of the votes | 5 years from 1988-2009 | IFE/CIDAC (Centro de Investigación para el Desarrollo, A.C.) |

Table 9 Summary of main independent variable

| Name of proxy | Description | Years | Source |
|----------------------|---|--------------------------|--|
| <i>Tax/total</i> | Municipal tax revenues/Total municipal revenues | Annual from 1989 to 2009 | SIMBAD (Sistema Estatal y Municipal de Bases de Datos) |

Table 10 Summary of control variables

| Name of proxy | Description | Years | Source |
|---------------------------|---|----------------------------------|--|
| <i>Development</i> | Human Development Index | 2000, 2005 | UNDP (United Nations Development Program) |
| <i>Rural</i> | % of population living in rural areas | 1995, 2000, 2005, 2010 | Censos y conteos de Poblacion y Vivienda (Population and Housing Censuses) |
| <i>State</i> | = 1 for state respectively, 0 otherwise | each year (time invariant) | |
| <i>Budget</i> | Local government's total revenue per capita | Every year | SIMBAD (INEGI) for revenue amount and Population and Housing Censuses (extrapolated to all years) for population |
| <i>Indigenous</i> | = 1 if >50% of the population of the municipality is indigenous and 0 otherwise | 2005 (relatively time invariant) | Censos y conteos de Poblacion y Vivienda (Population and Housing Censuses) |
| <i>Governor</i> | = 1 if the incumbent is of the same party as the governor, service delivery outcomes may be expected to be better: 1, 0 otherwise | Every 3 years | CIDAC |
| <i>Democracy</i> | Competition (Percentage of votes for opposition) * Participation (Percentage of votes over eligible population) | Every 3 years | CIDAC |

Chapter 5: Results of nation-wide quantitative analysis

The last chapter set up the methodology used for the quantitative tests of the taxation-accountability relationship. This chapter presents and interprets the results of those tests. I begin by showing how the dataset was prepared and then present the models and results of the regressions, transitioning from simple models towards increasingly complex ones. I then review the evidence in view of the five hypotheses laid out in Chapter 4.

The chapter is organised into four sections. Section 5.1 presents the results of correlation matrices and multiple regression analysis using cross-sectional data to test for correlations and associations between the measure of taxation (*Tax/total*) and each of the three measures of accountability (*Transparency*, *Drainage coverage*, and *Electoral competition*). I test various model specification, from simple regressions, to multiple regressions using various control variables and lagged x-variables. With these results, I test Hypothesis 1: that municipalities which are more tax reliant are also more accountable. I also begin to address Hypothesis 2: that there is a *causal* relationship between tax reliance and the proxies for accountability.

In Section 5.2, I aim to get closer to whether or not a causal argument can be found. To do this, I use panel regression analysis with fixed effects (which looks at whether *changes* in tax reliance are positively associated with *changes* in accountability).

Section 3 has three objectives. First, I address Hypothesis 3 and try to understand whether the relationship between taxation and accountability works through the long path (which involves a time lag between the independent causal variables and the onset of the dependent variable) or the short path (involving no time lag). I do this by comparing the regression results of Sections 5.1 and 5.2 to new regressions in which no time lag was included in the models. The second objective is to answer questions about whether it is true that the relationship between tax dependence and accountability is

stronger in a context of democracy (Hypothesis 4). To do this, I add interactions between the taxation variable and a democracy variable and rerun the regressions. The third objective is to address Hypothesis 5: are the results different when the tax variable is the proportion of only property tax revenue among total revenue rather than proportion of all local taxes and fees among total revenue. I present a summary of results after rerunning the previous regressions but replacing the *Tax/total* variable with a *Property tax/total* variable. This should show how the relationship works with this particular tax type, which is not only the most important local tax in Mexico but also universally.

The concluding section of the chapter reviews the results in view of the five hypotheses and draws conclusions about what the results show and what they do not show.

5.1 Preparing the dataset and exploring associations

In this section I first note some points about the data cleaning process. I then use correlation matrices to show some preliminary correlations between each of the accountability variables on one side and the taxation variable on the other. Next, I present the models and results of cross-sectional regressions for each of the three accountability variables. The final subsection summarises and interprets the results.

Preparing the dataset

In total, over all the 20 years and the over 2400 municipalities, there are about 54,000 observations. However, not all data is available for all years. The units for which data are missing are not all random. There are many missing observations for municipalities in Oaxaca, the poorest of the Mexican states, which also contains the largest number of small, rural municipalities with a large proportion of indigenous inhabitants. This could produce sample selection bias.

However, many of these municipalities are in fact governed by “uses and customs“ which apply different electoral systems, forms of governance, and tax collection methods (taxes are often collected in kind and services are provided by community members) so I intended to leave them out of the analysis anyway because their comparability is problematic. I eliminated data on the Federal District as this is not a municipality and neither are the delegations that comprise it. Most importantly, taxes are collected by the Government of the Federal District, not by its individual delegations. The fiscal data is in pesos. I adjusted the values for inflation and multiplied them by 100 so that they could be interpreted as an increase of 100 pesos (roughly equivalent to US\$1).

The relationship between taxation and accountability from a correlation matrix

I first test the hypothesis that levels of taxation and levels of accountability are positively correlated. Correlation matrices show positive associations between *Tax/total* (that is, the proportion of local tax revenues over total local revenues) and all of the measures of accountability (*Transparency*, *Drainage Coverage*, and *Electoral Competition*) as expected, as seen in Table 11. Column 1 in Table 11 shows the correlations for one year (all 2005 except *Electoral Competition*, which is 1988 in order to exploit the greater variation in that year as seen in Figure 15 in Chapter 4). Column 2 shows the correlations for all years in the dataset (1989-2009).

Table 11 Correlation matrix between taxation and accountability variables

| | (1) | (2) | |
|------------------------------|---------------------------|------------------------------|----------------------|
| | <i>Tax/total (1 year)</i> | <i>Tax/total (all years)</i> | <i>Expected sign</i> |
| <i>Transparency</i> | 0.217 (year: 2008) | NA | + |
| <i>Electoral Competition</i> | 0.141 (year: 1998) | 0.098 | + |
| <i>Drainage Coverage</i> | 0.524 (year: 2005) | 0.438 | + |

The relationship between taxation and accountability using cross-sectional regressions

In this subsection, I present the models and results for the cross-sectional regressions. Each table begins with models with no controls and then further adds controls, one after the other. The controls I use are *Development*, *Budget*, *Rural*, *Governor*, *North*, and *State*, as explained in Chapter 4. If *State* is included, I drop *North* in the same regression model as whether the state is located in the north or not is already captured by *State*. While *North* should be sufficient in controlling for cultural differences, *State* is more precise as these differences may vary from state to state. Yet including *State* takes away a lot of degrees of freedom, being dummy variables for each of Mexico's 31 states. If the coefficient on *State* is not significant, this may be simply for mechanical reasons because of the increased number of parameters and the reduction in degrees of freedom. I thus believe that using *North* in the model specifications is preferred. I nonetheless ran the regression using both, present only those with *North* here. The tables with *State* can be found in the annex (see Annex Tables 1-3).

With the controls, the models may begin to tell us something about causality too, as I am seeking to eliminate spurious causality caused by omitted variables. I also aim to get closer at possible causal relationships between taxation and accountability by creating a time difference between the independent variables and the dependent variable. Following the long path to accountability, as explained in the theory chapter (Chapter 4), I predict that taxation will affect accountability with about a 3 year time lag.

I use OLS regression with robust standard errors for all regressions except for those on the binary dependent variable *Electoral competition*, logit regression is more appropriate. In the following, I present the models and results of cross-sectional regressions with lagged independent variables for (a) *Transparency*, (b) *Drainage coverage*, and (b) *Electoral competition*.

a. Transparency

The transparency variable is only available for the year 2008, so, in order have a lagged predictor variable, the variables on the right hand side of the regression equations are from three years prior (2005). *State* and *North* are completely time invariant anyway. A linear model fit better than a quadratic or cubic model. The complete model thus looks like this:

$$\begin{aligned}
 & Transparency_{i,t=2008} && (5.1) \\
 & = \beta_0 + \beta_1 Tax/Total_{i,t=2005} + \beta_2 Development_{i,t=2005} \\
 & + \beta_3 Rural_{i,t=2005} + \beta_5 Budget_{i,t=2005} + \beta_6 Governor_{i,t=2005} \\
 & + \beta_7 North/State_{i,t} + u_{i,t}
 \end{aligned}$$

The results are shown in Table 12. The table presents six models as I add each control variable in one at a time, beginning with the three I deem most important (the structural variables: *Development*, *Rural*, and *Budget*), and further add *Governor* and *North*. There is a positive association between *Transparency* and the taxation measure and it is significant at the 99% significance level, even when all controls variables are included in the model (including *State* as can be seen in Annex Table 1). The results in Table 12, column 6, suggest that a 1 unit increase in *Tax/total* is associated with a 1.390 unit increase in the municipality’s transparency score (which ranges from -1.973 to 1.944, with the mean being 0.02), on average, controlling for *Development*, *Budget*, *Rural*, *Governor* and *North*. Rather than using a 1 unit increase, it makes more sense to look at an increase of .1 in *Tax/total* (or of 10% in the percentage of taxation revenue to total government revenue), so this would be associated with an increase in the transparency score of 0.139. So for instance, if a municipality has an average *Tax/total* value of .07 (or a tax revenue percentage of 7%), it’s transparency score would be 0.32, whereas if it had 40% tax revenue, it would have a transparency score of 1.24 (assuming it had mean values for all of the controls).

Turning to the control variables, *Development*, *Budget*, and *North* are positively and significantly associated with the accountability measure and negatively with *Rural*, all as expected. *State* (in the annex) was significantly associated with approximately half of the

states for the taxation measure. *Governor* was not significantly associated with *Transparency* in these regressions.

Table 12 Cross-Section, Effects of *Tax/total* on *Transparency*, time lag, 2008

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Tax/total</i> | 3.195*** | 1.856*** | 1.385*** | 1.435*** | 1.416*** | 1.390*** |
| | (.259) | (.316) | (.325) | (.336) | (.338) | (.337) |
| <i>Development</i> | | 2.677*** | 2.048*** | 1.958*** | 1.905*** | 1.573** |
| | | (.446) | (.467) | (.517) | (.538) | (.533) |
| <i>Rural</i> | | | -.031*** | -.023** | -.014 | -.015 |
| | | | (.007) | (.009) | (.009) | (.009) |
| <i>Budget</i> | | | | -.000* | -.000** | -.000*** |
| | | | | (.000) | (.000) | (.000) |
| <i>Governor</i> | | | | | -.008 | .001 |
| | | | | | (.044) | (.044) |
| <i>North</i> | | | | | | .203** |
| | | | | | | (.064) |
| Constant | -.040 | -1.990*** | -1.264*** | -1.134** | -1.084* | -.825 |
| | (.026) | (.327) | (.370) | (.410) | (.427) | (.423) |
| Observations | 1682 | 1682 | 1682 | 1511 | 1394 | 1394 |
| R-squared | .088 | .112 | .122 | .115 | .098 | .105 |

Robust standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

b. Drainage coverage

In the set of regressions on *Drainage coverage*, the controls are the same as above, though I use the year 2005 for the drainage variable, as data for Drainage is only available every five years. I correspondingly used lagged variables measure on the right hand side of the equation from the year 2002. Since *Development* and *Rural* were not available for 2002, I used data from the closest year that it was available for these variables: 2000. I reproduce the table including *State* in the annex. I ran the model using a quadratic equation as this proved to be a better fit given that (a) when running a quadratic model, the coefficients on the squared taxation variable came out statistically significant, as seen in the regression output in Table 13 and (b) a likelihood ratio test gave a probability of 0.000 that the null hypothesis, that there is no difference between the linear and quadratic

models (or that the quadratic model adds nothing), can be rejected. These two properties indicate that the quadratic model is a better fit than a linear model for these regressions. The model looks as such:

$$\begin{aligned}
 \text{Drainage coverage}_{i,t=2005} & & (5.2) \\
 &= \text{Tax/Total}_{i,t=2002} + \text{Tax/Total}^2_{i,t=2002} \\
 &+ \text{Development}_{i,t=2000} + \text{Rural}_{i,t=2000} + \text{Budget}_{i,t=2002} \\
 &+ \text{Governor}_{i,t=2002} + \text{North or State}_{i,t} + \mu
 \end{aligned}$$

The regression output in Table 13 shows positive and significant coefficients on the lagged *Tax/total* variable and negative and significant coefficients on the *Tax/total squared* coefficient. Table 14 shows the estimate margins at specific values of *Tax/total*. As municipalities have between 0 and 45% tax revenue in their total revenue, I used 5% intervals running from 0 to 0.4.

Both the figures under the column heading “Margin” in Table 14 and the concave curve in Figure 16 suggest that at low *Tax/total* values (below 0.20), *Drainage coverage* increases as the *Tax/total* value increases. The mean *Tax/total* value among the 2052 municipalities in this sample for 2005 was approximately 0.07, so just under the .1 mark on the x-axis in Figure 16 (or the third row in Table 14). Most municipalities are bundled between 0 and 0.2 on the x-axis, and in this range of the graph, when *Tax/total* increases, so does *Drainage coverage*. For instance, moving from .0 to .15 in terms of *Tax/total*, moves the municipality from 75% to 80% coverage of drainage services, on average, holding the control variables constant. Only about 100 of the over 2400 municipalities have *Tax/total* values above 0.2. It is only for the approximately 100 municipalities whose *Tax/total* proportion is greater than 0.2 (or tax revenues comprising 20% of the total budget) that the slope becomes negative.

This may mean that for municipalities with extremely high *Tax/total* values (which tend to be large urban municipalities), the relationship between *Tax/total* and *Drainage coverage* becomes negative. However, it is also likely that these results are driven by a few outliers. One can see both in Table 14 (under the column heading “Confidence intervals” and in the graph (by the length of the vertical lines intersecting the points) that

the confidence intervals are far larger. On the left hand side of the graph, as the concave line moves from 0 to .1, the confidence intervals are much smaller and do not even overlap. The model predictions for municipalities below 0.2 *Tax/total* values can therefore be reported with far greater confidence and these yield a clear positive relationship.

Turning to the control variables, Development and Budget were positively and significantly associated with Drainage coverage as expected. *Rural* and *Governor* negatively, though not significantly, and *North* negatively and significantly.

Table 13 Cross-Section, Effects of *Tax/total* on Drainage coverage, time lag, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>L3.taxtotal</i> | 3.191*** (.167) | .909*** (.139) | .916*** (.149) | .937*** (.152) | .942*** (.151) | .946*** (.151) |
| <i>L3.taxesquared</i> | -6.163*** (.575) | -2.351*** (.392) | -2.361*** (.402) | -2.439*** (.412) | -2.439*** (.407) | -2.418*** (.404) |
| <i>Development</i> | | 2.217*** (.078) | 2.221*** (.083) | 2.176*** (.087) | 2.168*** (.088) | 2.321*** (.091) |
| <i>Rural</i> | | | .000 (.001) | -.001 (.001) | -.001 (.001) | -.000 (.002) |
| <i>Budget</i> | | | | .000* (.000) | .000* (.000) | .000*** (.000) |
| <i>Governor</i> | | | | | -.014 (.008) | -.012 (.007) |
| <i>North</i> | | | | | | -.093*** (.011) |
| Constant | .594*** (.009) | -.991*** (.058) | -.996*** (.067) | -.968*** (.069) | -.956*** (.070) | -1.077*** (.072) |
| Observations | 1726 | 1726 | 1726 | 1693 | 1693 | 1693 |
| R-squared | .282 | .502 | .502 | .500 | .501 | .520 |

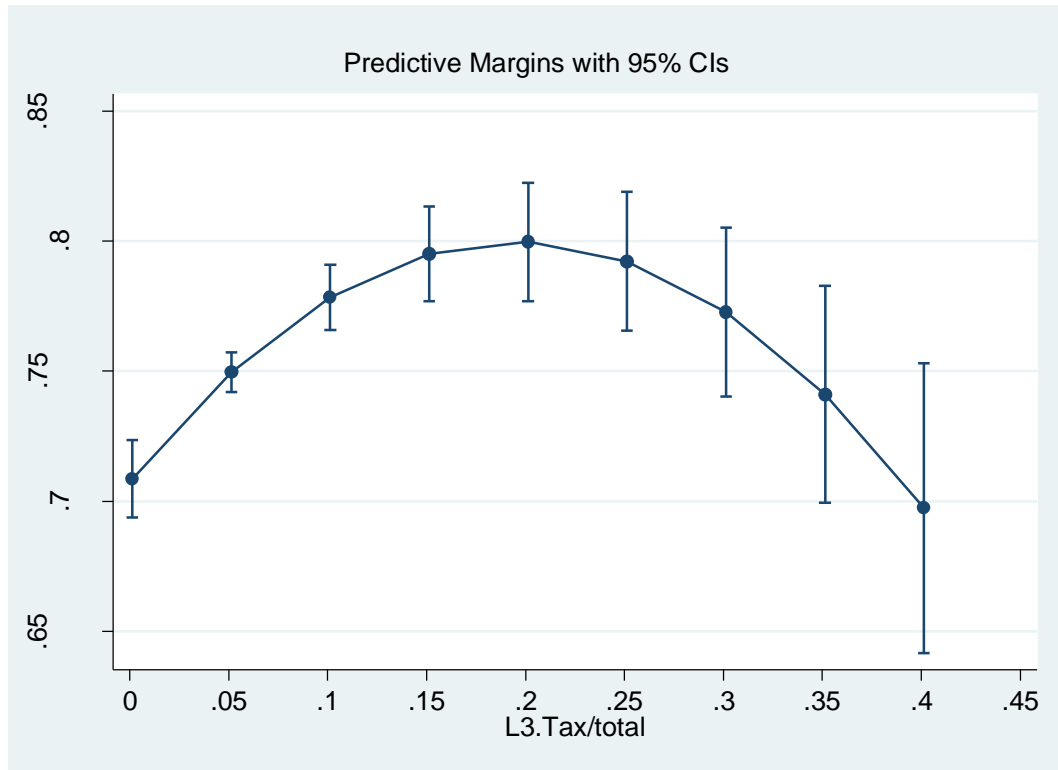
Robust standard errors in parentheses

* p<0.05 ** p<0.01 *** p<0.001"

Table 14 Estimate margins at specified values of Tax/total

| Tax/total | Margin | Delta-method | | | | | [95% Conf. Interval] |
|-----------|--------|--------------|----------|--------|-------|----------|----------------------|
| | | Std. Err. | z | P>z | | | |
| 1 | 0.00 | 0.708593 | 0.007607 | 93.15 | 0.000 | 0.693683 | 0.723503 |
| 2 | 0.05 | 0.749502 | 0.003891 | 192.6 | 0.000 | 0.741875 | 0.757129 |
| 3 | 0.10 | 0.778322 | 0.006361 | 122.36 | 0.000 | 0.765855 | 0.790789 |
| 4 | 0.15 | 0.795053 | 0.009335 | 85.17 | 0.000 | 0.776757 | 0.813349 |
| 5 | 0.20 | 0.799696 | 0.011586 | 69.02 | 0.000 | 0.776987 | 0.822405 |
| 6 | 0.25 | 0.792251 | 0.01366 | 58 | 0.000 | 0.765478 | 0.819023 |
| 7 | 0.30 | 0.772716 | 0.016575 | 46.62 | 0.000 | 0.74023 | 0.805202 |
| 8 | 0.35 | 0.741094 | 0.02133 | 34.74 | 0.000 | 0.699288 | 0.782899 |
| 9 | 0.40 | 0.697382 | 0.028449 | 24.51 | 0.000 | 0.641623 | 0.753141 |

Figure 16 Margins plot for quadratic function



c. Electoral Competition

Given that *Electoral Competition* is a dichotomous dependent variable, I used logistic regression models for a better fit. The linear probability model would be a poor fit because the error terms are no longer even approximately normally distributed and

because expected values may be smaller than 0 or greater than 1, which become meaningless when what we are looking for is a probability. The binomial distribution is the more appropriate probability distribution for binary variables. Parameters are thus estimated using Maximum Likelihood Estimation (MLE) rather than the method of Ordinary Least Squares (OLS).

I separated the data into five time periods of three years each (T1 to T5), as elections were held every three years in each municipality but on different dates within those three years. One election thus falls somewhere into each time period for each municipality. This gives me an observation for each municipality for the year of interest. I run the cross-sectional regression in time period 4 (1997-1999) as this still has more variation than time period 5 (2000 to 2003) but does not go back too far in time. After the fifth time period, there is no more variation at all; that is, there is electoral competition in practically all municipalities (as explained in Chapter 3). I use x-variables from the year 1995, thereby creating an approximate three-year lag between these and the accountability variable. Once again, the closest year available for *Development* and *Rural* is 2000, so I use data of that year for these two variables. This model takes the following form:

$$\log\left(\frac{\pi}{1-\pi}\right) = Tax/Total_{i,t=1995} + Development_{i,t=2000} + Rural_{i,t=2000} + North_{i,t=1995} + Budget_{i,t=1995} + Governor_{i,t=1995} \quad (5.3)$$

where $\log\left(\frac{\pi}{1-\pi}\right)$ are the log odds that a municipality has electoral competition (versus no electoral competition) in the year 1998.

The results of the logistic regression display the odds ratios of a municipality having electoral competition versus no electoral competition. The coefficients give us the results of y after a change in the Tax/total variable from 0 to 1 (or from 0 to 100%). We can thus calculate from column 1 (by plugging the coefficients in that column into the regression equation) that, without any controls, a 10% increase in *Tax/total* is associated with an increase of approximately 0.89 in the odds that the municipality has electoral competition, as shown in column 1 of Table 15. The odds are always greater than 1,

suggesting a positive relationship between *Tax/total* and *Electoral Competition*, and the results remain significant (at the 90% significance level) for all the model specifications, except when *Governor* is added. *Governor* is a political variable indicating that the municipal president (or mayor) is of the same party as the governor of the state that the municipality is located in. The results suggest that *Electoral competition* tends to be lower when there is co-partisanship between the mayor and governor.

However, *Governor*, like *Electoral Competition* is a binary variable and the two are highly (negatively) correlated. This makes sense as the autocratic PRI tended to be in power at the state level and municipal level when a municipality lacked electoral competition. This high correlation takes much away from the variation we are trying to get at here. I thus remove it from the last model specification (column (6) in Table 15), which I consider the best specification.

By plugging the coefficients in column 6 into the regression equation, we can calculate, for example, that a state in the south (North =0), with an average measure for *Budget*, *Development*, and *Rural*, at the average *Tax/total* value (of approximately 10% tax revenue) a 10% increase in *Tax/total* would increase the odds of having electoral accountability by 7.5; if it had a 1% *Tax/total* proportion, a 10% increase would increase the odds of a municipality being competitive by 5.7; and if it had a *Tax/total* value of 20%, a 10% increase in *Tax/total* would increase those odds by almost 10.

I ran robustness checks for the other time periods. The relationship is strongest and most significant in time period 2 (1994 to 1996), which also has the most observations, and starts to lose in significance in time periods 4 (1997 to 1999) and 5 (2000-2003) when there is less variation (few municipalities' elections are uncompetitive). The same trends are seen for other measures of electoral competition, namely when using a 70% rather than 80% victory margin to define a municipality as uncompetitive and when using the percentage of votes for the opposition as a measure for electoral competition.

The control variables behaved more or less as expected: *Development* and *Budget* were positively and significantly associated with *Electoral competition*. *Rural* and *Governor*

were negatively and significantly, and *North* was not significantly associated with *Electoral competition*.

Table 15 Cross-Section, Effects of *Tax/total* on *Electoral competition*, time lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------|----------------------------|----------------------------|--------------------------|----------------------------|-------------------------|---------------------------|
| <i>Tax/total</i> | 8.917*** (1.030) | 4.702*** (1.064) | 2.737* (1.075) | 3.768*** (1.143) | -.163 (1.221) | 3.714** (1.132) |
| <i>Development</i> | | 9.713*** (1.062) | 7.031*** (1.094) | 4.422*** (1.243) | 5.004** (1.654) | 4.128*** (1.254) |
| <i>Rural</i> | | | -.251*** (.039) | -.284*** (.040) | -.194*** (.046) | -.287*** (.040) |
| <i>Budget</i> | | | | .002*** (.001) | -.000 (.000) | .002*** (.001) |
| <i>Governor</i> | | | | | -.516* (.256) | |
| <i>North</i> | | | | | | .549 (.321) |
| Constant | .939*** (.097) | -5.443*** (.698) | -1.294 (.886) | .262 (.960) | 1.044 (1.293) | .506 (.972) |
| Observations | 1874 | 1858 | 1858 | 1858 | 1685 | 1858 |

Standard errors in parentheses

* p<0.05 ** p<0.01 *** p<0.001"

5.2 Looking for causation

In the last section, time lags and controls were used to try to show causation and mitigate omitted variable bias. This section further aims to rule out competing causal explanations through panel data analysis with fixed effects. Panel regression analysis should eliminate much of the risk of omitted variable bias as it allows controlling for time and unit fixed effects.

The dataset is unbalanced: the taxation data runs annually from 1989 to 2009 but not all other variables are available for all years. I want to account for unit effects. To do so, I need to decide whether fixed effects or random effects should be applied. I therefore run

Hausman tests to see in how far the covariates are correlated with the unit effects (Bartels, 2008). This would bias the parameter estimates and if the bias is large, then fixed effects should be used instead (Clark & Linzer, 2012). The null hypothesis of the test is that the difference in coefficients between the fixed effects and random effects model do not differ significantly. With a χ^2 of 0.000, the null hypothesis could be rejected for each regression so fixed effects should be used. I then also run a joint (Wald) test (using the command “testparm”) to decide whether or not to include year fixed effects in the model. If the dummies for all years are equal to 0, then this indicates that no time fixed effects are needed. The tests show that the probability the null hypothesis (that time fixed effects are not needed) is correct is less than 0.05 for each of the regressions, so the null hypothesis can be rejected. I thus include time fixed effects in all of the panel regression models.

The rest of this section presents and discusses the results of panel regressions for the accountability variables *Drainage coverage* and *Electoral competition*. No panel regression is possible with *Transparency* as the transparency data is available for only one year. I also discuss attempts at finding an instrumental variable or a case for regression discontinuity. The final subsection summarises and interprets the results.

The relationship between taxation and accountability using panel regressions

I now move from cross-sectional analysis to panel regression analysis. I use unit and year fixed effects and also include the controls *Budget* and *Governor*, which vary over time. The only other control variable that was included in the cross-sectional regressions but is not included here and is not time invariant is *Development*. This data was not available over a time panel. However, I assume that the level of development of a municipality is largely proxied for both through *Budget* and through municipality fixed effects.

a. Drainage coverage

Beginning with *Drainage coverage*, I began by testing the effect of changes in *Tax/total*, controlling for municipality fixed effects, year effects, *Budget* and *Governor*, on changes in *Drainage coverage* three years later. The model takes the following form:

at *changes* in variables, those municipalities have little room for improvement over the time period. Yet if the hypothesis is true, these should also be high tax collectors. This may be causing a bias that makes the coefficient less positive and significant. In order to get around this problem, I try two further sets of model specifications as explained below.

The first method I use to get around this problem is by using a lagged *Drainage coverage* variable on the right hand side of the equation, thereby controlling for past levels of drainage coverage. The model takes the following form:

$$\begin{aligned}
 \text{Drainage coverage}_{it} & & (5.5) \\
 &= \beta_0 + \beta_1 \text{Tax/Total}_{i,t-3} + \beta_2 \text{Drainage coverage}_{it-5} \\
 &+ \text{Municipality fixed effects}_i + \text{Year fixed effects}_{t-3} \\
 &+ \beta_3 \text{Budget}_{i,t-3} + \beta_4 \text{Governor}_{i,t-3} + \mu_{it}
 \end{aligned}$$

Table 17 Panel, Effects of Tax/total on Drainage coverage, time lag, 1993-2010

| | (1) | (2) | (3) | (4) |
|---------------------------------|---------------|---------------|---------------|---------------|
| Tax/total | .040 | .058 | .077 | .075 |
| | (.028) | (.031) | (.031) | (.031) |
| <i>Lagged drainage coverage</i> | .244*** | .109*** | -.010 | -.008 |
| | (.022) | (.025) | (.028) | (.028) |
| <i>year=1995</i> | .000 | .000 | .000 | .000 |
| | (.) | (.) | (.) | (.) |
| <i>year=2000</i> | .030*** | .049*** | .061*** | .060*** |
| | (.004) | (.004) | (.005) | (.005) |
| <i>year=2005</i> | .175*** | .200*** | .217*** | .216*** |
| | (.006) | (.007) | (.009) | (.009) |
| <i>year=2010</i> | .197*** | .258*** | | |
| | (.009) | (.011) | | |
| <i>Governor</i> | | -.003 | | -.001 |
| | | (.003) | | (.003) |
| <i>Budget</i> | | | .000 | .000 |
| | | | (.000) | (.000) |
| Constant | .425*** | .474*** | .520*** | .520*** |
| | (.010) | (.011) | (.012) | (.012) |
| Observations | 6604 | 5635 | 4938 | 4926 |
| R-squared | .695 | .666 | .625 | .625 |

Robust standard errors in parenthesis,
 * p<0.05, ** p<0.01, ***p<0.001

Given that I only have five time periods for the *Drainage coverage* data, however, adding a lagged dependent variable to the right hand side of the regression equation takes away a lot of the variation that I am trying to get at (as explained in Chapter 4) and the results are likely to yield insignificant results. The results are shown in Table 17 above. The coefficients on the lagged *Tax/total* variable are positive but not significant, suggesting that there is no association between *Tax/total* and *Drainage coverage* three years later, controlling for time effects and unit fixed effects, *Budget* and *Governor*. The lack of significance may be the result of mechanics due to the reduced degrees of freedom.

The second method I used to around the problem was to run the regression with only municipalities where 50% or less of the population lived in a household with drainage services in 1995. This circumvents the problem of using a lagged *Drainage coverage* variable on the right hand side, but at the same time we lose observations, as many municipalities were dropped, bringing us to approximately 800 observations with all controls included, down from around 5000). The model is the following:

$$\begin{aligned}
 \text{Drainage coverage} *_{it} & & (5.6) \\
 = \beta_0 + \beta_1 \text{Tax/Total}_{i,t-3} + \text{Municipality fixed effects}_i \\
 + \text{Year fixed effects}_{t-3} + \beta_3 \text{Budget}_{i,t-3} + \beta_4 \text{Governor}_{i,t-3} \\
 + \mu_{it}
 \end{aligned}$$

where *Drainage coverage** is a grouping of municipalities where 50% or less of the population lived in a household with drainage services. The panel regression results are presented in Table 18 below. None of the coefficients on the lagged *Tax/total* variable are significant. The results thus suggest that there is no significant relationship between the lagged tax variable and *Drainage coverage**. I ran further tests using municipalities that had 60% drainage coverage in 1995, but this was not significant either. Again, this may be due to either a lack of causality or possibly the mechanics of the model as the fewer observations allow less variation.

Table 18 Panel, Effects of Tax/total on Drainage coverage*, time lag, 1993-2010

| | (1) | (2) | (3) | (4) |
|------------------|---------------|---------------|---------------|---------------|
| Tax/total | .094 | .088 | .069 | .062 |
| | (.071) | (.072) | (.070) | (.070) |
| <i>year=1995</i> | .000 | .000 | .000 | .000 |
| | (.) | (.) | (.) | (.) |
| <i>year=2000</i> | .081*** | .082*** | .075** | .076** |
| | (.006) | (.006) | * | * |
| <i>year=2005</i> | .171*** | .173*** | .144** | .145** |
| | (.010) | (.010) | * | * |
| <i>year=2010</i> | .424*** | .425*** | .383** | .385** |
| | (.010) | (.011) | * | * |
| <i>Governor</i> | | .004 | | .006 |
| | | (.009) | | (.009) |
| <i>Budget</i> | | | .000* | .000* |
| | | | (.000) | (.000) |
| Constant | .284*** | .282*** | .285** | .281** |
| | (.011) | (.013) | * | * |
| Observations | 2370 | 2362 | 2366 | 2358 |
| R-squared | .857 | .858 | .860 | .860 |

Robust standard errors in parenthesis, * p<0.05, ** p<0.01, *** p<0.001

b. Electoral competition

For the panel regression on *Electoral competition*, I compare changes across the five three-year time periods created. I use a logit regression with fixed time effects and dummies for each time period. The model is the following:

$$\log\left(\frac{\pi}{1-\pi}\right) = \beta_0 + \beta_1 Tax/Total_{i,t-2} + \beta_2 Tax/Total^2_{i,t-2} \quad (5.7)$$

$$+ Municipality\ fixed\ effects_i + Year\ fixed\ effects_t$$

$$+ \beta_3 Budget_{it} + \beta_4 Governor_{it} + \mu_{it}$$

where $\log\left(\frac{\pi}{1-\pi}\right)$ are the log odds that a municipality has electoral competition versus the

opposite and the year fixed effects are dummies for each of the five time periods. The results below (Table 19) show the odds ratios. The odds ratios on the lagged *Tax/total* variable are not significant, even without controls in the model. This suggests that changes in the lagged *Tax/total* variable are not associated with changes in electoral competition in a later time period.

Table 19 Panel, Effects of *Tax/total* on Electoral competition, time lag, 1989-2003

| | (1) | (2) | (3) | (4) |
|-------------------------|---------------|---------------|---------------|---------------|
| <i>Tax/total</i> | .089 | .119 | -.557 | -.531 |
| | (.573) | (.583) | (.646) | (.657) |
| <i>1989-1991</i> | - | - | - | - |
| <i>1992-1994</i> | -4.759*** | -4.986*** | -4.518*** | -4.759*** |
| | (.109) | (.121) | (.171) | (.180) |
| <i>1995-1997</i> | -2.908*** | -3.151*** | -2.655*** | -2.878*** |
| | (.098) | (.110) | (.145) | (.153) |
| <i>1998-2000</i> | -1.565*** | -1.747*** | -1.305*** | -1.468*** |
| | (.098) | (.105) | (.139) | (.145) |
| <i>2001-2003</i> | .335** | .258 | .544*** | .482** |
| | (.127) | (.133) | (.150) | (.155) |
| <i>Governor</i> | | .594*** | | .636*** |
| | | (.094) | | (.100) |
| <i>Budget</i> | | | .000* | .000** |
| | | | (.000) | (.000) |
| Observations | 12171 | 11721 | 10734 | 10499 |

Standard errors in parenthesis, * p<0.05, ** p<0.01, *** p<0.001

A note on instrumental variables and discontinuity analysis

Attempts were made to apply an instrumental variable in the regression in order to further overcome endogeneity problems. No appropriate instrumental variable for *Tax/total* emerged that would work in this case. I considered variables that are correlated with tax revenues or transfers or the ratio between the two, but none could be found that are isolated from accountability. The transfer formula from the central government to states is determined by population, development indicators, and a historical figure, but the method of distributing transfers from the states to the municipalities has been far less

transparent, as explained in Chapter 3. Following Gervasoni (2010), I tried to use *Population* (total number of inhabitants in the municipality). The amount of central government transfers (the flip side of own revenues in the *Tax/total* ratio) largely depends on the population.

However, I found that it was significantly and positively associated with both the taxation and accountability variables for Mexican municipalities (which is less likely to have been the case for Argentine provinces, though still likely). This makes sense because municipalities with greater populations tend to be urban and wealthier, and more likely to have universities and ideas from abroad about democracy, and citizen demands are more likely to circulate, all of which are associated with accountability. This discards *Population* as an adequate instrument. Determinant variables of tax collection are also associated with accountability. These include structural factors like income, level of development, level of urbanisation, and geographic factors like state or north, which I specifically controlled for in the regressions above because they are associated both with taxation and accountability.

An attempt was also made to use regression discontinuity, following Gadenne (2013). Gadenne exploits an abrupt change in transfer formulas in Brazil. I was not, however, able to find this in the Mexican case. Another situation to look for would be if central government taxes were suddenly decentralised overnight to local governments, and even better if this change were applied in some municipalities but not in neighbouring ones. Changes to the local taxation and transfer formulas were implemented gradually over several years throughout Mexico. Cleaner instances may have occurred in other countries and should be exploited for further research on this topic.

5.3 Pathway, context and tax type

This section has three objectives. First, I try to ascertain whether the taxation-accountability link is more likely to occur via the short or the long path, as distinguished

in Chapter 2. Second, I try to find out if the relationship between taxation and accountability may be stronger in a context of democracy. This responds to the proposition laid out in the fiscal federalism literature that a context of democracy is in fact a requirement for local taxation to lead to greater accountability. Third, this section examines how the link works using the property tax in the tax measure rather than all local taxes and fees. The property tax is not only the most important tax in Mexico (see Chapter 3), but is also universally a tax popularly assigned to the local level (Bahl & Linn, 1992; Bahl & Martinez-Vazquez, 2007). Focus on this tax and how it fares in sparking greater local government accountability is thus of great practical relevance. This tax will also be the focus in the qualitative chapters that follow.

