

Unequal Development: Decentralization and Fiscal Disparities in the
Metropolitan Zone of the Valley of Mexico

by

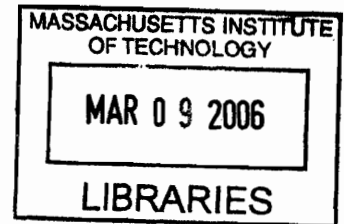
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Submitted to the Department of Urban Studies and Planning in Partial Fulfillment of the
Requirements for the Degree of

Doctor of Philosophy in Urban and Regional Studies
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Massachusetts Institute of Technology

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Submitted to the Department of Urban Studies and Planning on December 20, 2005
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Abstract

This study is about the impact of decentralization in metropolitan areas. Studies of fiscal decentralization have largely centered on the formal tiers of government, without looking at the effects of this process on the recipient jurisdictions in metropolitan areas. This is an important omission, considering that more than 50 percent of the world's population lives in urban areas that often extend beyond formal jurisdictional boundaries. As a response, in this study I incorporate the metropolitan dimension into the study of fiscal decentralization.

After integrating a database with information on the public finances of the Metropolitan Zone of the Valley of Mexico (ZMVM), I test the hypothesis that the policies of fiscal decentralization in Mexico have exacerbated the level of fiscal disparity in this metropolitan area. My results show that fiscal disparity in the ZMVM increased during the 1990s. Fiscal decentralization had two different and opposite effects on fiscal disparities in the ZMVM. On one hand, fiscal decentralization mitigated fiscal disparities through the use of a system of redistributive transfers. On the other, and in contrast to this equalizing effect, decentralization has exacerbated the level of fiscal disparity by accentuating the differences of the jurisdictions' expenditure needs and their capacity to collect local taxes.

In particular, this research shows that despite state intervention through a system of redistributive transfers, the increase in fiscal disparities was due to three primary factors: the indirect effect of transfers on local fiscal effort, the uneven distribution of services and infrastructure in the metropolitan space, and differing governance structures in the ZMVM's jurisdictions. Due to the negative effects of fiscal disparities on urban segregation and poverty, I recommend two policy alternatives to mitigate fiscal fragmentation in the ZMVM: the creation of a metropolitan fund and the formation of a special authority for the transportation sector.

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INTRODUCTION

This study is about the impact of decentralization in metropolitan areas. Studies on fiscal decentralization have largely centered on the formal tiers of government, without looking at the effects of this process on the recipient jurisdictions of metropolitan areas. This is an important omission, considering that more than 50 percent of the world's population lives in urban areas, which often extend beyond formal jurisdictional boundaries. As a response, in this research I add a metropolitan dimension to the study of decentralization. I do so by first integrating a database with the public finances of the Metropolitan Zone of the Valley of Mexico (ZMVM). Subsequently, I hypothesize that the policies of fiscal decentralization in Mexico have exacerbated the level of fiscal disparity in the ZMVM. Finally, I suggest two mechanisms to reduce fiscal disparities in the ZMVM.

Definition of the problem

In the 1980s developing countries embraced decentralization with the hope of improving their public sectors. Ever since then, Mexico has followed a series of decentralization policies in fundamental sectors like health, education, and infrastructure. Originally, the decentralization discourse was solely motivated by a number of normative political and economic considerations that sought to make governments more efficient and accountable. Now, after two decades of decentralization reforms, scholars have started to ask the following questions. What has been accomplished? What have been the conditions that lead to such results? Is everything going as planned, or are some things still missing?

In the last few years, students of public finance have identified a series of shortcomings in the theories of decentralization, especially when it comes to developing countries. Inman (1999), in a review of the evolution of fiscal decentralization in the last forty years, argues that most of the lessons learned in the field assume a U.S. model of economic and political institutions that is commonly missing in developing countries. Out of all the problems associated with decentralization (for a discussion of these, see Prud'homme 1995 and Tanzi 2001) this study focuses on the impact of fiscal

decentralization on fiscal disparity. According to fiscal decentralization theory, because decentralization may give rich jurisdictions larger tax bases and lower tax rates than poorer jurisdictions, the income gap between jurisdictions may increase. This is particularly problematic in metropolitan areas that are formed by a series of jurisdictions with economic and social interrelationships, but with significantly different patterns of public resources and demands (Sacks & Callahan 1973). Communities with similar public service needs have to exert different levels of tax effort to provide a standard package of services, or provide fewer services at a uniform tax effort (Bahl et al. 1992). The process of decentralization may increase fiscal disparities in this context of jurisdictional unevenness in fiscal resources and service needs.

High levels of fiscal disparity in metropolitan areas are problematic because they detonate a process of urban segregation in which households of similar income levels cluster together. This clustering generates a number of social and economic problems, such as the continuation and reproduction of poverty in that part of the metropolitan area that has high concentrations of poor households. This process of poverty reproduction results from a number of factors, such as unemployment, expansion of informal markets, lack of good infrastructure to access labor markets, etc. In addition to this economic factor, urban segregation has a critical impact on social integration. At the micro level, urban segregation has meant the social alienation of groups and communities, which results from the lack of spaces for social interaction. Such alienation consolidates and expands social pathologies like violence and criminal activity, and overall, has a negative impact on the quality of life (Rojas 2002).

Despite the economic and social problems associated with fiscal disparities and the vulnerability of metropolitan areas to increasing levels of fiscal disparity, in developing countries neither scholars from the public finance nor the urban development fields have started to explore the impact that decentralization has had on fiscal disparities. On the fiscal decentralization front, a significant problem lies in the design of federal decentralization policies, which have largely ignored the differences among the recipient jurisdictions. According to Burki et al. (1995: 25) decentralization policies have largely

been designed in a uniform way, and “a structure that fails to distinguish between major metropolitan areas and small villages makes it difficult to clearly define the functional responsibilities of local governments.” Similarly, Bird and Slack (2004: 22) argue that “the standard economic theory of local government does not distinguish among large metropolitan areas, intermediate-size cities, or towns and villages.” To put it more broadly, I argue that, overall, the process of fiscal decentralization has not taken into account the spatial or territorial realities of the recipient jurisdictions that, although difficult to capture for analytical purposes, are important determining factors of the success or failure of the decentralization process.

Analysts of urban and metropolitan formations have not been more responsive to this situation. In Latin America, for example, the scarcity of human and financial resources created a strategy of development and industrialization that was spatially concentrated in a few urban centers that rapidly became metropolitan areas. This process of urbanization was so fast that the number of cities with more than 1 million people increased from 21 in 1985 to 47 in 2000. Many of these cities are true metropolitan formations that are linked together by a common labor market but that often span a number of jurisdictions that go beyond local and even provincial boundaries. Despite this situation, studies on metropolitan areas in Latin America are still scarce, especially with respect to their public finances. One element that accounts for the scarcity of studies on metropolitan finances is a lack of data. A recent study by Bird and Slack (2004) reminds us of the striking absence of studies of urban finances in Latin America and underscores the necessity of serious fieldwork to produce databases at the metropolitan level. This absence of data has impeded metropolitan areas to become independent units of analysis upon which meaningful studies can be conducted.

The current situation in Mexico, like that of many other Latin American countries such as Argentina, is a direct consequence of a deeper problem that relates to a lack of formal recognition of the metropolitan phenomenon altogether (See Pírez n.d. for the case of Argentina). In a nutshell, there is currently a mismatch between the *de facto* existence of most metropolitan areas in Latin America, and their *de jure* recognition. Legal systems

have not been able to keep up with the rapid urbanization process that in many cases has gone beyond formal territorial divisions. Jurisdictional boundaries are in place for political, legal, and administrative reasons, but they become invisible when it comes to the functional operation of urban concentrations. This is evident in their failure to seal off problems of pollution, solid waste disposal, water, crime, and transportation (Pierce 1993). Despite this lack of legal recognition of the wider metropolitan phenomenon, their functional operation argues for a better understanding of their public finances, even if, for the time being, these areas exist only as statistical constructs, rather than as independent taxing and spending authorities.

The lack of studies on the public finances of metropolitan areas is particularly problematic in the case of capital cities in Latin America. The long history of centralization in Latin America, as in many late-industrializing countries, resulted in the formation in each country of one or two primate cities with high concentrations of investment, economic activities, and revenue generation. When such developments occurred in the capital city, the centralization process intensified because of the capital's concentration of political power. This centralizing historical past laid the foundation (perhaps paradoxically) for the metropolitan sprawl and patterns of economic development currently observed in many capital cities. In Latin America, core capital cities (with a few exceptions such as in Brazil) function as poles of political and economic power, surrounded by less well-off suburbs, which—unlike the United States—enjoy lower levels of services and infrastructure. As a result, such capitals have high levels of inequality as households of similar incomes tend to cluster together. Inequality in Latin America is so high that the World Bank considers it the region with the highest level of inequality in the world (Rojas 2002).

Despite this process of urban segregation, little still is known about the role that public finances play in this process and, more generally, about the fiscal condition of capital cities. It is only very recently that researchers have started to analyze certain public finance aspects of several Latin American capitals like Santiago (Glaeser & Meyer eds. 2002), Buenos Aires (Prud'homme et al. 2004), Lima (Linder 2004) and Mexico City

(PUEC 2004). In this study, I add to this recent literature by examining the public finances of the Metropolitan Zone of the Valley of Mexico (ZMVM). The ZMVM is currently the most populated and economically vibrant metropolitan area in Mexico. In terms of population, it is also the largest metropolitan area in Latin America and the second largest in the world (after Tokyo). In the year 2000, this area had 18 million people and produced about one-third of the country's national product. The ZMVM is formed by the Federal District (DF), which is the capital of the nation, together with its 16 administrative subdivisions or delegations, as well as 58 municipalities of the neighboring State of Mexico and the municipality of Tizayuca in the State of Hidalgo (POZMVM 2000).

The state and local jurisdictions that comprise the ZMVM interact with each other through a variety of services and activities of metropolitan scope that run the gamut from air pollution and water provision to transportation and public security. For example, in terms of metropolitan mobility alone, Gakenheimer et al. (2002) calculate that about 7.5 million vehicle trips take place every day between the DF and the metropolitan municipalities of the State of Mexico. This flow of people across multiple jurisdictions generates a variety of externalities (positive and negative) that affect both the single jurisdictions themselves and the metropolitan area as whole. It is in this sense that analysts need to conceive of—and eventually recognize—the ZMVM as a functional entity, because despite its multi-jurisdictional composition, the characteristics (fiscal, social, economic, etc.) of each unit can only be explained as a “function” of the whole metropolitan structure. In other words, whatever happens in one single jurisdiction of the ZMVM (either the DF, the metropolitan zone of the State of Mexico, or any individual municipality or delegation) affects and is affected by the condition of the other jurisdictions and of the metropolitan area as a whole.

Despite this functional operation of the ZMVM, Mexico's governance structure is highly dominated by its federalist structure, which does not recognize the legal existence of metropolitan or any other type of intermediate tiers of government (i.e., cities, regions). This lack of legal recognition has been both the source of the metropolitan problem and

the obstacle to achieving viable solutions. It has been the source of the problem because it has caused analysts and politicians to conceive of the ZMVM as a group of individual jurisdictions rather than as an integrated administrative or political entity. In turn, this has actually prevented reaching any viable solutions of metropolitan scope, as the legal options for coordination are limited and have proven incapable of making the state and local jurisdictions work together in an efficient and positive manner both for themselves and for the metropolitan area as whole. However, even if the lack of legal recognition has prevented policymakers from recognizing and rationalizing these multi-jurisdictional interactions formally, individually local jurisdictions make decisions about their own territories with knowledge of what is happening in the contiguous jurisdictions.

The individual state and local jurisdictions that form the ZMVM have very different levels of wealth, fiscal structures, and institutional designs. Moreover, they have contrasting levels of fiscal resources and service needs, a situation that leads them to exert different levels of tax effort to produce a similar package of public services. Overall—with the exception of a few municipalities adjacent to the DF—the ZMVM is divided into a rich pole in the DF and a poorer pole in the State of Mexico. Their wealth differential is so enormous that in the year 2002, these two entities respectively presented the highest and the lowest levels of total spending per capita in the country. There are several historical, political, social, and economic factors that account for these differences, all arising from the fact that the DF has always represented the epicenter of power and the axis of development in the country.

According to public finance theory, the existence of jurisdictions with different mixes of tax and spending levels, like in the case of the ZMVM, is not in itself problematic. Actually, it is one of the conditions for enhancing efficiency, as citizens can settle in the jurisdictions that better match their preferences for taxes and services. The problem is that in metropolitan areas, the tax/service differences among jurisdictions are not always determined by individual tastes, but are actually imposed or created by the metropolitan community itself (Sacks & Callahan 1973). In other words, jurisdictions, by forming part of a metropolitan area, are exposed to a series of spillovers that have an effect on their

access to revenue sources and levels of expenditure needs. These differentials result in a spatial misallocation of resources as the rich households and firms move away from the poorer ones in order to avoid inferior public services or, in theory, higher taxes (Oakland 1979).

In the case of the ZMVM, inter-jurisdictional spillovers and spatial misallocation of resources are present both in the public and in the private domains. In addition to the public misallocation of resources that results from the combination of high service needs and low revenue capacity, the ZMVM is also affected by the decisions made by private investors, who for strategic, market-driven purposes may choose to expand construction to areas with relatively cheap prices, thereby increasing the demand for services in areas with already low levels of infrastructure. In the case of the ZMVM this dynamic is accentuating the already marked wealth differences and is further increasing the segregation in this area.

Overall, the process of urban segregation is driven by the operation of real estate markets that increase the prices of the best-located parcels, and exclude low income groups from enjoying quality services and infrastructure. In the ZMVM this has resulted in a concentration of high-income households and commercial services in the DF, and a concentration of low- and middle-income households in the metropolitan municipalities. Because an enormous number of people who work in the DF cannot afford the high property prices of the DF, they have to settle in the metropolitan municipalities which offer more affordable housing, but substantively less services and infrastructure. This process accentuates the spatial misallocation of resources and increases the tax/service differentials between the DF and the State of Mexico. As a result, metropolitan municipalities bear high fiscal pressures, as they have to meet an increasing number of demands, while having a low revenue-generating capacity.

Research objective and contribution of study

It is in the previously described context that the current study emerges. For the last few decades, developing countries have experienced a rapid urbanization process whose

consequences have not been fully taken into account by policies of fiscal decentralization. In this study, I add the metropolitan dimension to the study of decentralization, by analyzing the extent to which the policies of fiscal decentralization in Mexico have exacerbated or mitigated the level of fiscal disparity in the ZMVM.

As already mentioned, fiscal decentralization may increase the fiscal disparities among the local jurisdictions within a metropolitan area by giving them access to different tax bases. In the case of Mexico, this prevailing theory about the impact of decentralization on fiscal disparities cannot be directly tested because Mexico's decentralization process has largely been characterized by an increase in the transfers that subnational governments receive from the central government, rather than by the devolution of tax bases. However, this relationship can be indirectly tested by assessing the impact—redistributive or otherwise—that the system of intergovernmental transfers has had in the level of fiscal disparity in the ZMVM. In addition, because decentralization is fundamentally a political decision, the study recognizes that fiscal disparities may also be increasing or decreasing for reasons other than those of pure economic efficiency or equity. Thus, I also explore the general conditions—both behavioral and structural—that may be causing an effect on the level of fiscal disparity in the ZMVM.

In order to conduct this exercise, I start by integrating a database of the public finance statistics of the ZMVM. Because metropolitan areas are not legally recognized in Mexico, this information is not yet available from any single source. For this exercise, I gathered, systematized, and integrated existing data from different sources into a single database that contains the most relevant public finance data of the constituent jurisdictions of the ZMVM. The ZMVM is composed of five different fiscal regimes, and the database includes relevant information on revenue and expenditure accounts in all of them. The dataset covers the period from 1989 to 2000, which are the years for which reliable information is available. I also include data for other years whenever they were available. The fact that there is complete financial data for the 1990s is a fortunate situation, because during this decade a number of important decentralization policies took place in Mexico.

After discussing the database on the public finances of the ZMVM, I explore the main objective of the study, which is to examine the effect of the process of decentralization on the fiscal disparities of the ZMVM. I do so in two ways. First, I explore how State intervention, through the system of transfers, has fiscally affected the ZMVM in respect to the rest of the country and other metropolitan areas. Second, I adapt a basic methodology developed by the Advisory Commission on Intergovernmental Relations (1973) to measure the level of fiscal disparity in the ZMVM—defined as the ratio of the total spending per capita in the DF to that of the metropolitan municipalities. The focus of the analysis is to determine the extent to which the observed level of fiscal disparity is being generated by the intervention of the State through the system of transfers.

Because fiscal disparities in the ZMVM are not only generated by the system of transfers, I also explore other determinants of such disparities. These determinants include: the system of property taxes; private-sector decisions about investment; the proximity between the DF and the State of Mexico; and the different governance structures of the ZMVM jurisdictions. This last point is particularly important because while the State of Mexico and its municipalities have a decentralized structure—with tax functions assigned to the state and local jurisdictions—the DF operates in a centralized way. Thus, the fact that municipalities and delegations that lay side-by-side face similar problems and service demands, but are equipped with different institutional characteristics (autonomous decentralized jurisdictions vs. centralized administrative departments), represents a semi-natural experiment to test the effect of institutional differences on fiscal disparities in the ZMVM.

By exploring all the previous factors, I contribute to an understanding of the conditions under which decentralization mitigates or exacerbates fiscal disparities. More generally, I make a series of contributions to the literature on fiscal decentralization, including: (1) establishing a database of public finances on a metropolitan scale; (2) providing a basic, yet innovative, methodology to assess the changes in fiscal disparities and their determinants at different points in time from an interdisciplinary perspective; and (3)

underlining the complexities and dangers of decentralizing functions and responsibilities to jurisdictions with different tax capacities and spending needs.

In addition to these contributions, I also provide decision-makers with empirical evidence to aid in the design of more efficient and equitable metropolitan-wide policies. Beyond the specific factors that determine the level of fiscal disparity in metropolitan areas whenever present, governments have several policy tools at hand to ameliorate this condition by pushing jurisdictions to provide standard packages of services at similar tax rates. Due to the proliferation of metropolitan areas everywhere in the world, there are already a variety of policy alternatives available to improve the governance of these areas. Mexico itself has a long, yet incomplete, history of intergovernmental structures. Thus, I also investigate some of the most technically viable and politically feasible policy alternatives to improve the level of fiscal equity in the ZMVM. Particularly, I explore the creation of a special district for the provision of metropolitan transportation services, and the design of a fund for the financing of services and infrastructure of metropolitan scope.