Pathway

I assume that if taxation leads to accountability through the long path, there is a time lag between the change in taxation, which comes first, and a later change in taxation, as explained in Chapter 4. This matches the specifications of the previous two sections (5.1 and 5.2). It is also a better way of testing causality with X preceding Y. In this section, I repeat all of the above specifications, but without lagging the independent variables to test the relationship in accordance with the short path to accountability. I report the coefficients on *Tax/total* in a summary tables below, for (a) *Transparency*, (b) *Drainage coverage*, and (c) *Electoral competition*, first for cross-sectional and then for panel regressions where applicable. I use summary tables as the idea is simply to compare results in terms of size and significance, identifying major differences or general patterns, rather than to focus on the particulars of each individual result. Nonetheless, the full model results are presented in the Annex Tables 4 to 8.

a. Transparency

For *Transparency*, the results of the cross-sectional regressions with no time lags are shown in the first row of Table 20 in bold. The second row shows the results with the time lags, as already shown in section 5.1 above, by way of comparison. The coefficient without the lag remains positive and significant and is slightly larger than with the lag.

This could either support the proposition that the relationship works for both the long and short path (and more so via the short path). Yet it may also suggest that the associations are driven by reverse causality (i.e. that greater accountability is in fact leading to greater tax collection).

Table 20 Cross-section, *Transparency*, no lag (in bold) versus lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | Tax/total | Development | Rural | Budget | Governor | North |
| <i>Tax/total</i> | 3.708*** (.325) | 2.532*** (.408) | 2.532*** (.408) | 1.832*** (.407) | 1.850*** (.404) | 1.586*** (.405) |
| <i>Lagged tax/total</i> | 3.195*** (.259) | 1.856*** (.316) | 1.385*** (.325) | 1.435*** (.336) | 1.416*** (.338) | 1.390*** (.337) |

b. Drainage coverage

For *Drainage coverage*, when we compare the coefficients using no lag on the independent variables to those with the lag for the cross-sectional regressions in summary Table 21, we see that both are positive and significant at the 99% significance level. The coefficients are also very similar to those with the lag, though again slightly higher. For instance the coefficient on *Tax/total* is 1.01 compared to 0.95 in what I consider the best specification in column 6. We can therefore make the conclusion that the relationship may run via the short or long path. Alternatively, the results may be driven by reverse causality.

Table 21 Cross-section, *Drainage coverage*, no lag (in bold) versus lag, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | Tax/total | Develop ment | Rural | Budget | Governor | North |
| <i>Tax/total (no lag)</i> | 2.996*** (.158) | .911*** (.128) | .901*** (.134) | .921*** (.135) | .915*** (.134) | 1.005*** (.129) |
| <i>Tax/total squared (no lag)</i> | -4.946*** (.509) | 1.898*** (.314) | -1.886*** (.319) | -1.939*** (.324) | -1.922*** (.319) | -2.094*** (.301) |
| <i>Tax/total (lag)</i> | 3.191*** (.167) | .909*** (.139) | .916*** (.149) | .937*** (.152) | .942*** (.151) | .946*** (.151) |
| <i>Tax squared (lag)</i> | -6.163*** (.575) | -2.351*** (.392) | -2.361*** (.402) | -2.439*** (.412) | -2.439*** (.407) | -2.418*** (.404) |

Turning to the panel regressions in Table 22, the regressions using the non-lagged *Tax/total* variable did not yield significant results even without *Budget* included. This suggests that the relationship works neither through the short path or the long path.

Table 22 Panel, Drainage coverage, no lag (in bold) versus lag

| | (1) | (2) | (3) | (4) |
|---------------------------|------------------------------|--|--|--|
| | Time and year fixed effects | Time and Year fixed effects plus <i>Governor</i> | Time and Year fixed effects plus <i>Budget</i> | Time and Year fixed effects plus <i>Budget</i> and <i>Governor</i> |
| <i>Tax/total</i> (no lag) | .050 (.030) | .048 (.030) | .044 (.030) | .042 (.030) |
| <i>Tax/total</i> (lag) | .043* (.021) | .043* (.021) | .038 (.021) | .038 (.021) |

c. Electoral competition

The cross-sectional regressions of the non-lagged *Tax/total* variable on *Electoral competition* yield considerably greater odds ratios compared to those with the lag, as seen in Table 23. For instance, looking at the best model specifications in column 6, an increase of 10% in *Tax/total* is associated with a change in the odds ratio of approximately 0.82 (compared to 0.37 with the time lags) of a municipality having electoral competition, holding the controls constant. This odds ratio is significant at the 99% level of significance, compared to only the 95% level using the lag. This suggests that the link is stronger for the short path than the long path, or that reverse causality is in fact at work. For the panel regression, the results were not significant, just as when lagged independent variables were used (see Table 24). This suggests that neither the short path nor the long path is at work.

Table 23 Cross-section, Electoral competition, no lag (in bold) versus lag, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|--------------------------------|-----------------------------------|
| | Tax/Total | Development | Rural | Budget | Governor | North |
| <i>Tax/total</i> (no lag) | 20.036*** (1.822) | 13.035*** (1.911) | 8.699*** (2.003) | 8.089*** (2.054) | 1.744 (2.585) | 8.164*** (2.044) |
| <i>Tax/total</i> (lag) | 8.917*** (1.048) | 4.702*** (1.111) | 2.737* (1.152) | 3.768*** (1.219) | -.163 (1.732) | 3.714** (1.205) |

Table 24 Panel, Electoral competition, no lag (in bold) versus lag, panel

| | (1) | (2) | (3) | (4) |
|----------------------------------|-----------------------------|--|--|--|
| | Time and year fixed effects | Time and Year fixed effects plus <i>Governor</i> | Time and Year fixed effects plus <i>Budget</i> | Time and Year fixed effects plus <i>Budget</i> and <i>Governor</i> |
| <i>Tax/total (no lag)</i> | -.479 (.515) | -.529 (.521) | -.117 (.533) | -.185 (.535) |
| <i>Tax/total (lag)</i> | .089 (.573) | .119 (.583) | -.557 (.646) | -.531 (.657) |

Context of Democracy

In this sub-section I test the proposition that the relationship between taxation and accountability is stronger in a context of democracy. I use the variable *Democracy* (see Chapter 4 for details on how this variable was constructed) and interact it with the taxation variable. I create an interaction term between *Tax/Total* and *Democracy*, yielding *Dem*Tax* to better understand the relationship between the variables. If the coefficient on the interaction term is statistically significant, then the effect of taxation on accountability is different depending on the level of democracy.

For the cross-sectional regressions, I used data from 1998 and for the panel regressions, I used data from time periods 1, 2, 3, 4, and 5 (i.e. from 1989 until 2003) as it was during these that there was more variation in levels of democracy (as explained in Chapter 3). I do not test this for *Transparency* as that data is only available for 2008, which is too far away in time from those time periods. I also do not test this for *Electoral Competition* as the concepts are too closely related so it is tested only for *Drainage coverage*.

The coefficient on the *Dem*Tax* variable is not significant for any of the regressions, neither cross-sectional nor panel. This indicates that a context of greater democratisation does not make the relationship between (lagged or non-lagged) *Tax/total* and *Drainage coverage* any stronger (or weaker). The results are displayed in the annex.

Tax type: Property tax

This subsection presents the results of rerunning the regression of Sections 5.1 and 5.2 results replacing *Tax/total* (constructed as revenues from all local taxes and fees over total local revenues) with *Property tax/total* (constructed as local property tax revenues over total local revenues). I here summarise the results, comparing the coefficients on *Property/total* to those found above on *Tax/total* in summary tables. The more detailed results of the regressions are presented in the annex (Annex Tables 9 to 20).

a. Transparency

Beginning with *Transparency*, we see that results do not differ greatly though the effect is always slightly stronger when using *Property/total* instead of *Tax/total* as seen in Table 25. For instance, in column (6), we see that the effect of a 10% increase of the lagged *Property/total* variable is associated with a rise of about 0.2 increase in the transparency score, holding *Development*, *Rural*, *Budget*, *Governor* and *North* constant, whereas the same increase in the lagged *Tax/total* variable is associated with a rise in *Transparency* of only about 0.14. It therefore appears that property taxes are more strongly associated with *Transparency* than other local taxes and fees. This is the same both using the time lag and without using the time lag.

Table 25 Cross-section, Effects of *Property tax/total* on *Transparency*, with and without lag

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | Tax/total | Develop- ment | Rural | Budget | Governor | North |
| <i>Property tax/total (with lag)</i> | 4.767*** (.481) | 2.585*** (.502) | 1.945*** (.491) | 2.015*** (.515) | 2.168*** (.500) | 2.052*** (.496) |
| <i>Tax/total (with lag)</i> | 3.195*** (.259) | 1.856*** (.316) | 1.385*** (.325) | 1.435*** (.336) | 1.416*** (.338) | 1.390*** (.337) |
| <i>Property tax/total (no lag)</i> | 5.369*** (.542) | 3.474*** (.634) | 2.468*** (.613) | 2.548*** (.611) | 2.441*** (.614) | 2.203*** (.626) |
| <i>Tax/total (no lag)</i> | 3.708*** (.325) | 2.532*** (.408) | 2.532*** (.408) | 1.832*** (.407) | 1.850*** (.404) | 1.586*** (.405) |

b. Drainage coverage

For *Drainage coverage*, the cross-sectional regression results in Table 26 show that the coefficients for property taxes are similar as for all local taxes and fees but slightly larger. Most interestingly, the panel regression results for the property tax yield positive and significant coefficients on *Property tax/total* (as seen in Table 27), whereas those on *Tax/total* in the previous panel regressions on *Drainage coverage* did not. This indicates a causal relationship between *Property tax/total* and *Drainage coverage* both using a time lag and no time lag. With no time lag, the relationship appears stronger (the coefficients are slightly higher and significant at a higher significance level), once the control variables are included in the models. In the best model specification with all the controls included, a 10% rise in *Property tax/total* is associated with a 0.01 rise in *Drainage coverage* three years later and a 0.02 rise in *Drainage coverage* in the same year. The fact that it doesn't rise more over time may be because either the short path or reverse causality are at work.

Table 26 Cross-section, Effects of *Property tax/total* on *Drainage coverage*, with and without lag

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|-------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | Tax/Total | Develop- ment | Rural | Budget | Governor | North |
| Property tax/total (with lag) | 4.802*** (.307) | 1.105*** (.230) | 1.039*** (.243) | 1.058*** (.249) | 1.057*** (.249) | 1.229*** (.244) |
| Property tax/total squared (with lag) | -14.235*** (1.788) | -4.805*** (1.053) | -4.653*** (1.069) | -4.806*** (1.113) | -4.781*** (1.118) | -5.293*** (1.074) |
| Tax/total (with lag) | 2.996*** (.158) | .911*** (.128) | .901*** (.134) | .921*** (.135) | .915*** (.134) | 1.005*** (.129) |
| Tax/total Squared (with lag) | -4.946*** (.509) | -1.898*** (.314) | -1.886*** (.319) | -1.939*** (.324) | -1.922*** (.319) | -2.094*** (.301) |
| Property tax/total (no lag) | 4.138*** (.209) | .950*** (.169) | .866*** (.176) | .883*** (.177) | .877*** (.177) | 1.198*** (.191) |
| Property tax/total squared (no lag) | -9.798*** (.921) | -3.173*** (.541) | -3.016*** (.546) | -3.095*** (.552) | -3.062*** (.553) | -3.778*** (.639) |
| Tax/total (no lag) | 2.996*** (.158) | .911*** (.128) | .901*** (.134) | .921*** (.135) | .915*** (.134) | 1.005*** (.129) |
| Tax/total squared (no lag) | -4.946*** (.509) | -1.898*** (.314) | -1.886*** (.319) | -1.939*** (.324) | -1.922*** (.319) | -2.094*** (.301) |

Table 27 Panel, Effects of *Property tax/total* on *Drainage coverage*, with and without lag

| | (1) | (2) | (3) | (4) |
|---------------------------------------|-------------------------------|--|--|--|
| | Time and year fixed effects | Time and Year fixed effects plus <i>Governor</i> | Time and Year fixed effects plus <i>Budget</i> | Time and Year fixed effects plus <i>Budget</i> and <i>Governor</i> |
| <i>Property tax (with lag)</i> | .101* (.041) | .103* (.042) | .089* (.041) | .092* (.042) |
| <i>Tax/total (with lag)</i> | .061* (.030) | .061* (.030) | .055 (.030) | .055 (.030) |
| <i>Property/total (no lag)</i> | .022 (.036) | .177*** (.049) | .160** (.049) | .164*** (.049) |
| <i>Tax/total (no lag)</i> | .043* (.021) | .043* (.021) | .038 (.021) | .038 (.021) |

c. Electoral competition

For *Electoral competition*, we see in Table 28 for the cross-sectional models, that the coefficients on *Property tax/total* are positive and significant, just like they were on *Tax/total*. Turning to the panel regression in Table 29, unlike for *Tax/total*, we suddenly do have positive and statistically significant results, both when a lag is used and without the lag. These results suggest that a 10% rise in the property tax variable is associated with an increase in the odds of a municipality having electoral competition of approximately 0.34 three years later and 0.31 in the same year. This is suggestive of a causal relationship running from *Property tax/total* to *Electoral competition*, working through both the short and (especially) the long path.

Table 28 Cross-section, Effects of *Property tax/total* on *Electoral competition*, with and without lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|----------------------------------|
| | Tax/Total | Develop-ment | Rural | Budget | Governor | North (without Governor) |
| <i>Property tax/total (with lag)</i> | 26.680*** (2.546) | 13.683*** (2.588) | 8.084** (2.713) | 7.048** (2.720) | -1.524 (3.176) | 6.447* (2.730) |
| <i>Tax/total (with lag)</i> | 9.760*** (1.048) | 6.839*** (1.111) | 2.902* (1.152) | 3.191** (1.219) | .814 (1.732) | 2.963* (1.205) |
| <i>Property tax/total (no lag)</i> | 31.686*** (3.019) | 17.865*** (3.106) | 11.087*** (3.237) | 9.673** (3.257) | -1.189 (3.830) | 9.032** (3.228) |

| | | | | | | |
|------------------------------|----------------------|----------------------|----------------------|----------------------|------------------|----------------------|
| <i>Tax/total</i> (no lag) | 20.036*** (1.822) | 16.985*** (1.939) | 11.864*** (2.037) | 12.524*** (2.093) | 1.623 (2.586) | 12.149*** (2.070) |
|------------------------------|----------------------|----------------------|----------------------|----------------------|------------------|----------------------|

Table 29 Panel, Effects of *Property tax/total* on *Electoral competition*, with and without lag, 1989-2003

| | (1) | (2) | (3) | (4) |
|---|--------------------------------|--|--|---|
| | Time and year fixed effects | Time and Year fixed effects plus <i>Governor</i> | Time and Year fixed effects plus <i>Budget</i> | Time and Year fixed effects plus <i>Budget</i> and <i>Governor</i> |
| <i>Property tax</i> (with lag) | 3.532*** (1.043) | 3.750*** (1.066) | 3.456** (1.184) | 3.395** (1.187) |
| <i>Tax/total</i> (with lag) | .089 (.573) | .119 (.583) | -.557 (.646) | -.531 (.657) |
| <i>Property/total</i> (no lag) | 2.349* (.964) | 2.696** (.979) | 2.808** (.997) | 3.149** (1.011) |
| <i>Tax/total</i> (no lag) | -.479 (.515) | -.529 (.521) | -.117 (.533) | -.185 (.535) |

5.4 Summary and Interpretation in light of the Five Hypotheses

In the first three sections of this chapter, I presented various regression results testing for the effect of *Tax/total* on the three measures of accountability. I moved from simple tests of correlations to multiple regression analysis and then panel regressions. I then looked at mechanisms through which X leads to Y as well as interaction effects. Finally, I reran some of the regressions using the property tax revenue in the tax variable rather than all taxes and fees. The aim was to find answers to the hypotheses laid out in Chapter 4. Recapping and interpreting the results presented in the first three sections of this chapter, I here subsume the evidence under the five hypotheses and discuss what this tells us about taxation-accountability linkages.

Correlation and causation

Hypothesis 1 stated that there is a positive correlation between *Tax/total* and all of the accountability variables. The correlation matrix in Section 1 shows positive correlations between *Tax/total* and each of the accountability variables (*Transparency*, *Drainage*, and *Electoral Competition*). The simple regressions with time lags in section 5.1 and simple regressions without time lags in Section 5.3 (i.e. the models with no control variables) showed positive and significant associations.

Hypothesis 2 stated that there is a *causal* relationship from *Tax/total* to the accountability variables. By including control variables for level of development, administrative capacity, politics and geography (with control variables *Development*, *Rural*, *Budget*, *Governor* and *North*) and a time lag between the independent and the dependent variables, I started to get closer to addressing the question of causation. There are differing views as to what constitutes causality (Angrist & Pischke, 2008). The goal here is not to find deterministic causation with necessity (if A occurs, then B must occur) and sufficiency (if B occurs, A must have occurred) (Granger, 1980). I am not assessing randomized controlled experimental data but instead trying to infer relationships from observational data. To draw conclusions about causal relationships, in line with Granger causality (A causes B if A forecasts B over the forecast of B without A)(Granger, 1980), or more specifically about the likelihood of my tax variable in helping to increase accountability (among multiple competing factors), I looked especially at three criteria: (1) there is correlation, (2) X precedes Y, and (3) other explanations can be ruled out. The cross-sectional regressions in Section 5.1 yielded positive and significant correlations between *Tax/total* and each of the three accountability variables, even when using a time lag so that the cause precedes the effect and ruling out other explanations with control variables for structural, cultural and political factors.

For *Transparency* this relationship was relatively linear. Holding constant the level of *Development*, *Rural*, *Budget*, *North* and *Governor*, a rise in *Tax/total* of 10% is associated with an increase in the transparency score (ranging from about -1.97 to 1.94) of about 0.14.

For *Drainage* a quadratic function was a better fit. This was concave, showing that the relationship was positive until municipalities had over 20% tax revenue and then became negative. This may suggest that for *Drainage coverage* the relationship is no longer positive for municipalities that are very tax autonomous. Large urban municipalities tend to have the highest *Tax/total* values. Yet it may also mean that a few outliers are driving these results of the comparatively few municipalities (approximately 100) whose *Tax/total* ratio is above 20%. The vast majority of municipalities (with average levels on the controls) have *Tax/total* values below 20% (with 11% being the mean value in 2005). The confidence intervals were very large with values possibly falling above the predicted values.

Now turning to *Electoral competition*, the results of binary logistic regression show that increasing the *Tax/total* value increases the odds of a municipality having electoral competition and this was also statistically significant (at the 90% significance level) using the best model specification that controlled for *Development, Rural, Budget, and North*.

Only for *Transparency* did the coefficient on *Tax/total* remain significant even when adding *State*, which consists of over 30 dummy variables. For *Drainage* and *Electoral competition*, the coefficient on *Tax/total* in the specifications that included *State* lost significance, but this was most likely for mechanical reasons as the large amount of dummy variables (for the 31 states) increases the parameters and greatly reduced the degrees of freedom. I thus drop *State* in the further regressions in this chapter.

The results indicate that, even controlling for structural, political and cultural variables, the greater the *Tax/total* ratio of a municipality (or the greater its proportion of tax revenues in its overall revenues), the more likely it is to be transparent, have higher coverage of drainage services, and have electoral competition three years later.

To be sure the risk of omitted variable bias remains and endogeneity problems from reverse causality remain, despite the efforts of mitigation through control variables and time lags. In section 5.2 I therefore went further in mitigating the risk of omitted variable bias and ruling out other explanatory factors by conducting panel regression analysis with fixed effects. Using panel regression, the effects of *Tax/total* on accountability three

years later mostly did not yield significant results, at least not when all controls of theoretical importance were added to the models.

For *Drainage coverage*, the coefficient on the lagged *Tax/Total* variable were only significant in the models that did not include the control variable *Budget* and only at the 90% significance level. I considered that for *Drainage coverage*, the lack of significance may have been due to bias, given that municipalities with close to 100% drainage coverage in the first time period of the dataset would not appear as making a positive increase. Two further methods were thus used to test the effects on drainage coverage. One, I added a lagged *Drainage coverage* variable to the right hand side of the equation (to account for previous levels of drainage coverage). Two, I reran the panel regression on a smaller set of municipalities in subsequent model specifications. This set consisted only of municipalities that began the time period with 50% or less drainage coverage (*Drainage coverage**). Yet the same results were observed in both cases: no significance. Both methods involved mechanical problems: the first lost degrees of freedom and second lost many observations, which may be responsible for the lack of significance. However, if the results were very strong, it would have been likely to get significant results as the number of observations is still relatively large. I therefore conclude that these results suggest that there is no causal relationship leading from *Tax/total* to *Drainage coverage*. The panel results on *Electoral competition* also indicate that there is no causal relationship from *Tax/total* to *Electoral competition* as coefficients on *Tax/total* were not significant.

The results of the panel regressions in Section 5.2 do not support the hypothesis that greater taxation using the *Tax/total* measure leads to greater accountability with a time lag (though it did using the *Property tax/total* measure as discussed further below). This contradicts what was found in the cross-sectional regressions presented in Section 5.1. It can be argued that the panel regression results are more trustworthy in finding causality than the cross-sectional results as they are able to control for all time and municipality invariant factors. The cross-sectional and panel regressions also test different things. While the cross-sectional regression compares levels, the panel regression compares changes in those levels. There is a possibility that changes take longer than three years to occur and that taxation affects long term development trajectories over several decades

rather than short-term effects as tested here. Yet the results here show that in a time span of three years, the predicted effects did not seem to occur.

It may also be that the specific aspects of accountability are simply less driven by taxation. Due to data restraints, panel regression was not possible on *Transparency* but changes to transparency, for instance, might be more easily implemented by the local government than changes in drainage service coverage or electoral competition, which may require longer term planning or support from the state government. This is difficult to tell from the quantitative data and requires further qualitative analysis.

Another explanation is that reverse causality may have driven the results of the cross-sectional regressions. Even with the time lag, it is possible that high levels of accountability three years later could be associated with high levels of taxation previously because accountability causes higher tax revenues and thus higher tax revenue/total revenue proportions over many years. No instrumental variable was found to be appropriate, including that used by Gervasoni (2010) in the Argentine context.

Causal pathway

Hypothesis 3 stated that the link between taxation and accountability works through the long path. As elaborated in the theoretical chapter (Chapter 2), I assume that the causal mechanism from taxation to accountability can take either of two paths: the short path or the long path. The long path assumes that a change in *Tax/total* is followed by a change in accountability with a two or three year delay. The short route assumes that there is no lag between a change in *Tax/total* and a change in accountability; that is, they set on somewhat simultaneously.

To test this, I reran the regressions from Sections 5.1 and 5.2, only without using time lags between the independent and dependent variables. If associations were positive and significant for one but not for the other, this would tell us that one pathway dominates. The short path assumes that there is no lag in the relationship: taxation and accountability changes occur simultaneously. The long path assumes that changes in taxation are preceded by changes in accountability. However, we found evidence of

associations both with and without lags. The coefficients on the tax variable of the cross-sectional regressions without time lags all yielded similar results to those with the time lags, except that the coefficients were consistently slightly larger. Running the panel regressions without the lag did not yield significant results, just like when the lag was included.

Given that accountability proxies were sometimes associated with *Tax/total* without the lag, one may also conclude that there may be reverse causality in the relationship or they may create positive feedback loops. The long pathway certainly does not clearly dominate over the other: both could be at work.

Context of Democracy

Hypothesis 4 stated that the relationship between tax reliance and accountability is stronger in a context of democracy. This was tested by including an interaction between *Tax/total* and the accountability variables in the regressions ($Dem * Tax$). I ran this for only one of the three accountability variables: *Drainage coverage*. The 2008 data for which *Transparency* is available (2008) was too far away in time from the year for which the *Democracy* data had any variation (up until about 2001), so *Transparency* was left out and Electoral competition, contained in the Democracy variable (though as a continuous variable) is too close conceptually to use for this in a sensible way.

The hypothesis was that there may be a partial effect of *Tax/total*, which in combination with high levels of democracy, would bring about increased accountability. Yet in none of the regressions was the interaction between democracy and taxation significant. From this, we conclude that a context of greater democracy does not make the relationship stronger, at least not in terms of the responsiveness aspect of accountability, operationalised through *Drainage coverage*. We may, however, also conclude that the degrees of freedom are smaller from adding democracy and the interaction term to the model, thus not yielding significant results. Either way, the evidence does not support hypothesis 4.

Property tax

Hypothesis 5 stated that there is a causal relationship for the property tax variable (even if there is none for the *Tax/total* variable that includes all local taxes and fees in its construction). The results using *Property tax/total* were quite similar when running the cross-sectional regressions on *Tax/total* with positive and significant coefficients on the tax variable for *Transparency*, *Drainage coverage* and *Electoral competition*.

Yet the regressions with the property tax measure yielded markedly different results to the *Tax/total* measure in the panel regressions: unlike *Tax/total*, associations using *Property tax/total* were positive and significant, indicating a possible causal relationship between the property tax measures and both *Drainage coverage* and *Electoral competition* (*Transparency* was not tested as no panel regression was available). No significant relationship had been found for *Tax/total*, suggesting that the property tax may be a better spark for accountability than other local taxes and fees. This is line with the expectation that the property tax is likely to be particularly conducive to sparking accountability as it is highly visible, salient and a broad-based tax, as discussed in Chapters 2 and 3. The panel regression results suggest that a 10% rise in the property tax variable is associated with an increase in the odds of a municipality having electoral competition of approximately 0.34 three years later and 0.31 in the same year. This is suggestive of a causal relationship running from *Property tax/total* to *Electoral competition*, working through both the short and the long path. It should be noted that caution is required as the regressions do not eliminate all risk of omitted variable bias if other variant factors play a role that are not captured by the controls or fixed effects used in these models. Also, reverse causality may still be driving the results and leading to endogeneity problems. Nonetheless, the results confirm, rather than contradict the theory that greater *Property tax/total* is likely to lead to greater local government accountability.

Conclusion

This chapter has presented the results of quantitative regression analysis of taxation-accountability linkages using nation-wide data of all municipalities in Mexico; that is, all for which data are available. It was organised from simple to increasingly complex regressions in an aim to find answers to the hypotheses laid out in Chapter 4.

The first section presented the results of correlation matrices and cross-sectional regressions between *Tax/total* and each of the three measures of accountability (*Transparency*, *Drainage coverage* and *Electoral competition*). The second section presented the results of panel regressions, again to explore the relationship between the taxation and accountability measures. The third section compared results when rerunning the regressions (a) with no time lag, (b) with interaction terms, and (c) replacing *Tax/total* with *Property tax/total*.

The results showed statistically significant correlations between taxation and accountability when running cross-sectional regressions (Hypothesis 1). However, the panel regressions which controlled for time and municipality fixed effects, did not yield significant results. I therefore concluded that the hypothesis stating a causal relationship running from taxation to accountability is not supported (Hypothesis 2). This did not change when dropping the time lag between cause and effect, in case the relationship may run through the short path (with cause and effect setting on simultaneously in time) rather than the long path (with a time lag). Neither pathway seemed to dominate (Hypothesis 3). A context of democracy also did not prove to make the relationship stronger (Hypothesis 4).

Finally, both the cross-sectional and panel regressions *did* yield significant results for the property tax measure, supporting the idea that, unlike with all local taxes and fees, greater reliance on property taxation does spark greater accountability (Hypothesis 5). Caution is required, however, in interpreting these results as endogeneity problems from reverse causality and omitted variable bias through factors that have not been sufficiently controlled for may still be driving the results.

The following chapters will use qualitative case study methodology in order to further study the relationship between taxation and accountability in the Mexican context. It is hoped in particular that the questions that were left unanswered in this chapter will be better understood by complementary methods. These include in particular the questions about the causal pathway and how the relationship does (or doesn't) work and why.

Chapter 6: Methodology for qualitative case study analysis

The previous two chapters used quantitative research tools to explore taxation-accountability linkages, especially economic regression analysis. This chapter and the following two use *qualitative* research tools based on case study evidence following field research in six Mexican municipalities to further delve into the linkages between taxation and accountability in the Mexican context.

The focus of the qualitative analysis is on local governments that are under substantial pressure to increase their tax revenue. The setting is thus one where local governments are faced with a tax revenue imperative, the predictor variable in the dominating taxation-accountability theories. I investigated the effect on the response variable: accountability. More precisely, through process-tracing, the idea was to follow the strategy chosen and steps taken by the local governments in six cases and assess the results of their endeavours in a comparative case study. I observed what strategic choices were taken by local government officials in view of their revenue needs and tried to identify what motivated their decisions, what processes emerged, and how. The principal aim was to understand what measures are stimulated from short-term revenue needs at the local government level. As opposed to much of the existing literature on local taxation and accountability, which studies rural, agrarian settings, the context here is urban and one of electoral competition. The objective is to understand in how far pressure to raise tax revenue is activating bargaining processes that are consistent with (longer term) claims about the taxation-accountability relationship.

The present chapter presents the methodology used in the qualitative analysis. It sets the stage for following two chapters in which the evidence is presented and analysed. Section 6.1 explains how the mixed methods research approach is used to complement and supplement the quantitative analysis in the previous chapters. It shows how the qualitative analysis is used to offset the weaknesses of the quantitative approach and where it adds to the analysis. Section 6.2 introduces the research strategy including the

research questions, the type of data and variables used to answer the research questions and the research design. Section 6.3 explains why the specific six cases were chosen (case selection), Section 6.4 provides further background information on the cases and the final section concludes.

6.1 Complementary mixed methods

This thesis employs mixed methods research. Mixed methods research (MMR) has been defined as “a type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (Johnson, Onwuegbuzie, & Turner, 2007:123; cited in Teddlie & Tashakkori, 2011:285). Mixed methods research has more recently evolved in the social sciences as a separate, third tradition. It is regarded as pragmatic, making use of a variety of available data sources, both numeric data and narrative information, that best fit the research question, rather than self-limiting to one perspective alone. It allows combining the strengths and remedying the weaknesses of each individual approach (Teddlie & Tashakkori, 2009).

The strengths of quantitative research are well known (D. T. Campbell, Stanley, & Gage, 1963; Cook & Reichardt, 1979). Compared to qualitative research, it has often been considered more objective and accurate as values are less likely to affect how research is conducted and results interpreted. There tends to be a greater distance between the researcher on one hand and the findings and subjects under study on the other. Results are presented in numerical form and often follow prescribed rules, standards and categories, such as pre-established rules for what is statistically significant. Also, research can more easily be replicated, thus limiting subjective interpretations. Quantitative analysis is also useful for studying a larger number of units, resulting in greater generalizability of results.

However, it also involves several drawbacks and limitations. There is often a lack of depth in numerical data: it is more narrow and superficial and less elaborate and nuanced

than detailed narrative descriptions. Findings may be too abstract or general and don't truthfully reflect complex realities. For understanding causal processes, quantitative tools are valuable for answering questions about causal effects, but less able to reveal much about the causal mechanisms. Fitting regression models on complex social processes can be particularly misleading and result in spurious correlation, especially when the dynamics of the underlying relationships and why they exist are not thoroughly clear (Eisenhardt, 1989, p.542). Gerring (2006:3) also lists identification problems, problems of extreme counterfactuals and extrapolating beyond observable data and accurately specifying models, "given a plethora of plausible models and associated problems of modelling interactions among these covariates".

Numerical data can contain mistakes as human errors and falsification occur in recording data or data input and in large-N studies, observations are less likely to be individually verified. Numerical indicators also tend to ignore the subjective perspectives of those involved. While this can be of advantage, it can also be an important lacuna in understanding complex realities or obtaining an accurate picture as pre-set categories used may not reflect what those involved perceive. Because quantitative analysis tends to be more distant to the studied phenomena, it may gloss over important variables and explanations as experienced by the subjects on the ground. Important additional variables and explanations may also be glossed over because of the distance. Quantitative research is better suited for testing existing hypotheses and less useful for generating theory (Gerring 2006:37).

Qualitative analysis, on the other hand, has its own strengths and weaknesses. The main weaknesses include case selection bias, less objectivity in interpreting results and less replicability, as well as non-generalizability. Among its strengths are its greater potential in unravelling complex phenomena (Collier, Brady, & Seawright, 2004; Lieberman, 2005) than quantitative tools. The complexities involved in causal processes, for instance, require more intensive, in-depth analysis (Collier et al., 2004; Lieberman, 2005). Given the smaller number of observations, it is possible to delve deeper into each, verifying its validity and corroborating findings through different sources including first-hand observation. On-the-ground investigation of specific cases and qualitative interviews also allow finding further variables of relevance that were not initially thought of as important

by the researcher. There thus tends to be a trade-off of breadth and simplicity versus depth and accurately reflecting complex realities. Data accumulated from narratives can be highly valuable for better understanding behavioural patterns, individual decisions, and human interaction. The sources are actual participants involved in the phenomena under study. Teddlie and Tashakorri (2011:286) not only consider that “qualitatively oriented case studies [...] express the complexities of behavioural patterns much more thoroughly than a statistical summary of numeric indicators”, they also argue that colourful narratives are “intrinsically more interesting (and often more enlightening) than numbers”.

By combining quantitative with qualitative analysis, one can unite strengths and one approach can remedy the weaknesses of the other in a Q^2 approach (Faguet, 2012:11). Yet merging the two in a juxtaposition of approaches has not gone without criticism. Some criticism is purely on grounds of logistics (as such research is likely to be costlier). Others have been disquieted by a tendency to subordinate qualitative methods within this strand of research, thereby unjustifiably demeaning and threatening an important research methodology (Teddlie and Tahakkori, 2011). Yet the main criticism has been about the incoherence of mixing the two approaches. The argument is that quantitative and qualitative methods are each “based on particular paradigms, a patterned set of assumptions concerning reality (ontology), knowledge of that reality (epistemology), and the particular ways of knowing that reality (methodology)” (Sale, Lohfeld, & Brazil, 2002:44). The argument is that these two approaches are like different world views that are not compatible with one another. It has also been argued that, rather than being more than the sum of its parts, MMR has resulted in a bereft application of both methods. This criticism, however, may be more about how MMR is adopted than an outright rejection of MMR. If the two methods are applied uncritically without truly integrating, complementing or triangulating, but simply presented next to one another, then the analysis may gain nothing from the merge.

Others believe that a multiplicity of paradigms, as offered through MMR, contributes to better understanding. Yet while the two approaches can be “compatible and can be fruitfully used in conjunction with one another” (Teddlie and Tashakkori, 2011:285), they need to be sufficiently integrated in order to make it better than the sum of its parts and

to avoid awkward dissemblance. There should therefore be a conscious effort at fulfilling one or more of the potentially positive purposes of a synergy. Greene, Caracelli and Graham (1989) have argued that mixing methods has the potential of fulfilling the following five purposes: triangulation, complementarity, development, initiation, and expansion.

How has mixed methods research been applied in this thesis? The rationale for using a mixed methods research approach is broadly to offset the weaknesses and combine the strengths of both the quantitative and qualitative approaches (Bryman, 2006:106) as well as to gain a more encompassing perspective on the issue than is possible with one approach alone. How specifically has qualitative analysis been used to fill the gaps and remedy the problems of the quantitative analysis in the previous chapters and add depth to the analysis?

In the previous section, the relationship between taxation and accountability was tested quantitatively through regression analysis. It appeared the most appropriate method for testing and validating existent theories on the taxation-accountability hypothesis using a large number of observations. Such a large-N analysis with thousands of observations over many years allowed for heightened generalizability. All Mexican municipalities were included in a nation-wide analysis (barring those for which data were missing) for a very broad analysis of the Mexican context, thus avoiding issues of case selection bias.

Yet it also had many weaknesses. First, while showing associations, the regression results were not clear in showing *causation*. Most importantly, it was also not possible to adequately discern the precise causal chronology against the importance of reverse causality and possible feedback loops and endogeneity problems may have affected the results. It was also not possible to understand possible effects of interacting covariates, though an attempt was made to model interactions between taxation and degree of democracy.

Through processes-tracing in a deeper analysis of specific cases, triangulation of evidence is sought in the qualitative analysis: if results from the different methods are mutually corroborative, this would enhance the strength of the findings (Bryman, 2006;

Eisenhardt, 1989:538). On the other hand, relationships found in the quantitative analysis may turn out to be spurious or superficial after closer examination of rival explanations through qualitative analysis (Lieberman, 2005).

Beyond the causal *effect*, it was difficult in the quantitative analysis to understand which causal *mechanisms* were at work. Differences (and changes) in accountability are likely to stem from a complex variety of variables with possible interactions between them. While attempts were made to distinguish causal pathways and interactions between variables, they were very simplistic and insufficient. Also, the theory predicts that there is not one effect immediately following the cause, but that there are many steps in a complex chain of processes. The quantitative approach looks merely at the final effects of taxation on the accountability proxies, ignoring intermediate steps and making it impossible to identify where possible bottlenecks lie.

Qualitative analysis holds greater promise for unravelling how exactly the relationship between taxation and accountability works in practice, what contextual factors are more likely to make it work, and what obstacles may have stood in the way. The complex phenomena involved in the causal processes of interest call for deeper analysis and qualitative research tools offer that depth (Collier et al., 2004; Lieberman, 2005). They answer descriptive research questions about what mechanism are at work as well as analytical research questions of how and why (Berg-Schlosser, De Meur, Rihoux, & Ragin, 2009; Wagemann & Schneider, 2010). Qualitative tools fare better in illustrating the sequence of events as well as in understanding the interdependence between a multiplicity of variables and are open to a wider explanation for the dependent variable (Berg-Schlosser et al., 2009).