Because of the complexity of analyzing the impact of fiscal decentralization in metropolitan areas, my study only focuses on the single case of the ZMVM. However, the contribution of this study aims to go beyond the case of the ZMVM and provide a framework, which may help researchers to study other metropolitan areas in Latin America. Although this study will not make reference to other metropolitan areas in Latin America, I would like to stress that the ZMVM shares a great number of similarities with areas like the Grand Santiago, the Greater Buenos Aires, and Metropolitan Lima (See Klink 2002). All of these areas not only share a common past characterized by strong national governments and processes of urban development concentrated in a few primary cities, but also have a similar territorial distribution of wealth. Like the ZMVM, areas such as the Greater Buenos Aires, for example, are comprised by a rich central city (Buenos Aires City) surrounded by a much poorer metropolitan area (Province of Buenos Aires) that has a proportion of poor households three times higher than that of the City of Buenos Aires (www.indec.gov.ag, 2005). Thus, since all of these areas share similar

characteristics, I hope this study will provide new ways to think about the fiscal condition of other Latin American metropolises.

Methods and fieldwork

In order to conduct the previously described research, I use a case-study approach with an extensive reliance on three methodologies: data collection, interviews, and statistical analysis. The process of quantitative data collection was far from a straightforward exercise. As public finance specialists know, in developing countries local data are commonly scant, incomplete, and often plagued with inconsistencies, and I could not avoid dealing with these problems. Due to the nature of this research, I did not generate any hard data myself, but gathered, systematized, and integrated a number of revenue and expenditure data that already existed in a variety of forms and places.

Because the ZMVM is composed of five different fiscal regimes (Federal, State of Mexico, Municipal, DF, and Delegations), I relied on a number of data sources. The quantitative data came from more than a dozen different sources, of which three were particularly relevant. The first is the National Institute of Statistics, Geography, and Informatics (INEGI) that generates a series of statistics on subnational finances. This source provided general revenue and expenditure data on the federal, DF, and State of Mexico levels. It also provided detailed data at the municipal level for the State of Mexico. The second is a database with general revenue and expenditure information put together by the Legislative Assembly of the DF (ALDF), based on an extensive review of the DF's annual public accounts. The third source is the DF's Ministry of Finance, where most of the detailed data on the revenue sources of the DF and the Delegations come from. Particularly, the DF's Treasury provided me with detailed information on the property tax and debt appropriations by delegation, which are data not commonly available to the public.

Aside from these data sources, I obtained a vast amount of financial information from fiscal codes, public accounts, annual revenue laws, spending budgets, and a number of other sources, including the National Institute of Federalism (INAFED), the National

Council of Population (CONAPO), the Ministry of Finance of Nuevo Leon, the Institute for the Technical Development of Public Finances (INDETEC), the National Banking and Assets Commission (CNVB), Federal Congress, the Center of Research for Development (CIDAC), the World Bank, and the web pages of various subnational governments that form part of the ZMVM.

In addition to integrating a vast number of quantitative financial data into a single database, I conducted a series of interviews to get an understanding not only of the quality of the data itself, but also, more generally, of the effect that the process of fiscal decentralization is having on the public finances of the ZMVM. For that purpose, I made four field trips to Mexico in January and June of 2003 and in March and September of 2004. In total, I conducted 34 interviews with local, state, and federal officials in both the executive and legislative branches of government. I also spoke with academics, real-estate developers, and with some of the statisticians responsible for assembling the databases. These interviews included: a former Federal Minister of Finance; a former Mayor of the DF; a former Minister of Finance of the DF, as well as the current one; different officials in the Metropolitan Commissions in both the DF and the State of Mexico; and several former delegates and local congressmen. In particular, I had a series of regular meetings with various officials at the DF's Treasury, mainly in the departments of Fiscal Policy, Public Credit, and Cadastre. As a follow-up to many of these *in situ* interviews, I conducted e-mail and phone communications in the subsequent months.

Outline of the study

This study is comprised of six chapters. Chapter 1 presents a general overview of both the main theories of decentralization and of Mexico's experience in the decentralization process. There I discuss the strengths and weaknesses of the systems of local taxation as well as the basic rationale for the use of transfers and their potential impact on tax behavior. I also explain why metropolitan areas are particularly vulnerable to fiscal disparities and propose the use of a simple measurement of fiscal disparities in developing countries, according to the ratio of the total spending per capita of the central

area to that of the periphery. In addition, I briefly discuss Mexico's policies of fiscal decentralization and present the main characteristics of the country's fiscal structure.

In Chapter 2, I define the ZMVM as a unit of analysis, and defend the necessity of envisioning this area as a functional unit. I also discuss some of the complexities of this region, mostly those deriving from the fact that it is composed by two entities with different endowments, fiscal capacities, and governance structures. I analyze some of the determinants of such differences, particularly the causes that led the DF to become the axis of Mexico's economic development. Also, I study the political reforms that the DF has gone through in the last fifteen years as well as the dramatic change in the political landscape since the beginning of its democratization process in the 1990s. The first and second chapters can be consulted for general reference, or skipped by the reader interested in the analysis of the public finances of the ZMVM, which begins in the next chapter.

Chapter 3 presents the fiscal picture of the ZMVM. Here, I discuss the revenue sources and spending responsibilities of both the DF and the State of Mexico. I analyze data at the state and local levels and underscore the differences and similarities among all the fiscal regimes that operate in the ZMVM. This chapter serves as a general reference on the public finances of this metropolitan area and as the basis for the analysis of the study, which is carried out in the next two chapters.

Chapters 4 and 5 present the analytical contribution of the study. In Chapter 4, I explore how State intervention, through the system of transfers has contributed to the fiscal fragmentation of the ZMVM. To do so, I determine the overall position of this region in the federal fiscal system by analyzing the evolution of conditional and unconditional transfers in the DF, the State of Mexico, and the ZMVM. In addition, I measure the level of fiscal disparity in the ZMVM and assess the extent to which transfers account for the observed level of fiscal disparity.

Because the fiscal fragmentation of the ZMVM is a complex and multi-causal phenomenon, in Chapter 5 I assess the extent to which a number of fiscal, administrative, political, and institutional determinants have mitigated or exacerbated fiscal disparities in the ZMVM. Lastly, in Chapter 6 I discuss a series of considerations related to the improvement of the fiscal condition of this metropolitan area. This analysis focuses on the discussion of two of the most technically viable and politically feasible governance alternatives for the ZMVM, namely the formation of a special transportation district, and the consolidation of a metropolitan fund.

CHAPTER 1

DECENTRALIZATION AT CROSSROADS: WHERE WE STAND

1.1. Introduction

The 1980s was a decade of public-sector reforms in many developing countries, resulting from the economic and political crises of those years. The stated purpose of these reforms was to make governments more efficient and equitable service providers, and to open new spaces for the democratic participation of society (Bangura 2000, Smoke 2001, and Tanzi 2001). One of the preferred policies that governments followed to achieve these results was the decentralization of functions, resources, and responsibilities from the central to the subnational units of government.

The decentralization policies of the 1980s and 1990s were largely driven by a series of normative economic and political principles. Economically, analysts maintained that decentralization closes the gap between suppliers of public services and local consumers, increasing efficiency and reducing costs. Efficiency in resource allocation improves in the face of different local preferences for local public goods. Politically, analysts advocated that decentralization promotes attributes such as participation, responsiveness, autonomy, and accountability (Shah 1998). These normative economic and political claims in support of decentralization were so persuasive that, according to Ebel and Vaillancourt (2001), by 1994, of the 75 developing and transitional economies listed by the World Bank, all but 12 claimed to have embarked on some form of transfer of power from central to local units of government. Despite this widespread implementation of decentralization policies, by the end of the 1990s analysts realized that countries often prized decentralization on normative grounds regardless of the results achieved (Bird & Vaillancourt 1998). In reaction, a new wave of more empirically driven literature has been emerging to demonstrate that despite strong belief in the virtues of decentralization, the actual evidence is either conflicting or nonexistent (Litvack et al. 1998 and Smoke 2001).

This most recent empirical literature underscores a variety of potential problems associated with decentralization, that range from complications in determining the optimal size of jurisdictions, to miscalculations in the capacities of the recipient jurisdictions to perform certain policy functions. From all the alleged shortcomings of decentralization (see Prud'homme 1995 and Tanzi 2001), one that is particularly important for this study is the potential impact that the policies of fiscal decentralization have on exacerbating fiscal disparities. According to fiscal theory (Prud'homme 1995), because decentralization gives rich jurisdictions a larger tax base and lower tax rates than to less rich jurisdictions, the income gap between jurisdictions tends to increase. Despite the potential of decentralization to enhance fiscal disparities, fiscal decentralization analysts have not yet studied how this process takes place in developing countries.

This situation arises from a more general and important problem with decentralization that has to do with analysts virtually overlooking the spatial dimension of the areas affected by decentralization, particularly the fact that territorial spaces do not have an homogenous composition in terms of the size and general composition of their comprising jurisdictions. In fact, central governments often decentralize functions, resources, and responsibilities to their subnational governments as if they were totally independent units of government, without factoring into this process those differences that directly affect their ability to fulfill their new obligations. For example, in Mexico the legal framework does not differentiate municipalities by any criteria such as size, urban composition or income level, regardless of the reality that these differences have an effect on municipalities' revenue generation and, consequently, on their capacity to provide local goods and services.

This problem is particularly critical in the case of metropolitan areas, which are spatially unique in the sense that they are comprised of a set of territorially contiguous and functionally dependent subnational units, but which have very different levels of fiscal resources and service needs. In these cases, because the jurisdictions form part of a single metropolitan area, they often require a similar provision of public services throughout the whole metropolitan area, but they have very different tax capacities to provide these

services. In addition, because of these differences in tax and spending levels, jurisdictions may impose significant externalities on each other which, unless curbed—through some sort of redistributive mechanism—can further increase the level of fiscal disparity in the metropolitan area. This is because to provide a specific level of public goods or services, jurisdictions must increase spending as a response to externalities such as pollution or crime, in order to cope with the additional costs that the externalities have imposed.

Just as decentralization theorists have ignored this spatial dimension, so do the policy-makers who design decentralization policies. For the last three decades, policy-makers in Mexico have been implementing a series of decentralization policies, largely relying on the country's federalist nature, thereby neglecting the legal existence of any type of intermediate government. A good case in point is the Metropolitan Zone of the Valley of Mexico (ZMVM) which still lacks any legal recognition despite its de facto existence. This situation is problematic because in the absence of such recognition, decentralization policies target the state and local jurisdictions that comprise this metropolitan area, with complete disregard for the fact that the actual levels of tax collection and service provision of one jurisdiction depend, to some extent, on the fiscal and spending behavior of the other jurisdictions.

In this context, the particular question that I seek to investigate in this study is: how does the decentralization process impact fiscal disparity across ZMVM jurisdictions? This is an important question because it directly relates to the fact that decentralization may be affecting the mix of revenue means and expenditure needs at the local level. Despite its importance, decentralization analysts have ignored the spatial dimension not least because of the complexity of capturing the various ways in which fiscal decentralization can affect the level of fiscal disparity in metropolitan areas. In the absence of a single model to explain the causes of variation in fiscal disparity levels, I rely on a variety of theories from the fields of fiscal decentralization, local public finance, and metropolitan governance, to explore the conditions under which the fiscal decentralization process mitigates or exacerbates fiscal disparities in the ZMVM.

In this chapter, first I present the theoretical foundations of this study, starting with a general introduction to fiscal decentralization theory and some of its general criticisms. Second, I discuss in more detail the advantages and disadvantages of having a decentralized system of local taxation and also present a more general discussion of the use of transfers and their potential implications for affecting the level of fiscal disparity. Third, I discuss a basic methodology that the U.S. Advisory Commission on Intergovernmental Relations (ACIR 1973 and 1984) developed to study the variation in fiscal disparities in the metropolitan areas in the United States, and I make a case for applying this methodology to the study of the ZMVM. Finally, because Mexico already has significant experience with decentralization, I present a brief description of the country's fiscal decentralization process and highlight some of the reasons that led the country to embark upon the decentralization process.

1.2. Fiscal decentralization in theory

Why decentralization? This process of transferring spending responsibilities and revenue sources from central to subnational units of government has been normatively justified on both political and economic grounds. Politically, given the fact that decentralization aims to bring the government closer to the people, analysts have identified this process with a series of democratic attributes such as the promotion of participation and the enhancement of the responsibility and the accountability of governments (Shah 1998). Economically, the basic rationale for decentralization is to attain allocative efficiency in the face of different local preferences for local public goods (Litvack et al. 1998). The economic rationale of decentralization has been evolving for more than half a century and largely relies on the seminal work of Tiebout (1956), Musgrave (1959), and Oates (1972). Tiebout developed the “voting with the feet” model to provide a market-analogue solution to the provision of local collective goods, by forcing consumer/voters in a spatial economy to settle in one community rather than another, thereby automatically revealing their preferences for the mix of taxes and services. According to Musgrave, local governments should mainly be in charge of the allocation function, which is concerned with how resources should be used and what goods and services

should be produced. Oates developed a “decentralization theorem,” which claims that because local governments have better information than the central government about local preferences, they will more efficiently provide public goods. Finally, along these lines of economic thought, more recently Weingast (1995) developed a model of “Market Preserving Federalism,” which contends that if states are able to make credible commitments to preserve markets, then a decentralized arrangement will stimulate competition, and therefore efficiency.

For a number of decades, decentralization discourse was largely rooted in this set of normative economic and political claims. During the 1990s, academics began to underscore a series of both theoretical and empirical weaknesses associated with the normative claims in support of decentralization. Theoretically, the main criticisms came from a series of flaws associated with the assumptions of the theory of decentralization, which include the following specific elements: (1) the fact that jurisdictions are not optimally designed to attain allocative efficiency, but instead are culturally, legally, and historically grounded (Oates 1999; Ter-Minassian 1997); (2) the theory’s lack of political foundations (Rodden & Rose-Ackerman 1997); (3) its incapacity to generate the necessary competitive framework, mostly because costs (for accessing information, coordination, and the like) are lower in the upper than in the lower tiers of government (Breton 2000), (4) the limitations of local taxes as sources of revenues (Inman and Rubinfeld 1996); and (5) simply because the challenges of local governments in developing countries are not to reveal the fine differences in preferences between jurisdictions, but mostly to satisfy basic needs (Prud’homme 1995).

The other important criticism of normative theories of decentralization is that the evidence regarding their alleged virtues is still scant and mixed. Since the 1990s there have been a growing number of empirical analysts who look for associations between decentralization and the series of its alleged virtues. Some of the associations they have tested include measurements of economic growth (Davoodi & Zou 1998), good governance (De Mello & Barenstein 2001), corruption (Fisman & Gatti 2000); government size (Stein 1999, Rodden 2003, and Ebel & Yilmaz 1999), and participation

(Peterson 1997; Smoke 2001). Overall, the results of these studies are not conclusive and they largely depend on the data and methodology used. Other more qualitative studies have also found that decentralization has not delivered the expected results. For example Burki et al. (1999) find that it is not clear how decentralization affects the provision of public services. Similarly, Tendler (1997) shows that decentralization in Brazil does not automatically result in more participation, but instead is the result of a complex process where paradoxically the central government plays a fundamental role. Because of this situation, Rodden (2002) argues that we are at the crossroads of the optimistic theoretical literature and the growing pessimistic empirical literature of decentralization.

1.2.1. Decentralization and local taxation

Despite the lack of empirical support, analysts who have supported the normative political and economic principles in favor of decentralization have made a compelling case in favor of having a system of local taxation. Their overall argument is essentially that local governments must raise their own revenues, because “if they do not, the whole rationale for improved economic efficiency and enhanced governance is in jeopardy” (IADB 1994: 180). Jones and Stuart (1983: 94) summarize a long-time claim in favor of local taxation in the following way:

To achieve genuine local accountability, the local government financial system should ensure that local authorities draw the buck of their income from their own local taxpayers and voters, and that the latter are aware that they are paying their taxes to support local government services

The idea is simple. If local governments are to be responsible and accountable, then they should tax and spend independently (Brennan & Buchanan 1980). Bahl and Schroeder (1983: 116) argue that accountability blurs when “separating the pleasure of expenditure benefits from the pain of taxation.” According to their argument, governments will be more solicitous in spending their budgets if they have taxation powers. The question is then, how do local governments remain accountable, especially in the context of developing countries, where the local tax bases are weak and they largely rely on other intergovernmental sources of revenue?

The problem of local accountability in developing countries—where local governments largely rely on transfers—is not yet solved, but theorists have made at least two important observations that must be taken into account. The first has to do with the way in which the decentralization process is designed, especially with the way transfers flow from the upper to the lower tiers of government. Here the idea is to devise a way that does not kill all the incentives for local taxation, and thus accountability. In particular, the theory of fiscal decentralization suggests that transfers should be delivered to local governments only after they have tried to raise their own revenues. If not, transfers could discourage local tax effort, because local governments will have few incentives to search for new sources of revenue or to efficiently collect taxes from their existing bases (Bahl & Linn 1992).

A second suggestion that Bird and Villancourt (1998) developed has to do with what they called “accountability at the margin.” According to this principle, it is perfectly possible for a local government to be highly dependent on transfers and still be fully accountable, as long as they are given control over their own revenues. Concretely, the idea is to give them control to affect the volume of their own revenues at the margin, through their own policy choices, in particular by choosing the tax rates. That is, “if subnational governments are expected to act responsively, such governments must be able to increase or decrease their revenues by means that make them publicly responsible for the consequences of their actions” (Bird & Villancourt 1998: 13).

Now the question becomes, over which sources of revenue should local governments be given control? Public finance theorists and policymakers have solved this tax-assignment question by looking both at the efficiency in tax administration and at the degree to which revenue capacity matches expenditure needs. Although the assignment of revenue sources across tiers of government varies from country to country (very much in direct relationship to the level of development of the subnational governments), local governments in developing countries rely on property taxes as their primary own-source revenue, and also, importantly, on fees from the provision of services (Shah 1994).

The arguments in favor of the local administration of property taxes are varied. Among the most important are: (1) there is no difficulty in attributing the yield; (2) evasion is extremely difficult; (3) the cost of maintaining the rating is low in proportion to the yield; (4) the tax is relatively simple and understandable; and (5) identifying the property to be taxed is fairly easy (Foster et al. 1980; Peters 1991).

Despite these strengths, property taxes also have severe economic and political limitations, some of the most important being: (1) its high visibility, that arises from its direct payment out of taxable income, as opposed to other taxes that are deducted at the source (McCluskey 1991); (2) the need for continuous reassessment of properties, which not only requires a skilled staff to do it properly, but is also one of the most corrupt of urban functions (Paul 1975); (3) the lack of a necessary correspondence between the value of property and residents' ability to pay (Oates 2001); (4) problems with technical aspects that have to do with the various types of tax relief available, and its high income-inelasticity (income grows faster than the tax); (5) and, most importantly, its inability to easily provide sufficient resources to finance a significant expansion of local public services (Bird 2000a). In regard to this last point, Bahl (2001) argues that in terms of its yield, the property tax is not a very significant revenue source, as it only represents 0.4% of gross domestic product (GDP). Its importance as a revenue source, measured as a share of GDP, has not changed in the last three decades, but as a percentage of total subnational taxes, its importance has declined by about 5 percentage points, from 45 to 40%. Because of all these shortcomings, Bird and Slack (1983: 15) argue that "it takes a good deal of sweat, tears and political blood to raise property taxes sufficiently to keep up with the pace of expenditure growth needed to maintain service levels."

In addition to these shortcomings, there is another problem in the property tax system that is of particular concern for this study. Although the decentralization of tax powers enhances accountability, this process introduces a tendency to increase fiscal disparities. The argument is that because decentralization will give richer jurisdictions a large tax base and lower tax rates than poorer jurisdictions, regional disparities will increase as these tax and base differentials force businesses and households to settle in localities with

lower tax rates (or similar rates but better services). This will enlarge the tax base in rich jurisdictions and increase the income gap between regions, a situation that led Prud'homme to argue that “decentralization can be the mother of segregation” (1995: 203).

Although the economic rationale of the previous claim is correct, two additional considerations must be taken into account. First, there is scant empirical evidence that decentralization causes deepened inequality. Second, governments have certain policy tools at hand to curb the inequalities that decentralization may bring. Concerning the first factor, Smoke (2001) argues that the way in which decentralization affects inter-area inequalities within local government jurisdictions in developing countries is still unclear, and that there is no empirical evidence on the matter. In this sense, my study will not only be an empirical contribution, but it will also shed light on the way in which decentralization mitigates or exacerbates fiscal disparities. In terms of the second factor, governments have ways to compensate for potential inequalities without losing the benefits of decentralization. There are two main ways to do so, one through intergovernmental transfers, and the other by designing alternative governance structures that cover the whole metropolitan area, including both rich and poor jurisdictions.

Despite the existence of these tools, there is no sound theory to explain the conditions under which governments decide to use them. Certainly, they may choose to use them in a pure economic spirit to try to counter-balance the fiscal disparities wrought by decentralization, but they may also be used as instruments to win political struggles in and over space. In the next section, I further elaborate on the logic of the transfer systems and in Chapter 6, I discuss the design of alternative governance structures.

1.2.2. Transfers, redistribution, and local fiscal behavior

In the presence of fiscal disparities, upper tiers of governments may take advantage of their redistributive capacity and use the transfer system to ameliorate disparities. In fact, one of the two most robust economic rationales for the use of transfers is the principle of “fiscal equity” (Shah 1994). This principle is related to the assumption that jurisdictions

should provide some “average” level of public services by exerting an “average” fiscal effort, usually measured as its tax rate. However, for various reasons (different tax bases, different costs of providing public services, or differences in the demands for public services), local jurisdictions cannot provide an “average” level of public services, so higher tiers of government commonly use transfers to reduce the fiscal inequalities among jurisdictions.

Beyond their equalizing nature, in general transfers are widely used in virtually all decentralized systems because the limited taxing powers available to subnational governments are not sufficient to fully finance their wide range of expenditure responsibilities (Bird & Villancourt 1998 and Willis et al. 1999). Actually, in developing countries, intergovernmental transfers are not only inevitably required to close the fiscal gaps between local revenues and expenditures, but they also represent the main source of revenue of subnational governments (Litvack et al. 1998 and Spahn 1999).

Despite the widespread use of transfers, both economists and political scientists commonly recognize that there is a series of complexities associated with their use, and that designing them properly is one of the more complex aspects of fiscal federalism (Shah 1994 and Ter-Minassian 1997). From all the disadvantages associated with the use of transfers, for the purpose of this study, I focus on only two. The first has to do with the aforementioned principle of accountability, and the other with the potential effect of transfers on the fiscal behavior of subnational governments.

Concerning the first disadvantage, the rationale is simple: transfers make local governments less accountable for their fiscal decisions by weakening the link between tax and expenditure decisions. According to the principles of (local) taxation, if a (local) government is to make the right fiscal decisions, it must weigh the benefits of the proposed public measures against their costs. However, as Oates (2001: 26) argues “if financing comes from elsewhere, this link is broken and the choice of public programs will no longer be based on their true cost, but they will rather be the result of political negotiations between local and higher-level authorities.” Along the same lines, Rodden

(2002) argues that when this link is weak, politicians may face incentives to act opportunistically, mainly by viewing public sector revenue as a common pool that politicians may try to “over-fish.”

In terms of the second disadvantage, the rationale is also simple: a high reliance on transfers may negatively affect local tax behavior and discourage tax effort (Bahl & Linn, 1992). Despite the important association that the concept of tax effort establishes between transfers and taxes, analysts have not clearly defined or measured this concept. In general, public finance theorists provide two alternative theories to explain the impacts of transfers on local tax effort.

The first theory, which I refer to as the “rational” or “fiscal laziness” model, proposes that an increase in transfers results in a decline in local tax effort. According to this model, transfers generate a disincentive to collect taxes because local governments “prefer ‘free’ central transfers to the politically costly course of raising own-source revenues” (Peterson 1997: 10). The second explanation, generally referred to as the “flypaper effect,” suggests that “money sticks where it hits” (Hines & Thaler 1995). According to this explanation, an increase in transfers does not reduce tax collection, and transfers increase total expenditures by approximately the same amount as the transfers, because transfers are indeed used for the purpose for which they were given. According to the “flypaper effect,” the particular ways in which local governments spend their resources not only depend on the design of the grants themselves, but also on the source from which the money originates. Thus, the “flypaper effect” runs contrary to the common argument raised by economists about the fungibility of money, in the sense that it assumes that the local government’s spending decisions are bounded by the source of their revenues.

Empirical studies on the impact of intergovernmental grants on tax effort usually support either the “rational” or the “flypaper” models. However, the evidence generated by studies of developing countries is far from robust (Bahl & Linn 1992 and Litvack et al. 1998). One of the reasons for this situation is the scarcity of studies that seek to assess the

impact of grants on tax effort. To the best of my knowledge, Colombia (Bird 1984, Garzon 1997, Jiménez 1996, and Melo 2002), the Philippines (Bahl & Schroeder 1983), Brazil (Dillinger 1994; Prud'homme 1998), and Mexico (Sobarzo 2003; Sour 2004) are some of the few developing countries that have been studied. According to various specialists in public finance (e.g., Bird 1984; Gramlich 1977), the studies on fiscal effort will not be conclusive until a proper formal theoretical model of the expected local fiscal response to grants is provided and tested against an appropriate body of data. Despite the fact that there are conceptual shortcomings and a lack of empirical support on the impact of transfers on tax effort, Schroeder (1988) argues that it is clear that if an objective of a grant program is to increase local government spending, this objective cannot be achieved if the recipient government diminishes its own tax effort.

1.3. Decentralization and fiscal disparities in metropolitan areas

Continuing with the discussion about the series of considerations that surround decentralization, I now deal with the additional problem of decentralization's failure to consider the spatial dimension, and its potential to increase fiscal disparities. In general, fiscal decentralization theorists have focused their analyses on the formal tiers of government, ignoring the metropolitan phenomenon altogether. As I will explain in the next chapter, by "metropolitan area" I refer to a territorial continuum that spreads over a series of local jurisdictions. In the United States, these are commonly referred as "urban areas" (see Chapter 2 Footnote 4). This limited focus on formal tiers of government exists largely because the recipients of the decentralized functions, resources, and responsibilities are almost always formal tiers of government (i.e., states and municipalities), which are the only units of government with political autonomy and fiscal powers. In developing countries, it is not uncommon to find that metropolitan areas or any other kind of multi-jurisdictional formations are not recognized as formal units of power, with rights to elect their own authorities and to tax and spend independently. This situation uncovers a more general and fundamental problem with decentralization discourse, which is a complete neglect of the spatial dimension. Overall, decentralization policy-makers conceive of subnational governments as totally independent units without

taking into consideration the impact of their size and general characteristics as well as their spatial territorial location (i.e., contiguous vs. separated jurisdictions) on the level and quality of the local goods and services provided.

One consequence of this failure to recognize the metropolitan phenomenon is a tendency to design standard decentralization policies that ignore the scale and general characteristics of the recipient jurisdictions. According to Burki et al. (1995: 25) “overall, decentralization policies have been uniformly designed, and a structure that fails to distinguish between major metropolitan areas and small villages makes it difficult to clearly define the functional responsibilities of local governments.” Similarly, Bird and Slack (2004) argue that on the theoretical front, fiscal decentralization analysts have also failed to distinguish between large metropolitan areas, cities, and small towns. This lack of recognition of the scale and general characteristics of the recipient jurisdictions is particularly problematic in the case of metropolitan areas, which are comprised of a series of distinct but territorially adjacent jurisdictions. The situation is problematic because despite the fact that these areas are comprised of jurisdictions with important economic, labor, and social interrelations, they have significantly different patterns of public resources and demands.

As urban economists (e.g., Oakland 1979) recognized a long time ago, jurisdictions that form part of a metropolitan area, or any other type of urban continuum for that matter, do not only have different tax and spending levels, but also impose significant costs and benefits on each other. The difference among jurisdictions’ tax and spending levels arises from a general misallocation of resources that largely results from locational choice. In fact, as Oakland argues, to the extent that upper-income groups and businesses concentrate in one part of the metropolitan area, and lower-income groups in the other, both tax and spending resources become spatially misallocated. This spatial misallocation reinforces the uneven distribution of resources by increasing the spending needs of the jurisdictions with the lowest revenue-raising capacity. In addition, there are other factors that contribute to this uneven distribution of resources, such as the particular history and political relevance of the jurisdictions, and differences in the composition of their tax

bases, their costs of producing public services, the age of their current infrastructure, and so on. The overall result of this uneven distribution of tax revenues and spending needs is an increase in the level of fiscal disparity, which is illustrated by the fact that communities with similar public service needs have to exert different levels of tax effort to attain these common needs.

In metropolitan areas, which usually are spread out over a set of spatially contiguous jurisdictions with different income levels, fiscal resources, and public service requirements, the process of decentralization poses additional threats, because these areas are particularly vulnerable to high levels of fiscal disparities. Indeed, the spatial misallocation of resources often seen in metropolitan areas reinforces this uneven distribution by increasing the spending needs of the jurisdictions with the lowest revenue-raising capacity. As already mentioned, fiscal decentralization may polarize jurisdictions by giving them control over different tax bases. It is in this context that I review here the standard economic rationale in favor of decentralization.

Economic theorists (e.g., Tiebout 1956) argue that decentralization enhances efficiency by allowing for the existence of jurisdictions with different mixes of tax and spending levels, which citizens can establish according to their local preferences for service provision and tax rates. However, in metropolitan areas, this is problematic because, as Sacks and Callahan (1973) argue, not all public-expenditure differentials appear to be caused by differences in tastes, but some are actually imposed on or created by the communities themselves. Examples of this sort include commuters who fail to internalize their mobility costs (e.g., environment and congestion), and out-of-state users of social services (e.g., education and health) who do not fully contribute to the financing of these services. In these cases in which “expenditure and tax differentials are not of a voluntary nature, they become non-neutral in character” (Sacks & Callahan 1973: 92).

In addition, jurisdictional mobility in developing countries is commonly restricted by several factors that impede people from moving across jurisdictions to satisfy their preferences for local services. Despite the expectation of the Tiebout (1956) model that

people will move in reaction to low taxes and better services, individuals' mobility is restricted by economic considerations and by what Donahue (1997) calls "citizen's surplus." Concerning the first factor, people in developing countries commonly lack access to "exit mechanisms" like real-estate credit markets, so that they are often forced to stay in communities that may not match their preferences. In terms of the idea of "citizen's surplus," this refers to the series of cultural affinities, friends and family ties, and economic connections that prevent people from moving across jurisdictions.

Aside from these efficiency-based arguments, the current metropolitan reality also forces the revision of the decentralization discourse on equity grounds. According to Oakland (1979: 334), actually "the principal source of dissatisfaction with present central-city fiscal conditions may not be related to economic efficiency but rather to considerations of equity." The basic equity factor has to do with built-in mechanisms in decentralization policies which segregate jurisdictions that would otherwise be more economically and socially integrated. This problem arises because when urban areas are divided into a number of fiscally independent local governments, each local government has the incentive to exclude individuals who require extra expenditures in excess of their marginal contributions to locally raised revenue (Chernik & Reschovsky 2001). This situation results in the segregation of rich and poor people in the metropolitan area, which is generally not the product of a deliberate policy of social exclusion, but rather the indirect consequence of a system of housing-market discrimination. This polarization creates a series of problems especially in poor areas that see their fiscal capacity weakening, while their average costs of providing public services continue to increase. In such a context, poor jurisdictions have little alternative but to increase their tax rates or reduce their spending levels, and because of their weak tax bases, they often opt for the latter. Needless to say, this results in a lower provision of public services, which in turn, reinforces the unequal distribution of resources in the metropolitan area.

1.3.1. In search of a measurement of fiscal disparities in metropolitan areas

The process of segregation that I previously described is accentuated as urbanization progresses and more metropolitan areas are formed. The world has just crossed the point

at which 50% of humanity lives in urban areas—in Latin America the rate is already 75%—and it is estimated that by 2020 half of the population in the developing world will be urban (Sachs 2003). Despite this reality, academics have not yet developed an acceptable methodological framework to study the concrete ways in which the decentralization process affects the level of fiscal disparity in metropolitan areas. Because the urbanization process is unlikely to stop and decentralization will inevitably remain on the development agenda, I believe it is crucial to develop an innovative, albeit incomplete, methodological framework to understand and rigorously test the impacts of fiscal decentralization in metropolitan areas.

In reaction to this current situation, I turned to the 1970s literature on city-suburban fiscal disparities in the United States to look for a way to study the impact of the decentralization process on fiscal disparity levels in the ZMVM. At that time, and all the way up to the 1980s, the financial problems of U.S. cities and metropolitan areas held the attention of academics and policymakers who began to study the problem of fiscal disparities and look for reforms. Particularly, the now disbanded Advisory Commission on Intergovernmental Relations (ACIR) made strong efforts to measure the level of fiscal disparity in the largest metropolitan areas in the United States (ACIR 1973 and 1984). Later on, other long-time students of public finance also continued with the measurements of fiscal disparities in U.S. cities and made new contributions to improving our understanding of the problem of fiscal disparities in metropolitan areas (Bahl et al. 1992 and Bahl 2000). Overall, however, the basic theory and measurement of fiscal disparities in metropolitan areas has remained unchanged for the last thirty years. In the rest of this section, I present the main conceptual definition and measurement method for fiscal disparities in metropolitan formations in the United States, and I argue for the use of this framework to improve the understanding and increase the rigor of analysis of the current fiscal condition of the ZMVM.

According to economic theory, the concept of fiscal disparity refers to the idea that fiscal disadvantages can arise either because some jurisdictions have to exert a higher tax effort to provide a standard package of services or, conversely, provide fewer services at a

uniform tax effort (Bahl et al. 1992). A precise measurement of this concept requires estimation of the cost of providing a standard package of services and a clear definition of tax effort. Since both these things are commonly difficult to measure, analysts have chosen to look at the ex-post level of fiscal disparity, as measured by the relative differences in per capita expenditure, taxes, and aid—without accounting for differences in need or in levels of tax effort. In that same tradition, I examine the differences in per capita expenditures as a basic measure of fiscal disparity.

With regard to metropolitan areas, the measurement of the concept of fiscal disparity goes back to the pioneering work of Sacks and Callahan (1973), who calculate a central city (CC)-to-outside central city (OCC) ratio (CC-OCC). This is a simple ratio in which the numerator is the per capita expenditures (or alternatively transfers and taxes) of all the local governments of the central city area, and the denominator is the per capita spending of all the local governments of the outside city area. Notice that this ratio measures the disparity between the fiscal activity of all local governments in the central city and of all local governments in the outside central city area, and not only of those jurisdictions that are territorially contiguous.

Although this indicator was developed and used in the United States to capture the specific city-suburb problems that metropolitan areas have in this country, it is of great usefulness to measure fiscal disparities in other metropolitan areas outside the United States that are comprised of two significantly different sets of jurisdictions. In this sense, such a concept fits the reality of the ZMVM, as this area can readily be seen as comprising a central city (DF) and an outside central city (metropolitan municipalities). However, I do not wish to stress this comparison any further as there are substantial differences between the reality and legal definitions of the US and ZMVM metropolitan areas.¹ With this in mind, I argue that the CC-OCC indicator represents an acceptable

¹ Some of the most important differences between the city-suburban reality in the United States and the current relationship between the DF and the metropolitan municipalities of the State of Mexico have to do with the fact that, in general, the central cities in the United States have lower levels of wealth and weaker public-service provisions than the suburbs (ACIR 1973; ACIR 1984). In contrast, in the ZMVM, the central city (DF) has higher income levels and better public services than the outside central city (metropolitan municipalities).

way to study the evolution in the level of fiscal disparity in the ZMVM. Needless to say, analysts could improve this indicator, as well as the overall measurement of fiscal disparity; however, its use allows me to shed some light on the current fiscal condition of the ZMVM.

1.4. Fiscal decentralization in practice—The Mexican case

The policies of decentralization that Mexico has adopted since the 1980s have been based on the theoretical arguments that I previously discussed. The causes that have given way to decentralization in Mexico are various, including both a general dissatisfaction with a centrally driven public sector, and most notably, the dramatic political changes that the country has undergone in the last two decades. The decentralization process began in Mexico at the start of the 1980s, when two important reforms took place: the creation of the National System of Fiscal Coordination (SNCF) in 1980 and the municipal reform of 1983.

The first important reform of the 1980s was the creation of the SNCF, which is the cornerstone of the federal fiscal pact, and which—with some revisions—is still valid to this day. The creation of the SNCF arose from the necessity to review the intergovernmental fiscal arrangement that had been in place for various decades without any substantive revision. Its objective was fundamentally to increase the total revenue of the federal government and to improve the regional distribution of resources. In principle, the creation of the SNCF was not driven by a decentralization agenda, but its operation is central to the decentralization process in Mexico. By assigning tax sources among different tiers of government and by consolidating the operation of a revenue-sharing system, the SNCF created a federal fiscal arrangement through which the entire fiscal decentralization process has been conducted since its creation.