Operationalizing the concepts of interest posed problems in the quantitative analysis. For instance, to measure the independent variable, taxation, a measure was used that proxied one of the common conceptualisations of the independent variable: the amount of tax revenue in a government's overall revenues. Yet the conceptualisation of the most dominant theoretical literature on the topic refers to a *need* on the part of governments to raise revenues (Bräutigam et al., 2008; Joshi & Ayee, 2008; Levi, 1988; Prichard, 2010b). This need may not have resulted in an actual rise in taxation that is observable in revenue

data. Yet the qualitative analysis allows me to focus on situations where local governments were verifiably under considerable pressure to raise tax revenues.

Operationalising the dependent variable, accountability, equally posed problems in the quantitative analysis as the concept may not have been well captured by the proxies. Also some variables were not all available over all years. In particular, I had no data on human capacity of local government officials or technical capacity of tax collection in each municipality. While this may have been partly proxied for by controls such as *Rural*, *Development*, and *Budget*, the proxies do not perfectly capture these potential influencing variables.

Finally, data reliability was uncertain given a lack of harmonised accounting methods and incentives to misreport. It is likely that data may have been falsified or itemised differently in different municipalities. The qualitative interviews revealed that the budgetary data was not standardised and homogenised, so for instance, expenditures on salaries are sometimes filed under “transfers” in the expenditure items to hide the costs of their bureaucracies (Gonzalez Anaya and Revilla, 2012:28). The qualitative approach has the advantage of relying less on potentially faulty numerical data.

The quantitative analysis left several questions unanswered, particularly those explaining how and why we saw the results that we did. How, or through which mechanisms, does the link work? Does it work through the short path or the long path? Who are the key actors? How do different causal factors interact with one another? Why did we tend to observe statistically significant relationships between taxation and accountability using cross-sectional models but not using fixed effects models? Was it really due to a lack of causal effect or were there methodological or data problems? Why were the results different using the property tax compared to other taxes and fees? Also, the quantitative analysis failed to elucidate which obstacles may be preventing the relationship from taking hold.

I use MMR to fill in gaps in the inquiry as one method is able to answer questions that the other cannot, thereby adding inferential leverage. While the quantitative methodology looked for whether relationships existed on a large scale, the qualitative section asks *how*

and *in what context* the relationships play out. I also use mixed methods research to seek “elaboration, enhancement, illustration, clarification of the results from one method with the results from another” (Greene et al., 1989:259). Focusing on specific cases in greater detail provides a better understanding of why we saw the results that we did in the quantitative section. For instance, by understanding sequences of events, I try to address the question of reverse causality in the taxation-accountability relationship and assess the importance of possible feedback loops that posed a challenge in the regression analysis.

There was also a back and forth process between the two approaches. For example, the problem of reverse causality, showing to be significant in the quantitative analysis, prompted me to look into this issue in the qualitative analysis as well. The findings on the qualitative analysis similarly prompted me to adjust and expand the quantitative analysis: the context of democracy appeared to make a difference in the qualitative analysis so I ran interactions in the quantitative section to search for general trends to verify this. The quantitative analysis also assisted in case selection for the qualitative analysis: numerical indicators collected for the quantitative analysis were used to give a better picture of which municipalities were responsible for the greater part of tax revenue collection and which were structurally similar: criteria used for case selection.

6.2 Research questions, design and data

In this qualitative part of the analysis, I focus on the causal processes arising from tax revenue needs at the local government level in urban municipalities in Mexico. The context I am examining is one of urban local governments and electoral competition where the most important local tax handle is the property tax. I here detail the research questions for the qualitative analysis and how I aim to find the answers.

The research questions

The main question asked is *whether tax revenue needs lead to a bargaining process between the local residents and the local government in this context and, if so, what form does this tax bargaining take and what implications does it have for local government accountability?*

I use an X-centered approach for causal inference. I select cases in which we have a scenario of X (municipalities that are under pressure to raise tax revenues because of urgent revenue needs) and investigate the outcomes and see if they are likely to lead to Y (are processes stimulated that are likely to lead to increased accountability?).

While X is straightforward and handled in the case selection process, which is detailed in Section 6.4 below, how do I identify the outcomes? In Chapter 2 three broad categories of outcomes were identified. The first aim here is to find out into which of these three categories the outcome falls. The three options were that tax revenue needs lead to:

- a) tax bargaining between two broad groups of actors: the local government and local residents,
- b) coercive tax collection, or
- c) neither of the above.

As shown in Chapter 2, a major point of contention in the literature is whether the revenue imperative is more likely to lead to *coercive* taxation rather than to contractual tax bargaining. And as discussed in Chapter 1, case studies at the local government level in China (Bernstein & Lü, 2008), Tanzania (Fjeldstad, 2001b), and Senegal (Juul, 2006) have shown that increased revenue pressure in those cases has largely led to *coercive* tax collection methods, “often characterised by violent and extortive forms of taxation”, (Fjeldstad, 2001b, p.302) (Moore, 2007, 2008). I also noted in Chapter 2 that the dichotomy of options between a and b may have been appropriate for the historical European context, a third option (c) was appropriate for contemporary developing country contexts in which the coercive power of the state may not be as strong as that found in early modern Europe, which much of the theory is largely based on.

If tax bargaining is attained (category a), I then look further to see what form this takes. I distinguish between “direct and explicit haggling and agreement” and “implicit strategic interactions and mutual behavioural adjustments without direct negotiation” (Moore, 2008:37-38). I also try to identify which key actors are involved (who in the local government and which group of local residents) and whether further actors also play an intervening role.

Once the type of bargaining has been identified, I also evaluate if it is likely to lead to increased accountability in one or more of its different forms identified in Chapter 1 (enhanced transparency, strengthened government responsiveness, greater influence of local residents in local government decisions, public goods projects, enhanced communication between local government and local residents), and who the beneficiaries of increased accountability are likely to be (a narrow group of taxpayers, the majority of local residents, or a third group different from the taxpayers (see Chapter 2)). I also examine whether the mechanism from tax revenue needs to greater accountability took the long path (first involving a reaction by the residents) or the short path.

If no tax bargaining is observed, I try to pinpoint which obstacles stood in the way. Why might coercive taxation be more likely or why did neither occur? I also investigate the role of further actors which may impede or aid tax bargaining (such as higher levels of government, and non-governmental actors such as private sector actors and criminal groups).

Figure 17 Summary of investigation process:

| | | | |
|---------------------------------|---------------------------------------|--------------------------|-------------------------------|
| 1. Tax bargain | → What form? Implicit or explicit? | → Leads to Y? | → Short path or Long path? |
| | | → Does NOT lead to Y? | → Why not? Obstacles? |
| 2. Coercive taxation | → Why? Obstacles? | | |
| 3. Other | → Why? Obstacles? | | |

In sum, the main question of interest involves the causal effect and mechanism and includes the following sub-questions as shown in Figure 17:

- Do revenue pressures lead to coercive rather than consensual taxation or some other outcome?
- If tax bargaining processes are stimulated, what form do they take? If they are linked to an increase in accountability, through which causal mechanism does this link work? Does the local government make unilateral concessions in order to encourage compliance? Does the local government engage with the residents and meet their demands? Do the residents protest and push for concessions?
- If no bargaining process is stimulated, why not? What are the obstacles?

My aim is to understand what processes are emerging from short-term revenue needs at the local government level and to what extent these efforts are activating processes of bargaining that are consistent with (longer-term claims about) the tax-accountability relationship.

Alongside this main question of interest, answers to secondary questions are also sought:

- Questions about the sequence of events: Is there reverse causality in the relationship? Does greater local government accountability also result in greater disposition on the part of local residents to pay local taxes? Are there positive feedback loops?
- Questions about the context: if there was greater trust, democracy and/or a stronger state-society bond beforehand (with greater accountability and transparency), are tax revenue needs more likely to lead to tax bargaining (and less likely to lead to coercive taxing)?
- Questions about tax type: Can any differences be observed among collection and bargaining around different tax types? If so, why?

To assist in answering this question, the evidence was collected and is presented in two parts. In the first (Chapter 7), I examine municipalities that rank particularly low in terms of transparency and accountability according to available rankings. In the second (Chapter 8), I examine municipalities that rank particularly high. This has a dual purpose. First, it may help to establish whether in municipalities in which trust, democracy, and state-society relations (proxied by those indicators) are generally weaker, we observe

different responses to revenue needs (such as coercive tax collection rather than consensual tax bargaining) from those where these are likely to already be stronger at the outset. The objective is to assess the proposition that when links for state-society relations are already in place, tax bargaining is a more likely outcome and coercion a less likely outcome.

The second purpose is to clarify the importance of reverse causality or interdependence in the relationship between taxation and accountability. It asks whether municipal governments that are more accountable and transparent at the outset are also more successful at raising tax revenue and why.

Data

The qualitative research is framed as a comparative case study. Case analysis is particularly suitable for in-depth insights into causal processes (Eisenhardt, 1989). Case studies are considered particularly appropriate for research on contemporary events (as opposed to pure archival or documentary research) as it allows for both direct observation and systematic interviewing (Yin, 1994:8). Through process-tracing, the sequences of independent (accountability), dependent (tax revenue dependence/needs), and intervening variables were observed in order to gain insights into causal processes. As Gerring (2006:45) explains, “when studying decisional behaviour, case study research may offer insight into the intentions, the reasoning capabilities, and the information-processing procedures of the actors involved in a given setting.” Case study research therefore made it possible to better understand the decisional behaviour of the actors involved, particularly of the local governments.

Field research was conducted in six municipalities located in six different states in Mexico and some additional interviews were held in Mexico City. In total, interviews were conducted with over 70 interviewees⁹. The interviewees in each municipality broadly comprised the following:

⁹ Interviews were conducted in Spanish and quotes have been translated to English. The interviews are referenced with a number corresponding to a list of interviews in the annex.

- Local council (*cabildo*) members (mayors, syndics, and councillors).
- Municipal directors of finance, revenues, taxation, property tax
- Directors of the cadastre
- Municipal citizen participation offices
- Municipal transparency offices
- External, state level or independent transparency, accountability, auditing institutions
- Civil society organisations, NGO's

Further informants of particular relevance were added to this standard list in each municipality, such as the representatives of hotel owners in Acapulco and the leaders of street vendors in Tabasco. For a broader contextual overview, the Mexican ministry of finance, state government finance secretaries, rating agencies, experts at international development organisations, and academics were consulted.

Interviews were semi-structured, roughly following an aide-memoire of topics that I aimed to cover. Allowing the interviewee to give a chronological account was preferable to sticking to a rigid questionnaire as this allowed the interviewee to recount events as he or she saw them in his or her own order of importance. I generally refrained from mentioning my thesis hypotheses or that I was studying the relationship between taxation and accountability at the outset, revealing only that I was writing a thesis on local taxation and local government, so as to prevent leading the interviewees into telling me what they thought I wanted to hear. Instead, I tried to find out more indirectly about the relationship, gradually asking about it more directly towards the end of the interview.

I faced several challenges during data gathering. It was not always possible to meet with all persons I had planned to interview. In particular mayors were not always available and the mayors I did manage to tie down only granted a maximum of 20 minutes of their time. The most obvious problem of elite interviewing is the reliability of the interviewees (Richards, 1996). I had particular difficulty gathering information from local councillors who often spoke in campaign slogans that only vaguely touched on the topic of my questions. The more technical staff (finance managers, tax directors, etc.), on the other hand, were excellent sources of information who generally had far more detailed knowledge and were more open and frank about what was going on in the municipality.

This is consistent with Seldon (1988:10) who considers (ex) politicians to be the least satisfactory interviewees as they, 'often encounter pathological difficulties in distinguishing the truth, so set have their minds become by long experience of partisan thought' whereas civil servants generally provide reliable sources of information.

Still, extra effort was required to gain the trust of all interviewees and to distinguish the truth from other statements. During the first part of the interview, I generally received cautious, unrevealing answers. Only after much reassuring that I was not a journalist and that I was not sent from the central government to evaluate them, showing that I had been in the country for some time studying local governments (listing several with worse reputations) and understood the challenges they faced and their circumstances, and sometimes called them out on seeming contradictions, did discussions eventually become more frank and more likely to have revealed their profound attitudes and convictions. As Chong (1993:868) writes about interviewing politicians, "While we cannot observe the underlying mental process that gives rise to their responses, we can witness many of its outward manifestations. The way subjects ramble, hesitate, stumble, and meander as they formulate their answers tips us off to how they are thinking and reasoning through political issues."

There was more reluctance on the part of interviewees in sharing data and documentation. The municipalities' data sometimes did not square with the data that I had been given by the federal government. This was partly because of a lack of homogenised accounting but there are also strong incentives to over-report tax revenues to the Ministry of Finance as tax effort is rewarded with higher fiscal transfers and as higher levels of government, private lending institutions and rating agencies may review their reported budget information in view of decisions over loans and transfers. For these reason I kept the comparison of fiscal data across municipalities to a minimum and instead focused on differences over time in the same municipality. There was particular reluctance in sharing data on tax compliance. As I was told by municipal revenue experts in the Institute for the Technical Development of the Public Treasuries (INDETEC), "If it becomes known how few people actually comply with their tax payments, then nobody would pay" (interview 83), confirming the literature on tax compliance: "publication of

the extent to which free riding is taking place [has] the effect of increasing non-compliance” (Levi, 1988:70).

Security concerns also presented an obstacle. Particularly in the Municipality of Acapulco, which is also among the most crime-ridden in the world, I was warned against meeting with certain people and was told that some of the data I had obtained was not secure for me to possess. There was also always a fine line to tread between taking advantage of information gathering opportunities such as following local councillors around in their work and accepting invitations to meet in informal settings where they were more open with the information they shared, and not being stuck in uncomfortable or insecure situations.

The short-term effects of ongoing current events are studied. This was viewed as necessary for several reasons: insights into the strategy and motivation of local government officials are easier to come by in real time. Particularly in the case of local governments in Mexico, any information about the administration is more difficult to attain once its term has ended. There is a large turn-over of staff, little institutional memory, and information is not passed on to the next administration. Direct real-time observation thus seemed the most viable and effective information-gathering method in this context for my purposes.

Interviewees were selected purposively (targeting the decision-makers responsible for tax increase and citizen relations at the local government level) and through snowballing. For example, during the interviews, interviewees would reveal who else was involved in certain processes and share the contact information of those key informants. Elite interviews were conducted to, first, understand the events and their sequence in the municipality, to gather information that was not documented and to help explain or clarify data, and second, to understand the interviewees’ perceptions, beliefs and motives. With regard to the latter, information was gathered to gain an “insight into the mind-set of the actor/s” more than to establish the objective truth (Richards, 1996:200).

Much of the information gathered through interviews was triangulated by analysis of fiscal data, legal codes, secondary literature, news articles, campaign platforms and other

documentary evidence. This was further supplemented by observation, for example of council meetings, and of the interaction of local authorities with residents (by following local councillors and revenue directors around as they worked).

In sum, field research was conducted, mainly involving semi-structured interviews with key informants in local government, but corroborating evidence through interviews with further informants, documentary evidence and direct observation.

6.3 Case selection

Six urban Mexican municipalities were selected for field research: Acapulco in the state of Guerrero, Centro in the state of Tabasco, La Paz in the state of Baja California Sur, Aguascalientes in the state of Aguascalientes, Mérida in the state of Yucatán and Saltillo in the state of Coahuila. The main selection criteria were that a) the municipalities were among the high tax collectors of the country; b) they were structurally similar in terms of GDP, size, major urban centres, and containing an independent city rather than forming part of a larger metropolitan area; c) they were somewhat spread out geographically; d) half scored particularly high on accountability and transparency rankings and half particularly low; and e) they were under considerable pressure to increase their tax revenues. In the following I describe the reasoning behind each of these criteria in greater detail. All of these variables are constants that the municipalities have in common apart from d) where I looked to separate the cases into two groups of extremes.

Among high tax collectors

The municipalities chosen are all municipalities where revenue from taxes and fees comprises a relatively important proportion of total revenue (between 11 and 19%) compared to the average municipality in Mexico (See Table 30). This places them among the 4% of municipalities that are responsible for 90% of Mexico's total local tax revenue

and where local taxes can be expected to make a real difference to the local government and local residents.

Table 30 Municipal taxes and fees, Property taxes, 2011

| | Taxes and fees as a percentage of total revenues | Property tax revenues as a percentage of total tax revenues |
|---------------------------|---|--|
| Acapulco de Juárez | 19% (low) | 77% |
| Centro | 11% (low) | 99% |
| La Paz | 31% (high) | 74% |
| Aguascalientes | 18% (low) | 97% |
| Mérida | 24% (high) | 99% |
| Saltillo | 26% (high) | 99% |

Source: SIMBAD 2012

Note: Here property tax revenues include the property tax (*impuesto predial*) as well as other taxes based on property values, such as the tax on acquisition or property transfer.

Structurally similar municipalities

Structurally similar municipalities were chosen: they are all urban municipalities that have comparable numbers of inhabitants, per capita GDP, and per capita budgets (see Table 31). They are all medium-sized cities with populations between 250,000 and 800,000, a per capita GDP of between USD 8,800 and 11,600, and local government budgets of between 185 and 335 USD per capita. I eliminated those municipalities that formed part of a large metropolitan area with other large municipalities. If they were part of cities with other major municipalities, it would be difficult to distinguish, for example, who was responsible for positive or negative city management and state-society relations. To prevent such complications of overlap, such municipalities were eliminated. Only municipalities with self-contained cities in which the municipality is solely responsible for the city's own local government goods and services were selected. The selected municipalities are also all state capitals, except Acapulco, though this is the largest city and commercial capital in its state.

Using structurally similar municipalities allowed me to more easily address the questions of interest while controlling for more obvious structural factors that would make a difference in how X affected Y. Differences in tax collection effort or accountability should not be simply due to, say, lack of budget capacity or different population dimensions that they are providing services to, but more dependent on strategic choices of the local government, which is of interest here. For instance, it is likely that in smaller, poorer municipalities, local governments would not be as successful in raising much revenue as larger, richer ones because property values are far lower and the population less able to pay. Small rural municipalities also tend to be more poorly equipped to raise revenues, often lacking human and administrative capacity. They may thus embark on an entirely different revenue-raising strategy and the municipalities would simply not be comparable on those lines.

Table 31 Structural characteristics of municipalities selected for case study

| Municipality | Population ¹ | GDP per capita (US\$)² | Local budget per capita (US\$)³ | Urban |
|---|--------------------------------|--|---|--------------|
| 1 Acapulco, Guerrero | 673,000 | 8,864 | 334 | Yes |
| 2 Centro, Tabasco | 665,000 | 13,800 | 308 | Yes |
| 3 La Paz, Baja California Sur | 252,000 | 10,545 | 234 | Yes |
| 4 Aguascalientes, Aguascalientes | 750,000 | 12,000 | 272 | Yes |
| 5 Mérida, Yucatán | 800,000 | 13,864 | 203 | Yes |
| 6 Saltillo, Coahuila | 725,000 | 11,607 | 185 | Yes |

Sources:

1. CONAPO 2010 population census
2. Standard and Poor's Sub-Sovereign Division's estimates 2011
3. SIMBAD 2012 (data for 2010), divided by CONAPO population data 2010.

Geographical divergence

Of the remaining municipalities, I chose cases that were geographically spread out (diversity sampling), rather than clustered in the same region, for greater representativeness and for a greater likelihood of variation in the findings. The northeast (Saltillo), northwest (La Paz), centre (Aguascalientes), southeast (Centro), southwest (Acapulco), and the peninsula (Mérida) are all represented (See Figure 18 below).

Figure 18 Map of Mexico showing municipalities selected for case study



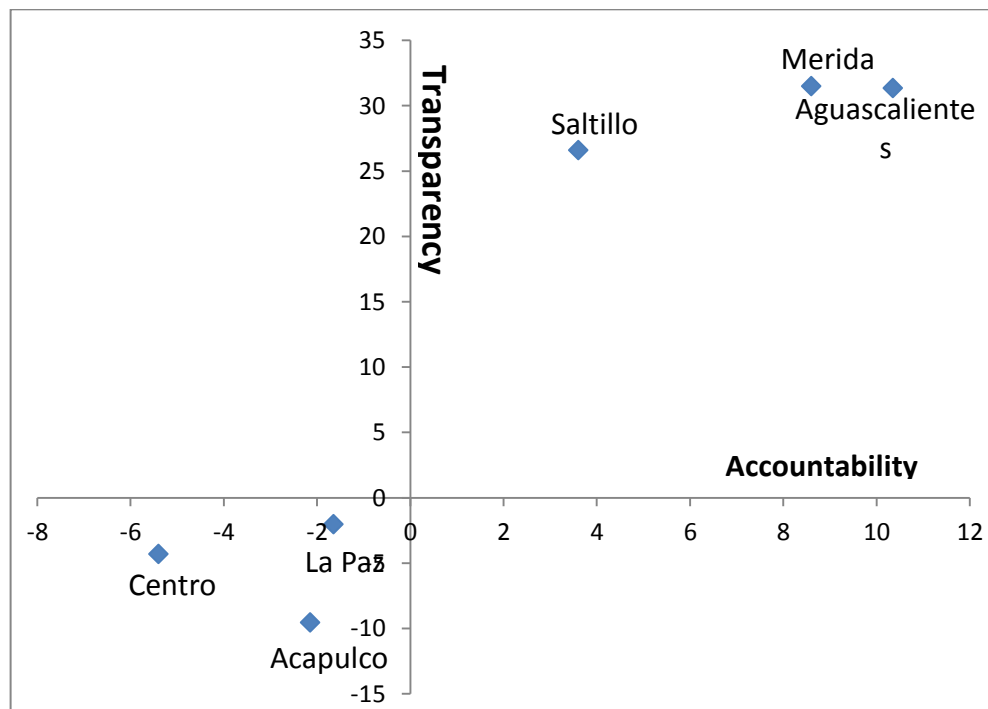
Two groups of extremes within

I chose six municipalities in a way that half were ones that ranked very highly in terms of accountability and transparency, according to available rankings, while the other half fared particularly poorly (See Figure 19 below). Selecting structurally similar municipalities that are polar opposites in terms of transparency and accountability had the aim of investigating to what extent local governments go about the process of raising revenues when accountability and transparency are relatively high versus the contrary.

Multiple (three) cases were selected in each category in order to increase the chance of finding patterns that repeat while at the same time diminishing the chance of studying complete outliers. This lends to wider resonance of the conclusions drawn (Eisenhardt, 1989).

More specifically, I focused on the municipalities that had the best track records in terms of accountability and transparency on a ranking by a magazine that specialises on state and municipal economics, public finance and politics in Mexico called ARegional (ARegional, 2011). Their ranking was conducted in 2010 and covers 100 municipalities. Yet I eliminated those that did not consistently show up in a similar position in other rankings of “transparency” and “accountability”, including those by the Mexican Institute of Competitiveness (IMCO, 2012b) and by an NGO called *Ciudadanos por Municipios Transparentes* or Citizens for Transparent Municipalities (CIMTRA, 2008, 2012).

Figure 19 Distance from average in terms of transparency and accountability



Source: Own elaboration based on ARegional, 2011 ranking scores (distance from average of the 100 municipalities rated).

Under pressure to raise tax revenues

It was important that the selected municipalities were ones that were under pressure to raise their tax revenues. This is the independent variable in the causal puzzle. The municipalities each fell in this category as they made vocal efforts in the media that they were attempting to raise revenues from the beginning of their administration onwards (between 1 to 4 years prior to the time field research was conducted¹⁰). In this subsection I first discuss the reasons why they were generally under pressure to tax raise revenue as urban municipalities in Mexico in a time of restricted revenue alternatives. In the next section, I then highlight, for each individual case, additional reasons, further confirming the municipality's propriety as one under pressure to raise tax revenues (the independent variable in the taxation-accountability relationship focused on here).

As elaborated in Chapter 3, municipal governments in Mexico have made little effort to raise taxes in the past and instead relied on alternative revenue sources including federal and state transfers or borrowing money (Morones Hernández, 2012:84). However, these alternatives became greatly limited between 2011- 2012 when the field research was conducted. During this time, many Mexican municipal governments found themselves (and some continue to find themselves) in dire financial circumstances. While municipal debt had been consistently growing, fiscal transfers from the federal government, their main source of revenues, had not (interview 3; interview 5; SHCP, 2012; SIMBAD, 2012). This came as a result of stagnating oil revenues and a general economic downturn starting in 2010, following recession of its main trading partners and a slowdown in tourism because of reports of drug violence and swine flu. Given that transfers are tied both to oil revenues and the overall national budget, this meant that transfers saw a great decrease from one year to the next.

Poor municipal financial management magnified what became a chronic debt problem as many outgoing municipal administrations left high debts for their successors to grapple with (Martínez, 2013; Rea 2012; Tzuc 2012). Many municipalities expected to be bailed out by the federal government; however, a stricter bailout policy had been effectuated,

¹⁰ In the case of Aguascalientes, the same party that was in power began attempts as far as 6 years prior.

subsequent to national outrage at mismanagement of local funds (Reforma, 2012), so bailouts were largely rejected. Making matters worse, credit agencies such as Moody's and Standard & Poor's downgraded their qualifications for most municipalities they rate, complicating those municipalities' access to credit, raising borrowing costs, and diminishing the interest of investors in financing their projects (Arteaga, 2013; Soto, 2013; interview 3; interview 4). Growing debt service compounded by a lack of alternative revenues placed great pressure on municipal governments to ramp up their tax revenue collection. The central government was highly vocal in placing particularly high pressure on urban municipalities to increase their tax revenues, urging them to make use of their unexploited tax handles, particularly the property tax, and making it clear that bailouts and other alternative revenue sources were closed off (García, 2013).

All urban municipalities thus faced great pressure from the central government to increase their tax intake and to make use of their largely unexploited tax revenue potential in the face of a lack of alternative revenue sources. They were also further motivated to increase tax revenues because of recent adjustments to the transfer formulas that reward tax effort with greater federal and state transfers (Peña Ahumada & Wence Partida, 2011:90).

6.4 Further information on the cases

The fact that urban Mexican municipalities were attempting, since about 2011 (and some for the first time) to abruptly increase their tax revenue makes the Mexican case particularly interesting as the focus of study. This acute situation provided an interesting opportunity to study local governments with a strong tax revenue imperative. In addition to these broad reasons, the municipalities chosen had further own specific revenue raising pressures. Some of the municipalities chosen had additional pressure to overhaul their budgets through their own efforts because of local financial crises following mismanagement of past administrations that left them with few funds to work with in order to fulfil their responsibilities, let alone carry out additional projects. This section

describes these further pressures. At the end of this section, I also provide additional background information on the cases.

Revenue needs in Acapulco

Revenue needs in Acapulco were particularly urgent because there was an immediate fiscal crisis in the municipality. According to a local councillor in the Municipality of Acapulco, the municipal government allegedly inherited a debt of MX\$2.14 billion pesos from its predecessor's government under Manuel Añorve Baños (interview 60). According to the PRD leader Jesús Zambrano, this was the result of "irresponsible action" and he has "no doubt that an important part of the resources went into private pockets" (Ponce, 2013). The former government denied this, saying the allegations of the missing debt left behind are exaggerated. Añorve defended himself saying the debt he passed on was less: 806 million pesos (Gómez, 2012). Whether the new government exaggerated the figures or not, the current mayor requested financial assistance from the federal ministry of finance in order to be able to cover costs during the first months of coming to power, before receiving the central government transfers (which tend to be disbursed every February). This request, however, was denied, leaving Acapulco to look to raising its own resources (RedPolitica, 2013; interview 5).

Revenue needs in Centro

Centro is highly dependent on oil revenues, which greatly affect the transfers it receives from the central government. This is because central government transfers are tied to oil sales and municipalities where oil is extracted receive a greater proportion. Oil revenues have consistently decreased in recent years and this has thus hit Centro particularly hard (Sánchez, 2013; SHCP, 2012).

Centro's credit rating also dropped: Moody's downgraded Centro to a negative outlook (Ba3 rating) in the summer of 2012 (Moody's, 2012), closing off further borrowing

options (interview 44). The municipal government thus has its hands tied without additional revenues. On top of this, the debt left behind by the previous administration at the end of 2012 amounted to \$700 million pesos.

Revenue needs in La Paz

Several factors contribute to revenue raising needs for La Paz. The Municipality of La Paz receives relatively few transfers from the central government compared to other municipalities in Mexico. This is because one of the dominant criteria in the transfer formula that determines its share of transfers is population and La Paz's population is relatively scarce. While the population is small, it is greatly disbursed over a large surface area (La Paz is the fourth-largest municipality in Mexico geographically, covering 20,275 km²). This makes it expensive and logistically challenging to provide public services. The city must thus rely particularly heavily on own revenues; these amount to approximately 48% of total revenues (31% of total revenues come from taxes and fees. According to the director of urban development of the Municipality of La Paz, urban migration to the municipality places further pressure on public services (interview 33).

When the municipal administration came to power in July of 2011, it found a situation of deteriorating public finances. The reason was a rise in current expenditures in previous years (on average about 10% between 2009 and 2011) that consistently exceeded revenue growth (dropping around 3% during the same period). According to a study prepared for the IDB (GeoAdaptive, 2012), there have been few savings that would allow investment in infrastructure or services; the municipality had trouble merely covering its operational costs. Investment could only be undertaken with borrowing and extraordinary revenues provided by the state or federal government.

Yet, as the revenue directory of the Municipality of La Paz laments, "since about one year, the federal government won't bail anyone out anymore, including with extraordinary emergency schemes. Last year, for instance, the rains destroyed many streets. Now the federal government no longer helps in these situations. They are no longer rewarding those that manage their finances poorly. The banks are not lending anymore either"

(interview 29). While conceding that this is correct of them, he emphasises that this puts the current municipal government under particularly great financial pressure.

Finally, to add to La Paz's troubles, the last administration took a lot of short-term high-interest loans that the new government has been left to amortize. The fiscal balance has remained below zero since 2010 and Fitch Ratings and HR Ratings downgraded La Paz to a negative outlook in 2012 (with a BBB rating) (GeoAdaptive, 2012).

Revenue needs in Aguascalientes

The population is rising as the city attracts migrants, bringing with it infrastructure and housing needs. "There is great demand for more revenues just to maintain the current standard" (interview 21).

The mayor had ambitious goals for her term in office from 2011 until the end of 2013 and needed more revenues to be able to carry them out. She made raising property tax revenues and water fees a priority in her administration, particularly because these are tied to transfers. "We get more central government transfers if we raise more revenues" (interview 22). The greater the percentage change in collection from one year to the next, the more central government transfers (in the form of unearmarked *participaciones*) they will receive. The government also wants to shed its dependency on the central government. In the finance directorate, staff complained that they are 70% dependent on federal transfers. "In places like Monterrey, the local government is not this dependent, although in places like Chiapas, they are complete leeches" (interview 25).

Revenue needs in Mérida

The municipal administration in Mérida began its term with a large debt that had been passed on to them from the previous administration. It owed 600 million pesos to various providers upon taking office. In addition to this, the deputy revenue director soon

found, after a thorough revision of the books, that there were almost MX\$ 100 million in debt that were completely unaccounted (interview 39).

In addition to this, the mayor was young (at 33 years when he took office) and ambitious and very vocal in his campaign and in the media, repeating that, “There are projects that I would like to spark off, but I need the resources and basic public services covered before investing in those issues” (quoted in Ortega, 2012). After a previous administration that had mismanaged its finances, this one vowed to “restore the shine of the white city” and this required raising revenues (Ortega, 2012).

Revenue needs in Saltillo

In Centro, Tabasco, I had been told that when a state is in financial trouble, then its municipalities will suffer too. The State Government of Coahuila, where Saltillo is located, experienced a massive debt crisis towards the end of 2012. One would thus think that vocal calls from the municipality to increase tax revenues stemmed from a financial crisis also at the municipal level. However, it turned out that Saltillo’s revenue needs did not follow a financial crisis. Despite that the State of Coahuila suffered a financial crisis, Saltillo has maintained solid financial management throughout and still enjoyed a positive rating from the rating agencies Fitch Ratings and Standard & Poor’s.

Instead, the pressure to increase revenues was instead largely self-imposed. Given that own revenues comprise a larger proportion of the municipality’s total revenues, and the transfer formula is such that it receives relatively few central government transfers in relation to its size (due to the criterion in the transfer formula that is based on historical tax revenue levels), own revenues are used not only to cover the payroll but also for investment projects. Investments were also made with credit from private markets. Yet the Mayor publicly announced, repeatedly since he took office, that he wanted to end the administrative term with a zero deficit. At the time of interview in July 2013, Saltillo still had a debt of 156 million pesos (25 million in long-term, 131 in short-term loans) but the debt had already been decreased by 70% from 430 to 131 million pesos. While this was not entirely problematic debt, it would take a particularly strong collection effort to pay it

off; that is, considerably more would have to be collected each month than during the same months in previous years. According to the revenue director, the Mayor thus put constant pressure on the revenue office to reinforce revenue collection efforts (interview 73). The finance director of the municipality also agreed that while the pressure had been on since the beginning of the administration in 2011, it was felt particularly strongly with just a few months left to balance the budget as the government term would end with the year 2013 (interview 75).

Additional background information on the municipalities

Development indicators on the municipalities are found in Table 32. We can see that all of the municipalities are above the Mexican average in terms of development. For example, while the United Nations Human Development Index (HDI) shows an average score of 0.75 for Mexican municipalities, those of the case study municipalities are all in a range between 0.82 and 0.90. We do see that that Acapulco's figures are consistently less than the other municipalities in terms of development indicators. Mérida comes in second in terms of poverty but Centro and Saltillo come in second in terms of the HDI.

Table 32 Socioeconomic characteristics of case study municipalities

| | Acapulco | Centro | La Paz | Aguas-calientes | Mérida | Saltillo | Average |
|---|-----------------|---------------|---------------|------------------------|---------------|-----------------|----------------|
| Households without drainage | 9.8 | 0.9 | 1.29 | 0.77 | 5.92 | 0.72 | 14.2 |
| Households without potable water | 18.1 | 4.82 | 5.71 | 0.54 | 1.7 | 2.11 | 13.4 |
| Households with mud floors | 15.23 | 3.97 | 4.7 | 1.7 | 0.69 | 1.47 | 10.3 |
| Percentage in poverty | 60 | 36.8 | 25.06 | 27.84 | 48.75 | 22.9 | 66.86 |
| Infant mortality rate | 13.8 | 11.43 | 10.46 | 9.96 | 8.8 | 8.93 | 23.13 |
| Literacy rate | 90.46 | 95.29 | 97.13 | 96.54 | 95.94 | 97.17 | 83.29 |
| Human Development Index | 0.82 | 0.86 | 0.90 | 0.87 | 0.89 | 0.87 | 0.75 |

Sources: CONAPO, 2005 for household data; UNDP, 2005 for Percentage in poverty, infant mortality rate and literacy rate, and human development index.

Conclusion

This chapter has presented the methodology for the qualitative analysis of this dissertation. The first section of this chapter has shown how the qualitative analysis is used in a mixed methods research approach. It aims to fill gaps and remedy shortcomings of the quantitative analysis in the previous sections and add to the understanding of

taxation-accountability linkages that would not have been possible with one approach alone.

The second section presented the research questions specific to the qualitative analysis. The main question asked is *when (if at all) do tax revenues needs lead to a bargaining process between the local residents and the local government in this context, what form does this take and what implications does this have for local government accountability?* Secondary questions are also asked regarding reverse causality, a context of stronger state-society relations and the tax type. This section also outlined what constitutes evidence for the answers to those questions and presents the data sources and research design used. The qualitative research is framed as a comparative case study involving semi-structured interviews, triangulated by review of documentary evidence such as legal codes, secondary literature, news articles, campaign platforms, and direct observation. It also discussed what challenges faced in conducting the research.

The third section explained the reasons for selecting the six municipalities as cases for field research. I chose structurally similar municipalities where tax collection is significant compared to the rest of the country. Of these I chose three that already had particularly strong established state-society relations and three at the other extreme. The fourth section provides further information about the revenue needs in each of the six municipalities and some additional background information.

The next two chapters will present the findings of the qualitative analysis. Chapter 7 will present the first three cases (Acapulco, Centro and La Paz) and Chapter 8 will present the last three cases studied (Aguascalientes, Mérida and Saltillo).

Chapter 7: Acapulco, Centro and La Paz

In this chapter and the next, I present the evidence found by way of field research conducted in six municipalities, all of which were under considerable pressure to raise tax revenue (the independent variable). The evidence presented in this chapter and the chapter thereafter examines the effect of the independent variable on the dependent variable, local government accountability, as well as all intermediate steps and obstacles between the two.

This chapter begins with the first three municipalities. These three each rank low in terms of transparency and accountability. Section 7.1 presents evidence from Acapulco, Guerrero, 7.2 from Centro, Tabasco and 7.3 from La Paz, Baja California Sur. In each of these sections, I begin with a brief description of the context. Then, in the first subsection, I reveal the strategy taken by the local government to raise tax revenue. In the second subsection I discuss the outcomes of that strategy. In the final subsection section I draw conclusions about whether the municipal government chose coercive taxation, tax bargaining or some other strategy. If tax bargaining was observed, I assess which form this tax bargain takes (implicit or explicit?) and who was involved. I then evaluate if it was likely to lead to an increase in some form of local government accountability and, if not, what obstacles prevented this.

Section 7.4 revisits the findings and adds further evidence addressing the causal link and mechanism, as well as on the secondary questions presented in Chapter 6. These secondary questions are fourfold, covering, first, whether the tax type influences the taxation – accountability link and why; second, which obstacles stand in the way of the relationship; third, to what extent reverse causality is present in the relationship; and fourth, whether a tax bargain is more likely in a context of more established state-society relations. In Section 7.4, the first, second and third of these are addressed. The fourth will be discussed in Chapter 8. The final section of this chapter concludes.

7.1 Acapulco: Murder by the sea

Acapulco lies on the Pacific coast in the south-west of the country. It is located within the state of Guerrero, which ranks among Mexico's five poorest states. Once known as a Hollywood star retreat with its majestic bay of beaches and dazzling high-rise hotels, the city is now famous for gang rape, decapitations, and drug cartel turf wars (Graham, 2011). With 1170 homicides in 2012, Acapulco landed second place among the world's most dangerous cities (CCSPJP, 2013).

The municipality of Acapulco was dominated by the PRI until 1996. Since then, power has vacillated between the PRI and the Democratic Revolutionary Party (PRD). The current mayor is Luis Walton-Aburto, a successful business tycoon and at the same time a former member of the left wing PRD party before running for office with his own independent party, the Movimiento Ciudadano. Walton-Aburto became mayor of Acapulco in October, 2012.

Figure 20 Map of Acapulco de Jurez Municipality in Guerrero



Source: INAFED 2014

The findings show a case in which the local government projected to increase its property tax revenue by revamping the property tax registry and by facilitating the tax payment process for taxpayers through online banking. No coercive taxation was observed. Instead, alongside the tax raising efforts, the government made extensive efforts to improve its image and level of trust among the population, appearing consistent with the short path to accountability. The government simultaneously increased accountability when demanding more taxes in an implicit agreement. However, it is unclear whether municipal leaders did to achieve tax compliance alone or to enhance their popularity more generally. Nevertheless, the local government officials did claim to see a connection between accountable governance and increased tax revenue. In the end, murder and threats by drug trafficking organisations prevented heightened tax raising efforts that may have incited further increases in accountability.

Strategy to increase tax revenue

According to the municipality's councillors, the agreed strategy to raise revenue was to increase property tax revenue. The property tax is Acapulco's most important local tax, comprising almost 80% of tax revenue. Yet revenues remain well below their potential. Around 60% of registered property accounts that owed property tax actually paid and this does not take into consideration the omitted and outdated base and values (interview 69).

Several steps were taken to increase property tax revenues. Cadastral values (the base of the property tax) were far below market values or missing altogether, exemptions abounded, and non-compliance with payments was not sanctioned. The main task was to update the cadastre in order to increase property valuation (interview 69). The director of the cadastre was appointed to put the out-dated land registry in order. He started a process of reassessing and up-dating information on properties that formed the basis of the property tax: the surface area of properties, construction on the property, ownership and other rights and obligations for each land plot in the municipality. Also, property

values were to be matched to their market values based on information from property acquisitions and other transactions.

These intentions were announced in a media campaign. The local government claimed in the media that the cadastre was unreliable and needed to be renewed. “We will go house by house and update the registry” (Briseño, 2013). According to the director of the cadastre, “the registry was recognised as being in disarray and it was impossible even to determine how many land plots existed. The idea was to put the cadastre in order: update values, expand the base of taxpayers and ensure that all who owned property paid their due share” (interview 69). The residents were not consulted on this decision but the media campaign had the intention of informing the public more generally and helping them to understand that these were necessary steps to improve government finances (interview 62).

The administration also tried to increase tax payments by simplifying the payment process for the taxpayer. For instance, a one-stop-shop was planned for all tax payments to replace numerous bureaucratic steps in different locations. The plan was also to allow payment via the internet. According to staff at the municipal cadastral institute, there were only six payment points in the municipality where property owners can go to make their payments (interview 70). Online property tax payments had been possible in the past, but in 2011 the server collapsed and the option was removed. The new government has entered into negotiations with two banks, Scotiabank and Bancomer, to reintroduce this system using better software. The idea was to have this set up and running within a few months from the start of the administration.

One of the councillors stressed that the main strategy to increase taxes was to re-establish trust in the government. “People had lost trust. They didn’t know where their money was going so they refused to pay” (interview 60), indicating an awareness of the connection between local government accountability and residents’ willingness to pay.

Other members of the local government also claimed to see this connection. In an interview, another member of the *cabildo* told me, “If people don’t receive anything for their money, they threaten not to pay anymore. Now the government is saying it will help

but if we don't do a good job, people won't pay their taxes [...] If the government is corrupt, then people don't want to pay" (interview 61). He continued that some people don't pay because they are unable to: perhaps they don't have a job or simply cannot make ends meet as it is. If the government tries to collect taxes from them, they regard the government as oppressive. People stop paying for two reasons: first, if the economic situation is bad and second, when there is corruption, "but corruption is the main reason" (interview 61). The mayor of Acapulco also said to the press, "there are areas where people don't pay. We have to give them services in order to demand a payment from them" (Briseño 2013).

According to one of the local councillors, in order to motivate residents to regain trust in the local government, and, by extension, to increase tax intake, an immediate campaign for street cleaning and public lighting was initiated. These services had been neglected, needed urgent attention and, importantly, were also highly and immediately visible. "The mayor started with the most visible projects to make the population clearly see that this government is different from the last" (interview 60).

In total, 21 actions were promised and advertised. In each action, the government branded itself with the slogan "Acapulco puede" (Acapulco can) and a colourful, easily recognisable logo, marking a visible break with the past administration, as seen in the photograph in Figure 21.

Figure 21 Photograph of Municipal Palace with municipal government logo



During the previous administration, public lighting had been neglected, particularly along the beach, which caused security concerns. Within the first six months, 44,900 lamps were replaced, increasing coverage from 60% to 90% (interview 61; OptimaEnergia, 2012). The previous administration had not paid the garbage company, so it ceased work and garbage piled up in several neighbourhoods. As the administration started in October and federal transfers were only due in February, there was no money to buy garbage trucks or pay collection companies during those first months. The councillor explained that the mayor took it upon himself to ask his friends for help. He managed to borrow 40 trucks in order to dispose of 800 tons of garbage daily from October until federal funds arrived in February. After that beaches and other tourist points of interest were remodelled and beautified. Additionally, roads were repaired and pedestrian walkways were improved and made accessible for wheelchairs (interview 60).

The mayor also began a programme of administrative transparency. Every three months he had the latest revenue and expenditure figures published in the newspapers. “No mayor had previously done this in Acapulco and it is not required by law. He goes beyond what is required. This gives people a lot of trust in his government” (interview 61). “During the previous government, for each bureaucratic step, government officials in the municipality would ask for a bribe. Now there is much less of this. The mayor is warning his people. One complaint and you’re fired. 200 people have been already fired in this administration” (interview 61).

These claims were put into perspective by other informants: “We were more or less told, ‘I know you’re going to steal, but please steal less’” (interview 62). The corruption appears to be a matter of degree. The game appears to be one of highly patrimonial politics, to a far more obvious extent than observed in the other municipalities visited. According to informants, on top of their official salary, local councillors received two to three times their salary for expenses; receipts were not generally asked for (interview 83). To be sure, there were strings attached to the use of this money: many of the expectations that came with it later became apparent. On Women’s Day, for instance, councillors were expected to purchase presents for the leaders of women’s organisations. When a councillor was visiting a poor community and an elderly man complained of going blind, the councillor was expected to pay for his eye surgery. These public resources were

spent arbitrarily and defined by personal power and loyalty to a discernibly greater degree than elsewhere. Yet, while there appeared to be less accountability than in other municipalities, there was a clear effort to show improvements in accountability than in the past.

Outcomes

What were the outcomes of the government of Acapulco's revenue-raising strategy? As it turned out, the municipal government was not successful in its attempts to raise revenue. All motivation to renew and update the cadastre quickly withered when the director of the cadastre was murdered two months into the new administration, together with the data manager of the municipal treasury. Sources say that it was narcotics traffickers who killed them for trying to update the property registry. One of the directors in the local government explained, "he tried to put order into the system and the mafia didn't like that" (interview 69). The drug traffickers had controlled the property registry up until then and did not want this to change. "They somehow got a hold of it and they have a strong interest in maintaining their control" (interview 69).

It is difficult to keep up with which narcotics trafficking group dominates in Acapulco, the site of many turf wars between various "cartels". There are many reasons why drug gangs take an interest in controlling the land registry. Information in the property registries helps them to collect protection money. They also have an interest in keeping property values low. The greater the discrepancy between the market value and the cadastral value, the greater the opportunity for money laundering: properties can officially be sold at a massive profit.

The rest of the staff at the municipal secretariat of finance continued to live in fear. It had been impossible to find a willing replacement for the position of director of the cadastre. At the moment of the last interviews in June 2013, the head of finances was still wearing both hats: in the mornings he was in the finance office on the coast and after the lunch break he worked in the cadastre directorate behind the Zocalo (the main square). Since the murders it has taken the remaining staff some time to get everything together and understand where the two experts left off. Their motivation to make any changes that

would affect or increase property tax revenue was severely dampened and they were afraid to be seen to be making any changes. They kept a low profile and even the negotiations with the banks (Scotiabank and Bancomer) were abandoned.

According to one local councillor, explicit bargains were struck with the hotelier industry concerning their tax obligations, as they pay a large share of property taxes.

Unfortunately I was unable to gain further details on the extent or on the nature of this share or the negotiations. According to the president of the association of hotels and tourism, the government is particularly attentive to their needs and public services are targeted to them (interview 68). Yet what these deals included remains opaque and it was difficult to ascertain whether government leaders' acquiescing to the hotel industry was primarily to motivate compliance with taxes. While the hotels pay larger property taxes than the general population, the concentration of ownership was not that stark to make it worthwhile to just go after these firms. What they would pay still does not compare to what the local government receives from the masses of property owners with smaller bills. They may have been simply trying to encourage tourism. It is generally accepted in Acapulco that if tourism is doing well, then the entire economy does well too. Or they may have been seeking personal benefits. Some former local public servants boasting that they owned entire floors of condominiums in hotel complexes along the bay sparked the suspicions that it may be the latter (interview 83).

Concluding remarks

In Acapulco, the strategy to raise revenue was not coercive taxation. Instead, the plan was to increase tax intake by facilitating tax payments for taxpayers through online payment options and by having all property owners pay the amount they actually owed according to facts that reflected reality in an updated and modernised property cadastre. In the end, organised crime got in the way of this strategy. The revenue-raising efforts were largely dropped as a result of fear of retaliation from the drug gangs.

Explicit bargaining was carried out with representatives of the hotel industry. It was clear that they worked together for mutual gain: the local government took measures to improve services that would encourage tourism, such as implementing street lighting and

a clean boardwalk along the bay. However, I was unable to determine whether the local councillors were making concessions because they were after the hotel industry's tax revenue or other advantages.

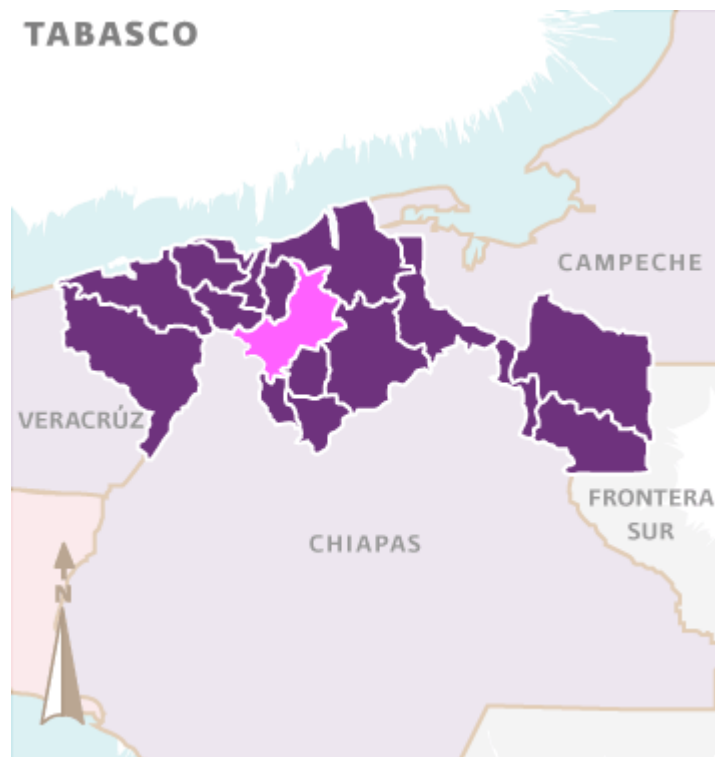
The local administration took many steps at the beginning of its term period to gain trust and improve its image alongside motivating residents to pay taxes for a greater tax intake. This may be viewed as an attempt at implicit bargaining: local government leaders manifested their awareness that residents would not pay taxes if they distrusted the government. If they regained trust, perhaps more taxes could be demanded. However, despite what government officials claimed, the principal intention might have been primarily to make the government improve its image, particularly after a very unpopular earlier administration, for reasons beyond raising tax revenue. As the coordinator of public services of the municipal government said, "the change in image and the effort to gain trust from the residents does not only increase tax compliance: it makes the government more popular generally." I then asked why the mayor wants to be popular if the Mexican Constitution does not allow for him to be re-elected. He replied that, "He may be elected for something else in future" (interview 61). Tax revenue may thus be a motivator for cultivating an image of accountable governance, but career aspirations are likely to be a stronger motivator for local politicians.

7.2 Centro: Oil wealth and street vendors

Centro is the most important municipality of the city of Villahermosa, which means 'beautiful town' in Spanish – although this is not what awaits the visitor. The city experienced a petrol boom after the discovery of massive offshore oil deposits in the 1970s. Oil money financed the rapid construction of bulky infrastructure projects and smoggy, congested highways now meander around the marshes and tropical parks of this hot, humid, mosquito-infested swampland. It is also a city of newly rich petro tycoons and has a noticeable obesity problem, reportedly well above the Mexican average (Hernández, 2012). After Mérida, it is now the most important commercial centre between Mexico City

and Cancun. The oil-funded prosperity has also led to a bloated bureaucracy. In Tabasco, the principal employer is the government. Employees of the national oil company PEMEX are the highest paid in town. Yet at the same time there is poverty and streets in the city centre are lined with informal vendors working hard in the scorching heat and in the rain barely earning enough to get by. Oil money has made living costs soar and has crowded out other industries. All staple foods are imported from other states or from abroad. The current mayor is Humberto de los Santos Bertruy of the PRD (a former PRI member who moved to the PRD after his original party did not select him as a running candidate), in power since January 2013.

Figure 22 Map of Municipality of Centro in Tabasco



Source: INAFED, 2014

In this case the municipality set out to increase property tax intake and to make use of a second previously unexploited tax: street vendor fees. No coercion was observed. Regarding the property tax, explicit bargaining was observed only between the local government and individual taxpayers with the outcome of reducing the latter's individual tax obligation but with no beneficial outcomes for the wider local population. Regarding street vendor fees, there was an explicit bargaining process in which the local

government was already taking steps to be responsive to street vendors' needs while negotiating taxation. There was also evidence of possible implicit bargaining as statements to the media were made in which the government pledged to improve accountability and transparency alongside collecting taxes. Also, the government is generally perceived as relatively more corrupt than in other municipalities and people may therefore pay correspondingly little property tax.

Strategy to increase tax revenue

The strategy of the local government, according to the local councillor of the municipality of Centro specialised on treasury affairs, was to increase tax revenue with priority placed on property taxation as this was viewed to have the greatest revenue potential (interview 58). He added that increases in its tax take would bring in more transfers because of the intergovernmental transfer formula. He was thus aware of and appeared motivated by the incentive of the central government transfer formula which rewards increases in property tax revenue (and water user fees) with a higher amount of central government transfers (See Chapter 3 and Law of Fiscal Coordination, 2011).

The municipal administration believed that a large increase in tax revenues could be attained through even just a little bit of tax effort as prior administrations had hardly made any (interview 44). The municipal governments in Centro have traditionally made little revenue raising effort because it would receive exceptionally large amounts of federal transfers as it is located in an oil extraction area and receives a bonus for this. Its proportion of tax revenues to total revenues at around 11% is thus far lower than in other municipalities of comparable size (see Table 30 in Chapter 6).

Tax compliance was low, estimated at around 30% so the aim was simply to urge residents to pay. It is well remembered among the current leaders that a past administration in 2005 proposed to raise property valuation to adjust it to inflation. A gradual increase was proposed over three years: the rise would only be applied to 40% of the full amount in 2005, then a further 30% in 2006 and the final 30% in 2007. Yet the mayor who decided this, Floricel Medina Pérez Nieto, consequently "died politically [...]"

Mayors don't want to bother people for taxes. It doesn't make them popular" (interview 50). In view of its more urgent revenue needs, however, the current administration felt it should make an attempt.

The internal policy set out by the directorate of finance of Centro, Tabasco at the start of the administration in January 2013 was "to support the compliant taxpayer and incentivise legalisation of the incompliant" (Finanzas, 2013). Specifically, discounts and partial amnesties were enforced and fees on late payments were scrapped in order to motivate residents to become compliant, but at the same time legal recourse would be threatened against those that had not paid their taxes for many years (Independiente, 2013), including through foreclosures of properties (Hernández, 2012). "To be perfectly clear, we are not raising the tax rate. But we are going after those who have not paid what they owe" (interview 44). The strategy was therefore not one of coercive taxation, but largely just positively motivating compliance and also reducing arrears, including through foreclosures. Much care was taken not to appear overly harsh.

A second unexploited revenue source which the revenue director regarded as having potential and wanted to target were street vendors fees. These are collected from the leaders of street vendors and market stands for the space they occupy for their sales. It's a source of municipal revenue that previous administrations had been unconcerned with. According to one local councillor who had been a local councillor in previous administrations also, "if the street vendors didn't pay, not much would happen in the past" (interview 58). The revenue director estimated that about 10 to 15% of the municipal population comprises informal vendors. "There are at least 20,000 that currently don't pay even a single peso. If each of these pays 36 pesos per month, then that would amount to about 8,640,000 million pesos" (interview 84). The plan was to negotiate with the leaders of the street vendors to see if they could strike a mutually beneficial arrangement.

Alongside the plan to raise the tax intake, this administration also promised transparency and accountability at the start of the property tax paying season in January 2013. A press release of the Municipal Government of Centro in January reported that the local

councillors vowed to “guarantee transparency and austerity and to contribute to better services for the citizenry” (Centro, 2013).

However, there was a limit to what the local government could do in terms of providing services to the residents. All of Centro’s un-earmarked transfers (*participaciones*) are directed towards personnel (salaries of the municipal workers). The municipal government in Centro employs 6800 people (compared to 3000 in Saltillo and 1200 in La Paz), 4000 of which are unionised and cannot be dismissed. “A great number of them are obsolete: there is no money for them to actually do anything” (interview 49). The remaining funds are earmarked, particularly for energy and public lighting.

Outcomes

A. Property taxes

During my interviews with the local councillors in their offices, a group of protesters congregated in the municipal palace. The protestors came to demand a delegate to represent their colony in the municipality. Each colony in the municipality has an elected delegate who serves as a representative who defends their interests. Tierra Amarilla is a colony slightly north of Centro that, according to the government, lies within the borders of the neighbouring municipality of Nacajuca. It is a rural colony with only 970 inhabitants. The protesters, interestingly, shouted, “We pay property tax in Centro. Now give us representation!” One of the local councillors explained, “They are fulfilling obligations in order to get rights. They have no services, only water but it is not potable. They want to be connected to Centro’s network. They want their own delegate who will then get them connected to Centro’s municipal services” (interview 58). Whether this would be granted remained to be seen.

The residents of Tierra Amarilla that organised a protest outside the offices of the local councillors also saw a link between taxation and accountability: they attempted to trade paying property taxes in exchange for receiving a delegate to represent them and access to public services. The residents voluntarily paid taxes in the hope that it would strengthen their bargaining power for receiving representation and municipal

government services. I was unable to find out if the municipal government finally conceded to their demands.

However, besides this instance, I found no evidence of explicit bargains between the local government and a larger group of residents. Explicit bargains were only observed between the local government and individual taxpayers. Further discounts, pardons of late payment fees and other exceptions were negotiated retrospectively with taxpayers who came to the office to ask for them. A constant stream of residents walked into the revenue director's office during my interviews asking for pardons of late payment fees or further discounts –including ad hoc discounts legitimised by the signature of the finance director-- and these were often granted. The largest exemption I witnessed involved a company with over 1000 land plots that owed over a million pesos in property tax. The mayor ordered a tax pardon for the company director of a certain percentage of his property tax payment since he had helped him with his campaign (interview 84). There was opposition to the discounts and exceptions in the revenue office: “They are a nightmare to administer and they create vices. Many think that because they voted for the mayor, they will get special tax treatment. But if we don't grant these discounts then many people won't pay anything at all” (interview 44).

Why have they found it so difficult to increase property tax revenues? Did it have to do with the fact that they were perceived as unaccountable, therefore comprising an implicit agreement in which taxpayers adjust their behaviour of evading or paying given the level of accountability of the government? According to the revenue director, the main reason for the low tax compliance was the culture of not paying taxes that existed in Tabasco more generally, which he believed was due to a deep-rooted distrust in the government. This in turn may in part be due to Centro's characteristic of an oil producing municipality. There is a sense among residents that the local government should have plenty of money already and shouldn't need to pay taxes. The governments which natural resource wealth obtain less tax revenue and are more likely to be corrupt have both been argued in the literature on the natural resource curse (Ross 2001, 2004). The revenue director estimated that Centro collects only a fraction of the potential. “Each year, half pay, half are late and the backlogs continue to accumulate. Over 400 million pesos is what we could get if everyone paid what they really owed” (interview 44). Yet a more realistic estimation for

2013 is 126.2 million pesos, which is what was budgeted (See Revenue Law of Centro, 2012).

But are people content with the services? One informant in the municipal government candidly answered, “No. There is a lot of dissatisfaction and we receive constant complaints” (interview 84). It was mentioned that water service coverage was poor and water was not clean (“chocolate water” is the term commonly used to describe it). There was garbage in the streets and public lighting had not expanded to cover all parts of the city. “The population wants to see the services first. Then they might pay. But the municipality doesn’t have the money to make the first step and improve things. It’s a chicken and egg problem” (interview 44).

Why is there such deep distrust of the government? The state of Tabasco was the very last one of 31 states to approve its State Transparency and Access to Information Law, which is to create a transparency institute that oversees and promotes both state and local government accountability. It entered into force in February of 2007, no less than five years after a federal transparency law required all states to approve theirs (Abdo Francis, 2010; Maldonado Garcia & Gallegos Pérez, 2010; Salazar Ugarte, 2008). In 2010 the councillors of the state transparency institute (ITAIP) resigned in frustration, saying that the State Transparency Law was dead letter. The new leaders have been accused of covering up and legitimatising the governments’ corrupt activities, rather than uncovering or preventing them. They allegedly entered into an agreement with the last administration and revealed public information very selectively (interview 51).

One members of an NGO in Tabasco claimed that, “Transparency and access to information may have improved but there is no accountability. Corruption has risen” (interview 51). Another purported that, “Immunity continues and government leaders leave [their term] rich” (interview 47). Corruption scandals have certainly dominated the news headlines. In 2007 \$3 million of a \$4 million federal disaster fund granted to the state following heavy floods allegedly went missing (Arias Rodríguez, 2009). Dubious financial management resulted in a hospital crisis in November and December 2012. The hospitals did not receive their share of government funds, leaving doctors unpaid, and patients unattended (Barboza, 2012, 2013; Pérez Marin, 2013). The estimated amount of

diverted funds that were supposed to reach healthcare totalled \$1.5 billion pesos (Marí, 2013). The arrest of the governor and former mayor Andrés Rafael Granier Melo in June 2013 on charges of corruption and embezzlement of public funds may also be a sign that the time of impunity was coming to end (Zabludovsky, 2013). However, there is still a strong perception that the government is manipulating information and government institutions cover up each other's illegal activities (interview 51).

The municipal government did not suffer the same public scandals as the state administration. The corrupt state governor Granier Melo, for instance, was highly regarded as a municipal mayor before he was elected governor. However, many suspect complicity between the state and municipality as the former audits the latter. "They cover for and protect one another. Additionally, the present [municipal] administration always covers for the former [municipal administration], saying that there is no evidence of wrongdoing and it is hoped that the future administration will do the same [for them]" (interview 52). The perception of a corrupt government that has been in the headlines because of issues at state level thus also affects the residents' perception also of local government. And, according to both informants in the office of coordinator of transparency and access to public information and the revenue director of the Municipality, the distrust sparked by the state government's misuse of funds is making residents wary of trusting even local government with their tax money (interviews 47 and 44).

B. Street vendor fees

Regarding the street vendor fees, the administration, through its coordinator of auditing, began to engage with the leaders of the street vendors and to mend relations that had previously been poor. There are 250 groups of street vendors around the historic centre's market alone. Each group of 30 to 100 vendors has a leader who helps to protect them and their selling spot. The leaders fight for the spaces of their vendors and reserve them when they are vacant. They are also their representatives vis-à-vis the government.

The municipal administration reached out to the leaders of the street vendors and at the time of interview, they were in the midst of negotiations to establish how much they

should pay in fees. The leaders would collect these from their members and then take them to the municipal till. They considered the proposed tax/permit fee too expensive and wanted to bring it down by half.

Negotiations continued during the time of interview and no agreement had been reached, but the extent to which the government responded to the street vendors and their needs had already changed considerably from the previous administration. In the previous administration, there was constant tension between the street vendors and the municipal government. The government continuously wanted the street vendors to stop clogging up the streets and sidewalks and to stop causing congestion. According to one of the leaders of the street vendors, “Pepe Canabal”, “they [the last administration] didn’t help us in anything. There were many violent confrontations between the vendors and the government. The new government is far more cooperative” (interview 53).

A second leader of another part of the historic centre, Manuel “El Cacahuate”, told the same story: “Now there is good communication. There is a lot of dialogue. They are giving us respect and that is fundamental” (interview 54). He added that “When the government shows us a benefit, we comply. If not, we get angry. [...] The problem is when they don’t show a motive for why they are taking our money away from us. [...]. We now see municipal government employees cleaning or remodelling the market” (interview 54).

This stood in stark contrast to the way the coordinator of auditing of the previous administration dealt with the street vendors. “He would walk through the streets like a local boss with his men following behind him --like a mafia gang-- threatening people to leave or see their goods destroyed” (interview 55). He and his men removed the street vendor’s stands overnight and set up barriers on the sidewalks to prevent them from laying out their products and setting up shop. A third group leader, “La Doña Betty”, on the job for about 15 years, said “previously they would crush our stores, sometimes with no prior notice. [...] There was no dialogue. There was no consensus” (interview 56).

The new administration was actively cooperating with the street vendors and took steps to demonstrate that it was working with rather than against them. There is a chance that the changed attitude to the past administration may have been because of campaign

promises. The street vendors may have delivered bloc votes to the new administration and the greater respect and cooperation was for this reason. But even if this was the case, the new approach provided opportunities for further bargaining around taxation and continued mutually beneficial outcomes were being negotiated as the result of the municipality's revenue needs.

Concluding remarks

The revenue director of the municipality certainly perceived a link between accountability and taxation, which he worded as such: "If I am dependent on you for taxes, I have to listen to you" (interview 44). And this was manifested in the government's conciliatory approach to the street vendors. To collect higher taxes, instead of threatening them and destroying their stands like the previous government, the new government entered into a dialogue with the leaders, showed respect to all the vendors and cooperated to help them clean and upgrade their selling areas in what holds hope of becoming a mutually beneficial outcome to an explicit tax bargaining. The local government took steps to show its cooperation prior to agreeing on the level of street vendor fees. This is consistent with the short path towards accountability.

The residents of Tierra Amarilla who organised a protest outside the councillors' offices also perceived a link between taxation and accountability: they attempted to exchange property tax payments for receiving a delegate to represent them and gain access to public services for them. The residents voluntarily paid taxes in the hope that it would strengthen their bargaining power for representation and municipal government services. Whether the municipal government would grant them what they demanded, however, remains to be seen.

Aside from this incident, explicit bargaining surrounding property taxation mainly involved individual taxpayers negotiating their personal tax obligation. The tax office received many complaints in this way. Yet it also shied away from raising the tax rate or raising values, remembering the political consequences this had for a previous mayor. Given the residents' distrust of local government (which in fact largely stemmed from corruption at state level rather than local level), they were less willing to pay and the local

government knew it could not get away with higher demands. Instead, they felt that they needed to grant discounts and exceptions in order to receive any payment at all. This can be seen as an implicit agreement, but it cannot be said that it prompted greater accountability. Instead, the residents wanted to see greater responsive and better services *before* they considered paying higher taxes.

7.3 La Paz: Intergovernmental rivalries

La Paz lies in the state of Baja California Sur, on the eastern bay side of the peninsula, allowing its visitors to witness stunning sunsets from along its boardwalk. The nearby biosphere reserves (UNESCO World Heritage sites) draw tourists and it is a popular stop for trips between the beach resorts at Los Cabos in the south and whale watching spots further north. However, one need not venture far into the city from the boardwalk to note the many empty shops, abandoned land plots, and deteriorating roads. La Paz used to be in a booming special economic zone (the whole of Baja California Sur and Campeche was) until the North American Free Trade Agreement (NAFTA) was signed in 1994. La Paz saw its peak as a bustling centre of commerce in the 70's and 80's but has since deteriorated. The current municipal government has been in power since July 2011. It is headed by Mayor Esthela de Jesús Ponce Beltrán of the PRI, which ran in coalition with the Green Party in La Paz.

The strategy to raise tax revenues involved tackling three different taxes: the property tax, local bus fees and garbage sales. In this case, again, no coercion was observed. Negotiations were started to make tax bargains around the local bus fees, but not with the other two tax handles. However, an implicit agreement may have been present as the local government simultaneously took steps to appear transparent when it urged property owners to pay their tax.

Figure 23 Map of La Paz in Baja California Sur



Source: INAFED, 2014

Strategy to increase tax revenues

The municipal government in La Paz set out to raise tax revenues predominantly by increasing property tax revenue. The local council approved a law to modernize the cadastre in February of 2013 but were still awaiting approval by the state congress. Already starting in January 2013, they introduced efforts to detect omissions in the property registry through aerial photography. Many property owners underwent construction on their property, which would increase the valuation of the property, but these constructions had not been declared to the revenue authorities. The municipality thus began to confront property owners who had neglected to declare new construction or other changes to their property that would increase the property valuation. The revenue director repeatedly emphasised that they are not raising the tax rate but only capturing omissions in order to increase tax revenue.

Compliance was estimated to be as low as 20%: the aim was to increase compliance by making it easier for residents to make their municipal tax payments. Internet payments were made possible for paying the property tax (though it was not yet possible to pay in banks). Mobile paying stations were introduced that would drive around to suburban and

rural parts of the municipality so residents did not need to travel into the town centre to pay their taxes. According to one official in the treasury, “We know the Mexican. The easier it is for him to pay, the better. We publicise it on the radio and on television, we send teams to the houses. People like physical ease. We bring the till closer to them” (interview 29).

Two further proposals to raise revenue were made. The first was to raise local bus fees. They negotiated with local transport industry in order to come to an agreement on this. The second was to sell garbage to private companies for recycling. As there was no legal basis for the municipal government to sell its garbage, a law was prepared and sent to the state congress for approval.

Alongside trying to raise tax revenue, the municipality set out to reduce its payroll which was creating a lot of costs and preventing investment in public goods and services. Steps were also taken to assure better transparency and access to public information. “The best way to demand property tax is to show what we are doing with it.”, said the mayor (interview 34).

Cutting payroll costs to release funds for investment proved difficult, however, as most employees of the municipality (1200) are unionized and “it is impossible to dismiss these workers” (interview 30). It was added that if only these *trabajadores* (workers) were really *trabajadores* (hard-working) (interview 30): many of the positions are unnecessary but given the rigid labour laws, the municipality could do little to reduce payroll costs beyond abstaining from hiring new workers.

The current mayor also wanted to restore society’s confidence in the local government, which, according to the municipal auditor, had been lost: “The past government had been opaque and the mayor wanted to change this” (interview 32). Mayor Esthela de Jesús Ponce Beltrán introduced a “zero-corruption” plan as part of her campaign platform. This plan consisted of four pillars: (1) transparency (2) accountability (3) citizen participation and (4) administrative reorganisation (interview 34). “She [the mayor] wanted to change the attitude and image of the government. [The zero-corruption plan] is what she was

elected for. More revenue may surely come as a consequence, but this was not the primary motivation” (interview 32).

When the new government came into power, the mayor demanded external audits for certain transactions made by the previous government. Warnings were given to previous officials according to the Law of Responsibility of Public Servants. According to a local councillor, this broke a tradition of keeping quiet about irregular activities of the previous government in the hope that the next government would do the same (interview 36). This statement about the change in behaviour must be qualified, however, in that the party in power had changed. The previous four administrations had all been PRD administrations and therefore were less likely to blame or bring legal charges against other administrations of their own party.

Since coming to power, the administration adhered to transparency laws requiring them to maintain an online directory of officials with their telephone numbers and publish council acts online, and in the print media. Regarding the goal of increasing citizen participation, a three point framework was in place. First, to involve groups from civil society in public work projects, their approval would be required in the decision-making phase of the project cycle. Second, the municipal audit office would respond to citizen requests. The office would also receive questions and complaints in person and there was an option of asking questions on the website, which links straight to the auditor’s computer. Third, suggestion boxes: one in the municipal government building, one by the potable water system, and one at the main transport terminal. The contents are collected and reviewed on a weekly basis.

Given that records by the past administration had not been passed on, it was difficult to find out whether these measures had been newly introduced or had also existed during the previous administration. According to an advisor to the municipality’s treasury director, before an administration hands over power (especially to a new administration of a different political party) “they erase everything from the computers, if they even leave the computers” (interview 30). Either way, they were listed as part of the municipality’s steps to enhance accountability to the residents. Yet again, it was difficult

to determine if these steps would not have been taken even if the municipality was not trying to increase tax compliance, as it may have just wanted to enhance its popularity.

Outcomes

a. Property taxes

There was no coercive taxation surrounding the property tax. Instead, immediate incentives and discounts and a longer term plan to capturing omissions through a cadastral modernization were the strategy (Rebolledo, 2013). These enhanced efforts were partly successful but not as much as the municipal treasury had hoped. Property tax revenue rose by 27% from 2011 to 2012 and was expected to increase further in the following years as the cadastre would be modernised and land values updated (mostly adjusted upwards to be closer to their market values), but projections had been higher. According to the municipal treasury director, the previous administrations neither made people pay taxes nor did it spend or invest very much. “Now the population has a poor habit of not paying” (interview 29). In other words, as government performance was low, there was also a correspondingly poor culture of compliance which was difficult to overcome. Property tax compliance (the amount received divided by the amount owed) was at 22.6 % in 2012 according to data by the Ministry of Finance (See Table 2 in Chapter 3 for a comparison of estimated compliance rates across Mexican states). The treasury director predicted that it would take some years for the culture of compliance to improve and it also required them to consistently witness solid municipal financial management and adequate service provision (interview 29).

Explicit bargaining was only observed between the local government and residents when the latter challenged their tax obligation, though not to the extent witnessed in Centro. While no explicit bargaining was observed with any large groups of residents for broader gains, there were sustained efforts at local accountability in order to maintain people’s confidence in the government and how it managed its budget. Sustained efforts were made to bring down municipal debt, not only through investing in increased future revenues but also in renegotiating debt. This was done with a great effort at being transparent and providing services efficiently. This may be regarded as implicit

bargaining in which the municipality tried to show it was increasing accountability in order for the residents to be more willing to comply with their tax payments. This describes a causal pathway following the short path to accountability. Towards the end of its administration, the municipal treasury could boast that it had greatly reduced the six billion peso debt problem that it had inherited from the previous administration. At the same time, it made improvements to the local police service, expanded public lighting, invested in water treatment plants, and built 124km of road works, a Municipal Art Centre and a Women's Centre (Puga Lizardi, 2014).

b. Revenue from local transport fees and garbage sales

No coercive taxation was observed surrounding the local transport fees or garbage sales either. The local government reached an explicit bargain with the local bus industry. The local bus industry agreed that it would charge higher fees and pass these on to the local government, in exchange for local government actions that would benefit them as a group in the form of upgraded bus services. I was told by one of the local councillors, "If we raise the fee, we must also raise the quality of transportation and we must reduce the fee if we don't comply with our promises" (interview 37).

However, the negotiations were abandoned and the administration was unable to reach its goal of increasing transport fees. A municipal budget law proposal to raise bus fees was brought to the state congress in September 2011 (as the state congress needs to approve all changes in municipal tax rates as well as the introduction of new taxes). The state congress never reviewed it, ignoring the timeframe laid out for decision-making. The municipal government thus withdrew the draft budget law in July 2012 and resubmitted it three months later. The state congress then finally did review it but rejected it, "for no good reason" according to informants in the municipal offices (interview 85).