In fact, since its origin, the SNCF has been at the center of the fiscal decentralization process in Mexico. During the 1980s the system mostly dealt with revenue, but by the 1990s, it had also incorporated the decentralization of spending functions and also of

subnational borrowing. In terms of revenue, the fiscal decentralization process has largely consisted of the operation of a system of unconditional revenue shares or *participaciones* (described in Appendix 1). The way the system works is that the federal government maintains control over the most important tax sources, which it further distributes to the subnational governments, according to a set of parameters that include population, taxable capacity, and fiscal effort. Because the SNCF does not provide any measure for devolving tax bases to the subnational governments, the extent to which this has been a real decentralization is questionable, as states and municipalities have actually increased their fiscal dependence on the federal government. There is one important exception to this process of (de)centralizing revenue sources, and that has to do with the second crucial reform that took place during the 1980s, which is the 1983 municipal reform.

An analysis of the 1983 municipal reform takes us directly to the origin of the decentralization process in Mexico that started with the election of President de la Madrid in 1982. At that time, the country was in the midst of one of its most critical economic crises, occasioned by the fall in oil prices and a severe currency devaluation. This economic crisis, together with the declining legitimacy of the political system brought about by the crisis, led the de la Madrid administration to put in place a program coined “the decentralization of national life.” Through this program, President de la Madrid sought to pursue a policy of national decentralization, consisting of three main components: strengthening of federalism, support of municipal life, and promotion of regional development. The axis of this program was the reform of article 115 of the Constitution that recognized municipalities as the basis of the territorial division and the political representation of the country. This reform sought to strengthen the municipal tier of government by enlarging its financial presence in terms of both revenues and expenditures. In terms of revenue, the 1983 reform gave municipalities control over the administration of property taxes;² and in terms of expenditures, it made them responsible for the provision of basic public services (see Section 3.4.3).

² The reform of 1983 did not give municipalities complete autonomy over the property taxation, as the approval of the tax rates remained under the control of state congresses. That right came almost twenty years after when a subsequent reform of article 115 in 1999 gave municipalities the right to propose their own cadastral values and tax rates.

This decentralization reform was targeted at the municipal level so it left the fiscal and political status of the states and the DF virtually unchanged. According to Davis (1994), despite the de la Madrid efforts to reintroduce urban and administrative reforms to the DF, the actors that stood to lose from these changes (i.e., the PRI elites in the capital city) opposed them to the point that, unlike the municipal reforms that were indeed implemented, the democratic reform for Mexico City was rejected. This is an important observation, because it reflects the overall purpose of decentralization at that time, which was to give way to reforms, as long as they were politically harmless to the hegemonic power of the official party PRI (Institutional Revolutionary Party). In fact, nowadays, academics seem to agree that the rationale of the decentralization policies of the 1980s was to re-establish the legitimacy of the political system without having to embark on a deeper democratization reform that would have brought irreversible political changes (Rodríguez 1997 and Davis & Raich 2003).

Aside from giving municipalities control over the administration of property taxes, most decentralization policies that took place during the 1980s and 1990s consisted of the devolution of spending responsibilities to states and municipalities mainly in the areas of education, health, and infrastructure. In terms of education, the decentralization process began in 1992 during the Salinas administration (1988-1994), when the federal education authorities, the governments of the 31 states, and the National Education Workers Union (SNTE) signed the National Agreement for the Modernization of Basic Education, that mandated a transfer of responsibility for the provision of basic education services to the state governments. In the case of health, the decentralization process began in the 1980s, but did not actually get underway until 1995, with the new federalism program of the Zedillo administration (1994-2000). At that time, with the National Agreement for the Decentralization of Health Services, the federal health authorities transferred the responsibility for delivering first and second-level health services for the uninsured population to the states.³ Finally, in terms of infrastructure, unlike the education and

³ States deliver health services to the uninsured population through “decentralized public organizations,” which are semi-independent state organizations headed by the state governors. These organizations are also integrated by the federal ministry of health (SSA) and other state authorities, that include the state’s Health Minister and representatives of universities, unions, and civil society. The state’s Health Minister is at the

health sectors where responsibilities were decentralized to the states, the provision of basic infrastructure was largely given to municipalities in 1997 through the creation of the Fund for Social Infrastructure.

This whole process of decentralization of spending functions has largely been financed with federal transfers, because states, and to some extent also municipalities, have not been given access to more extensive tax sources. Before explaining the main characteristics of this federal financing mechanism, I stress that the main responsibility for the lack of devolution of tax bases lies not only with the federal government, but also with the state governments themselves. According to a former Minister of Finance, who was a key player during the 1990s decentralization reforms, “it is true that it is in the interest of the federal government to have access to taxes that can later be used to compensate for regional inequalities, but states, at least some of them, do not like to tax” (Interview A).⁴ Indeed, judging by the position that states have commonly taken in the various discussions of the fiscal pact in the last fifteen years, they seemed to be pushing the federal government for more transfers, rather than for larger tax bases. Of course, there are some exceptions, primarily among those rich states that fare better financially by keeping control of their tax bases (mostly of the value added tax) than by being part of a fiscal system that pursues some redistributive objectives. In any case, without going into detail, what is important to note is that there is a reason, mostly political, concerning why the fiscal-decentralization process in Mexico has largely been federally funded.

The consolidation of federal financing of decentralization policies has been an incremental process that began in the 1980s and that reached its peak in 1997 when the creation of a new budgetary item (*Ramo 33*) concentrated most of the decentralized federal spending into a single spending item. In the case of both education and health, when states received the responsibility for the provision of these services, they also received federal funding to cover the associated costs. In the case of infrastructure,

same time the executive director of these organizations and is in charge of coordinating all state health actions according to national policies in the health sector.

⁴ The details of this interview and of all the interviews of this study are presented in Appendix 4.

federal financing started during the administration of President Salinas when it was channeled through a program called *Solidaridad*. This program, which represented the cornerstone of the Salinas antipoverty strategy, was criticized on several grounds, which led to its further reform in the Zedillo administration. Academics criticized *Solidaridad* for being too centrally driven (Rodriguez 1997) and for being motivated by the electoral objectives of the federal government rather than by legitimate local demands (Molinar & Weldon in Cornelius et al. 1994).

These criticisms, together with the commitment of the Zedillo administration to Mexico's democratic transition, moved the decentralization process in favor of states and municipalities. In 1996 Congress passed a reform law that included a public formula for the distribution of spending resources from the national government to the states.⁵ This reform, however, did not force the states to follow any specific criteria in the design of their formulae for distributing resources among their municipalities. The result of this reform was that states had great power to decide the fate of their municipalities, a situation that soon led the opposition parties to claim that the states' allocation of federal resources was politically biased, and caused them to push for further reform (Rodriguez 2000). That reform came in 1997, the year the PRI lost the majority of the seats in Congress for the first time in history, and the opposition parties were able to pass another reform to the intergovernmental transfer system. The reform consisted of the creation of *Ramo 33*, a budgetary item that structured a variety of spending programs into a single system of conditional transfers. In the past the federal government largely decided on these spending programs according to its own investment priorities and transferred funds to the subnational governments in an unstructured way. According to Courchene and Díaz-Cayeros (in Giugale and Webb eds. 2000), with the creation of *Ramo 33*, earmarked transfers, which have existed in Mexico for at least thirty years, formally entered into the SNCF at this time.

⁵ The Ministry of Social Development (*Sedesol*) calculated this formula according to the proportion of "relative" state poverty to total national poverty. The relative poverty of each state was measured by both their lack of financial resources and an index of unmet needs (Scott 2000: 24). Similarly, each state needed to calculate its own formula to distribute the resources among its municipalities.

Since its creation in 1997, *Ramo 33* has become the main financial channel for states and municipalities in the areas of education, health, and infrastructure. *Ramo 33* is composed of seven funds, many of them formula driven, and the most important ones (health and education) are targeted at the state level. Municipalities only receive a fund for the strengthening of the municipalities (FORTAMUN) and a portion of the infrastructure fund (FAISM), that together account for 18% of the total *Ramo 33*. According to the National System of Fiscal Coordination, municipalities must use the FORTAMUN for public security-related expenditures, and the FAISM for basic local infrastructure such as water and sanitation, electric power in rural and poor areas, roads, housing improvements, and productive rural infrastructure (Appendix 1).

Another important reform that the federal government put in place in the year 2000 to complement the decentralization process was a new system for subnational borrowing. Largely as a consequence of the massive 1996-97 bail-out process that followed the economic crisis of 1994-95, the administration of President Zedillo gave special attention to the restructuring of the credit system of states and municipalities in order to make it more market-oriented.⁶ From 1997 to 2000 the federal government introduced a series of new regulations that sought to create a true credit market for states and municipalities and to induce them to be fiscally disciplined. In short, the whole rationale of the reform was to create a market-like system of subnational borrowing. To do so, the new regulation sought to impose a hard budget constraint on subnational governments by eliminating the possibility of federal government intervention to bail them out in the case of a fiscal imbalance (aregional.com 2002).

More concretely, with the introduced changes the federal government sought to avoid the process through which states reserved their revenue shares as collateral for credit, by giving way to a more market-like credit system. While in the previous framework the Ministry of Finance was directly involved in this process through a series of mandates, in the new system, states enter into contact directly with the creditors through a mutual

⁶ The 1994-95 financial crisis and the ensuing increase in interest rates resulted in a total subnational debt increase from \$27 billion to \$71 billion pesos from 1994 to 1998 (Giugale et al. in Giugale and Webb eds. 2000).

agreement or *fideicomiso*.⁷ Another important characteristic of the new credit system was to build a system of capital risk for loans to subnational governments, and it accomplished that by establishing a system of credit ratings that made the pricing of bank loans a function of the underlying risk of repayment by the subnational borrower (Giugale et al. in Giugale and Webb eds. 2000).

1.5. Conclusion

The changes to the system of subnational borrowing together with the other series of reforms of revenue and expenditures leave very little doubt that decentralization has been part of Mexico's development strategy for the last twenty years. In various ways, the administrations of presidents de la Madrid, Salinas, and Zedillo included a series of decentralization policies in their political agendas. Aside from the revenue structure, which has been largely unchanged since the creation of the SNCF, the systems of intergovernmental transfers, subnational spending, and local borrowing look substantively different today from the way they looked twenty years ago.

Despite the importance of decentralization policies in Mexico, and the compelling normative argument in support of this process, the reader should not assume that Mexico's experience with decentralization has been a complete and a successful process. There is much more to say about Mexico's experience with the decentralization process than space allows, but I mention two important caveats: one related to the overall design of the policies of decentralization and the other to the assessment of their results. First, I note that those who designed the decentralization policies have been silent about another process that has also been present in the country for the last few decades, which is the rapid pace of urbanization and the continuous formation of metropolitan areas. As I will show in the next chapter, the decentralization process has been strictly bounded by Mexico's federalist nature, which has geared all the decentralization policies to the formal units of government, namely, states and municipalities. Despite the de facto

⁷ A *fideicomiso* is a provision in public law that is widely used in Mexico and that allows two parties to establish a legal commitment where each of the parties involved has specific rights and obligations.

existence of metropolitan and other intermediate tiers of government (e.g., cities and regions), policy-makers who designed the decentralization policies did not take into account the territorial dimension. In part, this is a consequence of the limited mechanisms available for intergovernmental coordination, which do not provide easy ways to channel decentralized resources and responsibilities to metropolitan or multi-jurisdictional formations. There have been some attempts to do this, such as the program “100 cities” that was targeted at 100 mid-sized cities in the country, but in general, these efforts have been fairly limited (see, for example, Garza 2003: 101-136).

Concerning the second caveat, I believe that both academics and policy-makers have been too cavalier about the effects of decentralization. So far, the push towards decentralization has largely been normatively driven rather than empirically grounded. On the theoretical front, decentralization analysts are beginning to recognize that this is not an inherently optimal process, but one whose success is determined by the concrete conditions in which it operates. On the practical front, countries are also starting to understand that this process has not led to the efficient and equitable results originally expected, but that its success hinges upon the existence of the proper institutional context, which cannot be built overnight. Some of these institutional requirements include: local capacity to design and implement policies; appropriate rules, especially for auditing, control, and evaluation at all levels of government; and last, but not least, sufficient financial resources, flowing to the states and municipalities in such a way that they do not kill all incentives to collect taxes.

In the case of Mexico, few analysts have sought to evaluate the specific impacts of decentralization, so it is difficult to make a definitive judgment of the country’s experience in its decentralization process. However, I argue that the available evidence suggests that decentralization in Mexico has encountered a variety of political hurdles and technical shortcomings. The reasons for this situation are many, and most of them are sector specific. For example, the success of the decentralization of education services has been overly determined by the role of the teacher’s union, which is a variable not always explicitly considered by decentralization analysts (see, for example, Ibarra 2003). In the

case of fiscal decentralization, policy-makers have wrongly assumed that all levels of government have the institutional maturity to embark on this adventure, and specifically, that local governments have sufficient planning, budgeting, and auditing capacities to spend their resources efficiently and equitably.

In summary, although much more empirical evidence is needed about the way decentralization has worked on the ground, I argue that so far Mexico's experience has been mixed at best. Inman (1999), in a recent review of the evolution of fiscal decentralization in the last forty years, provides a good explanation for why this has been so. According to him, most of the lessons learned in the field of fiscal federalism assume the presence of U.S.-style economic and political institutions, which are generally lacking in developing countries. "Voice" and "exit" mechanisms, for example, which discipline governments through inter-jurisdictional competition, are seldom found in developing countries (Donahue 1997). Undoubtedly, this is the case in Mexico, but analysts still must prove how the lack of these exit and voice mechanisms has affected the results of decentralization in the country. To a large extent, I intend to move beyond the normative arguments in support of decentralization, and develop an empirical contribution that would help to clarify how fiscal decentralization has worked on the ground, and especially how it has affected fiscal disparities in metropolitan areas. This is the spirit that motivates the rest of the chapters.

CHAPTER 2

THE ZMVM: TOWARD DEFINING THE UNIT OF ANALYSIS

2.1. Introduction

Metropolitan areas are comprised of a series of jurisdictional units, which exist for a number of political, legal, and administrative reasons, but whose territorial boundaries often become invisible when it comes to the functional operation of urban concentrations. According to Pierce (1993), metropolitan zones experience an infinite number of demographic, economic, and social interactions in complete disregard of the political and legal division of their comprising jurisdictions, which are incapable of sealing off their problems of pollution, solid waste disposal, water, or transportation. According to this conceptualization, metropolitan areas exist in their own right, even if they do not match the formal political and territorial structures of the units of government over which they expand.

Despite the *de facto* existence of metropolitan areas, they commonly lack legal foundations, so they are seldom recognized as formal political entities that could become recipients of decentralized resources and responsibilities.¹ To a large extent, this explains why the formation of metropolitan and other non-formal jurisdictional conglomerates (cities, regions, etc.) has been left out from both the theory and the practice of decentralization. Generally, decentralization policies are targeted to formal units of government that have taxing and spending powers, and also some degree of political autonomy. This has been the case in Mexico where policymakers designed decentralization policies at the state and municipal levels, altogether ignoring the existence of metropolitan or any other kind of intermediate formations. This situation has had important consequences in areas like planning and the provision of services because jurisdictions have different capacities to deal with decentralized functions and responsibilities, and therefore services are often provided in an uncoordinated way.

¹ There are, however, some examples of metropolitan areas that are legally recognized, such as the Greater Toronto Area in Canada. For a discussion of such areas, see Hobson and St-Hilaire 1997 and OECD 2001.

The Metropolitan Zone of the Valley of Mexico (ZMVM) is an area that policymakers have disregarded—especially its metropolitan dimension—during the country’s decentralization process. The area is currently comprised of 76 subnational governments with different legal regimes, fiscal capacities, and political representation. The functioning of the ZMVM is highly complex, among other reasons, because it encompasses the capital of the country, and because it is formed by two entities with very different resource endowments and funding allocations. Despite these differences, every day the ZMVM experiences innumerable social and economic interactions in a diversity of sectors such as transportation, water provision, air pollution, etc. that makes the area function as a single operational unit, and where the policies of each individual jurisdiction have an impact on the metropolitan area as a whole.

Therefore, in this chapter I make the case that even if the ZMVM is legally conceived of as a group of individual jurisdictions, it must be understood as a single territorial unit. Some very recent publications (e.g., ALDF 2002 and PUEC 2004) have already departed from the narrow constitutional definition that equates Mexico City with the Federal District (DF), and have begun to conceive of it as a metropolitan and even a regional zone.² In this chapter, I supplement these efforts and argue in favor of using an operational definition for the ZMVM that allows analysts to conduct studies on a metropolitan scale and not only for the DF. In order to perform this exercise, I first provide a brief account of the urbanization process in Mexico that led to the creation of the ZMVM. Then, I introduce a formal definition of the zone, as well as some of the main characteristics of its comprising jurisdictions. Unlike other metropolitan formations in the country, the ZMVM includes the federal capital, which has a different legal status and administrative structure than the rest of the states. For this reason, I devote an entire section to an explanation of the capital city’s evolution and its current legal status. Next, I describe the ZMVM’s transition from a PRI (Institutional Revolutionary Party) enclave to a politically plural metropolitan area. Finally, I make a case that despite the ZMVM’s

² For regional planning purposes, the DF and the State of Mexico form part of the “central region” of the country (Presidencia de la República 2001).

diverse jurisdictional composition, this territory should be envisioned as a single functional area.

2.2. Mexico's process of urbanization and the formation of the ZMVM

In general, Mexico's pattern of urbanization conforms to that of other Latin American countries. During the 20th century, Latin American countries experienced a process of rapid growth driven by strong central governments that, in general, followed protectionist economic models of import substitutions. These development strategies detonated a rapid rural-urban transition, which resulted in very high concentrations of people in a few cities that soon became metropolitan regions (Klink 2002). In the case of Mexico, the country reached its urbanization peak from 1940 to 1980, during which time rapid economic growth changed the social and economic structure of the population. During that forty-year period the number of cities in Mexico with more than 15,000 inhabitants grew from 55 to 227, and in 1980 the country's urban population represented, for the first time, more than half (55%) of the total population (Garza 2003).³ This process of urbanization has continued to the present day. In 2000, 70% of Mexico's 100 million people lived in 350 cities. The other 30 % of the population lives in approximately 200,000 localities of less than 2,500 inhabitants each. Out of the urban population, 83% lives in 56 metropolitan areas⁴ with more than 100,000 inhabitants, and 32 million live in nine areas with more than one million people (OCDE, 2002).

³ Mexico has no official definition for its different types of urban concentrations. The most widely accepted definition of a city comes from a pioneer study by Unikel, Ruiz, and Garza (1976) that considers a city to be a concentration of 15,000 or more inhabitants.