They were also unable to introduce the law that would enable them to sell their garbage for recycling. Although this would be an environmentally-friendly source of income with no burden on residents (instead a company willing to way to take the garbage), state congress rejected it. "Being from another party, they are killing all of our initiatives"

(interview 86). Legal remedies to bypass ungrounded decisions or undue delays exist “but these are costly and rarely utilised” (interview 86”).

Besides rejecting proposals to raise transport fees and introduce an environmentally friendly tax, the state government also made the municipality pay a large fee for publishing anything in the official bulletin to give legal validity to their laws. This had never been practice under the previous (PRD) state government. This was finally revoked through a decree of the current state governor at the end of 2012.

“It is difficult if the municipal government and the governor are from different parties” (interview 31). The current governor is from the centre right National Action Party (PAN) (although he is a former mayor of the left wing Democratic Revolutionary Party, PRD): the parties that dominate in the *cabildo*, however, are PRI and Verde (in coalition), as shown in Table 33. The obstacle in the way of a bargain was thus one of political party rivalry between the state and municipal government in this three tiered federal system.

Table 33 Parties in power at state and municipal level in Centro, 2005-2012

| | Municipal level | State level |
|------|------------------------|--------------------|
| 2005 | PRD | PRD |
| 2006 | PRD | PRD |
| 2007 | PRD | PRD |
| 2008 | PRD | PRD |
| 2009 | PRD | PRD |
| 2010 | PRD | PRD |
| 2011 | PRI/Verde | PAN |
| 2012 | PRI/Verde | PAN |
| 2013 | PRI/Verde | PAN |

Concluding remarks

No coercion was observed. There were no explicit agreements around the property tax, apart from individuals challenging their personal tax obligation. There was, however, evidence consistent with an implicit agreement. The officials of the municipal government who were interviewed claimed that if the government spent its resources well, then people would pay taxes (interviews 29, 30). The municipality of La Paz made an effort to

cultivate a more accountable image than the previous administration. With a view to enhancing trust in the government and improving its image, the mayor set out on a zero-corruption platform in her campaign and has followed through with her plans. However, it is unclear whether this was primarily done with the intention of improving tax compliance or simply to cultivate a positive image in order for the Mayor to gain political power.

There was an explicit bargaining process surrounding local bus fees. However, the municipal government's efforts to strike a tax deal were subverted by the state government. The state congress is required to approve municipal government proposals to change tax rates or introduce new laws. Conflict and competition between the different levels of government (or their political parties) in this federal system thus stifled the ability of the municipal government to raise revenues in order for processes leading to increased accountability to even begin.

7.4 Case comparisons

This section compares the evidence presented in Sections 7.1 to 7.3 above and draws conclusions about whether or not revenue pressure on the municipal governments led to explicit or implicit tax bargaining and if these may be leading to increased accountability. I first recount and compare the strategies taken in these cases to raise revenues. I look at whether pressure to raise tax revenue led to tax bargaining or coercive taxation. If there was tax bargaining, I look at which form this took. Were there explicit negotiations or implicit agreements? And did these lead to accountability following the short or long path? I also address the secondary questions about the tax type (whether different types of taxes had different effects in sparking the expected processes and why), and the obstacles that stood in the way of taxation leading to greater accountability. In doing so, I bring further evidence from the field research as well as from secondary sources into the discussion.

Revenue raising strategy: No coercive taxation

In none of the cases did I observe any coercive taxation. The strategies of the local governments were to motivate residents to pay their taxes primarily through positive incentives (especially discounts on their tax obligation, raffles and prizes), not through fear, violence or any other form of coercion. While some threatened foreclosures to those in default of their payments, the municipal governments in no case wanted to appear too harsh. Given the context of electoral accountability and the elected municipal leaders having career aspirations also in their party, and a culture of low tax compliance in the municipalities, it was more important for the government to maintain a positive image. There was great fear of “political death” through overly enthusiastic taxation, as those in Centro recalled.

There was also a clear preference to exhaust all possibilities before actually raising the tax rate or pursuing non-compliant taxpayers as this was deemed extremely unpopular. And there appeared to be substantial scope to raise the property tax intake through several methods short of actually raising the tax rate or the tax bills of property owners. Such methods focused on motivating people to pay who otherwise evaded, including economic incentives such as discounts and promises to pardon fines for past arrears (applied in each of the three municipalities) and facilitating the tax paying process, including by increasing payment points through online paying options (as in La Paz), paying in banks (as was attempted in Acapulco), and through mobile tills that drove around the municipality to meet the taxpayers closer to their homes (in La Paz).

Evidence from the municipalities visited, as well as from secondary sources, indicated that municipal leaders in fact tried to exhaust all alternative sources of revenue intake before making use of the tax handles. These included both ordinary and extraordinary transfers from the federal government or loans from private banks and international institutions (interview 95). The mayor of Acapulco, for example, first tried to receive a rescue fund from the central government (Ponce, 2013). Only when this failed were other revenue options considered (interview 69). The unit in the federal finance ministry responsible for coordination with federal entities complains that subnational leaders are incessantly asking it for funds while leaving their tax powers unexploited (interview 95).

Many municipal governments simply cut down on spending, defaulted on their liabilities (including personnel payments) or dug themselves further into debt (Romero, 2012). Many municipalities managed to illegitimately pass debt and liabilities to their successors through crafty accounting methods. These are all ways to circumvent unpopular tax collection despite substantial revenue pressure. As one revenue director recounted, “If municipal governments don’t raise revenues, they run into debts. But in many places they don’t want to raise revenues anyway even if it means running high debts. In Tecoman [a municipality in Colima], for example, they have a budget of 280 million pesos and ran debts totalling 200 million pesos. This poor management is the negligence of the municipal president and the local councillors. All the other treasurers are crying in anguish of the mismanagement happening there” (interview 73).

Explicit tax bargains with individuals and special interest groups

Regarding the property tax, explicit tax bargains predominantly occurred between the local government and individual (potential) taxpayers: individuals would come to the tax office of the municipal revenue directors in order to negotiate a lowering of their personal tax obligation. This was observed most blatantly in Centro, where a constant stream of taxpayers entered the tax office wanting to negotiate down their tax bill.

Did these types of explicit bargains have any outcomes consistent with an increase in local government accountability? Generally they appeared only to benefit the individual in the form of a tax reduction. The only way that this could lead to a benefit to a wider group of people would conceivably be because it was a form of engagement in which the government learned about complaints. Yet for this to have positive outcomes for accountability, it would require that the local government also acted on these complaints, for which no evidence was found.

In all three municipalities, there were also explicit tax bargains with specific groups of taxpayers with common interests. In La Paz, explicit bargains were initiated with the local transport sector regarding transport fees with negotiations to see how the transport service could be improved.

In Centro, explicit bargains were observed with two specific groups. The first was with the leaders of street vendors: the local government tried to get the street vendors to pay street vendor fees, a tax instrument which had rarely been utilised by local governments in the past, and offered services and concessions in return. Negotiations had not been concluded but outcomes consistent with accountability to a wider group looked promising. The government offered to provide specific services, such keeping the streets clean and bringing them unified stalls in return for tax payments. The leaders resisted the high price and tried to negotiate it down, asking for further concessions from the government including assurances of protection, assistance with keeping the markets clean and upgrading the market stands.

Also in Centro, there was an explicit bargain between the local government and the residents of Tierra Amarilla. Residents from that colony (not officially located within the municipality) took collective action and came to protest in front of the municipal palace. The residents voluntarily paid taxes in the hope that it would strengthen their bargaining power for being considered part of the municipality, receiving representation and obtaining access to Centro's local government services. Yet this bargaining was not sparked by the local government. Instead, it was initiated by residents of the colony who approached the local government, not in response to tax demands but voluntarily. They presumably made this attempt in view of the Centro's tax revenue needs, which means that the revenue needs may be considered to have sparked the bargaining process. The municipal government had not yet conceded to those residents' demands, (though the residents continued the campaign a year later), but the outcomes the residents were demanding would have been consistent with an increase in local government accountability. Besides this case in Centro, which was initiated by the residents, no negotiations were made with representatives of colonies or residential areas within the municipality.

In Acapulco, there were explicit agreements between local government and representatives of another specific industry group: the representatives of the hoteliers. However, I was unable to obtain more information about the nature of these negotiations and what outcomes they may have had for local government accountability. The

municipality did provide services that focused on helping the tourism industry and, by extension, the hoteliers, such as providing lighting, street cleaning and security along the bay where the hotels are located and which tourists frequent. Yet I was unable to determine that they were catering to the demands of the hotel industry for the reason that they were after their property tax revenue or if they instead felt it was in the general interest of the local economy to help attract tourists, or if they were seeking personal benefits in return.

Implicit tax agreements: Fewer tax payments to unaccountable governments

In each case, the local government took pre-emptive actions to exert an image of transparency and accountability and to gain trust through responsive service delivery alongside its revenue raising efforts. In Acapulco, the Mayor vehemently warned against corruption among public workers and published revenue and expenditure data in the media every three months, which no Mayor had done in his city before him. In La Paz a “zero-corruption” agenda was enforced. In Centro, assurances were made to accountability and improved service provision.

It is likely that they would have done more if they had more power to show responsiveness and accountability. Hands were tied to do more because of limited manoeuvring power due to lack of funds, fixed commitments to unionised workers, and earmarked transfers. I discuss this further below in the subsection on the obstacles.

In each case, it was unclear if the local leaders were taking these steps to be more accountable because of the revenue pressure in order to raise tax compliance, or if they would have done this anyway given other motivations, like maintaining popularity in order to be (re) elected (to some office) or to move up the career path within their political party. With more revenues (which are topped up by federal rewards in the form of federal transfers tied to tax effort), the mayor can do more, achieve more projects, improve services, improve the fiscal balance, etc. These motivations may thus be tied to one another, assuming the municipal government cannot obtain revenues through other

sources. The two explanations are thus observationally equivalent and difficult to distinguish.

Tax type: collective action problems?

The fact that the explicit bargains observed that promised benefits of government accountability to wider group of residents (i.e. not just individual taxpayers) may have to do with the characteristics of the tax type. The hotelier industry is a specific industry as are the local transport sector and the street vendors. They form groups with common interests and a common agenda. This is indicative of a classic collective action problem due to a diversity of actors, in line with the literature on this (Ostrom, 1990; Wade, 1982). Explicit tax bargains were observed when the tax incidence fell on a narrow group with specific interests and prior organisational strength. The street vendors and the transport union, for example, each had clearly defined needs and demands in common and leaders who represented them vis-à-vis the government.

With regards to the property tax, the local government did approach the representatives of the hotelier industry as they pay a lot of the property taxes. But elsewhere large landowners do not necessarily form a group with common interests. The revenue director in Centro said that there was no particular engagement with large landowners as they don't really form a group with common needs. Their properties were spread out geographically so that the municipal government could not, for instance, entice them with better service provision that would only benefit them. While I was unable to obtain exact figures, I was told by an informant at SEDESOL, the Mexican federal secretariat of social development, that the property tax and land ownership situation in larger municipalities was usually such that the local government receives far greater amounts from the masses, not from the few largest property owners (Interview 6). As opposed to in small, rural municipalities, where one may still find "*el rico del pueblo*" or a handful of families who own major proportions of property value of the entire municipality, this is generally not the case in the larger urban municipalities. He approximated that even if only 5% of land plots would be over half a million pesos, they would still represent at most 8% of the total potential revenues at best, and these would be spread out across different owners in different parts of the municipality (interview 6). As discussed in Section 7.1, this was even

confirmed in the case in Acapulco, which has the greatest amount of income inequality of all the municipalities studied.

Obstacles: to tax bargaining and to accountability outcomes

Several obstacles stood in the way of tax bargains occurring. First, third party interests interfered in efforts to increase tax demands. In Acapulco, violent intimidation and murder of the director of the cadastre by (allegedly) drug traffickers prevented the municipal government from modernizing the cadastre and ramping up its tax raising efforts. No tax bargains were thus initiated or provoked. In La Paz, the interfering third party was the state government. Intergovernmental rivalries were such that the state congress did not allow the municipality to increase tax demands by neglecting to approve its law proposals and making the process of proposing laws more costly.

Even when there were bargains, there were obstacles in the way of these leading to outcomes of increased accountability. The local governments may not always have the power to noticeably respond to the demands of their residents or to use the tax revenues for new projects demanded in a bargain. Many local governments have only few competencies and little decision-making power. In Mexico as elsewhere, a large proportion of local funds are earmarked to purposes decided on by the central government, and tax revenues may be used to cover previous liabilities passed on from the former administration, such as for a large payroll of unionised workers (as seen in Centro and La Paz). This leaves local governments little manoeuvring power to improve services or invest in new ideas in an effort to show residents that they are using their tax money effectively (Díaz-Cayeros & Martínez-Uriarte, 1997; Sánchez, 2013).

As the revenue director in Centro said, the fact that residents would not pay taxes before they saw a greater amount of accountability, but the local government largely had its hands tied in its ability to respond to demands, amounted in a chicken and egg problem. No virtuous cycle between taxation and accountability could be achieved. The aspects of accountability that could be tackled were cheap and quick actions, such as improving transparency and access to public information, but not more expensive, long-term changes, such as improving the quality of service delivery or investing in public works.

Another obstacle found was a mismatch between local government accountability on one hand and the perception of local government accountability by taxpayers appeared to be an obstacle as it interfered with the residents' ability to judge the level of accountability of the local government and adjust its behaviour accordingly. The decentralisation literature has emphasised that this can occur in particular where there is a lack of clarity with regard to which level has which competencies (Faguet, 2012; Garcia-Escribano & Ahmad, 2006). The case of Centro showed that this confusion also occurs in terms of the perception of government corruption. In Centro, tax evasion at the local level was believed to have resulted largely from a poor perception of accountability of the government. Scandals at the state government level seemed to create a distrust of all levels of government generally. As elsewhere, municipal leaders are quick to blame higher levels of government (rightly as when State Congress blocked initiatives in La Paz or wrongly) for any short-comings and take credit for their achievements. This stands in the way of taxpayers being able to react to changes in accountability.

Conclusion

This chapter has presented evidence collected in three municipalities: Acapulco, Centro and La Paz. In the last section I compared the evidence that the three cases provided in light of the main research questions (does tax revenue pressure cause increased accountability on the part of the local government and how?) and the secondary research questions (including about the characteristics of the tax type and the obstacles).

No evidence of coercive taxation was found. The property tax in particular is tied to very high political costs given that it is a direct, visible tax usually paid as an annual lump sum. Thus, local governments tried to exhaust the scope of raising property tax intake that would elicit the most inconsequential reaction possible from the taxpayers. That is, they encouraged payments by offering prizes or making the payment process more convenient. There was far more reluctance to make more meaningful efforts such as

enhancing enforcement through stricter sanctioning of non-compliance, raising rates or raising assessed property valuations to their market values.

Explicit bargaining was observed around taxes with a narrower interest group, such as street vendors or the local transport industry. Direct explicit tax bargaining surrounding the property tax predominantly took place only between local government and individuals or firms to negotiate a reduction of their tax obligation.

Most common were indirect implicit tax bargains manifested in two ways. First, when residents were dissatisfied with the local government's performance or perceived it as corrupt or unresponsive, they withheld their tax payments. They deferred payments until a seemingly more trustworthy administration was in power. Second, when local government authorities sensed that they were unpopular and that residents were dissatisfied, they adjusted their behaviour by refraining from collecting taxes and issuing sanctions. When they sensed that they are popular, they did dare to ramp up their tax collection effort. The degree to which these linkages lead to a mutually beneficial bargain or increased accountability, however, is less clear.

The local government initiated explicit bargains when the (potential) taxpayers comprised a narrow interest group, such as street vendors for street vendor fees and the local transport industry for local bus fees. Regarding the property tax, no group of property owners was approached except the representatives of the hotelier industry in Acapulco. Otherwise, the potential revenues from single property owners tended not to make as much of a difference as securing compliance of the masses. Instead, implicit agreements appeared more common surrounding the property tax.

Several obstacles prevented tax bargains from occurring or from leading to increased accountability. These included interference from third parties (higher levels of government and criminal organisations) and general constraints of the local government in being able to make concessions and respond to residents' demands, as well as a mismatch between perceived and actual local government accountability.

Chapter 8: Aguascalientes, Mérida and Saltillo

The previous chapter presented evidence from the three municipalities that had poor track records in terms of state-society relations, proxied by their rankings on accountability and transparency scales. This chapter presents findings from fieldwork in three structurally similar municipalities with a relatively high track record in state-society relations. The reasoning behind grouping the cases into two threesomes, as explained in the qualitative methodology chapter (Chapter 6) was to compare the two groups in order to see if stronger a priori state-society relations might affect the strategies taken by the local governments and the outcomes that follow.

This chapter is structured like Chapter 7. The first three sections present the evidence collected in three municipalities: 8.1 covers Aguascalientes, Aguascalientes, 8.2 covers Mérida, Yucatán, and 8.3 covers Saltillo, Coahuila. I first provide a brief introduction and overview of the case. In the first subsection, I discuss the strategy that was chosen by the municipal government to raise revenues. In the second subsection, I show the outcomes in terms of any bargaining processes and effects on local government accountability. The third subsection contains concluding remarks about whether revenue pressure led to any bargaining with increased accountability as an outcome and which pathway this involved. Was taxation achieved through coercion (i.e. forceful, even violent extraction of revenues) or through bargaining? If through the latter, did this resemble explicit agreements or implicit agreements in the form of mutual behavioural adjustments? Did the bargaining lead to increased local government accountability? If not, which obstacles stood in the way?

Section 8.4 of this chapter again compares the evidence of the cases and then addresses the secondary questions of interest, which comprise first, whether the tax type influences the taxation – accountability link and why; second, which obstacles stand in the way of the relationship; third, to what extent reverse causality is present in the relationship; and fourth, whether a tax bargain is more likely in a context of more established state-society

relations. While Chapter 7 covered the first two but not the third and fourth, this chapter covers the latter three but not the first. This is because no further tax types apart from the property tax featured among this chapter's municipalities' revenue raising strategies so there is nothing further to add on that point. Instead, having presented all the cases, a comparison is possible across the two groups to answer the questions about the context. This section draws from the evidence presented in previous sections and presents further evidence, including from confirmatory case. The final section concludes.

8.1 Aguascalientes: High compliance, no re-election

The Municipality of Aguascalientes lies in the state of the same name. Aguascalientes means "hot waters" after is named after its many hot springs. It is a small state of 5500 km² and only one million inhabitants (700,000 in the capital) and with few municipalities (only 10, compared to 60 in Tlaxcala, which has a similar surface area and number of inhabitants). Located in the middle of the country at the crossroads between Mexico City and several other cities in the north, it is a centre of trade and commerce. It has recently attracted a large amount of foreign investment. Nissan for instance is currently building a second massive industrial park. It is clean, relatively safe and services are run comparatively well. "The good conditions bring investors in" (interview 28). The current municipal president was a member of the PRI party and has been in power since 2010.

In this case, the strategy to increase tax revenues was to increase the property tax intake. Efforts were made to continue a cadastral modernisation programme that had been started by the previous administration. The tax rate was increased and taxpayers were encouraged to pay through motivational discounts, lotteries and a variety of payment points. Taxpayers in default and arrears were vigorously pursued. No explicit bargaining was observed, except between individuals and the municipality for a reduction of the individual's tax obligation. Possible implicit bargaining existed in that the local government took steps to increase accountability alongside calls for greater tax

compliance. Strong efforts were made to maintain a positive image of transparency and efficient management and to pursue popular projects that benefited large parts of the population.

Figure 24 Map of Municipality of Aguascalientes in the State of Aguascalientes



Source: INAFED, 2014

Strategy to increase tax revenue

To increase tax revenue, the municipality's main strategy was to help the state to update all cadastral information as the cadastre in Aguascalientes is run by the state finance secretariat. This involved matching property valuations to more recent records of transactions and verifying that all plots were included with their current construction and other characteristics.

Regular meetings were held between the state cadastre and the municipality (interviews 15, 16). Previously, an estimated 80% of land plots had outdated values (interview 28). In 2010 the government revised the cadastral values to reflect higher market values,

based on corrected dimensions and characteristics of properties, in order to raise property tax revenues.

Furthermore, the tax rate was increased by 0.05% from 1.05 to 1.10 per mil.¹¹ However, the administration did not raise the figure on property owners' tax bills to the new full amount right away. Instead, the tax obligation owed by any taxpayer was only to increase by a maximum of 25% from one year to the next. The tax revenue director explained that, "otherwise it would be too harsh on the people" (interview 28).

Several methods were applied to encourage residents to pay their property tax bills. First, financial incentives were granted to taxpayers. A raffle or lottery was announced; if people paid their entire year's property tax in one lump sum between January and March, their receipt entered a lottery. The prize was a car or a future property tax amnesty. Discounts were also applied: if residents paid their entire year's property tax in January or February, they receive a discount of 50% and in March a discount of 30%.

Second, the municipal government ran a publicity campaign in the media (television, radio, and the press). The objective, according to the revenue director was "to sensitise citizens with regard to the tax and to help them to understand that it was something necessary and had been necessary for a long time" (interview 25). The finance director recalled that he spoke in daily press conferences during the three month at the beginning of the year when lump-sum payments are encouraged and most payments are made, as that is when the discounts applied. They tried to be open and frank with people to encourage understanding and compliance with, rather than resistance to, the annual increase in taxes (interview 25).

Third, they increased the methods of payment in order to make it easier for residents to pay. They first sent receipts to the property owners' homes. It has already been possible for people to pay in all the main banks and since this year (2012) also at Oxxo, a chain grocery store. Plus, since 2011, it was possible for residents to make tax payments online.

¹¹ This is the amount of tax per thousand currency units of property value.

Finally, they actively pursued noncompliant residents, consistently applying a strict sanctions procedure against those who haven't paid their taxes.

Alongside these revenue raising efforts, the mayor opened a citizen observatory to serve as a link between NGO's and citizens on one hand and the municipal government on the other. The observatory conducted training for public officials on transparency, maintained a computerised complaints system and also received complaints, and suggestions from residents in person. The website outlines its purpose as helping to observe the quality of municipal management.

The creation of the observatory was not a response to demands from residents, but a unilateral move by the mayor to try to exude an image of transparency, citizen engagement and citizen influence. According to the head of the citizen relations department of the citizen observatory herself, "The idea to create this observatory comes from the mayor, not from the citizens". She added that "citizen participation is still not properly taken up in the culture here. The common perception is that the term 'citizen participation' refers to voter participation. [...] Few people use the mechanisms available for citizen participation. There is no awareness about it" (interview 24). According to a deputy director in the participatory planning department, the citizen observatory is more for the government to achieve legitimacy for what they have already planned to do than to genuinely ask the opinion of citizens or grant decision-making power to citizens. "The mayor created the observatory. It is not the citizens who asked for it. The head is appointed by the mayor. The citizen observatory is "citizen" in name only" (interview 26).

The mayor made it her goal to rise in the Mexican Institute for Competitiveness' (IMCO's) transparency ranking. And she succeeded: the previous administration ranked 70th out of around 300 municipalities. Hers came in 36th in 2011 and 5th in 2012. The mayor made clear efforts at creating an image of transparency and engagement with the residents. But was this done with tax revenue in mind? According to one informant in the public works sector of the municipality, "I don't believe that tax revenues were a direct motivator. I think it has to do with the personal aspirations of a leader trying to demonstrate her political will" (interview 26). Another informant at an NGO believes that the mayor has the will and motivation to improve transparency and citizen participation because her

political career has not yet ended and she has ambitions for higher office. She wants to demonstrate her capacity to achieve what she has set out to do.

The informant also said that he doesn't think that the revenues obtained through local tax collection make a big difference to residents. What really makes a difference to the city is when leaders find resources at the international and federal level to realize more projects and programmes that truly benefit the citizens (interview 27).

His point that the local government is constrained by limited resources and powers to respond to citizen needs and to carry out large projects that make a significant difference to the wellbeing of the residents stands. This appears to be a serious constraint in the ability to negotiate on the part of the local government and incentives to negotiate with the local government on the part of the residents. While revenue from tax collection may not be able to make a large difference in the budget compared to larger national projects, having to raise taxes may make a difference in terms of the incentive effects for the government and how they target the revenues they do obtain, which is the main hypothesis of the taxation-accountability theory. This is especially so given that the tax revenue raised is matched with additional federal transfers as a reward for tax effort. In addition, local governments may go a long way in promoting a positive business climate and attracting large projects to their jurisdiction. In sum, while the revenues may make a difference to incentives, there are constraints in the extent and range of changes local governments make in the municipality in order to respond to specific local demands or offer concessions in tax bargaining with the residents.

Outcomes

Tax compliance remained high at around 87% despite a rise in property valuations and a broader base of taxpayers following a cadastral update. The revenue director proudly claimed, "There has been a good response to the higher values and to increases in property tax. It has been a success" (interview 28). By mid-July they had already collected 92% of the property tax that they had estimated to receive over the entire year. They also reduced the backlog of tax arrears from 160 million in 2010 to 114 million in July 2013 (interview 25).

No evidence of coercion was found. There appeared to be superior tax collecting capacity that made evasion more difficult. The only evidence of explicit bargaining was between local residents and the individuals concerning individual tax bills. While this mainly had an outcome of reducing the individual's tax obligation, if granted, there may also have been further outcomes consistent with an increase in accountability. When asked whether residents see a link between paying taxes and receiving services, the director of the property tax, who deals with taxpayers on a daily basis answered, "Definitely yes. People come complaining, 'why are you taxing me if I don't have proper services?'" (interview 15). It is thus a mechanism in which the government can find out about complaints and deficiencies: a way in which the government and residents engage. I could not find direct evidence that the information the municipality received through tax bill negotiations actually led to changes in accountability, for instance by improving services in response to complaints.

In addition to better administrative capacity, the high compliance may be the result of implicit bargaining between the residents and local government in which residents agree to pay taxes in response to accountable governance. The municipal director of property taxes gave two reasons for the high compliance with property taxes. First, a procedure for enforcing sanctions on those who did not pay the tax, which was introduced by the state level administration, was a contributing factor. But she also gave a second reason: that people obey the government because the current mayor is very intent on providing more and better services. She listed, among other examples, a nearly-completed project to rehabilitate neglected localities in less affluent areas with a "green corridor" of parks and bicycle paths (interview 15).

When I asked the municipal tax revenue director the same question, he also claimed that the good performance of the government helped explain why people accept the higher tax obligations. He explained that the city was well planned and growth and expansion had also been well managed. "There is no accumulation of garbage, there is public lighting everywhere... things are working" (interview 28).

When asked whether they believed it was necessary for municipal governments to have a good image as a transparent and accountable government in order to ensure tax compliance, the answer was: “More than improving their image, they must prove to the citizens that their work has an impact and favours the citizens. If the citizens are convinced of this, they will be more willing to pay since they see it reflected in their tax payments (interview 15).

Municipal elections were held in July 2013. The PRI party that had supposedly performed so well and raised a lot of revenue was not re-elected. When asked why, informants in the finance directorate said that they did not have a strong PRI candidate this time around and he was not from Aguascalientes. Also, while the PRI candidate for mayor did not win, the PRI candidate for congress did, so voters did not entirely reject the party. He also added that the candidate who won was populist and promised two things. First, he would lower the property tax. Second, he would get rid of the speed camera fines. The outgoing administration had mounted speed cameras around the city in December 2012. “The speeding fines were not even introduced to raise revenues. Well below a million pesos was collected since their introduction. The main point was to reduce traffic accidents through speeding” (interview 22). With respect to the property tax revenue increase, the revenue director concluded that “the risk was taken and now we are suffering for it. You lose the sympathy of the taxpayers. I’m not saying that this was the predominant factor but it could very well be among the factors. Nonetheless, the valuations were updated and people paid their higher bills. They responded appropriately to the rise. Compliance is at almost 90%” (interview 22). He sees the compliance rate as evidence that the residents generally accepted the rise in property tax demands.

Why did Aguascalientes manage to modernise and update the cadastre while other municipalities have not? The property tax director of the municipality said the fact that there was a cadastral modernisation and that they could continue to consistently update the cadastre had a lot to do with whether the municipal government gets along with those at the cadastre, which belongs to the finance secretariat of the state government. “It helps a lot that they [the municipal leader and the state leader] belong to the same party” (interview 15). The cadastre in Aguascalientes is managed by the state government (the Mexican Constitution allows municipalities to enter into agreements with the state in

order for the latter to manage the cadastre, despite principally allocating cadastral functions to the municipalities).

This was corroborated by the staff at the Cadastral Institute of the State of Aguascalientes. When asked why the Municipality of Aguascalientes was able to follow through with modernizing the cadastre, I was told, “It has a lot to do with who the bosses are and what party they belong to” (interview 16). They recounted that several municipalities have been filing for revaluations and updates of the cadastre for ten years yet changes have not been made. Aguascalientes had entered numerous requests for changes yet these were consistently ignored or rejected by the Cadastral Institute before a PRI governor came to power at the state level in 2010 (See Table 34 for a clarification of which party was in power at which point at the municipal and state levels). “Since the parties have aligned again, the requests are being answered” (interview 16).

Table 34 Parties in power at state and municipal level in Aguascalientes, 2004-2012

| | Municipal level | State level |
|------|------------------------|--------------------|
| 2004 | PAN | PAN |
| 2005 | PAN | PAN |
| 2006 | PAN | PAN |
| 2007 | PRI | PAN |
| 2008 | PRI | PAN |
| 2009 | PRI | PAN |
| 2010 | PRI | PRI |
| 2011 | PRI | PRI |
| 2012 | PRI | PRI |

Updating the cadastre requires a large upfront investment but the returns are realised only in the longer term (interview 79). Given that municipal government term periods only last three years, the current administration carries the cost but the next administration receives the benefit. So what motivated the past PRI administration to take on this project? The revenue director, who had held his position across the last two administrations, conceded that the short term periods of municipal governments are a problem. There is no continuity and little regard for what was done before. However, the current party had been in power for six years now. This means that they have had six

years to continuously work on the project of modernising the cadastre to later receive increased revenues. And an important factor was that the momentum of politics was such that they knew from the start that they would be re-elected for a second three year term. That is, the party was highly popular and gaining popularity compared to the opposition. “This played a big role [in deciding to modernize the cadastre]” (interview 25).

Concluding remarks

In Aguascalientes, the strategy was to increase the property tax intake through modernisation of the cadastre, ardent pursuit of arrears, and a steady rise in the tax rate. There were upper limits on how much an individual’s tax bill could rise from one year to the next and there was still the possibility of challenging the tax bill in the municipal offices. This did not amount to coercive taxation and was not violent or extortive. It did appear more difficult for residents to evade taxes than in the municipalities of Chapter 7 whose administrative capacity was less developed. In Aguascalientes, information about properties was plentiful and far more complete and collection procedures were clear and highly organised in comparison. The municipality had also undergone a cadastral modernisation and consistent updates of cadastral information to keep cadastral values close to the market values of the properties, something that had begun in the previous administration. The municipality did not run into obstacles, such as intergovernmental rivalries (as the same party was in power at the state and municipal government level) or poor incentives due to short term limits (because the political momentum was such that the prior administration felt that the party would be re-elected for a second term).

The only evidence of explicit bargaining found was over individual tax bills. While the outcomes of such negotiations do not appear to bring any direct benefit beyond the individual’s reduced payment, it is a mechanism through which the municipal government can learn about deficiencies or needs of the population. However, whether the municipal government acted on the information gained through such exchanges by, for instance, responding to needs it learned of could not be determined.

Better tax capacity was part of the reason for success in raising the tax intake, but there may have also been a higher willingness to pay by the residents because of generally

sound municipal management, in an implicit bargain between taxpayers and local government. The revenue director (of that administration) claimed there was. The municipality was generally well managed and the mayor took steps to increase citizen participation and transparency. She also completed well-received projects beyond her mandate with the creation of the “green corridor”.

However, a populist mayor who promised to abolish property tax altogether was later elected by the residents to succeed that mayor. This may contradict what the revenue director said and show that residents were in fact not happy with the taxation-accountability equilibrium. Or they may not see any link between their tax payments and the maintenance of high quality services. It is also possible that they simply voted for some dimension other than taxation and accountability this time. In sum, while efforts to increase tax revenue may have led to efforts at increasing accountability in the short run (through the citizen observatory and efforts to climb the ranks in transparency rankings), the link of high taxation and high accountability was disrupted in the medium-term when voters elected an administration that abolished taxation, thereby likely moving the taxation-accountability equilibrium to a lower one.

8.2 Mérida: Good government, bad government

Mérida lies along the Riviera Maya on Yucatán peninsula. It lies inland, has a picturesque historic centre dotted with parks, stately French colonial pastel-coloured mansions, bustling markets, ice-cream shops, bars and restaurants where you can enjoy local dishes like *poc chuc*, *panuchos*, and *salbutes*. Mérida has a population of 800,000 and an additional floating population of 200,000 tourists and seasonal workers who also consume municipal services. The municipal government is a PAN administration led by Rénan Barrera Concha who has been in power since 1 September 2012.

While no coercion or explicit tax bargaining was observed, this is a case in which a clear correlation between tax payments and local government accountability was found:

evidence of implicit bargaining. This is seen when comparing the tax intake of the municipal administration in power at the time of interview in 2013 and that of its predecessor.

Figure 25 Map of Mérida in Yucatán



Source: Wikimedia Commons

Strategy to increase tax revenues

Mérida's strategy to raise revenue was to increase property tax revenue by updating cadastral values and matching the tax bills accordingly. Mérida has had its own cadastre since 2000 (as do another eight of the larger municipalities in the state of Yucatán; the rest are managed by a state-controlled cadastre).

Two administrations ago in 2008, the government of Mérida had signed on to a programme with Banobras, the national development bank, to modernise its cadastre. This involved taking aerial photographs and field visits (conducted in 2010). 94,000 land plots that had not been registered were identified. This opened up a far larger tax base.

According to the director of the cadastre, the new valuation was never linked up to the valuation used by the treasury of the municipality. The higher valuations were thus not used as the base for determining tax obligations and thus did not translate into higher tax revenue. When asked why this was the case, he explained that, "In the past, all secretariats had their own databases." A resident would go to one secretariat, for example to the finance secretariat, to declare that he had bought a new property. That secretariat

would create a new account for him that was not linked to any of the other registries, like the cadastre or the database used by the social development secretariat. If he wanted to pay his taxes and went to the cadastre, he would find that he wasn't even registered as the new owner" (interview 43). They had proposed merging the property registry with the cadastre since 2008, but this was consistently rejected "for political reasons: it is a very simple thing to merge these systems – we all have computers. But the more bureaucratic steps there are, the more control the government officials have. [...] If they simplify things, they lose control and opportunities to collect bribes" (interview 43). An agreement was only signed in the current administration for all the computer systems to link up to a unified platform and to be adjust tax obligations to the updated property values.

To help raise revenue, current administration also pushed a strong campaign in the media to prepare residents for the forthcoming rise of their property tax bills and to convince them to pay. In addition to this, they tried to lure taxpayers with discounts for early payments (20% in January, 10% in February and 8% in March). This had been done in previous years so this was not a new strategy in Mérida, but they also added a raffle for those who paid in the first months, with prizes including two cars, ten laptops and 25 televisions. They also opened more payment points to facilitate tax payments. The next subsection examines the outcome in terms of any tax bargaining.

Outcomes

No coercive taxation was witnessed in Mérida and there appeared to be a greater ease of evasion than in Aguascalientes, with less ardent pursuit of non-complying taxpayers.

No explicit bargaining was observed between individual taxpayers and local government but that may only be because the time of research did not fall into the property tax early payment "season" where discounts are granted (January until March) and when such negotiations are most frequent and most visible. No evidence of explicit bargaining between the local government and any larger group of taxpayers was found either.

There was evidence of implicit bargaining, however, in which the government and residents mutually adjusted their behaviour. The government's tax collecting behaviour and the extent of its accountability appeared to always match the taxpayer's compliance

with payments, showing that they were mutually adjusting their behaviour. This could be seen through a comparison across administrations in Mérida.

There had recently been a break in the seemingly consistently accountable governance in Mérida. The National Action Party (PAN) had ruled for 20 years (from 1991). Then the PRI came to power in 2010, when a break in accountability occurred, and the PAN came back into power in 2013 the PAN is back in power (see Table 35).

Table 35 Municipal leaders in Mérida, 2004-2015

| | Municipal level party | Municipal leader |
|------|------------------------------|-------------------------|
| 2004 | PAN | Fuentes Alcocer |
| 2005 | PAN | |
| 2006 | PAN | |
| 2007 | PAN | Bojórquez Zapata |
| 2008 | PAN | |
| 2009 | PAN | |
| 2010 | PRI | Araujo Lara |
| 2011 | PRI | |
| 2012 | PRI | |
| 2013 | PAN | Barrera Concha |
| 2014 | PAN | |
| 2015 | PAN | |

The director of the Municipal Public Access to Information Unit maintains that the culture of transparency was particularly poor during the previous (PRI) administration. He had audited the transactions of that administration in his past position as State Auditing Director and told of numerous irregularities (interview 38).

He also recounts that the Access to Public information Unit of the past administration (his predecessors in his current position) also made it more difficult for citizens to obtain information. Anyone can request public information and the unit then has 12 days to respond. The previous government made it necessary for people to come in personally if they wanted information and charged for it. The governments before it as well as the current government try to handle everything electronically so that people don't have to

come in and they don't need to pay to request transparency and accountability (interview 38).

The staff at the State Institute for Access to Public Information (INAIP), which checks that municipalities comply with the transparency laws, spoke along similar lines. Yucatán's State Transparency Law was signed in 2004 and entered into force in 2005, obliging all 106 of Yucatán's municipalities to publish certain information, in particular on their use of public resources. It also required municipalities to set up their transparency directorates and comply with certain minimal standards of publishing public information. Mérida has had solid compliance with these laws and has even gone beyond what is required by the law. For example, receipts of purchases are published online. "They identified a necessity of the people. Now no one dares to withdraw it. That would have a high political cost" (interview 42). Also, each month the treasury of the municipality publishes the municipal government revenues and expenditures as well as salaries in the newspaper with the mayor's signature. He said that this had always been the policy in Mérida. But this wasn't done by the PRI government during their term period from 2010 to 2012 (interview 42).

The staff at the finance office of the Municipal Government also corroborated this story, as did those workers that had been employed in the office across administrations and were not members of the PAN. During the 20 years of the PAN administration at the municipal level in Mérida, financial management was solid. But from 2010 to 2012, "the PRI administration destroyed all the work and good practices that the treasury had built up over the years" (interview 40). In response to the question of whether this may have been simply due to lack of experience, given that the PRI had not been in power for decades, the response was, "No, it was because they were too experienced. They manipulated the system and very intentionally neglected to follow the good practice that had been established during previous years" (interview 40). The good practices include contracting services through transparent public auctioning processes. The PRI administration allegedly ignored these procedures and contracted directly. The current administration now doesn't have any clarity on who was contracted and which payments were agreed.

Workers at the municipal finance office complain that suppliers now come to the new administration with bills and demand payment, but the previous administration had left no backup of this or any information on the contract. “It didn’t appear in the accounts as liabilities. They didn’t follow proper accounting practices. [...] They also didn’t follow the processes set up for handing over the administration to the next one. They left us no information; they left us completely in the dark” (interview 41). Official documents contained a certain debt figure. But the incoming administration later found, after a thorough review, that there was M\$ 99.3 million pesos in debt completely unaccounted for. Again, in response to the question of whether this may have been because the previous administration did not know what they were doing, the answer was “No, it is because they knew too much about what they were doing. The corruption was systemic” (interview 39).

There is some continuity of expert staff in the municipal finance office. It is only the directors and deputy directors that change from administration to administration. So if there is a relatively permanent bureaucracy in this case, how could this happen? According to the staff, the directors of the PRI government did not involve anyone else in the office. They kept to themselves and left the rest of the staff with nothing to do. They were not interested in following the established processes despite being urged to do so repeatedly by the rest of the staff (interviews 40, 41).

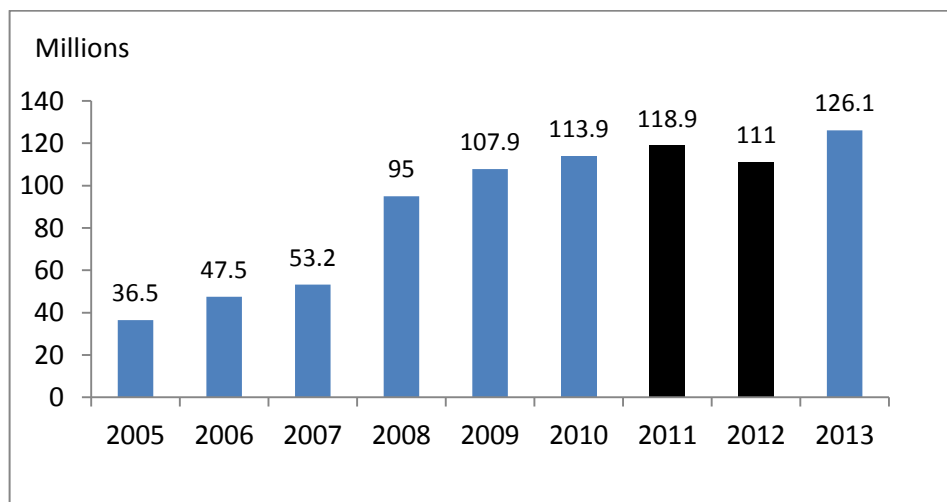
Administrative costs had skyrocketed. For instance, the previous PAN administration had paid M\$500,000 pesos for collecting taxes and hired three firms to assist the administration. The PRI administration claimed to have spent M\$2 million pesos more on this, hiring eight firms, but results did not improve; instead, they worsened. The main firm hired was called Hermes. The revenue director believes that they might have invented this firm as he has found no record of its existence.

The media also reported that the mayor of the previous (PRI) administration, Ms. Angelica Araujo Lara, was perceived as thoroughly corrupt. She reportedly diverted public funds to organise a Shakira concert in Mérida for the 15th birthday of her daughter (Universal, 2011). She then resigned before her three year term ended in order to run for senator and many suspect that she diverted municipal funds towards her campaign. Her

cousin Omar Lara Pacheco (also the cousin of the former governor of Yucatán, Ortega Pacheco) became interim mayor until the term ended. Municipal funds disappeared and the PRI stopped paying the garbage company, who then stopped collecting garbage. Residents would try to leave their garbage in front of the mayor’s house in protest (though police heavily guarded it) (Yucatan, 2012).

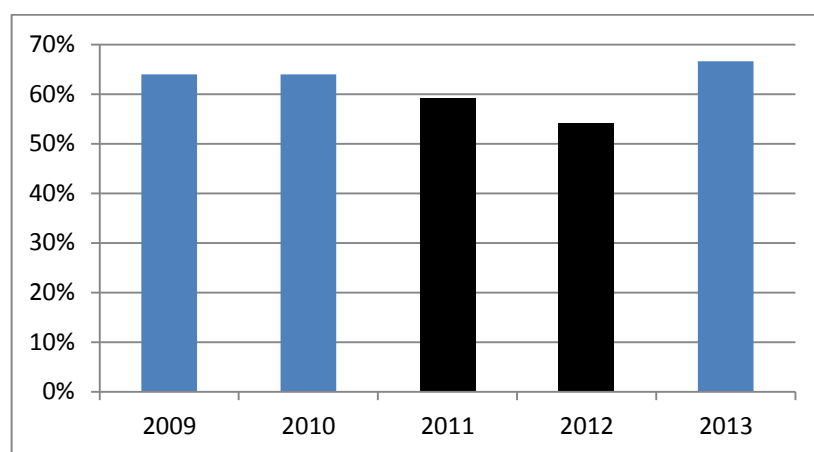
The PRI had also caused outrage over the issue of public lighting. They had replaced all light bulbs with supposedly more environmentally friendly ones that are meant to save 40% in energy costs for the municipality. A firm called ABC Leasing won the auction after a short advertising period that did not meet public procurement rules. “The previous lights had worked fine and the municipality even received a prize for this service. The best indicator was that people didn’t complain. Yet the new bulbs don’t work properly and streets are now dark, creating a zebra effect when driving through them” (interview 39). Again, fraud is suspected (interview 40, 41). “The working methodology here for all public services was solid and Mérida won several national prizes for its good results. But the PRI government simply didn’t adopt these. [...] One sees that money was stolen and not spent on the services. [...] The rumour is that it was used for the mayor’s campaign” (interview 87).

Figure 26 Mérida’s Property Tax Revenues, 2005-2013



Source: Mexican Ministry of Finance (UCEF-SHCP)

Figure 27 Property tax compliance (amount paid/amount owed), percentage, 2009-2013



Source: Municipal Government of Mérida

It was thus established that the previous government had been an outlier in the sense that it showed extremely poor accountability compared to the other municipal administrations in Mérida. How did revenues perform over these administrations and why? The final year of the un-accountable PRI administration, 2012, saw a very unusual dip in property tax revenues, just as the population was feeling outraged with the mayor and the PRI government. Collections then reverted to trend after the current government came to power in autumn of 2012. The drop in property tax revenue in 2012 and subsequent rise in 2013 can be seen in the revenue data in Figure 26. Figure 27 shows a similar fall and rise in tax compliance, measured as total property tax amount paid over the amount owed.

In the current administration, according to the director of the cadastre, “despite the revaluation, people paid their taxes. People appear satisfied and in agreement [with the current government and its tax policy]” (interview 43). The revenue director also believes that there is far more trust in the current government than in the previous one and that this is reflected in people’s willingness to pay property taxes. He further claims that “people are more willing to pay their taxes if there is transparency” (interview 39).

Yet the drop in revenues may also be due to lax collection efforts on the part of the PRI government. Some in the finance directorate agreed that “the PRI didn’t make an effort to collect taxes as they did not want to hassle people. They didn’t want people to get even more upset at them than they already were” (interview 41). It is therefore likely to be a two-way process of mutual adjustments: residents are less willing to pay and the local government knows that it cannot demand more taxes from an already outraged population.

Concluding remarks

The strategy to raise revenues was to mark a return of accountability and transparency in local government and to convince residents of the need to balance the budget after the previous administration’s financial mismanagement alongside increasing property tax obligations.

While no coercive taxation or explicit tax bargaining were observed, evidence was found of implicit tax bargaining between residents and the local government, especially when comparing across the last two administrations in Mérida. Implicit bargaining involved behavioural adjustments of both parties. First, when the residents were unhappy with the government and perceived it as corrupt and unaccountable, they withheld their tax payments. They then paid once a new, seemingly more trustworthy administration was in power. Second, when the government sensed that it was unpopular and had angered the residents, it refrained from collecting taxes and issuing sanctions. When the new administration showed that it had brought transparency and accountability back, it dared to increase the tax effort, including through increasing people’s tax obligations following higher property valuation.

8.3 Saltillo: Tax discount for employment

Saltillo lies in the northern desert state of Coahuila. It is close to Monterrey, the main commercial and intellectual hub of the north. Saltillo itself is one of the most important manufacturing centres in the country with a large automobile sector and at the same time offers high living standards (IMCO, 2012a). Its prime location just south of the United States makes it convenient to transport goods across the border to its northern neighbour via roadways. The Financial Times evaluated Saltillo as one of the 10 best cities (of 422 in the Americas) in the areas of cost effectiveness and economic potential, judging it as an excellent place for investing (MBW, 2013). Its Mayor Jerico Abramo Masso received the Prize for Good Municipal Governance 2013 from the National Federation of Mexican Municipalities (FENAMM) for his contributions to sustainable development. His photograph was displayed in every room, on seemingly every wall of the municipal government building. It was clear that this ambitious young mayor does not regard himself to be at the end of his career path. Mayor Jerico Abramo Masso of the PRI came to power in 2010 and his administration would finish at the end of 2013.

Figure 28 Map of Saltillo in Coahuila



Source: Wikimedia Commons

In this municipality, again, no coercive taxation was observed, but explicit bargaining was carried out with firms: concessions for tax discounts were granted by the municipal government if firms hired above a certain number of employees in the municipality. There was also evidence consistent with the existence of an implicit agreement: taxpayers and the local government mutually adjusted their behaviour to reach equilibrium between the level of tax payment and the level of accountability. On one hand, the municipality maintained high standards of services and the approval rating of the mayor was high. On the other hand, tax compliance was high at 70% despite regular upward adjustments to the tax bills.

Strategy to increase tax revenues

The strategy taken was similar to that of the other municipalities. The main prerogative was to step up efforts at increasing property tax revenues. To do this, discounts were granted to taxpayers who paid early, as was done in other municipalities (15% in January, 10% in February and 5% in March). In 2011 the government also introduced a scheme to grant people insurance against fire and floods if they paid early (in January) or if they self-declared a rise in their property value.

The local government also facilitated payments for the taxpayers. Since 2011 taxpayers have had various options for paying their property taxes: online, in banks or at Oxxo (a widespread convenience chain store). Further payment points were opened in supermarkets and elsewhere where residents could pay, needing only a printout of their tax receipt which they could obtain online. In January and February of this year, the local government distributed coffee and hot chocolate to people who came to the municipality and stood in line to pay their taxes. Many (particularly elderly residents) still preferred to travel to the municipal building rather than making use of the more convenient online or other payment options.

The last aerial photography and field visits were conducted as far back as 2004. No further major updates or modernization of the cadastre were planned by the municipal

administration, yet over the years there had been consistent updates to the cadastral valuations in line with inflation and to align them to market values (through comparison with sales prices and other data) , which in turn raised the amount of tax owed by property owners and the amount received by the municipality.

The revenue directorate said that he was simply told to continue his efforts and not to ease up with tax and fee collections, even during the electoral campaign period running up to the municipal elections in July 2013. Relaxing tax collection efforts in the run-up to elections is considered a widespread practice all over the country, as tax directors in the municipalities of Villahermosa, Colima, and Villa de Alvarez confirmed (interviews 44, 80, 76). Yet, even during the campaign period, this Saltillo mayor continued pressurising his staff to keep tax payments rising by continuing to update values, continuing to remind taxpayers to make their payments, follow up on arrears, and not to let anyone off the hook through exemptions or pardons. “We were told to continue our efforts just as strongly as always” (interviews 71, 73). The local councillor who focused on treasury affairs corroborated this, saying that the mayor’s message was, “Same strong effort as always. Don’t lax off, even though elections are coming up” (interview 72). It appeared that it was more important for the mayor to end his term with a zero deficit than to make exemptions for taxpayers ahead of the municipal elections.

Outcomes

No coercion was observed. Explicit tax bargaining was carried out between the Municipality of Saltillo and private firms. Yet rather than this being bargaining about tax payments in exchange for improved services or other benefits, the arrangement was a partial or full exemption for companies if they employed a lot of local residents. The director of the cadastre claimed that the local government uses tax exemptions to motivate employment generation (interview 71). Discount tables were published in the municipality’s revenue law (Saltillo Revenue Law, 2012) and are reproduced in Table 36. These reveal that the greater the number of employees a firm hires during the year, the higher its discount will be with respect to the property tax: this can even reach full exemption if the firm employs over 1000 people. The law required that the firms sign specific contracts to this end with the municipality. Such an arrangement did not exist in

the other municipalities researched. Property tax powers are thus used as an instrument by the municipal government to lure investors and encourage growth and employment in the municipality. This was not a recent proposal but continued from previous administrations.

There was also some evidence of implicit bargaining. First, Saltillo’s property tax revenues consistently increased in real terms throughout the administration’s term from 2010 to 2012 (See Figure 29 further below). The director of the cadastre estimated that 170 million pesos would be collected during 2012, with an even greater increase to come. At the same time, compliance remained high at around 70%, despite regular upward adjustments to tax bills to meet inflation and market values. Saltillo thus managed to collect far more taxes and has also been granted awards for the high quality of municipal service provision and city management. This may be because taxes motivated local councillors or put them under more severe pressure to provide better services. It may also be consistent with the idea that residents were more willing to pay taxes if they were content with local governance.

Table 36 Discount granted to firms based on employment generated in 2012

| Number of direct employees generated through the firm | Percentage of discount | Applied to year |
|--|-------------------------------|------------------------|
| 10 to 50 | 10 | 2012 |
| 51 to 150 | 25 | 2012 |
| 151 to 250 | 35 | 2012 |
| 251 to 500 | 50 | 2012 |
| 501 to 1000 | 75 | 2012 |
| 1001 and above | 100 | 2012 |

Source: Saltillo Revenue Law, 2012

Yet there may also be other reasons for this. First, higher compliance may simply be a result of better capacity of the tax administration, making evasion more difficult, independent of the accountability or satisfaction of residents. Tax reliance may have motivated better taxing capacity but this is still different from the accountability theory put forth in this thesis. Second, the high compliance and high revenues may be the result of a

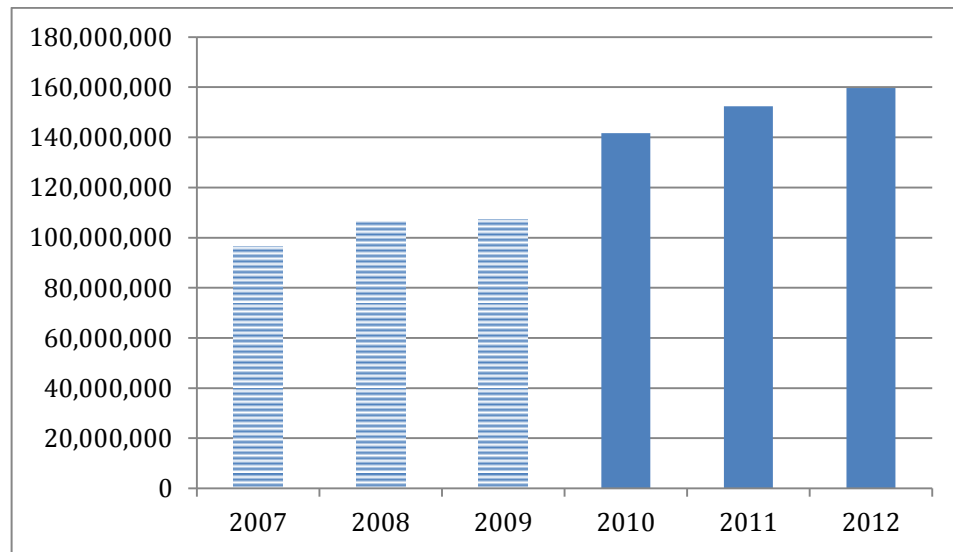
different tax paying culture. The secretary of finance of the neighbouring state of Chihuahua has a theory about the tax paying culture in the north, which he revealed to me in a meeting. He said that since the population had always been sparse and living conditions harsh, people were more hard-working and more dependent on one another and thus more honest, trusting, obedient, and law-abiding compared to people in the south of Mexico. He added that the border with the United States could also have brought the influence of a different ethic to comply with rules and tax obligations (interview 88).

Evidence against the second argument is that other similar municipalities in the same state do not follow suit with Saltillo in terms of accountability or revenue collection. Saltillo is the top tax collector within the state. A common comparator is the municipality of Torreon in the same state. It has a similarly high budget and population and is even slightly larger in terms of surface area with more land plots, but collects far less in property tax revenue. There are also large differences in accountability between the two cities. Saltillo received a perfect score in the parameters for financial accountability set out by the state auditing body, while no other municipality in the state did (Auditoria, 2011). The mayor in Torreon had an approval rating of 40% compared to Saltillo's of 75% according to a poll by Consulta Mitofsky. This shows that, despite the fact that both are in the north, one has high tax compliance and high accountability while a nearby one has low tax collection and low accountability, indicating that it is not only about the tax paying culture in the north of Mexico.

Still, I tried to investigate whether there was any causal link running from taxation to accountability. It was clear that the municipal government did what it could to maintain the mayor's positive image of performing well for the residents and succeeded in maintaining his approval. Yet when asked whether the government manages its revenue more prudently and efficiently than other municipalities because they have a greater proportion of own revenues, both the revenue director and local councillor responsible for public finance answered that the government doesn't differentiate between revenue that come from local taxes and that which comes from the federation (interviews 72, 73). "After all, transfers also partly consist of payments by Saltillo's residents for national or state taxes. We handle all public resources with great care" (interview 72).

While this appeared an obvious response by a government official in defence of his government, the revenue director claimed that residents tend to withhold their payments if they are unhappy with the administration and then pay later when someone is in power that they prefer. “The amount of property tax revenues we received rose a lot once the new mayor came to power”, he said (interview 71). Data I was given from the revenue directorate showed that it had increased from 107,471,000 to 141,690,000 pesos (and I was twice assured that these were real values) between 2009 when the last administration was in power and 2010 when Mayor Jericó Abramo Massa came to power, which was a marked discontinuity in the previous trend (See Figure 29 below). “People expected a lot from the new mayor [who has been in power since January of 2010]” (interview 75). He further explained that they had high expectations from him in managing the city well and were willing to trust him with their tax payments. They withheld tax payments to the previous government and waited until this mayor came to power in order to make their payment. While some of the drop in revenues during the last year of the previous government could have been from relaxing their tax collection efforts, the revenue director maintained that the spike in the following year showed that it could not have been purely from lax collection but instead from residents first withholding their payments and then finally paying the following year. It is difficult to know from the data if it really is as the revenue director claimed, but it corroborates the story told in Mérida.

Figure 29 Property Tax revenues in Saltillo, 2007-2012, pesos (real values)



Source: Municipal Government of Saltillo

Similar to Aguascalientes, the PRI administration in Saltillo that was successful in raising tax revenues and maintaining high tax compliance subsequently lost the next election. The PAN defeated the PRI in Saltillo during the July 2013 elections. It is doubtful, however, if this is due to resistance against the property tax as it was in Aguascalientes. Given that the same mayor could not run again consecutively for the same position, the voters may have simply decided against the new candidate running for the PRI in favour of an individual of a different party. According to a former municipal treasury director, “Here people fixate on the person - the candidate, not the party” (interview 74). Jericó Abramo Masso in fact ended his term with a 79% approval rating (Morán, 2013), a liquidated debt and was highly applauded by representatives of various sectors for improving Saltillo through a row of achievements in security, economic development, rural development, public works, social development, public services, public finance and transparency (De Kosta, 2013; Diario, 2013; Jiménez, 2013; Milenio, 2013). And, unlike in Aguascalientes, the mayor-elect did not promise to abolish or diminish property taxes.

Concluding remarks

The strategy of the Municipality of Saltillo in raising tax revenues was to maintain the mayor’s image of performing well for the residents and maintaining a high tax collection effort by chasing up non-compliant taxpayers, allegedly even during the electoral campaign period, which appeared to be something of an anomaly. No coercive taxation was observed. Instead, as in the other municipalities, taxpayers were motivated to pay their taxes through incentives such as discounts, prizes, convenient payment options, and even offering coffee and hot chocolate to taxpayers who stood in line to pay their taxes at the municipal palace.

Explicit agreements around taxes were made with firms giving them exemptions on their payments for creating employment. Yet this tax arrangement did not lead to an increase in local government accountability to, for instance, improve public services or offer active programs that would help business directly. Instead the concession on the part of the

local government was the tax exemption itself, though it may have encouraged increased employment for other residents. It may have contributed to creating a friendly business climate, thus bringing in investors to Saltillo who may have otherwise gone elsewhere. I was unable to find any evidence of special exemptions between the local government and *individual* taxpayers regarding their tax payment, but I was also not present in the municipal palace during the main taxpaying season when most residents pay their taxes, i.e. when the discounts apply (January-March), so it may have occurred just the same.

There appeared to be implicit bargaining in the sense that Saltillo manages the municipality well with high standards of service provision and solid financial accountability compared to other municipalities and the population is therefore willing to comply with comparably high property tax bills. The evidence was consistent with this idea that residents are happy to comply with their tax obligations as long as they observe a well-managed municipality.

One could argue that the high compliance even with regular upward adjustments to the property tax bills has to do with a general culture of compliance in northern Mexico compared to other regions. However, this explanation is contradicted by the fact that in the neighbouring municipality of Torreon, compliance with property tax payments is far lower. While there appeared to be evidence to support the revenue director's claim that residents withhold their tax payments until an administration is in power that they prefer, I was unable to find evidence that revenue needs pushed the government to be accountable to residents in the first place.

8.4 Case comparisons

In this section I compare the findings of the three cases presented in this section. Was coercive taxation observed? Was tax bargaining observed? Did these take the form of explicit bargains or implicit agreements? I also compare the three cases presented in this chapter to the first three cases presented in Chapter 7 and address the secondary research questions regarding the context of *a priori* state-society relations, reverse

causality and the obstacles that may be preventing tax bargaining from leading to increases in local government accountability.

Strategy to raise tax revenues: coercion would compromise popularity

The strategies taken by the three municipal governments all involved increasing property tax intake. In both Mérida and Aguascalientes modernisations to the cadastre had already been initiated by previous administrations. In Mérida, what remained to be done was to link the raised cadastral values to the tax bills and the government was in the process of merging this data. In Saltillo, there hadn't been a cadastral update but the tax bill figures were regularly upwardly adjusted with inflation. In Aguascalientes, the local government also raised the tax rate.

Just as in the first three cases, no coercive taxation was observed in these three cases either. Again, it seemed unlikely that the government was using any coercive methods as they were aware of the political costs of taxing, especially by way of the property tax. This is consistent with the literature on property taxation that has often highlighted that the property tax is particularly unpopular among taxpayers (and local leaders thus reluctant to collect it) as it is usually paid in the form of an annual lump sum, making it a highly visible, direct and salient tax (Bird, 2011; Cabral & Hoxby, 2012). Even if the real tax owed remains the same, just nominal differences are noticed and create resentment among taxpayers. Even though the property tax is an important tax handle for local governments in many countries, local governments are reluctant to exploit it (E. Ahmad et al., 2015; see also Chapter 3).

The municipal leaders had at least one eye on higher office, especially the ambitious young mayors in Mérida and Saltillo, and were very intent on maintaining their popularity. In the case of the mayor of Saltillo, however, they mayor appeared to feel that his popularity would be more greatly maintained if he was able to fulfil his promise of

achieving a zero deficit by the end of his term, even if this meant continuing to hassle residents with taxes and sending out warrants for arrears.

However, they did not appear far as cautious in their tax efforts as the local governments in Chapter 7. For instance, the revenue directors in Centro and La Paz in Chapter 7 repeatedly stressed that they were not raising the tax rate, only urging for more compliance and reducing omissions. By contrast, Aguascalientes was vocal about its strict procedures in the case of non-compliance that ended in black listing those in default for other municipal services and, further down the line, property confiscations. I was told that everywhere municipal governments tended to relax such efforts in the run-up to elections, but the mayor in Saltillo demanded that warrants would continue to be sent out and procedures continued even in the campaign period in order to keep tax revenues coming in. Administrative capacity for taxing was thus stronger and enforcement higher, making evasion more difficult. But it still did not amount to coercion.

Explicit bargains: Negotiating discounts with individuals and firms

Revenue needs did not tend to spark any *explicit* negotiations with any groups. The only explicit bargaining for which I found evidence were between the local government and individual persons and firms. In Aguascalientes, for instance, individuals would come to the office of the municipal revenue directors in order to challenge their personal tax obligation in hopes of negotiating down the amount. In doing so, residents often complained about a lack of services, as the director of the property tax attested, who was receiving residents to this end on a daily basis in her office. She had remarked that people often complained about receiving poor services when negotiating their tax obligation or their fines for arrears. While this may be an excuse, it may also imply that they hold the local government to a higher standard, given that they are paying it directly, than they would if the local government were financed indirectly through their federal taxes and the transfer system. Either way, the tax bills motivated the local residents to come to the municipal palace and bring shortcomings in service provision to the attention of the local

government. Taxation therefore motivated engagement between residents and the local government that may not occur so regularly without local taxation. What is further required to support the taxation-accountability theory, however, is that the information attained by the property tax staff about needs and deficiencies in the municipality is channelled to the appropriate local officials and acted upon to make changes. Whether the complaints actually led to the local government acting on them, however, could not be shown.

In Saltillo, explicit contracts were signed between the municipal government and firms that granted the firms a discount on their property tax bills if they hired large numbers of employees from the municipality. The government did not, however, offer any other types of concessions such as greater transparency, instruments for greater citizen participation or any services that would benefit the taxpayers or a larger group of residents. It may have, however, helped to lure investors into the municipality, thus effectively raising tax intake in the long-run (amounting to a benefit to the municipal government) and providing employment and increased business, resulting in a benefit to a larger group of residents of the municipality.

One of the obstacles, as one informant in Aguascalientes had pointed out, is that the local government does not have the power or resources to enact massive projects in the municipality that would make a difference to the municipality. The local government does have constraints in how it responds to citizen demands in a potential bargaining process. In this respect, a local government's bargaining power is more constrained than that of, for instance, the federal government.

Implicit agreements: mutual behavioural adjustments

There was evidence of implicit agreements between the local governments and the residents surrounding taxation. First, there seemed to be a correlation between the level of accountability and the level of tax payments. Several pieces of evidence were consistent with this. First, the more accountable cases had higher tax compliance rates compared to

the less accountable ones. Surely, this may be for reasons of tax capacity. But there is also evidence within some of the municipalities over time that further support the idea that residents were less compliant if the local government was relatively unaccountable.

According to several interviewees in municipal treasuries, taxpayers tended to withhold their tax payments if the government was perceived as unaccountable until a more favourable government came to power. Revenue data from Saltillo and especially from Mérida (see and Figure 29 and Figure 26 respectively) appeared to support this. In Mérida, the predecessor administration broke with a tradition of following established norms and procedures that guaranteed transparency, sound financial management and accountability and the mayor was accused of embezzling funds. Many taxpayers appeared to have therefor withheld their property tax payments and revenues dropped. When a new administration took office, revenues rose again.

On the other side of the coin, the local governments appeared to would show more tax effort if they were popular and less so if they felt that the residents were upset and distrusted them. They were more likely to maintain a strong tax effort if they were popular and had high approval ratings. As already mentioned, the mayor of Saltillo maintained high tax effort even in the wake of electoral campaign as he felt that this would not compromise his popularity. And he ended his administration with a high approval rating.

The leaders of the different municipalities generally sensed or forecast how far they could go in raising taxes, updating property values or pursuing tax arrears. They contended to be aware that if they upheld a positive image and enjoyed citizen satisfaction through accountable governance, they could go further in demanding tax payments as residents would comply. By contrast, if they performed poorly, there would be more evasion and tax revenues would diminish.

The question is whether this awareness stimulated outcomes in the form of increased accountability. As in the Chapter 7 cases, the local governments appeared to take pre-emptive steps to show it was transparent, accountable and trustworthy alongside its revenue raising efforts. An increase of accountability thus occurred prior to or

simultaneously with increased demands of taxes, consistent with the theory of a short path to accountability. For instance, in Aguascalientes, the mayor set up a “citizen observatory” for citizens to scrutinise the quality of municipal management and to create a closer link between the municipal government and the residents. In Mérida, too, the mayor reintroduced norms and procedures to increase transparency and accountability and sound financial management. This is consistent with the short path to accountability.

However as with the first three cases, in each of the cases presented in this chapter, the respective mayor may have taken steps to portray an image of trustworthiness and accountability anyway, however, to seek a positive image and popularity, as each had at least one eye on higher office. It was not entirely discernible whether they deemed it necessary in view of raising revenues (rather than simply helping), let alone whether the need for increased tax revenues *sparked* these policies. More generally, while their fear of the political cost of taxation may be regarded as evidence that local leaders anticipate protest, revolt or, especially, judgement at the ballot box or by their political party, it is more likely that this fear simply leads to a demise of tax effort when they are unpopular rather than a positive motivation to increase accountability.

No evidence of accountability attained through the long path was found. Resistance by the taxpayers took the form of evasion or seeking discounts on their personal tax obligation.

Context of *a priori* state-society relations and reverse causality

How did the first group (with weaker *a priori* state-society relations, proxied by higher rankings in terms of transparency and accountability) fare compared to the second group? First of all, it cannot be said that coercive taxation is more likely if state-society relations are strong. Coercive taxation was not witnessed in either group. If anything, where there was more accountability and transparency, there also tended to be better administrative capacity for tax collection and less ability to evade taxes with impunity.

The previous chapter established in section 7.4 that the three municipalities that had *a priori* low accountability had more problems in raising tax revenues. This occurred for different reasons, not necessarily because of its low accountability and transparency. In Acapulco, drug traffickers prevented a modernisation of the cadastre, in La Paz intergovernmental rivalries prevented the introduction of new laws and changes to some of the tax rates concerning other tax handles (though it did not prevent them from starting a cadastral modernisation program). Only in the case of Centro was the low tax compliance culture blamed on a deep distrust of local government generally. Yet the low compliance may have also been the result of oil wealth: residents feel that the government should have plenty of money from oil revenue even if they do not pay taxes. It has often been argued in the literature on the 'natural resource curse' as discussed in Chapter 1 that governments with abundant natural resource wealth have trouble collecting taxes. Citizens find it more difficult to understand why they should be taxed and the government finds it even more difficult politically to demand taxes when it receives large inflows of non-tax revenues from natural resources.

By contrast, those municipalities that were more accountable did not list any problems in increasing their tax intake. This was largely due to superior administrative capacity but also, as discussed above in the subsection on implicit tax agreements, residents appeared to be more likely to pay if the government is accountable and but governments that were perceived as unaccountable did not bother further angering residents with tax payments.

The data received from the municipality, from UCEF and from INEGI all varies greatly. The discrepancies are such that comparisons of the numbers do not seem worthwhile, especially for the less transparent and accountable municipalities. Comparisons of revenue levels can have a lot to do with immigration, GDP, valuation of the property and several other factors. I therefore judged their success by their own parameters. While Centro, La Paz and Acapulco were not taking in what they hoped to, Aguascalientes and Saltillo very proudly boasted that they were taking in more than expected. In Mérida, it was still early to tell, but tax revenue continued to rise.

Table 37 Tax compliance rates: number of accounts registered/number of accounts paid, 2012

| Municipality | Compliance rate | Municipality | Compliance rate |
|---------------------|------------------------|-----------------------|------------------------|
| Acapulco | 60% | Aguascalientes | 89% |
| Centro | 30% | Mérida | 70% |
| La Paz | 50% | Saltillo | 75% |
| <i>Average</i> | 47% | <i>Average</i> | 78% |

Source: Data obtained from respective municipalities

Note: Compliance rate is calculated as actually paid property tax payments over total owed property tax payments

Obstacles to revenue raising, to tax bargaining, and to accountability

There was little interference of third parties that stood in the way of tax revenue raising efforts, as was the case in Acapulco and La Paz. However, in Aguascalientes I learned about two potential obstacles that had prevented revenue raising efforts and, by extension, tax bargains from occurring. Intergovernmental rivalries do pose problems for other municipalities in the state of Aguascalientes and had posed problems for the municipality of Aguascalientes in the past. It made a difference whether the parties at the state and municipal level were aligned or not in order to be able to pull through and cooperate in terms increasing the municipal tax intake. When the state and municipal governments were of the same party, the state approved the municipality's proposals to update the cadastre and to pass modifications that would expand and increase the tax bill for taxpayers. When they were of rival parties, the state blocked these efforts, thus nipping any processes that would lead to bargaining processes and greater accountability in the bud.

Another obstacle I learned about was that the short term limits of municipal governments in Mexico, compounded with electoral competition, were an obstacle to raising tax revenues. This means that local governments have little incentive to embark on an investment like updating property values to raise property tax revenues, as the benefits will not accrue until the next administration is in power. This also means that by the time the additional tax money has been received, the government that asked for the tax

increase would no longer be in office to reward the taxpayers with any demanded expenditures. This obstacle was prevented in Aguascalientes only because the momentum of politics was such that it was clear that the PRI was going to be in power for at least two administrations: the predecessor administration thus embarked on the long term investment of a cadastral modernisation.

Again, a mismatch between local government performance and the residents' perception of accountability may be an obstacle for taxpayers to adjust their behaviour according to the level of local accountability. For the taxation-accountability link to take hold, residents need to be able to judge whether their local government has performed responsibly and in their interest or not. It appeared that through opaque accounting, many municipalities in Mexico passed the consequences of poor financial management to the next administration without their residents noticing. The extent of the financial mayhem was usually revealed only after the next elections had taken place and the successor administration was in power to review the accounts. This was indirectly noted from information on administrations in power prior to the ones interviewed, such as in Mérida as described in Section 8.2, but also appeared to happen across Mexico according to newspaper reports (Romero, 2012) and interviews with UCEF, the coordinating office of federal entities and municipalities of the federal ministry of finance (interview 10), as well with INDETEC, the institute for the technical development of public treasuries (interview 9).

Conclusion

This chapter has presented three further case studies: Aguascalientes, Mérida and Saltillo, which I used as examples of relatively better *a priori* state-society relations, as each scored particularly highly in terms of accountability and transparency on various rankings.

The strategies involved increasing the property tax intake. This involved positive incentives to motivate taxpayers to comply with their tax obligations, but no coercion. Few instances of explicit bargaining were found: the only evidence was when individuals challenged their tax obligation in the municipal palaces, which occurs in all municipalities, as witnessed most blatantly in Centro, and when, in Saltillo, the local government signed agreements with firms to grant them discounts if they hired a certain number of employees from the municipality.

What I did find were indirect implicit tax agreements. When residents were dissatisfied with the local government's performance or perceived it as corrupt or unresponsive, they withheld their tax payments. They deferred payments until a seemingly more trustworthy administration was in power. This was seen in Mérida as well as in Saltillo. Implicit agreements were more common than explicit bargaining and perhaps what one should expect at the local government level: an equilibrium in which residents adjust their tax payments according to their view of the government and its performance (especially the perception of corruption versus relative effectiveness).

Corroborating this, a comparison with the municipalities in Chapter 7 indicated that the more accountable municipalities in Chapter 8 (with stronger a priori state-society relations) appeared to be able to go further in pursuing arrears and maintaining tax collection efforts. Both in Aguascalientes and Saltillo, the local government appeared relatively popular even by the end of its term. In Mérida, the mayor was also popular though he had not yet reached the final year of his term. The local governments of this chapter were also more successful in attaining tax compliance. In some of the municipalities of Chapter 7, compliance was low and the local governments felt that they would be perceived as too harsh or unpopular if they took further steps. Instead, exceptions and further discounts to tax obligations were granted retrospectively.