⁴ Note that although there are no internationally agreed-upon definitions of metropolitan areas, the treatment that the term "metropolitan" receives in Mexico is different than the one in the United States. In Mexico, it is loosely defined as an urban agglomeration with certain common factors like socioeconomic structure, urban equipment, territorial continuity, natural resources, and human activities (López Pérez 2003). In addition, the widely agreed-upon definition establishes a minimum of 100,000 inhabitants in order to qualify as a metropolitan area (Garza 2003). Apparently, in the United States, this phenomenon is referred to as "urbanization," while the term "metropolitan" is mostly reserved for what the US census calls a "metropolitan statistical area (MSA)," which has between 50,000 and 100,000 residents (Stephens and Wikstrom 2000). Thus, in order to avoid misunderstandings, in this study I use the term "metropolitan" to refer to the US notion of "urban" or "urbanized" areas.

Throughout this urbanization process, the ZMVM has always occupied a central role. In terms of population, it greatly expanded during the twentieth century, passing from a concentration of 2.5% of the total population of Mexico in 1900 to 18.2% in 2000. As in the rest of the country, the most dramatic population expansion began in the 1940s when the number of people living in the DF nearly doubled from 1.6 to 2.9 million people. The tendency continued during the 1950s, when an annual population growth of 5.7% resulted in an addition of 2.1 million people, 40% of whom were immigrants attracted by the city's buoyant economic activity. Continuing the trend, in the 1960s and 1970s, the population expanded by 3.6 and 4.4 million people respectively (Garza 2003). This population expansion was largely linked to the economic centrality of the DF, which derived first from the country's development process during the "porfirian period" (1876-1910), based on the expansion of the electricity and transportation sectors, and later from the rapid process of industrialization structured around the capital city in the post-revolutionary period (1940-1970).

The DF's population growth and economic expansion gained momentum after the revolution mostly because the capital city became the axis of the country's industrialization strategy. Starting in the 1940s, and through the late 1970s, Mexico followed an economic model of import substitution based on the promotion of the industrial sector, in which the DF played a dominant role. During this process, the DF undertook policies that protected the industrial sector, mostly by keeping wages low through a series of subsidies to urban services like transportation and housing. In addition, the DF adopted a fiscal regime that provided a number of subsidies and tax breaks for the industrial sector, and the national government invested an enormous amount of resources in big infrastructure projects in the capital city. All of these factors made the DF the cornerstone of the country's modernization strategy. According to Davis (1994), primary emphasis was given to the DF's industrial development because of technocratic considerations as much as of political objectives. On one hand, the city's agglomeration economies, its linkages to other regions through rail and communications, and the location of previous industrial infrastructure made the capital city an ideal enclave for the rapid industrial development of the country. On the other hand, those in

power at the time were also aware of the DF's unchallenged centrality in national politics and the importance of capitalizing on this political support.

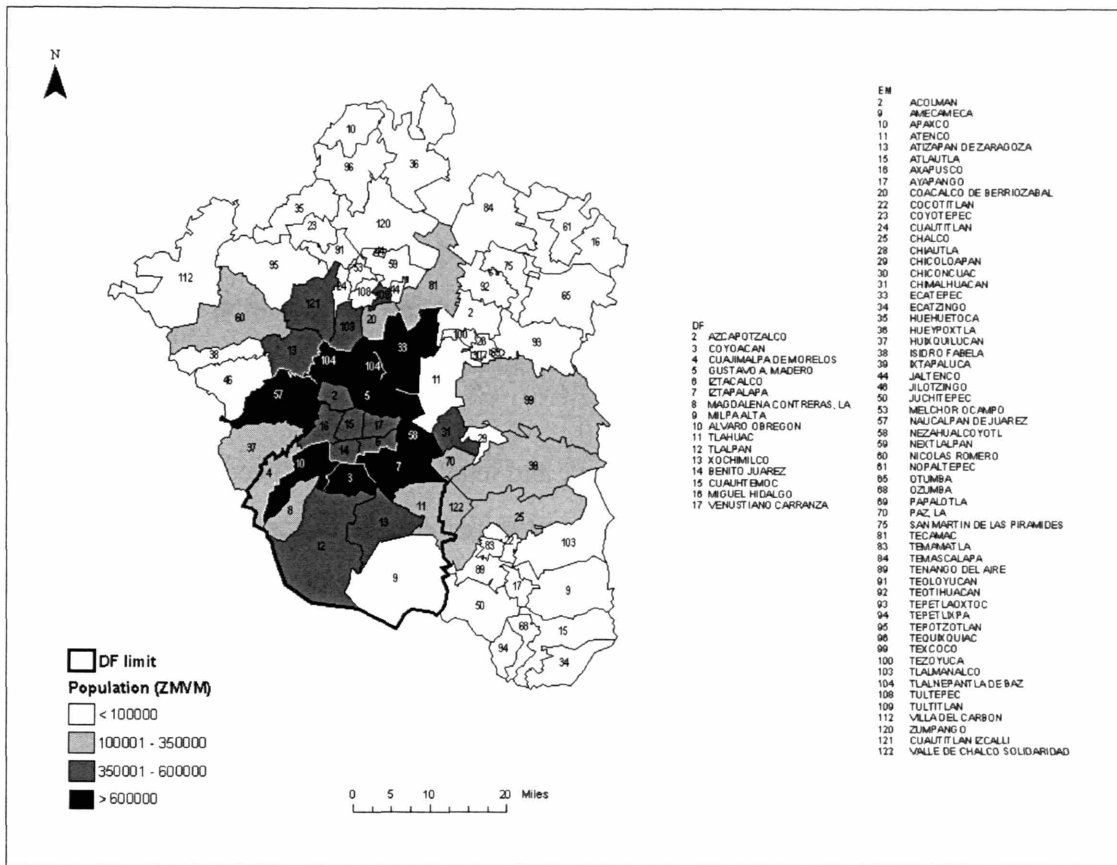
The rapid industrial growth of the DF together with the major federal investments in the capital city continued until the 1980s when the DF experienced important changes in the growth and distribution of its population. During the 1980s the number of people living in the ZMVM continued to grow to almost 14 million, but for the first time, the population expansion that had already begun to take place in the neighboring State of Mexico in previous decades started to accelerate rapidly. This acceleration was accompanied by a decline in the rate of population growth in the DF, due in part to the earthquakes of 1985 that caused significant relocation of the population, and the overall slowdown of the economy brought about by the 1982 peso crisis. Another factor that contributed to the slowdown of population growth in the DF was a decline in employment resulting from the migration of industries to other parts of the country, and from the restrictions on building new potentially polluting industries in the DF. Still another factor was the high cost of living in the capital city, particularly the enormous differences in real estate values between the DF and the State of Mexico. The massive federal investments in the capital city together with four decades of industrialization and economic growth provided the DF with high infrastructure endowments that have had a positive impact on property prices. In reaction, people have been forced to move to neighboring states around the DF, in search of lower-priced real estate markets, as in the State of Mexico, where infrastructure levels are notably lower than in the DF. This process of population expansion into the periphery, however, has also occurred within the DF itself. While in the 1950s almost 80% of the population lived in the five central delegations of Cuauhtémoc, Venustiano Carranza, Gustavo A. Madero, Benito Juárez, and Miguel Hidalgo, by 2000 only 34% lived in this area (Beristain and Rodriguez: 2001).

This process of population expansion into the State of Mexico has intensified during the current administration of Mayor López Obrador as a consequence of his strategy for land-use regulation known as “Bando 2.” The *Bando* prohibits the construction of new housing

and commercial developments in the peripheral delegations of the DF. The original idea of the *Bando* was to increase the population density of the four central delegations (Cuauhtémoc, Benito Juárez, Miguel Hidalgo, and Venustiano Carranza) which lost 1.2 million people in the last thirty years. To do so, the *Bando* prohibited sprawl into the southern and eastern delegations of Alvaro Obregón, Coyoacán, Cuajimalpa, Iztapalapa, Magdalena Contreras, Milpa Alta, Tláhuac, Tlalpan, and Xochimilco. However, due to the high prices of land in the central delegations in comparison to localities in the State of Mexico, people have been moving even further away from the DF into the State of Mexico.

The overall decline in the population growth rate of the DF has had direct consequences on the neighboring State of Mexico which, for the aforementioned reasons, has been absorbing significant numbers of people moving away from the DF. In 2000, it was estimated that 49% of the inhabitants of the metropolitan municipalities in the State of Mexico were born in another State (Iracheta 2004). According to some estimates, 70% of the immigrants that arrived in the metropolitan municipalities during the second half of the 1980s, and 65% of those arriving during the first half of the 1990s came from the DF (Iracheta 2004). As a result, from 1995 to 2000 the population in the ZMVM changed from an even distribution between the DF and the metropolitan municipalities, to a concentration of 53% (9.2 million) of the population in the latter and the remaining 47% in the former (8.6 million). This expansion resulted from the tremendous population growth of the metropolitan municipalities, which experienced a population increase of 320% from 1970 to 2000, as compared to the 35% experienced in the DF (see Figure 2.1). Academics believe that this tendency will continue, and their demographic scenarios estimate that in the year 2020 between 55 and 65% of the population of the ZMVM will live in the metropolitan municipalities, as compared to an estimated 35 to 45% who will live in the DF (Iracheta 2004).

Figure 2.1. Population of the ZMVM, 2000



Source: Author

This trend in population growth has been closely matched by the spatial expansion of the ZMVM into the State of Mexico. This spatial expansion has been incremental and has resulted from the continuous incorporation of the municipalities of the State of Mexico into the territory of the ZMVM. In 1950, for example, just the municipality of Tlanepantla in the State of Mexico formed part of this area. However, the number of incorporated municipalities increased in the following decades to the point that in 2005, there are about 60 municipalities forming part of the ZMVM. As a consequence of this expansion, the territory of the metropolitan area of the State of Mexico currently occupies 52% of the total area of the ZMVM, and the DF occupies the remaining 48% of the metropolitan territory.

2.3. The ZMVM as a unit of analysis

The population and spatial expansion from the DF into the State of Mexico has resulted in the formation of the area that I refer to as the ZMVM. Both because of its origin, and the current interaction between its comprising jurisdictions, the ZMVM exists as a *de facto* functional unit expanding over a territorial domain that does not coincide with political boundaries. Despite this *de facto* existence, Mexican legislation still does not recognize the functional operation of this area, or any other metropolitan area in the country, as an integrated political and/or administrative entity.

There are various political, economic, social, and legal factors that account for this lack of metropolitan recognition. Politically, it is not in the interest of most actors to move beyond their local strongholds of power and try to compete for new constituencies that are already under the control of other political forces. Economically, rich jurisdictions tend to prevent the formation of any intermediate type of government that would push for more redistributive policies at their expense. Socially, groups that benefit from the current distribution of power will not want to share their special privileges with the social forces of neighboring jurisdictions. Legally, Mexico has an explicit constitutional prohibition against the formation of any kind of intermediate tier of government. As a consequence, the country lacks any official definition of a “metropolitan zone.”⁵ The definition most widely used comes from academia, which refers to metropolitan zones as concentrations of 100,000 or more people. According to a methodology elaborated by Garza (2003), these urban centers can be located either within one or in various contiguous municipalities.⁶

For of all these reasons, the ZMVM is still largely understood as a conglomerate of independent state and local jurisdictions, with minimum capacities to interact as an integrated or coordinated metropolitan-wide entity. This situation has had important

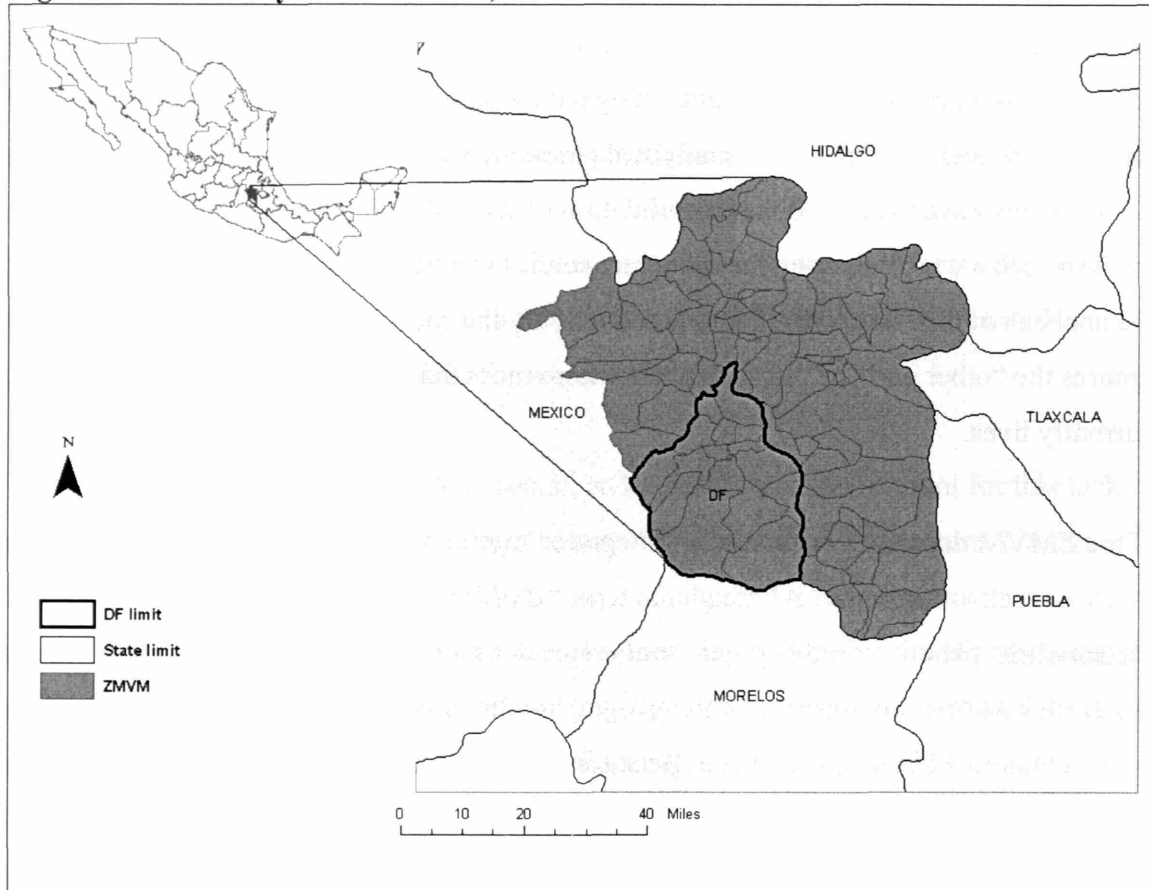
⁵ According to López Pérez (2003), any attempt must take an interdisciplinary approach in order to capture the legal, institutional, and conceptual difficulties tied to the definition of such zones.

⁶ For a detailed explanation of the methodology used to define metropolitan areas in Mexico, see Garza 2003: 97-99 and 151-153. Also note that although INEGI does not yet provide an official definition, according to some of its publications on metropolitan zones, these are loosely defined as “the total surface extension of the municipalities in which the urban cities and localities of the metropolitan area are located” (INEGI 2002).

planning and analytical consequences. In terms of planning, it has resulted in a complete lack of a metropolitan vision, with very negative effects on the administration of all urban services, whose provision is constantly plagued by problems of coordination, inefficiency, and inequality. The analytical consequences have also been substantial, because they have prevented the consolidation of the ZMVM into a single unit of analysis, upon which meaningful economic studies can be conducted. Clearly, restricting the analysis of this area to the DF, as is commonly the case, gives a partial vision, as it ignores the “other part” of the metropolis where more than half of the population currently lives.

If the ZMVM does not yet exist as an integrated metropolitan area, then I wonder what this area really represents? Although the term “ZMVM” is meant to be a reference for metropolitan planning, at this point it only represents a territorial delimitation that helps academics and policymakers map the geographic dimension within which a number of socioeconomic activities take place. Because the geographic definition of a spatial area is to some extent an arbitrary exercise, I use the most recent definition from the Ordering Plan of the Metropolitan Zone of the Valley of Mexico, that considers this area to be comprised of the 16 delegations of the DF, 58 municipalities of the State of Mexico, and the municipality of Tizayuca in the State of Hidalgo (POZMVM, 2000).

Figure 2.2. Territory of the ZMVM, 2004



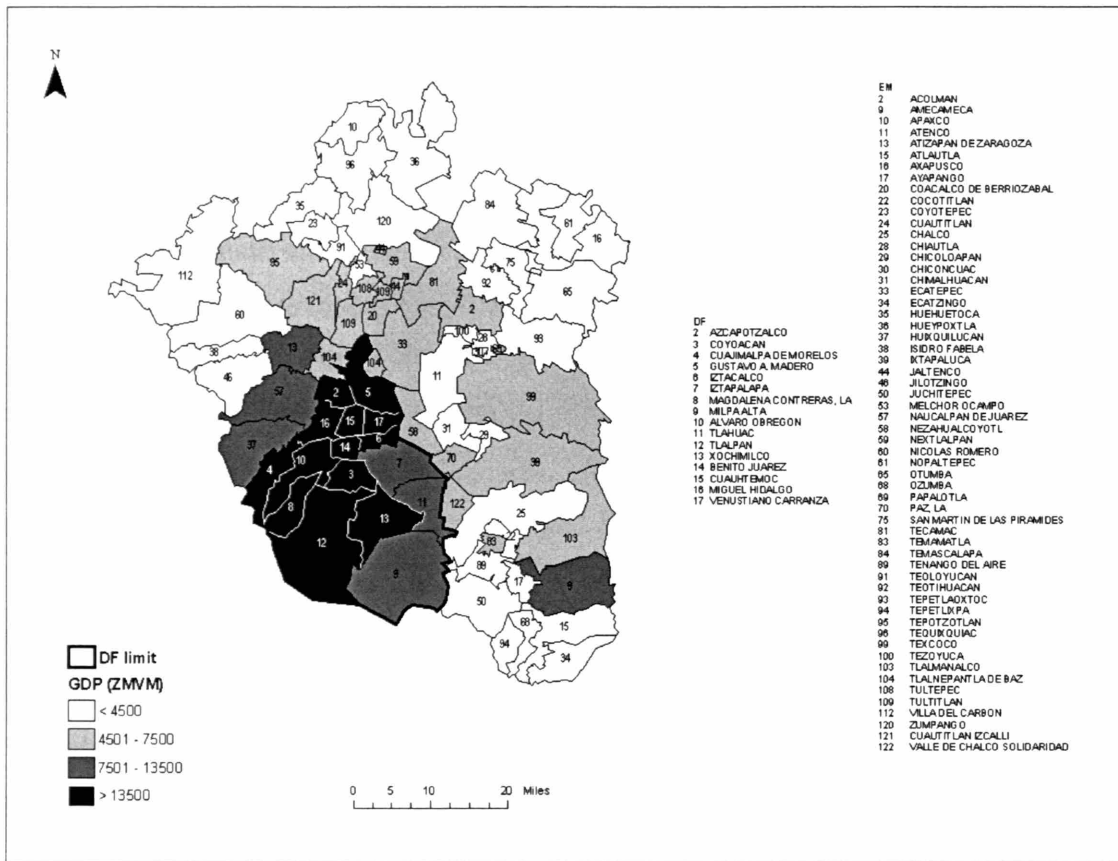
Source: Author

There are other available territorial definitions of this area, but they only vary in the number of metropolitan municipalities that they take into account. Therefore, because my analysis is eminently financial, I could have chosen any other territorial definition and my results would not have been affected in a substantive way.⁷ This is because most of the finances of the metropolitan area are concentrated in a handful of municipalities that are contiguous to the DF, all of which are included in the definition that I selected, but also in the other available definitions. Following this same logic, I decided to exclude the municipality of Tizayuca, in Hidalgo from this territorial definition because it would have complicated the gathering of information enormously and would have not contributed in any substantial way to this study.