The chapter that follows summarises the finding of the municipalities in Chapters 7 and 8, compares these, and also compares them to the findings of the quantitative chapters (4 and 5). It then draws conclusions for theory and practice.

Chapter 9 Conclusion

The objective of this thesis was to explore the relationship between taxation and accountability at the local government level in Mexico. It responds to the renewed attention scholars have given to taxation-accountability linkages, broadly termed as such: if governments are dependent on taxation, they will become more accountable to citizens and less corrupt; a tax bargain will arise with mutually beneficial outcomes: citizens agree to comply with tax payments in return for more accountable governance (Bräutigam, 2008b; Bräutigam et al., 2008; Di John, 2011; Everest-Phillips, 2010; Moore, 2004, forthcoming).

This thesis has explored taxation-accountability linkages in the Mexican local government context, bringing to light the different obstacles that stand in the way of this link at the local government level. Chapter 3 described the institutional context surrounding Mexican municipalities and, subsumed under the theoretical foundations laid out in chapter 2, showed that there was reason to believe that this causal relationship would run into problems. In Chapters 4 and 5, the relationship was tested empirically through regression analysis. The results corroborated the fact that the relationship is not straightforward and depended on the tax type. While positive correlations were found, identifying causality proved more difficult and problems of data and method could not be overcome to rule out reverse causality and endogeneity problems.

The quantitative econometric methods were unable to tell us how the link worked when it did and what obstacles precluded it when it did not. Chapters 6, 7 and 8 thus explored the relationship further through qualitative case study analysis of six municipalities: Acapulco, Centro, La Paz, Aguascalientes, Mérida, and Saltillo. While explicit tax bargains were occasionally observed around some local taxes when the taxpayers comprised a narrow group with common interests that the local government could usefully approach, more common were implicit agreements in which the local government and the local residents adjusted their behaviour in response to the other. However, several obstacles were found that stood in the way of taxation leading to either a tax bargain or increased accountability.

The first two sections of this chapter evaluate the empirical evidence found in view of the theoretical framework. It integrates the findings of both the quantitative and qualitative research conducted. Section 9.1 evaluates the existence of causal linkages and the causal mechanisms involved. Section 9.2 evaluates the obstacles that stand in the way of those linkages. It draws from the empirical evidence found in the qualitative analysis and from the Mexican context laid out in the background chapter (Chapter 3). Finally, section 9.3 summarises the research contribution this thesis makes to the theory and draws implications from what we have learned for development policy.

9.1 Evaluation of local taxation-accountability linkages and causal mechanisms in Mexico

In this section and the next, I bring together the various conclusions of this thesis and review the evidence. I reconcile the findings of both the quantitative and the qualitative analysis in order to respond to each of the sub-questions introduced in Chapter 1. This section deals with the main questions concerning the relationship between taxation and accountability: whether or not there is a causal relationship running from taxation (operationalised as greater tax revenues to total revenues and greater pressure to increase tax revenues) to increased accountability in the Mexican local government context. In doing so, it also addresses reverse causality and possible feedback loops. It also draws conclusions about the mechanisms through which this works.

Is there a causal relationship leading from taxation to greater accountability among Mexican municipalities?

The evidence of both quantitative and qualitative analyses showed that taxation did not always lead to increased accountability in the Mexican context. The results of the *quantitative* econometric analysis using nation-wide data of all Mexican municipalities

(that is, all for which data were available for the years tested) *did* accord with the taxation-accountability theory for the property tax, but causal relationships could not be found using all local taxes and fees. The *qualitative* analysis showed evidence of tax bargaining and increased accountability along-side revenue raising efforts and processes were sparked that were consistent with the taxation-accountable theory. However, in many municipalities several obstacles stood in the way of those processes, preventing a completion of the chain from greater taxation to greater accountability.

Beginning with the *quantitative* analysis, results of cross-sectional regression analysis showed positive correlations between taxation (comprising all local taxes and fees) and accountability. The more tax revenues in a municipality's overall revenues, the more it is likely it was to be transparent, provide basic services for large proportions of its population, and have electoral competition. However, when using panel regression analysis, the results were no longer statistically significant and therefore did not support the existence of a *causal* relationship between taxation and accountability. This makes it conceivable that the taxation and accountability variables are simply highly correlated for other reasons, different from the causal mechanisms laid out in the taxation-accountability theory. The cross-sectional results may have been driven by spurious correlations or reverse causality.

When repeating the regressions looking only at the effect of property taxes (versus all local taxes and fees among municipalities' total revenues), however, positive and significant coefficients were observed even using panel regression that held constant time and municipality invariant covariates as well as other control variables.

The quantitative methodology used at identifying causality of the relationship improved on attempts in previous studies (given the use of time series data as opposed to pure cross-sections and within-country as opposed to cross-country analysis), yet problems remained. The possibility of spurious causality and reverse causality may have yielded erring results due to endogeneity problems. The results need to be regarded with caution. While attempts were made to isolate the effects of taxation and rule out other possible causal explanations through lagged variables and controls, such as for level of development and administrative capacity, the controls may not have been adequate.

While the cross-sectional regressions were unable to control for all municipality-invariant factors, it was not possible to add the development controls to the panel regressions. The variable on which the tax variable showed to have the strongest positive relationship in the cross-sectional regressions (*Transparency*) could not be tested using fixed effects as data was not available across multiple years for this proxy. There were also problems with the data due to a lack of harmonised accounting and controls. The large discrepancies I detected between fiscal data that I came across at the local level and that reported to the national level makes creative accounting appear viable.

In sum, the results of the econometric regressions, while appearing to show causality between taxation and accountability for the property tax (if not all local taxes and fees), were insufficient in ruling out different mechanisms and theories about the relationship. Further evidence was needed to explore the link in order to see if these findings reflected the reality of the relationship or again showed spurious correlations. The fact that reverse causality is expected alongside the expected route of causality, with feedback loops between the two creating virtuous (or vicious) cycles, one can simply conclude that the results support and do not contradict (but do not prove) causality from taxation to accountability.

I thus went on to explore the relationship *qualitatively* through in-depth analysis of a smaller selection of municipalities. I chose six urban municipalities that were under particularly high pressure to increase their local tax revenues. These six were also among the highest tax collecting municipalities in the country, so taxation represented a high proportion of government revenue and could be expected to make a difference to local government incentives. The qualitative analysis showed that, while pressure to increase tax revenue sometimes led to intermediate steps in the causal pathway (different tax raising strategies and tax bargaining), rarely did it lead to a longer term increase in accountability. This was due to a variety of obstacles which will be discussed further below.

If there was an increase in accountability, it was most often in the form of an increase in transparency and the creation of platforms for citizen participation alongside property tax revenue raising efforts. This is a quick, inexpensive and therefore easily achievable

method for the local government to gain confidence from the residents and was done in Acapulco, La Paz, Aguascalientes, and Mérida. It was more difficult for local governments to achieve accountability through public service delivery or expenditure on public works and services due to budgetary restrictions, unionised workers, and institutional constraints discussed further below in this chapter. This is supported by the quantitative regression results as the effect of taxation on *Transparency* was consistently positive and significant (though the arguably methodologically superior panel regressions were not possible due to limited data availability).

While it was clear from the field research interviews that local leaders recognised that they could collect more taxes if perceived as more transparent and accountable, it was uncertain whether taxation *sparked* the steps taken to foster an image of transparency and accountability or if they would have taken them anyway as a means to further their political popularity and careers.

Also, while increased accountability was often perceived in the immediate short-term, it was also shown to not always hold beyond the end of the administration: in Aguascalientes, the residents elected a new government that promised to abolish the property tax altogether, thus disabling any virtuous cycles of increased taxation and increased accountability.

For other taxes with an incidence on a specific interest group with common goals, such as the street vendors in Centro, the tax revenue needs did spark tax bargaining processes that were consistent with increases in greater local government accountability vis-à-vis that group of residents. The local government acted cooperatively rather than aggressively towards the street vendors and agreed to tolerate them rather than harass them and destroy their market stands. There were also negotiations to provide services such as cleaning and lighting in return for street vendor fees.

What processes are sparked and through which mechanisms does the casual relationship work?

According to the theory laid out in Chapter 2, taxation will lead, first, to either coercive taxation, tax bargaining, or neither. If tax bargaining is achieved, this may take the form of either an explicit or implicit agreement. The tax bargaining may then lead to greater accountability or it may not.

Did tax revenue dependence lead to *coercive* taxation?

No coercive taxation was observed in any of the cases studied. Raising tax revenue was widely viewed as a last best option involving a high risk of “political death”, as one of the interviewees put it. The context of electoral competition and judgement not just at the ballot box but the more general fear of becoming unpopular (particularly as this could hinder their career trajectories) made mayors highly reluctant to tax in any way that was a very noticeable increase in the tax obligation and/or perceived as unfair by the residents.

In the municipalities visited, the local governments raised the tax intake through several methods short of actually raising the tax rate or the tax bills. Instead, methods focused on positively motivating people to pay who normally evaded, including through economic incentives such as raffles, discounts and promises to pardon fines for past arrears; facilitating tax payments for the residents by increasing payment points and setting up online payment options; and making tax payments more comfortable by offering coffee and hot chocolate to those queueing to make their payment. Tackling tax arrears or omissions in the property registry was the next step. More stark methods like updating property values to coincide with market values or raising the tax rate were rarely considered. The latter were regarded as far more politically sensitive, leading to dissatisfaction and anger among the residents, and were preferred to be avoided.

Did taxation lead to greater accountability through *explicit* agreements?

Regarding the property tax, few *explicit tax bargaining* was observed that led to an outcome of improved local government accountability. The direct explicit bargaining observed with (potential) taxpayers predominantly involved bargaining over the amount of the tax to be paid: individuals would come to the office of the municipal revenue directors in order to negotiate a lowering of their personal tax obligation. In one municipality, agreements were signed between the municipal government and firms in which firms could be granted discounts if they hired large numbers of employees from the municipality. The government did not, however, offer any other types of concessions such as greater transparency, instruments for greater citizen participation or any services that would benefit the taxpayers or a larger group of residents.

The instances observed where the government did explicitly bargain with a group of potential taxpayers with a likely outcome of concessions that would be responsive to a wider group were mostly instances involving different types of taxes. For instance, in Centro, local officials approached the leaders of the street vendors, improved relations and started a dialogue with a view to collecting street vendor fees from them. At the time of interview, the street vendors and the government were in the midst of negotiations with a potentially mutually beneficial outcome: in return for floor fee payments, the municipal government showed willingness to assist the vendors in cleaning their selling areas and upgrading their stands. Additionally, they already mended relations, heightened their dialogue and respectful treatment considerably in the run-up to negotiations. In La Paz, the municipal government and local bus drivers negotiated an exchange as well: a rise in transport fees in exchange for government projects to improve transport services.

Did taxation lead to greater accountability through *implicit* tax agreements?

There were also indications of *implicit tax agreements*. The local governments appeared to take pre-emptive actions to ease acceptance among taxpayers of the increase in tax effort. Many of the municipal leaders paralleled their tax raising efforts with a vocal campaign of transparency and accountability to the taxpayers. For instance, in

Aguascalientes, the Mayor set up a “citizen observatory” for citizens to scrutinise the quality of municipal management and to create a closer link between the municipal government and the residents. In Acapulco, the mayor vehemently warned against corruption among public workers and published revenue and expenditure data in the media every three months, which no mayor had done in his city before him. In La Paz a “zero-corruption” agenda was enforced. The leaders of the different municipalities generally sensed or forecasted how far they could go in raising taxes, updating property values or pursuing tax arrears. They contended to be aware that if they upheld a positive image and enjoyed citizen satisfaction through accountable governance, they could go further in demanding tax payments as residents would comply. By contrast, if they performed poorly, there would be more evasion and tax revenues would diminish. An increase of accountability thus occurred prior to or simultaneously with increased demands of taxes.

Yet in each of these cases, the respective Mayor may have taken steps anyway to seek a positive image and popularity, as each had at least one eye on higher office. It was not entirely discernible whether they deemed it necessary or important in view of raising revenues, let alone if the need for increased tax revenues *sparked* these policies. More generally, while their fear of the political cost of taxation may be regarded as evidence that local leaders anticipate protest, revolt or, especially, judgement at the ballot box or by their political party, it is more likely that this fear simply leads to a demise of tax effort when they are unpopular rather than a motivation to increase accountability. There is thus a positive correlation between tax collection efforts and accountability but no causal link in which tax revenue needs spark increased accountability.

Turning now to the citizens, there was no *collective mobilisation* in any of the cases in response to the municipal government scaling up its property tax effort. As already mentioned individual citizens tried to seek reductions in their own payments on a personal level. Requests for personal favours and concessions, but no collective action or demands for public benefits, were observed.

One case where citizens did mobilise was when the people of Tierra Amarillo colony organised a protest in front of Centro’s Municipal Palace. However, this popular

mobilisation did not occur in reaction to the government's tax policy. Instead, the citizens voluntarily paid property taxes without being legally obliged to, as they believed that this would win them bargaining power and strengthen their case for obtaining a delegate to represent them in the municipality and have municipal services extended to their colony. At the time of interview it was still unclear whether they would obtain the concession they demanded and whether their paying property taxes was sufficient to convince the government to grant them any right to representation.

Several cases revealed that residents resist taxes through *tax evasion* when they are dissatisfied with the government. In Mérida, when corruption scandals and deterioration in service delivery became apparent in the previous administration, residents withheld their property tax payments. Once the new government came to power, which exerted more trust, payments swiftly resumed. This is particularly feasible when compliance is not immediately sanctioned or when it is easily pardoned, as is the case in most municipalities in Mexico (Morones Hernández, 2012).

One may thus regard this as an implicit bargain or exchange. Taxpayers only pay the equivalent of what they deem the government deserves, according to the level of local government accountability. And local governments only demand as much as they feel they can get away with considering their level of accountability. Yet such a bargain does not lead to increased accountability unless awareness of the loss in revenues that follows poor performance motivates local government officials to actively strive for accountable governance. As mentioned above, the local government officials were very clear about the fact that they could gain compliance only if they were popular and maintained satisfactory public management and service delivery, while if people become disillusioned, they would not achieve tax compliance. Yet it was difficult to discern how important of a motivator tax compliance was next to other motives when local governments made efforts to demonstrate accountability alongside their tax collection efforts.

Did taxation lead to accountability via the short or long path?

On the rare occasions that taxation did lead to accountability, this tended to occur via the short path through implicit agreements. The government acted first, trying to show it was accountable before or as it attempted to increase the tax intake in anticipation of resistance or continued evasion by the residents. On the fewer occasions where explicit bargaining was observed, the local government tended to initiate it: it would approach the leaders of a specific taxpayer group first and offer concessions before collecting the (higher) tax, as seen in Centro with the street vendors and in La Paz with the transport sector. The quantitative evidence is consistent with this: the regressions with no lag yielded stronger positive relationships than the regressions with a lag of 2-3 years on the tax variable. However, as explained, these results are also consistent with the possibility that the effect of reverse causality is stronger. What is certain is that the long path, while the dominating narrative of how the taxation-accountability theory works, was *not* observed.

9.2 Evaluation of obstacles and context

In the last section I stated that while greater taxation seemed capable of sparking greater accountability, many times obstacles stood in the way. In this section I summarise the obstacles that prevented tax bargaining and increased accountability in the cases studied. I also answer the other sub-questions of the research: was there a stronger relationship in the context of democracy? And how did the property tax fare compared to other taxes in sparking the processes consistent with the taxation-accountability theory and why?

What obstacles to tax bargaining at the local government level?

In Chapter 6, I set up a framework that looks at the causal mechanism as a multi-step process. The first chain of the link, following revenue pressure, was a strategy to raise tax revenue. This would lead to either tax bargaining, coercive taxation or neither. In order

for the taxation-accountability theory to take hold, it would have to lead to tax bargaining. Yet several obstacles already appeared here, causing neither to occur; that is, there were obstacles to raising revenues.

1. One obstacle to raising tax revenue were third party interests that interfered with efforts to raise tax revenues. Drug traffickers proved to have a profound interest in property tax registry and preventing updating of the cadastre. They allegedly used the property tax registry to collect extortion money and they also had interests in maintaining low cadastral values and using sales to launder drug money. This posed a problem in Acapulco, where the director of the cadastre and his data manager were murdered by drug traffickers. It was given as the reason for the Municipality of Acapulco dropping all efforts to update the cadastre and increase property tax revenue.
2. Another obstacle to raising tax revenue was the local government's limited tax powers coupled with intergovernmental political rivalry in Mexico's three-tiered federation. Mexico governments require consent by the state congress both to introduce new taxes and to change the tax rate. Municipal governments in Mexico complain that state governments often reject municipal proposals if they are of a different political party. This was most evident in La Paz where the state congress delayed and finally rejected proposals to charge a fee selling garbage to a recycling company and a proposal to raise local transport fees. Evidence of this was also found in Aguascalientes, where the reason cited for why the administrations *could* raise property values and update the cadastre was that it was of the same party as the state, which meant that there was cooperation between the local government and the state run cadastral institute. While updating the cadastre and raising property tax rates had posed an obstacle in the past, when parties were not aligned, it no longer did since the two parties did align.
3. A third obstacle is that municipal government term limits end after only three years in most municipalities and consecutive re-election of municipal leaders is forbidden by the Mexican Constitution, especially in connection with the high turnover of local officials in municipal governments. This means that local

governments have little incentive to embark on an investment like updating property values to raise property tax revenues, as the benefits will not accrue until the next administration is in power. This is a great disincentive that makes large increases in tax revenue unviable.

4. Finally, local taxation, especially of the salient property tax is unpopular. This point, combined with electoral competition and a lack of complete need for it, meant that tax collection efforts were unlikely to be as strong as they could have been, even in a context of considerable revenue raising pressure. Evidence from the municipalities visited as well as secondary evidence indicates that municipal leaders in fact tried to exhaust all alternative sources of revenues before even taxing at all, including both ordinary and extraordinary transfers from the federal government or loans from private banks or international institutions (interview 95) (Ponce, 2012). Only when this failed were tax revenue raising options considered (interview 69). The unit in the Mexican Ministry of Finance in charge of coordination with the federal entities complains that subnational leaders are incessantly asking it for money while leaving their tax powers unexploited (interview 95). Many municipal governments simply cut down on spending, defaulted on their liabilities (including personnel payments) or dug themselves further into debt (Romero, 2012). In Mérida, for instance, the predecessor administration illegitimately passed on debt and liabilities to its successor through crafty accounting methods. These are all ways to circumvent unpopular tax collection despite substantial revenue pressure.

Even when local governments did increase efforts to raise tax revenue, this did not always lead to tax bargaining. The following obstacles were encountered:

1. One obstacle was the little power municipal governments have compared to the national or state government to noticeably improve the lives of a large part of the population, respond to the demands of their residents, or to use their tax revenues for new projects demanded in a bargaining process. Many local governments have only few competencies and little decision-making power. In Mexico as elsewhere, a large proportion of local funds are earmarked to purposes decided on by the central government, and tax revenues may be used to cover

previous liabilities passed on from the former administration, such as for a large payroll of unionised workers (as seen in Centro and La Paz). This leaves local governments little manoeuvring power to improve services or invest in new ideas in an effort to show residents that they are using their tax money effectively (Díaz-Cayeros & Martínez-Uriarte, 1997; Sánchez, 2013).

2. Furthermore, as the decentralization literature has often argued, local performance may easily be confused with successes and failures of the state or national government (Faguet, 2012; Garcia-Escribano & Ahmad, 2006). In Centro, scandals at the state government level seemed to create a distrust of all levels of government generally. As elsewhere, municipal leaders are quick to blame higher government levels of government (rightly as when the State Congress blocked initiatives in La Paz or wrongly) for any short-comings and take credit for their achievements.
3. Regarding property tax, some of the characteristics of the tax posed an obstacle to tax bargaining. Taxpayers for this tax tended to be a heterogeneous group. Even those with the highest property values tended to be disbursed across the municipality but did not form homogenous groups with interests between them. The only concession that the local government tended to think of was granting some kind of discount in order to positively motivate any payment at all.

Finally, even when there was tax bargaining, this did not always lead to greater accountability due to the following:

1. As mentioned already, municipal efforts to raise local transport fees were blocked by higher levels of government in La Paz. This had been attempted after a bargain had been struck with the local transport owners to invest in and improve transport services. Give that the tax could not be increased, the concession of improved transport services, which would have benefited a large portion of the population, was not realised.

2. There was much explicit tax bargaining over individual's specific tax obligation. It appeared that there was also little understanding or social solidarity among the local citizens. Individual gains rather than broader gains to the community were sought. Also, in both Saltillo and Aguascalientes, revenue directors said that it was usually wealthier citizens who asked for exemptions and exceptions to their tax obligations while poorer residents were more compliant. The revenue directors blamed this on a culture of entitlement or of feeling above the average or being able to ride the system and a culture of timidity towards local government officials on the part of poorer residents.

Is the link stronger in a context of democracy?

While the Mexican case provided a specific context in which to explore taxation-accountability linkages, I also probed whether, within Mexico, the linkages might be stronger in a context of greater democracy. The hypothesis that the relationship would be stronger in a context of democracy was not strongly supported by either the quantitative or the qualitative evidence.

Beginning with the quantitative results, the coefficient on the interaction term created between democracy and taxation was not statistically significant in a way that would suggest that the relationship between taxation and accountability would be stronger in a context of greater democracy. While this was only tested for one of the three proxies for accountability (*Drainage coverage*), I draw the conclusion that the context of democracy did not make relationships between tax dependence and accountability any stronger.

What did we learn from the case studies? This was examined in a different way in the qualitative analysis. Since electoral competition is now widespread across Mexican municipalities, especially urban ones, I decided that electoral competition no longer served as a workable proxy for a measure of democracy. I thus instead compared, from the pool of structurally similar urban municipalities, three that were consistently ranked relatively low in terms of transparency and accountability in national rankings and three

that ranked particularly high, as an analogous measure of the strength of state-society relations and relative democracy compared to the other.

Coercive taxation was not witnessed in either of the two groups. With regard to the tax revenue collecting strategies, in both groups efforts were made to improve the image of the local government alongside revenue raising efforts. It should be noted that the differences in levels of democracy, state-society relations, taxation and accountability among the urban case studies was not as great as may have been the case if one were to compare these to remote, rural municipalities deep in the authoritarian enclaves. Yet some differences were found.

The main difference was that each of the municipalities that ranked low ran into problems in raising their tax revenues, preventing any further processes along the chain that would galvanise greater accountability. In Acapulco, drug traffickers prevented the municipality from modernising and updating the property registry in order to increase their property tax payments. In La Paz the opposition party in power at the state government level prevented the municipal government from raising taxes or introducing new taxes. In Centro there was a low tax compliance culture which was said be due to distrust of the government yet it may also have been a result of oil wealth that made residents feel that the government did not need tax revenues as it should already have had sufficient revenues through the oil production.

By contrast, those municipalities that ranked high did not list any problems in increasing their tax take and residents appeared to be more accepting to pay taxes, though this was difficult to compare across municipalities. The context of greater transparency and accountability may have contributed to greater seeming compliance but may also go hand in hand with greater institutionalisation of procedures, a more advanced bureaucracy, and greater control and authority over the jurisdiction, especially compared to rival powers like narcotics traffickers. This made tax revenue collecting more stable and problem-free, thus making it more likely that processes such as tax bargaining could follow. The multi-step process described in Figure 17 in Chapter 6 was thus extinguished at the first stage.

The general context of electoral competition led local governments not to tax coercively but not to want to tax at all. For instance, in Centro, the local governments all remembered how unpopular a former mayor became who had tried to raise property values to their market values, despite relatively mild year-on-year increases. The more electoral competition there was, the more the need to be popular and not to tax. This was clear in the Municipality of Aguascalientes where I was told that the reason why the predecessor PRI government there had embarked on an ambitious modernisation programme of the cadastre was because it did not feel great competition from other parties; that is, the political momentum was such that they were certain that the party would win again in the following term.

What can be expected of the property tax compared to other taxes and why?

In the quantitative analysis, positive and statistically significant associations were found between the property tax variable and the accountability measures, both in the cross-sections and in the panel regressions. However, it is important to be cautious with these results given that endogeneity problems from reverse causality may have affected the results. For instance, more transparent municipalities are also more likely to have transparent and well working property registries and thus collect more property tax for that reason. It was difficult to isolate these effects in the quantitative analysis. There may also have been spurious causality: in particular, property tax collection involves administering an organised cadastre and gathering information about the residents. This increased information and administrative capacity could, in turn, be conducive for greater transparency and responsiveness.

It could be confirmed that, even though the property tax is an important tax handle for local governments in many countries, local governments are thus reluctant to exploit it. The reasons for this were explained in the previous chapters and are consistent with the literature on the property tax that has often highlighted its unpopularity among taxpayers and among local leaders who are thus reluctant to collect it. The municipal leaders had at least one eye on higher office, especially the ambitious young mayors in Mérida and

Saltillo, and were very intent on maintaining their popularity. In the case of the mayor of Saltillo, however, they mayor appeared to feel that his popularity would be more greatly maintained if he was able to fulfil his promise of zero deficit by the end of the term period, even if this meant continuing to bother residents with taxes and sending out warrants for arrears.

The case studies showed that explicit tax bargaining for mutually beneficial governance outcomes was observed only with taxes different from the property tax. This is likely due to the tax incidence and prior organisational strength of the taxpayers: those taxes paid by a narrow group with special interests, such as street vendors or the transport union, both of which have common, clearly defined needs and demands and leaders who represent them vis-à-vis the government, were the taxes around which explicit tax bargains were observed. The local government could easily approach the leaders of these groups and lure them to pay taxes with clearly defined concessions.

As mentioned above in the subsections on obstacles, the property tax, however, did not appear to be conducive for direct explicit bargaining initiated by the local government. Concessions were very general and difficult to target to specific property owners (except concessions on their actual tax obligation). This is because the (major) property taxpayers did not tend to form a homogenous group with common interests and representatives. It is imaginable that if a specific residential area or colony does not receive adequate services, it could group together and boycott property tax payments, but this was not observed or heard of in any of the cases studied.

One interesting, though probably unusual, exception was when residents of a colony that officially pertained to neighbouring municipality of Centro protested and actively paid property tax to the Municipality of Centro in order to motivate that municipal government to grant them a delegate to represent them and to extend municipal services to their colony.

There were, however, implicit agreements and these may have led to the seeming causal relationship observed in the quantitative analysis between property taxation and accountability. Residents were willing to pay more property tax when the local

government was regarded as accountable, but withheld their property tax payments when the government was regarded as corrupt or performed inadequately. On the side of the governments, these made greater efforts to collect property taxes when they enjoyed a reputation as being accountable but dropped all efforts when public discontent, particularly due to corruption scandals such as during the PRI government in Merida, threatened their popularity.

The seeming causal relationship in the quantitative analysis may also have been observed because of another causal relationship, different from that of tax bargaining. This is because maintaining a property cadastre requires administrative capacity and development and information gathering about the residents. It also brings greater legal security of property and trust. These factors, which could not be controlled for, show that property taxation may be leading to greater accountability, but not through tax bargaining.

9.3 Implications for theory and practice

This thesis has responded to several gaps in the literature. First, few studies have explored taxation-accountability linkages in developing countries empirically and even fewer have examined it at the local level. The thesis has thus added to the otherwise scarce literature on taxation-accountability linkages at the local level, yet focusing on a different country and a different context from those previously studied. While the research findings need to be considered within their context and limitations, theoretical implications that derive from the findings are also relevant for the debate in the wider literature. This section summarises how the findings corroborate, qualify and/or contradict the existing literature through some of its key insights. It also discusses the methods to be used for further research in this area and draws lessons for development policy.

New case, different approach

Besides adding further evidence, this thesis has improved on previous attempts to study these linkages by being the first, to my knowledge, to combine within-country large-N analysis with qualitative small-N case studies in a mixed methods research design or Q^2 approach. This not only has several advantages that increase the validity of the findings and the confidence in the conclusions, but it has also allowed me to address the contradictory evidence on this issue in the literature stemming from the qualitative research camp on one hand and the quantitative camp on the other.

The mixed methods research approach applied here provides a number of advantages over the existing studies that fall into either one of the two categories (quantitative or qualitative research) alone. Small-N studies are able to identify causal processes and analyse precise institutional dynamics more deeply with greater attention and nuance to each of its specificities. Yet they are but single examples, making it difficult to generalise beyond the few cases they examine (Faguet, 2012). Large-N studies, on the other hand, benefit from being replicable and more transparent, using consistent and relatively unbiased indicators and categories, as well as from a higher degree of generalisability. However, it is difficult to categorise and quantify complex dynamics and concepts, it is difficult to specify models adequately, given a potential multitude of influencing and interacting factors in complex social processes, and problems of identifying causal mechanisms (Gerring:3-4).

Blending the two is key for an analysis of taxation-accountability linkages. While the large-N analysis could look for general trends, only through more detailed field research of a few specific cases could data be gathered and in-depth knowledge gained about how the causal pathways worked, if A was really leading to B, and through which mechanism.

The combination of small-N case studies combined with a within-country large-N analysis was also useful because the two methods complemented one another at different stages of the analysis throughout the research. For instance, the qualitative analysis informed which variables needed to be controlled for in the quantitative analysis. It particularly highlighted the need to control for municipality invariant variables through panel

regression as levels in tax revenue and accountability were largely dependent on structural factors and other municipality specific characteristics, such as administrative capacity, the quality of the cadastre, the proportion of rural land plots, the level of sophistication of the municipal government bureaucracy, etc. This information, acquired in the field research, thus guided the choice of controls in the quantitative analysis. It also enabled a better understanding of results obtained from the econometric regressions.

Resolving the contradiction in the literature between methodological camps

The contradictory findings between the two camps of literature particularly highlight the importance of the mixed methods approach and allowed me to address this contradiction. In Chapter 1, a review of the literature showed that, on the one hand, there is a small body of *quantitative* large-N statistical literature that, for the most part, *supports* that the taxation-accountability theory works at the subnational level in developing countries (Gadenne, 2013; Gervasoni, 2010; Hoffman & Gibson, 2005). On the other hand, there is also a small body of *qualitative* case study literature that illustrates a different picture. The case studies at the local government level were conducted in China (Bernstein & Lü, 2003, 2008), East Africa (Fjeldstad, 2001a; Fjeldstad & Therkildsen, 2008), and Senegal (Juil, 2006) and have shown that increased pressure to raise tax revenues tended to lead to coercive tax collection methods, “often characterised by violent and extortive forms of taxation” (Fjeldstad, 2001b;302) or no taxation, rather than to any agreement to increase accountability, therefore *countering* the taxation-accountability theory.

How has the evidence found here helped to further the knowledge and/or reconcile this seeming contradiction? The previous large-N literature has found positive relationships between taxation and accountability in support of their causal argument. In this study, the large-N regression results support the idea that taxation and accountability are positively associated, even controlling for various factors like development, size of the overall budget, and political, geographic and cultural factors. However, proving causality posed problems as revealed by more sophisticated panel regressions with fixed effects and time lags. Spurious correlations or reverse causality may have driven the correlations and endogeneity problems are likely to have affected results. These problems are also likely to have affected results in existing studies, especially those using only cross-sectional

regressions. Problems of method and data would also affected results in other studies, especially those comparing cross-country data that cannot soundly be compared. Another problem was that of adequately capturing the concepts. Unlike previous studies, this analysis included more than one or two proxies for the multi-dimensional concept of accountability as dependent variables in separate regression models, but the problem remains. It is thus possible that wrong conclusions about causal arguments were drawn from simple correlations and that data and specification problems affected attempts at showing causation.

The existing small-N study literature, by contrast, found that taxation usually did *not* lead to tax bargaining or greater accountability, just like this thesis, but for different reasons. In the existing literature, the reason was that the local context led to coercive taxation rather than tax bargaining. In this research, no coercive taxation was observed. Instead, other obstacles broke the chain and either prevented tax bargaining from occurring at all or prevented tax bargaining from leading to increased accountability.

The apparent contradiction in findings between camps of literature and between the two approaches taken in this dissertation can therefore be traced back to two factors. First, the divergent conclusions between the different methodologies can be partly explained by the fact that the quantitative models are not always properly specified to isolate the effects of taxation, solve endogeneity problems, and adequately prove causality, implying that the relationships found may be based on spurious correlations or reverse causality and/or data problems. While the recent within-country studies are already superior to the more frequently found cross-national statistical tests, this needs to be tested in further contexts. Gadenne (2012) and Gervasoni (2010) have made strides to overcome endogeneity problems through instrumental variable regression. Yet best would be to complement such attempts this with qualitative case study research in a mixed methods approach, for the reasons described at the beginning of this section.

A second explanation for the disparities between the bodies of existing literature is that the linkages simply hold in some contexts but not in others. The within-country statistical studies and the case studies have all been conducted in different countries. While the recent theoretical literature has already established that outcomes are highly contingent

on contextual factors and circumstances (Levi, 1999; Moore, 2008; Prichard, 2009, 2010b), this thesis has explored the linkages in a new context (that of Mexico with its specific characteristics and institutional framework) but has looked at different contexts within Mexico. It has shown that different contexts provide different obstacles that may hinder an otherwise predictable course of events.

Resolving the contradictions with other small-N literature

The previous studies on local taxation and accountability where coercive taxation was found have been based on examples from China and Sub-Saharan Africa. Part of the explanation for this is that in agrarian societies, local governments tax immobile assets which local residents cannot escape. Yet the Mexican case also involved the taxation of an immobile base (property) and no coercion was observed.

There are at least three major differences in the context that can explain this. One lies in the intergovernmental power structure. In the Chinese example, local governments were under considerable pressure to raise tax revenues from higher levels of government, but were free to impose new taxes and higher tax rates with little control, leading to arbitrary new taxes, duplicate taxing of revenue bases and other forms of what was considered overly harsh taxation, often using (threats of) coercive measures. In Mexico, local governments are restricted from imposing new taxes or raising rates without the consent of the state congress, thereby generally precluding arbitrary taxes and overly harsh rates.

A further difference is the context of electoral competition. In Mexico, highly competitive elections and the importance of property tax policy as one of the only ways for candidates to differentiate between one another, that made it unlikely for coercive taxation to occur. Given that local authorities were very conscious of the political cost of taxation to their future election or career path, they did not attempt to tax in any way that would be deemed unfair or overly harsh.

Another difference is that the case studies in this thesis have focused on urban local governments. The situation may be different in the more isolated backwaters in which authoritarian enclaves thrive and survive, where information does not flow as freely, and

where pressure for accountability and democracy may not be as strong. Given that the majority of the population lives in urban local governments and that is also where the bulk of local taxes are collected, it is particularly important to study the urban context and not to conclude from the existing studies that *all* local taxation is prone to coercive practices rather than tax bargaining.

Corroboration and contestation on the context and circumstances

This thesis has corroborated the theoretical literature in that the context of taxation is crucial for its effects on accountability. As mentioned above, results of revenue pressures were different from those in rural agrarian settings, mostly likely because of the intergovernmental framework, electoral competition and urbanisation. This thesis has also shown that results are contingent on the tax type. According to the quantitative results, the property tax appeared particularly conducive to sparking accountability compared with other municipal taxes and fees. This corroborates the idea that taxes which are broad based, adhere to the benefit principle, and are visible, felt and salient (which the property tax is), are more likely to spark accountability than those tax types that are not. However, the qualitative analysis showed that direct explicit tax bargaining was unlikely around the property tax. Because property owners didn't make up a small, homogenous group that the government could easily approach with specific concessions, tax bargaining around specific issues was not considered. There may have been implicit agreements to be more transparent and accountable (though this was hard to prove). Yet it is also likely that the quantitative results were due to spurious causality and that the causal mechanism was instead that increasing property tax revenue necessitates creating greater administrative capacity (gathering information on the population, maintaining an updated and organised property tax registry), all of which facilitate transparency and responsiveness to residents' needs.

Policy implications

Can increased local taxation and pressure to raise tax revenues at the local level bring about greater local accountability? This is an important policy question for development

policy as many local governments in developing countries suffer from poor governance and a lack of accountability. At the same time, more expenditure power and administrative functions are being passed to local level governments. Additionally, rapid urbanisation has turned many urban municipal governments into extremely important players in terms of promoting development for a large amount of people. While some local leaders use their term periods effectively, working with and for its population, others use it to empty the government coffers without making any effort to respond to the residents' needs and demands. If increased dependence on taxation can help to turn the second group into the first, then this should be promoted as a policy.

The evidence presented in this thesis leads us to several considerations about tax decentralisation. While in general, evidence of the mechanism from local taxation (operationalised as revenue raising pressure or importance of tax revenues in the budget) to accountability was found, various obstacles stood in the way. The following considerations should thus be taken into account.

First, the Mexican case shows that decentralising tax powers to subnational governments does not imply that subnational governments will make use of these, develop any dependence on taxation, or feel genuinely pressured to raise tax revenue. However, the Mexican case also shows that (a) imposing a hard budget constraint through a stricter policy on financial rescues and (b) introducing a transfer formula that effectively rewards tax effort with a greater share of central government transfers can help uphold revenue pressure to some degree.