⁷ Some other definitions of this area include: *Área Metropolitana de la Ciudad de México (AMCM)* that comprise the DF and 17 metropolitan municipalities in the State of Mexico, and the *Zona Urbana del Valle de México (ZUVM)* that comprise the DF, 32 metropolitan municipalities in the State of Mexico, and the municipality of Tizayuca in Hidalgo.

Beyond the actual definition of the metropolitan area used, it is important to notice the dual nature of the ZMVM. On one hand, it is formed by a single territorial continuum, but on the other hand, it is comprised of a series of very different local and state jurisdictions. These jurisdictions vary in their legal, administrative, political, economic, and demographic characteristics. In terms of its wealth level, the ZMVM is composed of two poles: an eminently rich one in the DF, and a poorer one in the State of Mexico (Appendix 2, Table A2.1). At the state level, the differences between these two entities is astounding. For example, in the year 2002, the DF was the entity with the highest total spending per capita in the country, and the State of Mexico the entity with the lowest. This contrast is also present at the local level, where all of the local governments with the highest GDPs (with the exception of the delegation of Milpa Alta), are concentrated in the DF, while the State of Mexico has some of the poorest municipalities in the country (Figure 2.3). In terms of population, jurisdictions in the DF are generally more populated than in the State of Mexico. However, there is not a clear pattern, as there are very populated jurisdictions (of more than one million people) on both sides of the border (Figure 2.1). The most significant differences in levels of population, however, are not between the DF and the State of Mexico, but between the State of Mexico's own metropolitan municipalities, where municipal populations range from 3,500 to 1.6 million inhabitants. Actually, the dispersion of population in the metropolitan municipalities has a coefficient of variation (1.7) of more than twice the value of that in the DF (0.7). In addition to all these differences, the jurisdictions that form part of the ZMVM belong to five different types of legal, economic and political regimes.

Figure 2.3. GDP per capita in the ZMVM, 2000



Source: Author

The jurisdictions that form the ZMVM are the DF, its delegations, the State of Mexico, its municipalities, and the federal government, which intervenes in the DF because of its status as the nation's capital. The multi-jurisdictional nature of this area makes it a particularly complex metropolitan formation, and calls for an understanding of some of its basic characteristics. Mexico is a federal republic formed by 31 states, a federal district, and 2,426 municipalities. The State of Mexico, like all other states, is a sovereign entity entitled to perform all functions not expressly reserved for the federal government. The territory of the State of Mexico is divided into municipalities that represent the political and administrative units of the federation.⁸ At present, the State of Mexico has 122 municipalities (58 of which are currently part of the ZMVM) all with the same legal status, because Mexico's constitution does not legally recognize any local distinctions in

⁸ Unlike the United States and other federal systems, in Mexico, municipalities represent the lowest formal tiers of government.

terms of size, population, wealth, etc. Municipalities in the State of Mexico, as in the rest of the country, have dual roles as structures of political representation and providers of local services. They have almost complete power over their local concerns, but several of their substantive functions still pass through the state legislature. Municipal governments in Mexico do not have formal legislative power. Their legislative bodies (*cabildos*) have a deliberative rather than a normative nature, and their only legislative capacity is to draft administrative regulations. Due to this limited legislative capacity, the state Congress formally legislates on their behalf.

Like the State of Mexico, the DF is also a federal entity, but because it is the capital of the country, it has a different legal and political status. The debate over the legal and political characteristics of the capital city has been alive for the last two centuries, but currently the constitution (article 44) defines the DF as both the capital of the country and the “house” of the federal powers. In addition, the constitution equates Mexico City with the DF, and considers it to be a federal entity rather than a state.⁹ Due to its double role, the DF hosts both the federal government (the executive, legislative, and judicial branches) and its own local government, composed of the Chief of Government of the DF (executive), the Legislative Assembly, and the Superior Tribunal of Justice of the DF. In addition, the government of the DF not only has all the fiscal faculties of a state, but it also centralizes all the fiscal functions of its delegations. Thus, for example, the DF not only collects payroll taxes—the most important state taxes—but it also collects the property taxes that are the primary own-source of municipal revenues. Similarly, the DF directly collects the payments for user charges, fees, fines, etc. at both the state and the delegation levels.

Unlike the rest of the States, the territory of the DF is divided into 16 delegations, which are administrative units with semi-autonomous political rights, but largely dependent on the government of the DF. Delegations do not have the right to exploit their local fiscal bases, as all the local fiscal activity is centralized in the Treasury of the DF. Thus,

⁹ The constitution does not define the DF as a “state,” but as a “federal entity.” All states however, are also federal entities.

delegations lack fiscal autonomy as they operate entirely on the budgets apportioned by the DF's Legislative Assembly. Another fiscal peculiarity of the DF's delegations is that they do not receive their intergovernmental transfers in a clear, explicit, and predictable way. This is because the DF is the only federal entity in the country that does not have a law of fiscal coordination that sets formulas for transfer allocations. The current status of the DF and its delegations has been the result of a long process of political reforms that took place throughout the 20th century. Because these reforms largely explain the present legal and political condition of the DF and the ZMVM, I will briefly comment on them.

2.4. The political reform of the DF in brief

The political history of the DF is long and complex, so in order to present it in a clear and succinct way, I will follow Marván (2000) who divides the political evolution of the DF into three stages. The first stage is from Independence to 1928, when the territory of the DF was divided into municipalities and given autonomy to govern its own internal affairs. The second stage is from 1928 to the end of the 1980s, when the municipalities of the DF were substituted with delegations that were highly dependent on the central power. And the third stage is from the end of the 1980s until today, during which delegations have begun to gain back their political rights.

Prior to 1928, the territory of the DF was divided, like any other state, into municipalities that were in charge of the provision of most of the local services in the capital city. That situation changed in the first decade after the revolution when the city's political and administrative crisis pushed the Revolutionary General Alvaro Obregón to send a proposal to reform the DF and abolish its municipalities. That year saw the creation of a central department called the Department of the Federal District (DDF), whose Mayor was directly appointed by the president. The old municipalities were substituted with the delegations, whose heads or delegates were nominated by the Mayor but appointed by the President. That period was marked by the constant presence of the federal government in the local affairs of the City, but that did not preclude the authorities of the DDF from taking full responsibility over many of their urban functions. Notably, local authorities

remained in control of their own fiscal accounts, as they had to rely on their own sources of revenue to cover a large portion of the city's urban infrastructure expenditures (Davis 1994).

Marked by a lack of democratic rule in the DF, this period continued through the end of the 1980s when some important reforms started to take place and delegations began to gain back their political rights. During the 1980s and 1990s the DF went through a series of political changes that, by and large, explain its current condition. There are many factors that contributed to the passing of these reforms. Two of the most important were the general process of democratic transition that began in the 1980s that put an end to the PRI's authoritarian control of virtually all elected authorities, and the earthquakes of 1985 that created a civic consciousness that resulted in the formation of a number of social movements, and that led people to look for wider spaces of political participation. As a response to citizen demands for more mechanisms of political participation, in 1987 city authorities created the Assembly of Representatives of the Federal District (ARDF) that was envisioned as a mechanism of popular representation. This reform gave back to the citizens of the DF the right to elect their representatives directly. In addition, it gave the ARDF the capacity to draw up regulations and to designate the judges of the Judicial Tribunal of the DF. Overall, however, the Assembly had very limited legislative powers, because, as Davis (1994) argues, it was only intended to alleviate grassroots demands for democratic participation without compromising the PRI's ability to control urban policymaking in Mexico City.

Despite the initially limited powers of the ARDF, its formation represented a first step towards the future creation of an independent government in the DF. In 1993 another constitutional reform was passed to broaden the powers of the ARDF and to consolidate the institutional autonomy of the DF. One year after this constitutional reform, the first statute of government of the DF appeared, which is a sort of constitutional document that regulates almost all the functions of the capital city. Other important changes introduced by the 1993 reform included the removal of the federal Congress' responsibility for the approval of the fiscal and budgetary legislation of the DF; the creation of the Council of

Metropolitan Coordination; the indirect election of the Mayor; and the election of delegational councils. Overall, the reform increased the DF's independence from the federal branch, but limited its autonomy in three fundamental ways: (1) the Federal Congress maintained legal control over the DF through the approval and reform of the DF's statute of government, (2) the level of indebtedness of the DF remained in control of the federal executive and Congress,¹⁰ and (3) the President maintained control over the designation of the DF's Attorney General and Chief of the Police.

The limitations of the 1993 reform created a push for a new constitutional amendment that in 1996 changed the status of the ARDF from a representative to a legislative body. As a result, in 1997 the first Legislative Assembly of the Federal District (ALDF) came into existence; in addition the citizens of the DF were given the right to elect the Mayor directly for the first time in 1997, and the right to elect delegates starting in the year 2000. The first democratic government of the DF was elected for a period of three years (1997-2000), and after that it changed to six years like the rest of the states. Delegational authorities were to be in place for three years, like the rest of the local governments in the country.

Despite the fact that these changes opened the door for the democratization of the DF, its political autonomy remained bounded on several fronts. First, the DF kept its constitutional status as the "house" of the federal powers, a situation that precluded it from being legally considered an additional state of the federation. Second, the approval of the DF's legal statute and level of indebtedness remained under the control of the federal Congress—and not of the ALDF. Finally, the reform fell short of transforming the delegations into autonomous local governments. Unlike the rest of the local governments in the country, delegations were deprived of local councils and lacked any kind of fiscal autonomy.

¹⁰ The level of indebtedness of the DF is annually approved in the Law of Revenue of the Federation, in which the Federal Executive begins with a proposal that is then approved by both the lower and the upper houses of Congress.

The constitutional reform of 1996 made substantive progress in changing the political nature of the DF, but despite these advancements, all political forces agreed that additional reforms were needed, especially to separate the DF from federal influence and to give more legal and financial autonomy to the delegations. During the last years of the 1990s, political parties began to frame a new political reform for the DF, and in November of 2001, they presented a proposal that sought to give the ALDF total legislative control over the internal affairs of the DF. In particular, this political reform tried to give the ALDF the full capacity to approve and modify the DF's statute of government, and aimed to exclude the national Congress from the approval of debt ceilings in the DF. Both the ALDF and the Federal Chamber of Deputies approved the reform, but the PRI's faction in the DF's Legislative Commission in the Senate of the Republic voted against. In my interviews, I found that representatives of various political parties (some even from the PRI) regret that the PRI stopped the reform in the Senate, as they saw it as a firm step forward in consolidating the political independence of the capital city. Some political representatives even thought that this reform was meant to be a first step toward the future regulation of the metropolitan phenomenon in the area (Interviews J and K).

Despite the inability of political parties to agree on the direction for future reform of the DF, there is a wide agreement among the economic, political, and social actors of the city that something needs to be done, especially because the political transition has rendered all the previous institutional arrangements between the federal and the local authorities inoperable. Despite the urgency of the matter, in the current context of continuous political friction among the main actors in the ZMVM, the chances for a new political reform that would solve the metropolitan-wide problems of the DF look rather slim.

2.5. The Political composition of the ZMVM: from a PRI stronghold to political plurality

There are various political and legal factors that account for the lack of a new political reform in the DF, and more generally for the absence of a metropolitan agenda in the ZMVM. In addition to the legal constraints already presented, one characteristic that is

having a direct consequence on the current condition of the area is its high degree of political fragmentation. The series of legal changes that the DF underwent in the last two decades opened the door to electoral competition, thereby decimating the presence of national politics—especially those emanating from the PRI elites—in the capital city. The weakening of the PRI was not restricted to the DF, but also began to happen in other jurisdictions of the ZMVM, that fell under the control of the right-wing (PAN- National Action Party) and left-wing (PRD- Democratic Revolutionary Party) parties. In fact, during the 1980s the PRI's hegemonic power, which for decades traded votes for public services through an electorally efficient corporatist system, began to give way to an electoral turnover, completely changing the political composition of the ZMVM from a PRI stronghold to a politically plural region (Domínguez 1999 and De Alba 2004). As I discuss in the rest of this section, electoral change happened in virtually all elected positions in the area, from the federal electoral districts in the DF and the State of Mexico, to the local jurisdictions of these two entities.

The jurisdictional composition of the ZMVM at the state level includes the governorship of the State of Mexico and its local Congress, and the Mayor of the DF with its Legislative Assembly. At the local level, this area includes the 16 delegations of the DF and the 58 metropolitan municipalities of the State of Mexico with their corresponding local councils. Overall, this comprises more than 200 elected authorities that have experienced a dramatic electoral change in a period of about ten years. In terms of the political composition of the DF, until 1997 the PRI totally dominated the executive and delegation levels. This domination came directly from the federal branch, as the President had virtual control of the capital through his appointed Mayor, who was largely his political operator in the city. The hegemonic control of the PRI in the DF came to an abrupt end in 1997 when the government of the DF, together with all of its delegations, switched to PRD control. That year Cuauhtémoc Cárdenas, a long time political activist from the left, won the governorship of the city for the first time. Ever since then, the capital city has been in control of the PRD. Cárdenas left office early to compete in the federal election of 2000, but his party colleague Rosario Robles finished his term in office. In 2000, when the first election for a six-year term took place in the DF, the PRD

won the capital, and López Obrador became the new mayor (see Appendix 2, Table A2.2, for a complete list of the DF's Mayors).

At the delegation level, the democratic transition began in the year 2000, when the citizens of the DF won the right to elect their local delegates for the first time. This right, however, was limited to the election of delegates or local executives because delegations, unlike the rest of local governments in the county, do not have local councils. In that year, 9 delegations went to the PRD and 7 to the PAN (www.iedfor.org.mx, 2005). The PRI, which three years before controlled all delegations, did not win any of them. In 2003, the PRD gained control over three more delegations (moving from 10 to 13), the PAN lost control over three (moving from 6 to 3), and the PRI captured one. In terms of local legislative turnover, 1988 was the first time when the citizenry of the DF had the right to elect representatives to the first ARDF. In the three periods of the ARDF's existence (1988-1991, 1991-1994, 1994-1997) the PRI managed to keep the majority of its 66 seats (34 in first period, 40 in the second, and 39 in the third). The PRI dominance of the ARDF comes as no surprise, because during this period the PRI also maintained control over the executive and administrative functions of the DF, which still gave it almost total control of the city. As in the executive branch, the PRI's dominance of the legislature changed dramatically in 1997 with the creation of the first Legislative Assembly of the DF (ALDF). At that time the PRD won control of 38 seats and the PRI got only 11. The political landscape of the ALDF changed again in 2000 when none of the political parties won a majority in the Assembly.¹¹ In the most recent legislative period (2003-2006), the political landscape changed again in favor of the PRD, which won a simple majority of the Assembly with 37 seats.

As the following table illustrates, after the DF gained its democratic rights in 1997 the political landscape of the capital city changed dramatically from PRI domination to political pluralism. As this process of political plurality evolved in the DF, the neighboring State of Mexico also experienced important political changes. The State of

¹¹ In the second legislative period of the ALDF (2000-2003), the PRD had 19 seats, the PAN 17, the PRI 16, and the remaining 14 seats went to various minority parties.

Mexico has always been a political stronghold of the PRI. Not only are the political elites of Toluca, the state capital, closely aligned to the federal party officials, but for decades local authorities served as efficient electoral machines that brought the votes that the PRI needed to maintain its hegemonic control of the state. In the 1980s however, this situation began to change, especially in the state’s metropolitan area.

Table 2.1. Political composition of the DF before and after the democratic transition

	Before 1997		After 1997		PRI change
	PRI	Other	PRI	Other	
Mayor (1)	1	0	0	1	-1
Delegations (16)	16	0	1	15	-15
Legislature (66)	39	37	7	59	-32
Total (83)	56	37	8	75	- 48

Source: Author, based on www.iedf.org.mx, 2004.

Some of the reasons for this political change have to do with the fact that the political groups from the metropolitan area began to feel alienated from the political struggles that were taking place in the capital city of Toluca. Toluca is the epicenter of local power in the State of Mexico, and all the important political nominations have always come from its local political groups, notably from the Atlacomulco group (Iracheta 2002). This continued focus of the state’s political elites on the political groups of the Toluca area resulted in a virtual abandonment of the metropolitan area surrounding the DF, and in turn, gave rise to new political forces in this part of the State (Iracheta 2002). During the rapid urbanization process of the metropolitan part of the State, municipalities began to face severe service demands that they were unable to meet without the continuous and deliberate support of the state government and the party elites of the Toluca area. In this context of the PRI’s failure to deliver services, the opposition parties began to exploit the opportunity to gain a political presence in the metropolitan part of the State. In some cases, local electorates decided to elect municipal administrations with better technical capacities than those of the PRI, and in other cases, different political parties (mainly the PRD) were able to build strong political clientele out of the dissatisfied citizens whose particular demands were not met by the PRI’s local authorities.

In addition to these reasons, Iracheta (2002) identifies a series of other determinants that contributed to the weakening of the PRI in the State of Mexico during the 1990s. These are (1) the general discontent with the PRI after the economic crisis of 1994, (2) a weakening of political cohesion within the party resulting from the loss of political strongholds throughout the country and the separation of the president of the country from the PRI leadership, and (3) an increase in the capacities of other political parties to win electoral positions and to offer new alternatives to the electorate.

All these factors help to explain the decline in electoral support for the PRI in the State of Mexico, both at the local and the federal levels. For example, in the 1981 presidential elections, almost 60% of the votes in the state went to the PRI, but in 2000 the PRI only received 32% of the total votes. Conversely, the PAN moved from 24 to 45% of the votes, and the PRD from 5 to 20% of the total votes for president. The election for governor followed the same trend, with the PRI losing electoral support. Thus, while in 1981 the PRI received 82% of the votes for the gubernatorial election, in 1999 that number declined by half (42.5%). The percentage of votes lost by the PRI went mainly to the PAN, whose support increased from 7.6 to 35.4% and to the PRD, whose share of the total votes increased from 3.4 to 22%. The PRI also lost power in the local Congress, moving from 34 (out of 57) seats in 1990 to 24 seats in 2003.

At the municipal level, the PRI also gave up power to the PAN and the PRD. While in the municipal elections of 1990 the PRI won control over 118 of the then 121 municipalities, in the election of 2003 that number declined to 67 (out of 122) municipalities. During this time both the PAN and the PRD widened their presence in the State by moving from 2 to 24 municipalities in the case of the former, and from 1 to 22 municipalities in the case of the latter. The weakening of the PRI's political control in the State of Mexico was particularly acute in the part of the State that forms part of the ZMVM. Thus, according to my own calculations, while in the municipal elections in the State as a whole, the PRI moved from controlling 98% of the municipalities in 1990 to 55% in 2003, in the metropolitan municipalities the PRI presence fell from 95 to 48% of municipalities in this same period.

These data on electoral turnover illustrate the dramatic political change experienced by the ZMVM in the last fifteen years. Although there is no general agreement on the extent to which this political plurality has impeded the formation of a metropolitan agenda, during my interviews diverse political actors told me that this is one of the main reasons for the lack of inter-jurisdictional cooperation in the area. This political fragmentation together with the legal constraints on the recognition of metropolitan areas in the country has turned this area into an agglomeration of single jurisdictions rather than an integrated metropolitan unit. In this context, the question that arises first and foremost is, why should an area with these characteristics be envisioned as a single functional unit? If after all, jurisdictions in this area have different levels of resources, legal status, and political representation, then what is to be gained from including them into a broader metropolitan structure? In the rest of this chapter, I provide some preliminary answers by looking at the functional interrelations that exist among the different jurisdictions that form part of the ZMVM.

2.6. Functional integration: the ZMVM as a unit of analysis

In the previous sections, I have thoroughly documented the high level of political, legal, and fiscal fragmentation that exists among the jurisdictions that comprise the ZMVM. Despite this fragmentation, I have been arguing that this area should be envisioned as a functional territorial continuum rather than as a conglomerate of independent jurisdictions. In this section, I provide a series of additional arguments to support this claim. According to Duhau (2003), one idiosyncrasy of metropolitan areas is that despite their multi-jurisdictional composition, their individual characteristics can only be explained as forming part of a common structure, which normally functions as a single and integrated unit. In other words, the nature of a metropolitan structure derives from the relationship that each individual jurisdiction has with the rest of the jurisdictions in that same structure, which are different than those relationships between jurisdictions that do not form part of the same metropolitan structure.

In this theoretical framework, the characteristics of the single jurisdictions forming part of the ZMVM can hardly be explained without reference to other jurisdictions in the area and, at times, to the metropolitan area as a whole. In fact, the dramatic population growth in the metropolitan municipalities is directly linked to the secular dynamics of the DF, and this alone has given rise to a process of continuous functional integration among the jurisdictions of the ZMVM. Regardless of the dividing lines between states, delegations, or municipalities, people constantly move from one place to the other within the metropolis to perform a multitude of socio-economic activities which include work, dwelling, consumption, education, leisure, etc. To put it in the words of a publication on air quality in the Mexico mega city area, the flow of people, trade, and services between the DF and the State of Mexico reflect the many ways in which these two areas represent a single entity (Lezama et al. in Molina & Molina eds. 2002). All these activities, together with the dense net of social and economic interactions taking place above the formal legal divisions of the ZMVM, cause this area to operate like a functional metropolitan unit.

Functional interaction among the comprising jurisdictions of the ZMVM occurs in a number of urban sectors such as environmental management, public security, transportation, housing, water, and solid waste management, amongst others. Out of all these sectors, perhaps the one that best illustrates the functional integration of the ZMVM is housing. The evolution of the housing market in the ZMVM has followed a natural trend dictated by the rapid population increase (both by migration and natural birth) in the metropolitan municipalities. As already mentioned, the population expansion of the ZMVM has taken place in the State of Mexico, a phenomenon which has increased the demand for housing. The very high demand for housing in the metropolitan municipalities has been largely driven by the high real estate prices in the central city that have forced people to look to areas with lower property values. In fact, as Ward (1990) argues, the process of population expansion into the State of Mexico has resulted from the constraints imposed by the land and housing markets rather than by the outcome of migrant choice. People move where there is available land, and where property prices

give newcomers the opportunity to buy instead of having to rent or share space in the central city.

The population and housing expansion into the State of Mexico has occurred on a massive scale. From 1995 to 2000, for example, out of the 201,000 households that left the DF, 53% moved to the metropolitan municipalities. Similarly, from the 102,000 households that the DF received in this period, 40% came from the metropolitan part of the State of Mexico, resulting in a net migration of 65,700 households to the metropolitan municipalities (Eibenschutz 2004). According to a real estate developer, as a result of this migration, the metropolitan area of the State of Mexico is building around 100,000 houses per year; most of these houses—between 60,000 and 70,000—are affordable housing projects, or what is called “social interest” housing (Interview H). By and large, these projects of social interest housing in the State of Mexico function as sleeping communities for commuters who form part of the DF’s labor market. Out of the remaining 30,000 to 40,000 houses, about half is made up of middle-income level households, and the other half is informal settlements.

In terms of the mobility of these commuters, Gakenheimer et al. (2002)—based on a COMETRAVI report—argue that 25% of the trips in the ZMVM occur between the DF and the State of Mexico, the other 55% of the trips are concentrated within the DF, and the remaining 20% within the State of Mexico. Although there is no precise measurement of the total number of trips in the ZMVM, they amount to about 30 million, meaning that about 7.5 million trips take place between the DF and the metropolitan part of the State of Mexico. According to an estimate from a real estate developer, between 5 and 6 million people travel everyday from their bedroom communities in the State of Mexico to work in the DF (Interview H). As land in the area contiguous to the DF has become more congested, new construction has been pushed to more distant places, to the point that some commuters from the State of Mexico must travel up to two and even three hours one way to get to their work places in the DF. Currently construction is mostly taking place in the third and even fourth “ring” areas of the State of Mexico. The expansion into the first ring took place during the 1950s, when most construction was built in the

municipalities adjacent to the DF (e.g., Naucalpan, Nezahualcóyotl). Then, during the 1970s and 1980s, population expanded into the second “ring” area where construction began to take place in more distant places, like Atizapán, Coacalco, and Atenco. Now, population is expanding into the third or even fourth “ring” areas, which include municipalities like Tecámac, more than 40km away from the city center (Ward 1990).

The high degree of mobility of the population between the DF and the State of Mexico has generated a number of sectoral activities, which have an inherently metropolitan scope. Some of these metropolitan-wide activities include the management of air pollution, water, transportation, and solid-waste. The issue of water use and management is highly illustrative of the functional relationship between the DF and the State of Mexico, as almost the totality of the water consumed in the former comes from basins located in the latter. A similar situation is observed in the case of solid waste, but here the production takes place in the DF and then it gets dumped into the State of Mexico.

Transportation is another sector that has clear metropolitan characteristics, as it connects the flow of people between different parts of the metropolitan area. So far, there is no single transportation network in the ZMVM; infrastructure is highly unequal and very loosely integrated despite the fact that the segments of transportation networks in the DF have direct consequences on those in the State of Mexico and vice-versa (Iracheta 2004). Finally, air pollution is another sector that has clear metropolitan scope. The natural dispersions of pollutants, both from fixed and mobile sources, create a continuous number of environmental externalities in the different jurisdictions of the ZMVM, and these can only be mitigated with a common metropolitan strategy (see Molina & Molina eds. 2002).

The activity that takes place within and across the numerous jurisdictions of the ZMVM, without any regard to their political and legal boundaries, is what generates the metropolitan nature of this area. In the last few decades, public officials and academics have underscored this metropolitan nature and have called for its legal recognition.

Unlike other metropolitan formations throughout the world (OECD 2001), but similar to other Latin American capitals like Buenos Aires (Pérez n.d.), the ZMVM has been very

slow and highly inefficient in dealing with its common problems. Some policies have been put in place, but they are still insufficient. In the next section, I conclude by providing a brief account of these policies and explaining where the ZMVM stands today.

2.7. Conclusion: where do we stand?

In summary, the ZMVM is a conglomerate of state and local independent jurisdictions, which despite their functional inter-relationships are not recognized as an unified entity with integrated administrative or political functions. The current situation presents one of the worst possible scenarios for this area, as no one is responsible for the costs that individual jurisdictions impose on each other and on the metropolitan area as a whole. The frequent number of social and economic transactions (travel, commercial activities, pollution, crime, etc.) that take place among the jurisdictions of the ZMVM generate a series of externalities with negative consequences for the metropolitan area as a whole. Although much more work is needed to quantify the costs and benefits that accrue to the jurisdictions in the DF and the State of Mexico, political actors recognize the enormous amount of spillover that exists under the current structure. Actually, it has already become part of the political strategy of the DF to underscore the costs—in terms of pollution, congestion, infrastructure deterioration, etc.—imposed by the millions of commuters from the State of Mexico. Similarly, the State of Mexico furiously argues that it is not being compensated for all the services that it provides to the DF (mainly water), and on almost every occasion points to the superior service infrastructure that exists on the other side of the border.

In the presence of externalities, such as in the case of the ZMVM, economic theory recommends the formation or legal recognition of intermediate tiers of government to internalize such spillovers (Rothenberg 1970). For the political, legal, and historical reasons already discussed, the ZMVM has not been able to follow this route. In fact, at this point, the ZMVM is characterized by the opposite situation: a complete lack of metropolitan vision, and a precarious and limited system of metropolitan coordination. Iracheta (2002: 23) summarizes the current situation in the following way:

For the Federal District or the State of Mexico, the city ends within its own limits. Each of these entities considers that the other is indeed 'other' in almost every sense. Because of the particularities of the democratization process in Mexico, this same scheme has begun to be reproduced in the delegations of the Federal District and the metropolitan municipalities of the State of Mexico. The municipal presidents of the State of Mexico and the delegates of the Federal District conceived of 'their territories' in a very isolated manner; with little interdependence and co-responsibility with their neighbors, moving away from a metropolitan vision

In order to deal with their metropolitan problems, authorities in the ZMVM have mainly relied on a series of limited planning mechanisms (See Davis & Raich 2003). Mexico has a long yet incomplete history of intergovernmental mechanisms aimed at solving problems that involve a multiple jurisdictions. At present, these mechanisms are largely reduced to the formation of collective bodies or commissions, and to narrow bilateral agreements. In the ZMVM, there are various sectoral commissions and there is even a multi-sectoral commission of metropolitan affairs (Executive Commission of Metropolitan Coordination), where authorities from the DF, the State of Mexico, and the federal government meet to plan for the metropolitan area. Despite the fact that most metropolitan planning has been channeled through these commissions, their results, with the exception of the commission for the environment (CAM), have been rather limited. There are various factors that account for the weakness of the commissions, primarily their inability to generate binding agreements, and their lack of financing and political support.

In addition to the limited availability of mechanisms for metropolitan planning, the political turnover in the ZMVM has made the current situation for metropolitan coordination even more critical. During my interviews, it became clear that there is agreement among academics and public officials that this political change has further delayed the formation of a metropolitan agenda in which the jurisdictions from both sides of the border come together to envision a common strategy for the ZMVM. In the past, not only did the federal government play a convening role, with a more visible economic and political presence in the area, but politicians in the DF and the State of Mexico seemed to have understood that what happened on one side of the border had direct

repercussions on the other side. This was clearly the case in the expansion of the metro B line from the DF into the eastern part of the State of Mexico, when authorities from the DF (Mayor Camacho) and the State of Mexico (Governor Pichardo Pagaza) agreed that this project was beneficial to the metropolitan area as a whole. Although examples like this one are limited, the current lack of metropolitan awareness is particularly critical, not only between the DF and the State of Mexico, but among the jurisdictions within these federal entities. A former delegate clearly illustrated the current condition in the following terms: “the only way to get things done is to focus on our own projects; little can be gained by turning our heads to the other delegations or municipalities, not to mention the central authorities of the Federal District” (Interview L).

The consequences of this lack of metropolitan vision are many. Scholars have begun to underscore the urgency of approaching metropolitan problems on a sectoral level. Thus, studies on water (e.g. PUEC 2004a), transportation (e.g. Gakenheimer et al. in Molina and Molina eds. 2002), and the environment (e.g. Molina and Molina eds. 2002) have begun to emerge with a metropolitan vision. So far, however, very few analysts have investigated the financial condition of the ZMVM. In particular, they have not studied the effects of decentralization policies on the fiscal disparity of the ZMVM. One of the main reasons for this situation is the lack of a financial database that includes spending and revenue data on all of the state and local jurisdictions that form part of the ZMVM. This exercise is the objective of the next chapter.

CHAPTER 3

OVERVIEW OF THE PUBLIC FINANCES OF THE ZMVM

3.1. Introduction

The Metropolitan Zone of the Valley of Mexico (ZMVM) is not only politically, economically, and legally diverse, but also quite fiscally fragmented. The local jurisdictions that form part of this area have different fiscal compositions, levels of revenue, and expenditures. As in most other sectors, studies on Mexico City's public finances largely focus on the Federal District, without considering the fiscal condition of the metropolitan zone of the State of Mexico.¹ This results in a partial and skewed vision of the area, because it ignores the fiscal reality of the 58 metropolitan municipalities, where more than half of the population of the ZMVM lives. One of the main reasons for this lack of an integrated vision is the scarcity of data at the state and municipal levels and the absence of a basic methodology to integrate the financial information of jurisdictions with different fiscal compositions.

Because the unit of analysis of this work is the ZMVM, understood as a single territorial and functional continuum, the construction of an integrated fiscal framework becomes necessary to perform any kind of metropolitan-wide analysis. As discussed in the previous chapter, the ZMVM faces a number of problems of metropolitan scope, but the prevailing vision of this area fails to recognize that its comprising state and local jurisdictions have very different revenue sources, and therefore must exert different levels of fiscal effort to provide similar levels of public services. In order to recognize this fiscal heterogeneity and to incorporate it into policy measures that will alleviate problems in the ZMVM, one first step lies in generating an integrated framework of the public finances of the metropolitan area as a whole.

In this chapter I construct a comprehensive picture of the public finances of the ZMVM. To the best of my knowledge, this effort represents a unique exercise that seeks to show the complexities and tensions between the state and local jurisdictions of the ZMVM.

¹ Some notable exceptions are Morales (2002) and Iracheta (2002).

Because there is no model for the construction of such a picture, I propose to do it in three main parts. In sections 3.2 and 3.3, I present the finances of the DF and the State of Mexico at the state-wide level, while in section 3.4 I turn to the local level to discuss the public finances of the metropolitan municipalities of the State of Mexico and the delegations of the DF. Together, these three sections illustrate the overall fiscal condition of the ZMVM.

The current fiscal condition of the ZMVM is accounted for by a number of determinants. In addition to the legal and political factors that I discussed in Chapter 2, here I present the social and economic characteristics of the ZMVM. I explore these characteristics because the economic activity in the state and local jurisdictions of the ZMVM and their social composition affect the fiscal condition of this area as a whole. The process of decentralization is another factor that has affected the fiscal condition of the ZMVM. In this chapter I present the evolution of the public finances in the region during a decade of important decentralization reforms, and leave for the two subsequent chapters the analysis of how decentralization has contributed to the current fiscal fragmentation of the ZMVM.

3.2. The Federal District

The DF is the wealthiest federal entity in Mexico, and due to its economic vitality, it generates substantial revenue. Historically, the DF has always been the federal entity with the highest amount of revenue generation, but although this is still the case, the economic and demographic changes of the last few decades have placed its public finances under increasing pressure. In this section, I review the evolution of the public finances of the DF in the last two decades. Because the fiscal condition of the DF derives from its social, demographic, and economic characteristics, I begin by providing a brief description of these characteristics.

As the wealthiest entity in the country, the DF receives high scores in the basic indicators of development. According to the United Nations, it has the highest Human Development

Index in Mexico, with a 97% literacy rate (in comparison to the national average of 90.5%), and with a concentration of 12% of the total number of teachers in the country. Concerning healthcare, the DF has the highest number of hospitals and doctors of any other state; and concerning basic infrastructure, the DF boasts the best in the country, with the widest coverage of water, drainage, and energy services. In terms of economic indicators, the DF is the largest contributor to the country's gross national product, currently representing 22.4%. In addition, 17% of the total employed population is concentrated in the DF, it receives the highest (62%) level of foreign direct investment (JP Morgan 2003), and it has the highest income per capita in Mexico, calculated at approximately US\$14,000, which is about three times the per capita income of the rest of the country (Beristain and Rodriguez: 2001).

Despite being the strongest economy and the most productive entity in the country, in the last few decades the DF has faced significant pressure to sustain its economic vitality. This pressure has been caused by various conditions, especially the drastic shift in the economy from the industrial to the service sector, a decline in public investment, and the opening of the economy to free trade. In terms of the shift from an industrial to a service and commercial economy, for the last thirty years the DF has been losing its industrial capacity to other states with closer proximity to export markets. In the meantime, its service and commercial sectors have come to represent more than 75% of its internal product. According to Beristain and Rodriguez (2001), 7 out of 10 jobs in the DF are in the transport, commercial, and service sectors, and one out of every four jobs is in the public sector. The loss of manufacturing jobs has had a direct consequence on the finances of the DF, which has seen the conversion of highly productive jobs into more informal and fragmented services with lower productivity levels. This situation contributed to a slowdown of the economy, to the point that the economy of the DF grew at rates below the national average at various times during the 1990s. Similarly, its relative importance in the country's gross national product fell from 23.9% in 1993 to 22.3% in 2001.

Another element with important implications for the economy of the DF has been the slowdown of federal investment in the area. As explained in Chapter 2, until the 1980s, authorities in the DF used public and private investments to expand the production of services and infrastructure well beyond the national average. Up until that time, very important investments took place in all sectors of development from water and transportation, to housing and commercial infrastructure. All these projects were possible due to the widespread use of public funds to stimulate private investment. During the 1990s however, that vision changed, and the fiscal retreat of the federal government from the DF, together with the DF's inability to increase its revenue, has prevented the DF from bringing in the levels of investment that a city of this magnitude requires (Moreno et al. 2004).

3.2.1. Public finances in the DF

According to standard public finance theory, in a federal system, the states with the highest concentration of economic activity collect the largest amounts of revenue and have the highest spending levels (Slack 2001). This is clearly the case in the DF, which, as the most economically sound entity in Mexico, has a high concentration of private income and employment and thus a large tax base. Consequently, the DF also has high levels of public spending, required to finance the infrastructure and public service needs generated by its high economic activity.

Because of its high concentration of economic activity, the DF is the only federal entity in the country that generates more than half of its revenue from its own fiscal base. In fact, while the DF receives about 40% of its total revenue from federal transfers, the rest of the states receive, on average, 85% of their revenue from transfers. This condition is due to the DF's unique fiscal composition, which combines the fiscal characteristics of both a state and a municipality. In practice, this means that the central government of the DF (GDF) not only has access to all state-wide taxes, namely the payroll tax (the main state tax), but also to local taxes, including the property tax, which is the most important municipal tax in Mexico.