For the taxation-accountability link to take hold, local governments need to be *dependent* on taxation. Unless there is a high degree of dependence on the taxpayers for revenues, the local government will have little incentives to engage in tax bargaining with its residents. Strong dependence on taxation is difficult to attain at the local government level. Since local tax revenue usually doesn't suffice to pay for all of their expenditure responsibilities, local governments tend to be financed through some combination of transfers, taxes, credit, and other revenue sources. When transfers from the central government abound, when municipalities can easily borrow on the market with no accountability, when they can pass their debts on to the next administration with

impunity, and when they can expect a bailout from the central government following fiscal mismanagement, there is little dependence on taxation. While own revenues give local governments independence from the centre, they are also more costly to collect, both economically and politically (the latter particularly if the local leaders are popularly elected or if they hope to be elected for other positions in future), and local governments will prefer to rely on alternative revenue sources.

Possible solutions to increasing dependence on taxation by local government therefore include: a) rewarding marginal increases in tax effort with greater transfers and designing transfer formulas in a way that the gain is obvious and substantial to the municipalities; b) making local governments accountable to credit institutions for loans rather than having central government bail them out if they do not comply with repayments (i.e. allow local governments to fail and suffer the consequences for poor management); c) improving transparency around accounting so that municipalities cannot so easily hide money and pass the buck to the next administration.

Limited power to decide on expenditures (and to affect real changes in the municipality) and on local tax policy (e.g. to introduce new laws or change the tax rate) has proven to be an obstacle to tax bargaining. If local governments do not have the power to exact changes that affect local residents and are not able to take full responsibility for their local policies, this precludes negotiations around taxation and opportunities for mutually beneficial agreements between the local government and local residents.

It would thus be beneficial to tax bargaining if local governments were to have more control over tax rates and bases and over expenditure decisions in order to have greater bargaining power and a wider choice of concessions to make for residents. The fear that municipalities in Mexico would drastically raise tax rates and impose a row of new taxes has proven entirely unwarranted in the context of electoral competition as municipal governments in any case fear the political costs associated with taxation. To prevent coercive taxation, a tax rate range could be introduced, with both a minimum rate (to prevent dropping tax revenues altogether like the elected candidate in Aguascalientes did with the property tax) and a maximum to prevent abusive overtaxing.

Regarding expenditure powers, there is a trade-off between allowing local governments greater decision-making power to respond to specific needs and demands of their localities (but also allowing them greater freedom to fail) on one hand, and losing central or state government control over governance (including preventing them from failing their residents). Earmarked transfers, conditionality, higher level approval requirements, and also short term periods, limit the freedom of what local governments can do to respond to specific demands to increase accountability following tax bargaining. As Ahmad and Brosio (2008) write, “subjecting local governments to strict conditionality is still considered in Latin America as a necessary instrument of good governance to ensure better targeted social spending. [This] reduce[s] the scope of decision-making by subnational officials, and also their accountability.”

Regarding the short time horizon of local governments due to high staff turnover, short term periods for local government leaders and no consecutive re-election. Consecutive re-election (which will soon come into force in Mexico) and longer term limits may slightly increase the time horizon of local politicians, as would a more stable bureaucracy with less frequent staff turnover. Nevertheless, even where there is consecutive re-election, political time horizons sadly do not tend to reach beyond the next elections. And while one administration may change course over another in terms of its policies on transparency and accountability, there tends to be consistency in these over time. Expectations are set and it is difficult to justify taking away good practices that have been established by previous administrations.

Finally, there is much scope among local governments in communicating a greater link between taxation and its benefits to the population and increasing transparency. If the benefits of taxation are made clearer and are linked to specific benefits to residents, this is not only likely to foster tax compliance but also to create greater accountability.

Decentralising taxation from higher to more local levels of government does not automatically imply increasing the overall tax burden on the individual resident. Yet what about going beyond this and expanding the tax burden? It is not uncontroversial to promote taxation in developing countries and among poor populations. Why make lives even more difficult for poor people by demanding taxes?

Putting these principles into practice requires judgement calls and knowledge of the specific contexts at hand. It requires weighing the pros and cons of its wider effects, something that is beyond the scope of this thesis. For example, property taxation usually requires extensive information-gathering and high skills and technical capacity to maintain an updated property cadastre. This may have high administrative costs that channel funds away from other purposes. Yet at the same time, the property tax is generally progressive and may help redistribute quickly growing concentrations of wealth among small parts of increasingly unequal societies witnessed in many developing countries, especially in urban areas. The administrative tasks are also likely to improve the overall administrative capacity of local government, making it more capable of responding to local residents' needs. Finally, a property registry provides greater legal certainty to residents and makes money laundering more difficult which in turn bolsters a sense of security among local residents and fosters business and investment. Such pros and cons need to be weighed in each case.

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Annex A: Additional regression tables

Annex table 1 Effect of *Tax/total* on *Transparency with State*, linear, time lag, 2008

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <i>Tax/total</i> | 3.195*** (.259) | 1.856*** (.316) | 1.385*** (.325) | 1.435*** (.336) | 1.416*** (.338) | 1.390*** (.337) | 1.351*** (.322) |
| <i>Development</i> | | 2.677*** (.446) | 2.048*** (.467) | 1.958*** (.517) | 1.905*** (.538) | 1.573** (.533) | .665 (.475) |
| <i>Rural</i> | | | -.031*** (.007) | -.023** (.009) | -.014 (.009) | -.015 (.009) | -.016 (.008) |
| <i>Budget</i> | | | | -.000* (.000) | -.000** (.000) | -.000*** (.000) | -.000*** (.000) |
| <i>Governor</i> | | | | | -.008 (.044) | .001 (.044) | .099* (.047) |
| <i>North</i> | | | | | | .203** (.064) | |
| <i>Baja California</i> | | | | | | | -.447* (.215) |
| <i>Baja California Sur</i> | | | | | | | -.899** (.341) |

| | |
|-----------------------------|----------------------|
| <i>Campeche</i> | - .508** (.188) |
| <i>Coahuila de Zaragoza</i> | - .336* (.138) |
| <i>Colima</i> | - .828*** (.224) |
| <i>Chiapas</i> | - 1.030*** (.140) |
| <i>Chihuahua</i> | .028 (.124) |
| <i>Durango</i> | - .737*** (.148) |
| <i>Guanajuato</i> | - .599** (.191) |
| <i>Guerrero</i> | - 1.595*** (.169) |
| <i>Hidalgo</i> | - .795*** (.141) |
| <i>Jalisco</i> | - .852*** (.127) |
| <i>México</i> | - .584*** |

| | |
|----------------------------|-----------|
| | (.131) |
| <i>Michoacán de Ocampo</i> | -.811*** |
| | (.129) |
| <i>Morelos</i> | -.433* |
| | (.188) |
| <i>Nayarit</i> | -.369 |
| | (.192) |
| <i>Nuevo León</i> | -1.205*** |
| | (.169) |
| <i>Oaxaca</i> | -1.458*** |
| | (.145) |
| <i>Puebla</i> | -.823*** |
| | (.128) |
| <i>Querétaro</i> | -.266 |
| | (.238) |
| <i>Quintana Roo</i> | .145 |
| | (.216) |
| <i>San Luis Potosí</i> | -.737*** |
| | (.169) |
| <i>Sinaloa</i> | -.102 |
| | (.174) |

Annex table 2 Effect of Tax/total on Drainage coverage with State, time lag, quadratic, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| <i>Tax/total</i> | 3.191*** (.167) | .909*** (.139) | .916*** (.149) | .937*** (.152) | .942*** (.151) | .946*** (.151) | .214 (.143) |
| <i>Tax squared</i> | -6.163*** (.575) | -2.351*** (.392) | -2.361*** (.402) | -2.439*** (.412) | -2.439*** (.407) | -2.418*** (.404) | -.902** (.336) |
| <i>Development</i> | | 2.217*** (.078) | 2.221*** (.083) | 2.176*** (.087) | 2.168*** (.088) | 2.321*** (.091) | 2.554*** (.088) |
| <i>Rural</i> | | | .000 (.001) | -.001 (.001) | -.001 (.001) | -.000 (.002) | -.002 (.001) |
| <i>Budget</i> | | | | .000* (.000) | .000* (.000) | .000*** (.000) | .000*** (.000) |
| <i>Governor</i> | | | | | -.014 (.008) | -.012 (.007) | -.002 (.007) |
| <i>North</i> | | | | | | -.093*** (.011) | |
| <i>Baja California</i> | | | | | | | -.231*** (.033) |
| <i>Baja California Sur</i> | | | | | | | -.285*** (.040) |
| <i>Campeche</i> | | | | | | | -.290*** |

| | |
|-----------------------------|----------|
| | (.045) |
| <i>Coahuila de Zaragoza</i> | -.204*** |
| | (.031) |
| <i>Colima</i> | -.069 |
| | (.039) |
| <i>Chiapas</i> | .024 |
| | (.030) |
| <i>Chihuahua</i> | -.192*** |
| | (.028) |
| <i>Durango</i> | -.182*** |
| | (.028) |
| <i>Guanajuato</i> | -.120*** |
| | (.027) |
| <i>Guerrero</i> | -.222*** |
| | (.031) |
| <i>Hidalgo</i> | -.126*** |
| | (.026) |
| <i>Jalisco</i> | -.017 |
| | (.025) |
| <i>México</i> | -.118*** |
| | (.025) |

| | | |
|----------------------------|----------|--------|
| <i>Michoacán de Ocampo</i> | -.059* | (.026) |
| <i>Morelos</i> | -.122*** | (.030) |
| <i>Nayarit</i> | -.083** | (.030) |
| <i>Nuevo León</i> | -.194*** | (.028) |
| <i>Oaxaca</i> | .000 | (.) |
| <i>Puebla</i> | -.077** | (.026) |
| <i>Querétaro</i> | -.104** | (.033) |
| <i>Quintana Roo</i> | -.225*** | (.035) |
| <i>San Luis Potosí</i> | -.289*** | (.032) |
| <i>Sinaloa</i> | -.180*** | (.031) |
| <i>Sonora</i> | -.189*** | |

| | | | | | | | |
|--|-----------|--------------|----------|----------|----------|-----------|-----------|
| <i>Tabasco</i> | | | | | | | (.028) |
| | | | | | | | .000 |
| | | | | | | | (.030) |
| <i>Tamaulipas</i> | | | | | | | -.351*** |
| | | | | | | | (.040) |
| <i>Tlaxcala</i> | | | | | | | -.052 |
| | | | | | | | (.027) |
| <i>Veracruz de Ignacio de la Llave</i> | | | | | | | -.117*** |
| | | | | | | | (.027) |
| <i>Yucatán</i> | | | | | | | -.340*** |
| | | | | | | | (.029) |
| <i>Zacatecas</i> | | | | | | | -.104*** |
| | | | | | | | (.026) |
| Constant | .594*** | -.991*** | -.996*** | -.968*** | -.956*** | -1.077*** | -1.097*** |
| | (.009) | (.058) | (.067) | (.069) | (.070) | (.072) | (.073) |
| Observations | 1726 | 1726 | 1726 | 1693 | 1693 | 1693 | 1693 |
| R-squared | .282 | .502 | .502 | .500 | .501 | .520 | .664 |
| Standard errors in parentheses | | | | | | | |
| "* p<0.05 | ** p<0.01 | *** p<0.001" | | | | | |

Annex table 3 Effect of *Tax/total* on *Electoral competition* with *State*, linear, time lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
| <i>Tax/total</i> | 8.917*** (1.030) | 4.702*** (1.064) | 2.737* (1.075) | 3.768*** (1.143) | -.163 (1.221) | 3.714** (1.132) | 1.632 (1.339) |
| <i>Development</i> | | 9.713*** (1.062) | 7.031*** (1.094) | 4.422*** (1.243) | 5.004** (1.654) | 4.128*** (1.254) | 5.362** (1.741) |
| <i>Rural</i> | | | -.251*** (.039) | -.284*** (.040) | -.194*** (.046) | -.287*** (.040) | -.090** (.034) |
| <i>Budget</i> | | | | .002*** (.001) | -.000 (.000) | .002*** (.001) | -.001* (.000) |
| <i>Governor</i> | | | | | -.516* (.256) | | -1.188*** (.308) |
| <i>North</i> | | | | | | .549 (.321) | |
| <i>Baja California</i> | | | | | | | .000 (.) |
| <i>Baja California Sur</i> | | | | | | | .000 (.) |
| <i>Campeche</i> | | | | | | | -.999 (1.315) |

| | |
|-----------------------------|-----------|
| <i>Coahuila de Zaragoza</i> | -1.865* |
| | (.921) |
| <i>Colima</i> | .000 |
| | (.) |
| <i>Chiapas</i> | -.243 |
| | (.964) |
| <i>Chihuahua</i> | -.341 |
| | (1.053) |
| <i>Durango</i> | .310 |
| | (1.262) |
| <i>Guanajuato</i> | -4.881*** |
| | (.843) |
| <i>Guerrero</i> | -.589 |
| | (.839) |
| <i>Hidalgo</i> | -2.344** |
| | (.781) |
| <i>Jalisco</i> | .041 |
| | (1.034) |
| <i>México</i> | .754 |
| | (1.023) |
| <i>Michoacán de Ocampo</i> | -.165 |

| | |
|------------------------|---------------------|
| | (.950) |
| <i>Morelos</i> | -.805 (1.050) |
| <i>Nayarit</i> | -1.798 (1.123) |
| <i>Nuevo León</i> | -1.345 (.857) |
| <i>Oaxaca</i> | -2.564** (.784) |
| <i>Puebla</i> | -1.976** (.759) |
| <i>Querétaro</i> | -.137 (1.289) |
| <i>Quintana Roo</i> | -3.101** (1.084) |
| <i>San Luis Potosí</i> | .000 (.) |
| <i>Sinaloa</i> | -.730 (1.276) |
| <i>Sonora</i> | -.687 (.863) |

| | | | | | | | | |
|--|--|--|--|--|--|--|--|--------------------|
| <i>Tabasco</i> | | | | | | | | -2.292 (1.283) |
| <i>Tamaulipas</i> | | | | | | | | -2.614** (.823) |
| <i>Tlaxcala</i> | | | | | | | | -.733 (.963) |
| <i>Veracruz de Ignacio de la Llave</i> | | | | | | | | .086 (.834) |
| <i>Yucatán</i> | | | | | | | | -2.709** (.825) |
| <i>Zacatecas</i> | | | | | | | | .000 (.) |

| | | | | | | | |
|--------------|---------|-----------|--------|--------|---------|--------|---------|
| Constant | .939*** | -5.443*** | -1.294 | .262 | 1.044 | .506 | 1.170 |
| | (.097) | (.698) | (.886) | (.960) | (1.293) | (.972) | (1.538) |
| Observations | 1874 | 1858 | 1858 | 1858 | 1685 | 1858 | 1623 |

Standard errors in parentheses

=* p<0.05

** p<0.01

*** p<0.001"

Annex table 4 Pathway: cross-section, Effects of *Tax/total* on *Transparency*, no lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------|----------|-----------|-----------|----------|----------|----------|
| <i>Tax/Total</i> | 3.708*** | 2.532*** | 2.532*** | 1.832*** | 1.850*** | 1.586*** |
| | (.325) | (.408) | (.408) | (.407) | (.404) | (.405) |
| <i>Development</i> | | 2.306*** | 2.306*** | 1.510** | 1.612*** | 1.412** |
| | | (.455) | (.455) | (.467) | (.475) | (.523) |
| <i>Rural</i> | | | | -.040*** | -.036*** | -.020* |
| | | | | (.008) | (.008) | (.008) |
| <i>Budget</i> | | | | | -.000 | -.000** |
| | | | | | (.000) | (.000) |
| <i>Governor</i> | | | | | | -.023 |
| | | | | | | (.044) |
| <i>North</i> | | | | | | .201** |
| | | | | | | (.065) |
| Constant | -.095*** | -1.780*** | -1.780*** | -.845* | -.898* | -.719 |
| | (.028) | (.332) | (.332) | (.370) | (.374) | (.412) |
| Observations | 1731 | 1729 | 1729 | 1729 | 1729 | 1476 |
| R-squared | .098 | .114 | .114 | .129 | .131 | .103 |

Standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001

Annex table 5 Pathway: cross-section, Effects of *Tax/total* on *Drainage coverage*, no lag, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------------|-----------|-------------|-----------|-----------|-----------|-----------|
| | Tax/Total | Development | Rural | Budget | Gov | North |
| <i>Tax/Total</i> | 2.996*** | .911*** | .901*** | .921*** | .915*** | 1.005*** |
| | (.158) | (.128) | (.134) | (.135) | (.134) | (.129) |
| <i>Tax/Total squared</i> | -4.946*** | -1.898*** | -1.886*** | -1.939*** | -1.922*** | -2.094*** |
| | (.509) | (.314) | (.319) | (.324) | (.319) | (.301) |
| <i>Development</i> | | 2.133*** | 2.126*** | 2.096*** | 2.094*** | 2.260*** |
| | | (.080) | (.084) | (.087) | (.087) | (.089) |
| <i>Rural</i> | | | -0.00 | -0.001 | -0.001 | -0.00 |
| | | | (.001) | (.001) | (.001) | (.001) |
| <i>Budget</i> | | | | .000 | .000 | .000*** |
| | | | | (.000) | (.000) | (.000) |
| <i>Governor</i> | | | | | -0.016* | -0.012 |
| | | | | | (.007) | (.007) |
| <i>North</i> | | | | | | -0.114*** |
| | | | | | | (.010) |
| Constant | .579*** | -.936*** | -.927*** | -.910*** | -.900*** | -1.040*** |
| | (.009) | (.058) | (.066) | (.068) | (.068) | (.069) |
| Observations | 1771 | 1771 | 1771 | 1771 | 1771 | 1771 |
| R-squared | .312 | .506 | .506 | .506 | .507 | .536 |

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Annex table 6 Pathway: cross-section, Effects of *Tax/total* on *Electoral competition*, no lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------|----------------------|----------------------|----------------------|----------------------|--------------------|--------------------|
| <i>Tax/total</i> | 20.036*** (1.822) | 16.985*** (1.939) | 11.864*** (2.037) | 12.524*** (2.093) | 1.623 (2.586) | 1.607 (2.584) |
| <i>Development</i> | | 4.344*** (1.088) | 1.952 (1.127) | 1.256 (1.225) | 5.160** (1.959) | 5.127** (1.971) |
| <i>Rural</i> | | | -.279*** (.037) | -.287*** (.038) | -.128** (.049) | -.129** (.049) |
| <i>Budget</i> | | | | .000 (.000) | -.000 (.000) | -.000 (.000) |
| <i>Governor</i> | | | | | -.930** (.284) | -.932** (.284) |
| <i>North</i> | | | | | | .072 (.345) |
| Constant | .582*** (.088) | -2.503** (.775) | 1.896* (.931) | 2.338* (.985) | .735 (1.559) | .767 (1.571) |
| Observations | 2063 | 2063 | 2063 | 2057 | 1789 | 1789 |
| Pseudo R-squared | .110 | .119 | .160 | .162 | .080 | .080 |

Robust standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001"

Annex table 7 Pathway: panel, Effects on Drainage, no lag

| | (1) | (2) | (3) | (4) |
|---------------------------------------|-----------|--------------|---------|---------|
| <i>Tax/total</i> | .043* | .043* | .038 | .038 |
| | (.021) | (.021) | (.021) | (.021) |
| <i>year=1990</i> | .000 | .000 | .000 | .000 |
| | (.) | (.) | (.) | (.) |
| <i>year=1995</i> | .137*** | .137*** | .136*** | .136*** |
| | (.003) | (.003) | (.003) | (.003) |
| <i>year=2000</i> | .201*** | .201*** | .194*** | .194*** |
| | (.003) | (.003) | (.004) | (.004) |
| <i>year=2005</i> | .359*** | .360*** | .346*** | .347*** |
| | (.004) | (.004) | (.006) | (.006) |
| <i>Governor</i> | | .002 | | .003 |
| | | (.003) | | (.003) |
| <i>Budget</i> | | | .000** | .000** |
| | | | (.000) | (.000) |
| Constant | .381*** | .380*** | .381*** | .380*** |
| | (.003) | (.004) | (.003) | (.004) |
| Observations | 6700 | 6666 | 6699 | 6665 |
| R-squared | .732 | .732 | .732 | .733 |
| Robust standard errors in parentheses | | | | |
| "* p<0.05 | ** p<0.01 | *** p<0.001" | | |

Annex table 8 Pathway: panel, Effects on Electoral competition, no lag

| | (1) | (2) | (3) | (4) |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|
| <i>Tax/total</i> | -0.479 (.515) | -0.529 (.521) | -0.117 (.533) | -0.185 (.535) |
| <i>T1 (1989-1991)</i> | -5.581*** (.158) | -5.441*** (.164) | -5.434*** (.221) | -5.310*** (.225) |
| <i>T2 (1992-1994)</i> | -4.468*** (.099) | -4.322*** (.108) | -4.227*** (.148) | -4.120*** (.155) |
| <i>T3 (1995-1997)</i> | -2.600*** (.090) | -2.502*** (.096) | -2.338*** (.138) | -2.288*** (.143) |
| <i>T4 (1998-2000)</i> | -1.214*** (.091) | -1.097*** (.097) | -.973*** (.128) | -.910*** (.132) |
| <i>T5 (2001-2003)</i> | .153 (.120) | .375** (.134) | .332* (.134) | .492*** (.144) |
| <i>Governor</i> | | -.538*** (.085) | | -.477*** (.086) |
| <i>Budget</i> | | | .000** (.000) | .000* (.000) |
| Observations | 14783 | 14517 | 14538 | 14288 |
| Standard errors in parentheses | | | | |
| =* p<0.05 | ** p<0.01 | *** p<0.001" | | |

Annex table 9 Property tax: cross-section, Effects on Transparency, time lag, 2008

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|----------|-----------|-----------|----------|----------|----------|
| <i>Property tax/total</i> | 4.767*** | 2.585*** | 1.945*** | 2.015*** | 2.168*** | 2.052*** |
| | (.481) | (.502) | (.491) | (.515) | (.500) | (.496) |
| <i>Development</i> | | 2.987*** | 2.104*** | 2.070*** | 1.737** | 1.498** |
| | | (.425) | (.462) | (.521) | (.543) | (.537) |
| <i>Rural</i> | | | -.036*** | -.028** | -.017 | -.018* |
| | | | (.007) | (.009) | (.009) | (.009) |
| <i>Budget</i> | | | | -.000** | -.000*** | -.000*** |
| | | | | (.000) | (.000) | (.000) |
| <i>Governor</i> | | | | | -.013 | -.002 |
| | | | | | (.045) | (.045) |
| <i>North</i> | | | | | | .175** |
| | | | | | | (.065) |
| Constant | .016 | -2.187*** | -1.242*** | -1.144** | -.879* | -.690 |
| | (.025) | (.316) | (.374) | (.422) | (.440) | (.435) |
| Observations | 1631 | 1631 | 1631 | 1469 | 1334 | 1334 |
| R-squared | .076 | .109 | .123 | .118 | .094 | .099 |

Robust standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001

Annex table 10 Property tax: cross-section, Effects on *Transparency*, no lag, 2008

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| <i>Property tax/total</i> | 5.369*** (.542) | 3.474*** (.634) | 2.468*** (.613) | 2.548*** (.611) | 2.441*** (.614) | 2.203*** (.626) |
| <i>Development</i> | | 2.715*** (.457) | 1.591** (.484) | 1.690*** (.490) | 1.286* (.547) | 1.114* (.539) |
| <i>Rural</i> | | | -.047*** (.008) | -.042*** (.008) | -.021* (.009) | -.022* (.009) |
| <i>Budget</i> | | | | -.000 (.000) | -.000** (.000) | -.000*** (.000) |
| <i>Governor</i> | | | | | -.025 (.044) | -.016 (.044) |
| <i>North</i> | | | | | | .159* (.066) |
| Constant | -.049 (.027) | -2.058*** (.337) | -.828* (.390) | -.877* (.393) | -.541 (.438) | -.396 (.433) |
| Observations | 1656 | 1654 | 1654 | 1654 | 1367 | 1367 |
| R-squared | .089 | .114 | .136 | .138 | .089 | .093 |

Robust standard errors in parentheses

=* p<0.05

** p<0.01

*** p<0.001"

Annex table 11 Property tax: cross-section, Effects on *Drainage coverage*, time lag, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-----------------------------------|------------|-----------|-----------|-----------|-----------|-----------|
| <i>Property tax/total</i> | 4.802*** | 1.105*** | 1.039*** | 1.058*** | 1.057*** | 1.229*** |
| | (.307) | (.230) | (.243) | (.249) | (.249) | (.244) |
| <i>Property tax/total Squared</i> | -14.235*** | -4.805*** | -4.653*** | -4.806*** | -4.781*** | -5.293*** |
| | (1.788) | (1.053) | (1.069) | (1.113) | (1.118) | (1.074) |
| <i>Development</i> | | 2.297*** | 2.261*** | 2.223*** | 2.219*** | 2.349*** |
| | | (.080) | (.085) | (.089) | (.089) | (.093) |
| <i>Rural</i> | | | -0.002 | -0.002 | -0.003 | -0.002 |
| | | | (.001) | (.002) | (.002) | (.002) |
| <i>Budget</i> | | | | .000 | .000* | .000*** |
| | | | | (.000) | (.000) | (.000) |
| <i>Governor</i> | | | | | -0.011 | -0.010 |
| | | | | | (.008) | (.008) |
| <i>North</i> | | | | | | -0.094*** |
| | | | | | | (.011) |
| Constant | .623*** | -1.041*** | -1.002*** | -.978*** | -.970*** | -1.080*** |
| | (.009) | (.060) | (.069) | (.071) | (.072) | (.074) |
| Observations | 1678 | 1678 | 1678 | 1649 | 1649 | 1649 |
| R-squared | .238 | .491 | .491 | .491 | .492 | .511 |

Robust Standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001

Annex table 12 Property tax: cross-section, Effects on *Drainage coverage*, no lag, 2005

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>Property tax/total</i> | 4.138*** (.209) | .950*** (.169) | .866*** (.176) | .883*** (.177) | .877*** (.177) | 1.198*** (.191) |
| <i>Property tax/total squared</i> | -9.798*** (.921) | -3.173*** (.541) | -3.016*** (.546) | -3.095*** (.552) | -3.062*** (.553) | -3.778*** (.639) |
| <i>Development</i> | | 2.310*** (.078) | 2.243*** (.085) | 2.219*** (.088) | 2.214*** (.088) | 2.355*** (.091) |
| <i>Rural</i> | | | -.003* (.001) | -.003* (.001) | -.003* (.001) | -.002 (.001) |
| <i>Budget</i> | | | | .000 (.000) | .000 (.000) | .000*** (.000) |
| <i>Governor</i> | | | | | -.013 (.008) | -.008 (.007) |
| <i>North</i> | | | | | | -.117*** (.011) |
| Constant | .621*** (.008) | -1.059*** (.058) | -.986*** (.069) | -.972*** (.070) | -.962*** (.071) | -1.091*** (.073) |
| Observations | 1634 | 1634 | 1634 | 1634 | 1634 | 1634 |
| R-squared | .249 | .490 | .491 | .492 | .493 | .525 |

Robust standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001"

Annex table 13 Property tax: cross-section, Effects on *Electoral competition*, lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>Property tax/total</i> | 14.708*** (1.756) | 8.479*** (1.808) | 2.776 (1.854) | 3.342 (1.970) | 3.342 (1.970) | 2.271 (1.957) |
| <i>Development</i> | | 8.517*** (1.033) | 3.817*** (1.102) | 3.130** (1.207) | 3.130** (1.207) | 3.021* (1.244) |
| <i>Rural</i> | | | -0.369*** (.037) | -0.350*** (.038) | -0.350*** (.038) | -0.354*** (.039) |
| <i>Budget</i> | | | | -0.000 (.000) | -0.000 (.000) | -0.000 (.000) |
| <i>North</i> | | | | | | 1.586*** (.342) |
| Constant | .725*** (.079) | -5.378*** (.740) | 1.494 (.934) | 1.906 (1.006) | 1.906 (1.006) | 2.108* (1.037) |
| Observations | 1982 | 1982 | 1982 | 1888 | 1888 | 1888 |

Standard errors in parentheses

=* p<0.05

** p<0.01

*** p<0.001"

Annex table 14 Property tax: cross-section, Effects on *Electoral competition*, no lag, 1998

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|
| <i>Property tax/total</i> | 31.686*** (3.019) | 26.107*** (3.196) | 17.384*** (3.343) | 17.678*** (3.383) | 17.678*** (3.383) | -1.106 (3.888) | 16.009*** (3.356) |
| <i>Development</i> | | 4.717*** (1.071) | 1.263 (1.130) | 1.129 (1.193) | 1.129 (1.193) | 4.658* (2.063) | .952 (1.239) |
| <i>Rural</i> | | | -0.332*** (.038) | -0.334*** (.038) | -0.334*** (.038) | -0.184*** (.054) | -0.341*** (.038) |
| <i>Budget</i> | | | | .000 (.000) | .000 (.000) | -0.000* (.000) | -0.000 (.000) |
| <i>Governor</i> | | | | | | -1.143*** (.311) | |
| <i>North</i> | | | | | | .417 (.415) | 1.862*** (.381) |
| Constant | .544*** (.080) | -2.829*** (.768) | 2.804** (.947) | 2.881** (.980) | 2.881** (.980) | 1.930 (1.692) | 3.190** (1.019) |
| Observations | 1926 | 1926 | 1926 | 1922 | 1922 | 1602 | 1922 |

Standard errors in parentheses

= " p<0.05

** p<0.01

*** p<0.001"

Annex Table 15 Property tax: Effects n Drainage coverage, panel, lag

| | (1) | (2) | (3) | (4) |
|---------------------------------------|-------------------|-------------------|-------------------|-------------------|
| <i>Property tax/total</i> | .067 (.038) | .119** (.041) | .136** (.043) | .137** (.043) |
| <i>Lagged drainage coverage</i> | .253*** | .124*** | .010 | .013 |
| <i>year=1995</i> | .000 (.) | .000 (.) | .000 (.) | .000 (.) |
| <i>year=2000</i> | .029*** (.003) | .047*** (.004) | .057*** (.005) | .056*** (.005) |
| <i>year=2005</i> | .174*** (.006) | .199*** (.007) | .212*** (.009) | .211*** (.009) |
| <i>year=2010</i> | .195*** (.009) | .254*** (.011) | | |
| <i>Governor</i> | | -.003 (.003) | | -.002 (.003) |
| <i>Budget</i> | | | .000* (.000) | .000* (.000) |
| Constant | .418*** (.010) | .461*** (.011) | .506*** (.012) | .506*** (.012) |
| Observations | 6289 | 5322 | 4696 | 4684 |
| R-squared | .694 | .665 | .628 | .629 |
| Robust standard errors in parentheses | | | | |
| * p<0.05 | ** p<0.01 | *** p<0.001 | | |

Annex table 16 Property tax: panel, effects on *Drainage coverage* with right-hand side drainage variable panel no lag

| | (1) | (2) | (3) | (4) |
|---------------------------------|-------------------|-------------------|-------------------|-------------------|
| <i>Property tax/total</i> | .174*** (.048) | .168*** (.048) | .165*** (.048) | .159** (.048) |
| <i>Lagged drainage coverage</i> | .007 (.031) | .010 (.031) | .007 (.030) | .010 (.031) |
| <i>year=1995</i> | .000 (.) | .000 (.) | .000 (.) | .000 (.) |
| <i>year=2000</i> | .074*** (.004) | .073*** (.005) | .067*** (.005) | .066*** (.005) |
| <i>year=2005</i> | .229*** (.007) | .228*** (.007) | .214*** (.008) | .213*** (.008) |
| <i>Governor</i> | | -.002 (.004) | | -.002 (.004) |
| <i>Budget</i> | | | .000** (.000) | .000** (.000) |
| Constant | .503*** (.014) | .504*** (.014) | .502*** (.013) | .503*** (.014) |
| Observations | 4438 | 4426 | 4438 | 4426 |
| R-squared | .643 | .643 | .645 | .645 |

Robust standard errors in parentheses

"* p<0.05

** p<0.01

*** p<0.001"

Annex Table 17 Property Tax: panel, effects on *Drainage coverage panel lag**

| | (1) | (2) | (3) | (4) |
|-----------------------|-------------------|-------------------|-------------------|-------------------|
| <i>Property/total</i> | .380*** (.089) | .325*** (.094) | .142 (.087) | .146 (.088) |
| <i>year=1995</i> | .000 (.) | .000 (.) | .000 (.) | .000 (.) |
| <i>year=2000</i> | .084*** (.005) | .074*** (.005) | .052*** (.008) | .051*** (.008) |
| <i>year=2005</i> | .182*** (.009) | .161*** (.010) | .108*** (.015) | .105*** (.016) |
| <i>year=2010</i> | .430*** (.009) | .402*** (.014) | | |
| <i>Governor</i> | | .000 (.009) | | -.003 (.006) |
| <i>Budget</i> | | | .000 (.000) | .000 (.000) |
| Constant | .265*** (.009) | .208*** (.011) | .133*** (.005) | .135*** (.006) |
| Observations | 2297 | 1386 | 802 | 798 |
| R-squared | .859 | .808 | .492 | .492 |

Robust standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001

Annex Table 18 Property tax: panel, effects on *Drainage coverage panel no lag**

| | (1) | (2) | (3) | (4) |
|---------------------------|-------------------|-------------------|-------------------|-------------------|
| <i>Property tax/total</i> | -0.004 (.052) | .002 (.052) | -0.002 (.052) | .004 (.052) |
| <i>year=1990</i> | .000 (.) | .000 (.) | .000 (.) | .000 (.) |
| <i>year=1995</i> | .040*** (.004) | .040*** (.004) | .039*** (.004) | .039*** (.004) |
| <i>year=2000</i> | .087*** (.004) | .087*** (.004) | .083*** (.006) | .082*** (.006) |
| <i>year=2005</i> | .146*** (.007) | .145*** (.008) | .138*** (.012) | .134*** (.012) |
| <i>Governor</i> | | -.005 (.005) | | -.005 (.005) |
| <i>Budget</i> | | | .000 (.000) | .000 (.000) |
| Constant | .130*** (.002) | .135*** (.005) | .130*** (.002) | .134*** (.005) |
| Observations | 1453 | 1435 | 1453 | 1435 |
| R-squared | .531 | .530 | .532 | .531 |

Robust standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001

Annex table 19 Property tax: panel, effects on *Electoral competition*, no lag

| | (1) | (2) | (3) | (4) |
|---------------------------|--------------------|--------------------|--------------------|--------------------|
| <i>Property tax/total</i> | .195** (.069) | .187* (.077) | .222** (.069) | .213** (.077) |
| <i>T1 (1989-1991)</i> | -.363*** (.016) | -.365*** (.016) | -.324*** (.017) | -.305*** (.018) |
| <i>T2 (1992-1994)</i> | -.300*** (.010) | -.301*** (.011) | -.248*** (.011) | -.237*** (.012) |
| <i>T3 (1995-1997)</i> | -.127*** (.007) | -.135*** (.007) | -.078*** (.008) | -.075*** (.009) |
| <i>T4 (1998-2000)</i> | -.054*** (.004) | -.053*** (.005) | -.013* (.006) | -.003 (.007) |
| <i>T5 (2001-2003)</i> | -.011*** (.002) | -.005* (.002) | .012*** (.003) | .025*** (.004) |
| <i>Governor</i> | | -.041*** (.004) | | -.039*** (.004) |
| <i>Budget</i> | | | .000*** (.000) | .000*** (.000) |
| Constant | .870*** (.003) | .987*** (.005) | .813*** (.007) | .916*** (.009) |
| Observations | 36312 | 32602 | 35817 | 32107 |
| R-squared | .199 | .217 | .201 | .219 |

Standard errors in parentheses

* p<0.05

** p<0.01

*** p<0.001

Annex table 20 Property tax: panel, effects on *Electoral competition*, lag

| | (1) | (2) | (3) | (4) |
|--------------------------------|-----------|-------------|-----------|-----------|
| <i>Property tax/total</i> | 2.349* | 2.696** | 2.808** | 3.149** |
| | (.964) | (.979) | (.997) | (1.011) |
| <i>T1 (1989-1991)</i> | -9.041*** | -8.379*** | -7.817*** | -7.435*** |
| | (.262) | (.266) | (.364) | (.371) |
| <i>T2 (1992-1994)</i> | -7.378*** | -6.842*** | -6.252*** | -5.963*** |
| | (.209) | (.213) | (.301) | (.310) |
| <i>T3 (1995-1997)</i> | -5.227*** | -4.829*** | -4.140*** | -3.969*** |
| | (.201) | (.205) | (.288) | (.296) |
| <i>T4 (1998-2000)</i> | -3.766*** | -3.489*** | -2.847*** | -2.761*** |
| | (.199) | (.204) | (.263) | (.270) |
| <i>T5 (2001-2003)</i> | -1.820*** | -1.601*** | -1.281*** | -1.177*** |
| | (.209) | (.219) | (.234) | (.242) |
| <i>Governor</i> | | -1.557*** | | -1.496*** |
| | | (.135) | | (.138) |
| <i>Budget</i> | | | .000*** | .000*** |
| | | | (.000) | (.000) |
| Observations | 13150 | 13032 | 12869 | 12776 |
| Standard errors in parentheses | | | | |
| * p<0.05 | ** p<0.01 | *** p<0.001 | | |

Annex B: Interview list

Available upon request