In order to provide a detailed account of the fiscal composition of the DF, I rely on two databases: one prepared by the DF's Legislative Assembly (ALDF) and the other by the Treasury of the DF. Both databases concentrate information from the yearly public accounts, and although they include similar data entries, in various cases they complement each other. The analysis covers the years from 1989 to 2000 for which complete information is available, but in some cases it includes other years when there are existing data. Although the data only cover a ten-year period, this series includes the decade of the 1990s when, as discussed in Chapter 1, a number of important fiscal decentralization policies took place in the country.

3.2.2. Revenue in the DF

From 1989 to 2002, total revenue in the DF grew 56% in real per capita terms. Unlike the rest of the states in the country, this increase was the result of the consolidation of the DF's own-source revenue, rather than an increase in its dependence on federal funding. Thus, while own-source revenue grew 65% in real per capita terms during the period, transfers grew 45%. This change in the financial structure of the DF was the result of a fiscal reform at the beginning of the 1990s that increased its collection of local taxes and fees, and of a series of changes to the National Systems of Fiscal Coordination that reduced the federal transfers flowing to the DF.

Table 3.1: DF. Total revenue per capita and as a proportion of total (constant 2002 pesos)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total revenue	4,340	4,964	5,201	5,888	6,061	6,220	4,638	4,614	5,839	5,478	6,262	6,468	6,911	6,863
Own-source	2,092	2,528	2,788	3,437	3,604	3,952	2,867	2,797	3,485	3,137	3,318	3,420	3,583	3,523
Total transfers	2,248	2,436	2,413	2,451	2,457	2,268	1,771	1,817	2,354	2,341	2,444	2,828	3,187	3,279
<i>% of total</i>														
Own-source	48.2	50.9	53.6	58.4	59.5	63.5	61.8	60.6	59.7	57.3	53.0	52.9	51.8	51.3
Total transfers	51.8	49.1	46.4	41.6	40.5	36.5	38.2	39.4	40.3	42.7	39.0	43.7	46.1	47.8

Source: Author, based on ALDF (2004).

The increase in the DF's own-source revenues was largely the product of a major fiscal reform that took place during the administration of Mayor Manuel Camacho (1988-1994). When Mayor Camacho came to power at the end of 1988, the finances of the DF

were in good shape because the federal government had just taken over all financial obligations of the DF after the earthquakes of 1985. Thus, Camacho had enough leeway to begin a series of reforms that attempted to strengthen the collection of the DF's own-source revenue through a series of policies that included the modernization of information technology services, improvement of the cadastral systems, administrative simplification, improved enforcement policies, and the restructuring of the whole system of tax administration. As a result of these changes, from 1989 to 1994, the DF experienced an increase in almost all of its local sources of revenue, and its total own-source revenue almost doubled in real per capita terms. This fiscal soundness, however, was severely damaged by the peso crisis of 1995, which together with the lack of any substantive fiscal reforms since then, have prevented the DF from reaching the 1994 levels of revenue collection.

Table 3.2: DF. Own-source revenue per capita (constant 2002 pesos)

	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	%
Own-source revenue	2,092	3,952	2,867	2,797	3,485	3,137	3,318	3,420	3,583	3,523	100
Taxes	616	1,561	1,144	1,168	1,535	1,243	1,275	1,432	1,586	1,570	41
Fees	249	686	461	464	539	482	567	554	595	552	16
Products	995	795	628	585	625	791	832	795	152	695	23
Fines	40	192	127	147	122	97	108	83	597	152	5
Betterment levies	2	108	45	29	35	27	6	2	2	1	1
Other	144	611	461	404	629	497	530	553	651	553	14

Source: Author, based on GDF, Ministry of Finance.

Table 3.2 shows that taxes are the most important element of the DF's own-source revenue, representing about 41% of the total. Taxes grew during the period largely because of an increase in the collection of property taxes and the introduction of a local payroll tax in 1988 (Table 3.3). Since its introduction, the payroll tax has represented an important source of revenue, amounting to 39% of total tax collection. Property taxes, however, remain the main source of local taxation in the DF (43%); the proportion of property taxes to total taxes is by far the highest in the country. In fact, from 1989 to 2001, the collection of property taxes in the DF represented almost half of the total receipts of property taxes in the country (Appendix 3, Table A3.1).

After taxes, so-called “products” are the second most important source of local revenue, amounting to almost one quarter of total own-source revenue. Products consist of revenue obtained from the provision of services that are private in nature. In the case of the DF, most revenue in this category comes from the provision of auxiliary police services. Fees are the third most important source of local revenue, and this category experienced some of the highest increases during the period. The collection of fees for the provision of water services grew almost five times in real per capita terms from 1989 to 1994, largely due to a reform of the water system in the early 1990s that had an important privatization component (Haggarty et al. n.d.).

Table 3.3: DF. Own-source revenue per capita (constant 2002 pesos)

	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	%
TOTAL TAXES	616	1,561	1,144	1,168	1,535	1,243	1,275	1,432	1,586	1,570	100
Property	111	694	534	592	572	571	591	653	728	698	43
Payroll	311	589	385	411	714	486	520	580	627	625	39
Other taxes	194	278	225	165	249	185	163	200	231	246	18
TOTAL FEES	249	686	461	464	539	482	567	554	595	552	100
Water provision	60	297	210	230	276	274	295	298	320	296	48
Vehicular control	107	131	110	95	116	85	108	107	125	100	23
Other fees	82	257	142	140	146	123	165	149	151	156	29
TOTAL PRODUCTS	995	795	628	585	625	791	832	795	152	695	100
Auxiliary, banking, and industrial police	347	480	369	441	515	551	599	641	-	631	58
Credit, interests, and stocks	612	110	217	88	45	190	163	85	87	-	29
Other products	36	204	42	55	65	50	69	69	66	65	12

Source: Author, based on GDF, Ministry of Finance.

After own-source revenue, transfers represent the second most important source of revenue in the DF. The DF is the only federal entity that covers more than half of its expenditures with its own revenue sources. Despite this moderate level of vertical imbalance, the total transfers per capita also experienced real growth from 1989 to 2002. Until 1998, when the system of earmarked transfers or *aportaciones* was created, the total transfers were largely composed of unconditional transfers or *participaciones*, which experienced modest but positive real growth until 1994. Then, with the peso crisis of 1995, the *participaciones* declined, but began to rise again in 1997. The growth of transfers since 1997 has been the product of both a recovery from the economic crisis of

1995, and of a reform to the SNCF in 1998 that increased the total amount of the General Revenue Sharing Fund from 18.5 to 20% of the Federal Revenue Sharing Pool (*RFP*). In addition, the creation of the *aportaciones* at the end of 1997 began to channel new, earmarked resources to the DF, mainly to cover its health and security-related expenses. This situation explains both the increase in *aportaciones* and in transfers as a whole.

Table 3.4: DF. Total transfers per capita (constant 2002 pesos)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Participaciones</i>	2,232	2,430	2,405	2,322	2,398	2,159	1,751	1,801	2,209	2,013	2,151	2,438	2,479	2,603
<i>Aportaciones</i>	16	6	7	129	59	109	20	16	146	328	293	390	708	676
Total transfers	2,248	2,436	2,413	2,451	2,457	2,268	1,771	1,817	2,354	2,341	2,444	2,828	3,187	3,279

Source: Author, based on ALDF (2004).

In addition to *participaciones* and *aportaciones*, there are other less-structured transfers that the federal government uses for specific purposes. For a number of decades, the federal government channeled several of these transfers to the DF, but since the 1990s they have been in decline and recently they have virtually disappeared. As I mentioned in Chapter 2, the purpose of these transfers was to help the capital city cover the costs of its infrastructure projects, mainly in the areas of water and transportation. The origin of these special transfers goes back to the 1960s, when according to Davis, “the urban infrastructural development had been undertaken by the national party leadership through nationally funded institutions and programs in order to jump-start the Mexico City economy for purposes of national development” (1994: 119). These mega projects were largely financed by the federal government, but by the late 1970s the federal authorities decided to transfer major infrastructure expenses, such as the construction and operation of the metro system, to the DF. At that time, the federal government began to make special transfers to the DF, primarily subsidies to the metro. During the 1980s the federal government increased the use of these special transfers to help the DF out of the financial crisis created by the crash in oil prices in the early 1980s and the high cost of reconstruction after the 1985 earthquakes. During the first part of the 1980s these special transfers went from 6.4% of the total DF’s revenues in 1980 to almost 40% in 1986 (Table 3.5).

Table 3.5: DF. Federal Transfers (millions, 1990 constant pesos)

Year	1980	1982	1984	1986	1988	1990	1992
Amount	420	1080	2489	2897	2125	1044	267
% of total revenue	6.4	13.7	28.8	37.4	22.6	9.9	2.8

Source: Moreno et al. (2004).

This high level of special transfers, together with federal government interventions in the 1980s to alleviate the DF's debt, began to create the image that the DF was being subsidized to the detriment of the rest of the states. To respond to this situation, in 1990 President Salinas—who came to power through a questionable democratic process and needed to gain legitimacy in the states—significantly reduced the distribution of special federal transfers to the DF. With this decision, the DF became fully responsible for covering the operation of its big infrastructure projects with its own revenue. Out of all the big infrastructure projects in the DF, the metro system generates the most financial pressure. Because of the high political cost of raising the price of metro fees, the authorities have absorbed subsidies of roughly \$4 billion pesos (US\$365 million) per year since 1990 (Moreno et al. 2004). The DF has largely paid for these subsidies with debt, another very important financial source for the DF.

In addition to own-source revenue and transfers, debt is the third source of funding for subnational governments in Mexico, and it has always been an important part of fiscal policy in the DF. When examining the DF's use of debt, the first thing an analyst notices is that the capital city has a special debt regime. Unlike all the other states, it is the Federal Congress, and not the ALDF, who authorizes debt ceilings for the DF. In practice, the federal government formally contracts out the debt, and it covers this debt by using the DF's *participaciones* as collateral. Thus, the federal government functions as a lender of last resort, but the DF remains directly responsible for paying the debt service. This special debt regime has been controversial, and has significant advantages and disadvantages.

The major advantage of this system is that creditors conceive of the capital city's debt as a federal debt. Therefore, the DF commonly has access to preferential borrowing rates. Perhaps more significant is the apparent certainty that in the case of financial distress, the

federal government will step in and take over the DF's debt obligations (JP Morgan 2003). This happened a few times in the past when the DF was still a Department of the Federal Government, and the politicians at both federal and local levels had the same political allegiances. However, the recent movement towards political pluralism in Mexico creates uncertainty about how the federal government would handle future insolvency in the DF. Based on past experience, the situation does not look promising for the DF. When Mayor Cárdenas took office in 1997 and requested that the federal government take over the DF's debt obligations, as the federal government had done in the past when other federal entities like Baja California Sur and Quintana Roo formally became parts of the federation, the federal administration of then-President Zedillo denied the request. Regardless of what happens in the case of a future financial crisis in the DF, the arrangement is still controversial because it is not clear if the other states are excluded from the implicit federal back up enjoyed by the DF. When I interviewed the Minister of Finance of the Zedillo administration, he mentioned that all states (including the DF) have similar guarantees as they all have their *participaciones* as collaterals. He also noted that the federal government must have an extremely neo-liberal approach to let one of its federal entities go into financial crisis, regardless of whether it is the capital city or any other state (Interview A). His position was not completely shared by the DF's Minister of Finance during the Camacho administration who, in another interview, told me that he considers that the debt of the capital city to be different from that of other states. According to his view, because the debt of the DF is formally part of the debt of the federal government—unlike the situation in any of the other states—“the debt problems of the DF are problems not only of this entity but of the country at large” (Interview B).

Concerning the disadvantages of the current status of debt in the DF, a central concern is its lack of autonomy over debt policy. The yearly debt levels of the DF are approved both by the President who includes the debt ceiling in the provision that he sends to Congress, and then by lower and the upper houses of Congress, since the debt ceiling forms part of the annual Law of Revenues. This situation not only limits the autonomy of the DF's own legislative branch, but it also creates problems by making a pure financial concern the

subject of a broader political negotiation. The rationale of this system is that the DF's debt is formally part of the federal debt, and therefore the whole country should have a say in its management. In practice, however, political groups in the Federal Congress use their power over this budget line to bargain for other general concerns that have nothing to do with the public finances of the DF. A former Minister of Finance mentioned to me that this has been the case several times during past annual budgetary negotiations, when political forces have only been willing to trade their support for the DF's debt level in exchange for specific concessions on other budget items (Interview A).

Having reviewed some of the main characteristics of debt policy in the DF, in the remainder of this section I discuss the DF's use of debt in the last few years. Today, it is the most indebted entity in the country. Although the DF has not always had high debt levels, its use of credit goes back several decades. The DF's recent debt trend started with the construction of the big infrastructure projects of the 1950s. During that period a massive urban expansion took place in the DF, which required enormous amounts of investment. Oldman et al. (1967: 25) documented that over the decade from 1953 to 1963, the revenues and expenditures of the then DDF "increased nearly five times in current prices and over three times in real terms." Since the DF did not have enough resources of its own, these infrastructure and service needs were financed either directly with federal funds, or indirectly through the use of credit.

From that time until the mid-1980s the DF reached high levels of indebtedness intermittently, but the federal government always stepped in to alleviate its financial stress. The first time this happened was in 1977, when the federal government agreed to alleviate the costs of the construction of the metro system. Continuous demands for urban services pushed the DF to incur high debt levels that by 1982 reached the maximum level of 8.2% of its GDP. This situation, together with the oil crisis of that year, pushed the federal government to step in again to absorb \$163 million pesos of debt created by the loss in the exchange rate.² Three years later, in 1986, the federal government once again

² In 1983 the DDF and the federal government signed the "Agreement for the Restructuring and Absorption of Debt" which the latter committed to take over the losses created by the slide in the exchange rate from

intervened to help the DF out of the crisis caused by the 1985 earthquakes, taking over all its debt commitments.³

The bail-out of 1986 left the finances of the DF in a sound condition that lasted for the next nine years. The fact that the DF had a healthy fiscal condition in the second half of the 1980s allowed it to increase its collection of own-source revenue and to maintain fiscal discipline. As a result, the DF reached a real reduction of 87.2% of its total debt, and the achievement of primary surpluses in various years (Cámara de Diputados 2001; Banobras 2004). This situation abruptly changed with the peso crisis of 1995, which reduced the total revenue of the DF by 25%, and pushed the authorities to resort to the use of credit. Since access to credit was then favorable because of the DF's good fiscal condition in previous years, the DF decided to exploit its credit capacity (Interview B). During that year, Mayor Espinoza started what was called the "Multi-annual Investment Program of Credit for the DF, 1995-2000," which aimed at reaching the levels of investment necessary for the DF to keep up with its service and infrastructure demands. This Program established a debt ceiling of \$33 billion pesos for the year 2000, and restricted the use of these funds for the financing of transportation, water, and sewage projects (Moreno et al. 2004).

During the first three years of the Multi-annual Program, the administration of Mayor Espinoza contracted credits for \$10.6 billion pesos, of which 35% was allocated to transportation and 45% to water-related projects. The specific projects that financed by these credits were, in the transportation sector, the metro, the light rail, and the trolley systems; and in the water sector, the deep drainage, the water-metering system, and the expansion of the primary and secondary water and sewage networks. The remaining 20% was allocated to justice and public safety programs, which do not regularly justify the use of debt, as they do not contribute to the building of assets (Moreno at al. 2004). In 1997 when the first opposition government came to power in the DF, it had an outstanding debt of \$11.8 billion,

26 pesos per US dollar in 1982 to 130 pesos per US dollar in 1983. With this measure, in 1983 the DF reduced its deficit by 43% with respect to the debt levels of 1982 (Cámara de Diputados, 2001).

³ In 1986, the DF and the federal government signed the "Agreement of Financial Rehabilitation" in which the latter took over 96% of the total passives of the DF, which amounted to \$418 million pesos (Cámara de Diputados, 2001).

which the federal government refused to take over (Table 3.6). Despite this, Mayor Cárdenas⁴ decided to go ahead with most of the debt commitments of the previous administration, and requested additional credits for \$7.5 billion in 1998—an amount that represented the highest annual debt ever authorized to the DF. As can be seen in Table 3.6, since then the administrations of the Democratic Revolutionary Party (PRD) have continued to rely on the use of debt, to the point that by 2003 the debt levels of the DF had increased by almost thirty times in less than 10 years.

Table 3.6: DF. Consolidated debt (thousands of current pesos)

Year	Net debt	Debt balance
1994	344	1,473,290
1995	94,727	2,465,346
1996	4,812,899	5,460,669
1997	3,871,868	11,789,230
1998	7,286,108	20,366,509
1999	1,600,794	22,962,079
2000	5,010,005	28,649,770
2001	4,508,968	32,784,527
2002	4,964,370	38,285,164
2003	n.a.	43,887,900*

Source: Moreno et al. (2004), *Banobras (2004).

As a result of this situation, in 2002 the DF had the highest level of absolute debt of all the federal entities, representing more than 30% of the total subnational debt in the country. Despite the DF's high levels of indebtedness, the current authorities believe that the current situation is fiscally sustainable because of the size of its economy and its payment and revenue generation capacity. In addition, the current administration of Mayor López Obrador is well aware of the negative consequences that the payment of the debt service could have in the short run, so in 2001 he renegotiated its debt, rolling it over to the next 7 to 10 years, reducing its interest rates and generating savings of about \$400 million pesos per year (JP Morgan 2003).

⁴ In 1997 the powers of the Mayor changed and with that the formal name of the rank change from "Mayor" to "Chief of Government," however, just for simplicity reasons I will also refer to the executive of the DF after 1997 as a Mayor.

Aside from the systematic growth of debt levels during the PRD administrations, it is also noticeable that the priorities for the use of debt have changed since the previous administrations. Following Moreno et al. (2004), I identify four special features of the new orientation in the use of debt. First, there has been a shift from the financing of big infrastructure projects in the transportation and water sectors to smaller and more atomized projects. Second, in the case of investments in urban services such as water and transportation, credit has not primarily been used to pay for the physical expansion of these services, but mostly to cover their operating and maintenance costs. Third, the use of credit by a series of local entities that in the past did not usually administer debt, mainly the delegations. Finally, debt began to be used to cover some of the regular operating programs and non-productive projects, which were previously financed by the DF's own-source revenue. In order to understand these particularities of the DF's use of debt, I explore not only the sources of the revenue, but also where it has been targeted. In the next section, I present a general overview of the DF's public expenditures.

3.2.3. Expenditures in the DF

As in the case of revenue, the expenditures of the DF went through important changes during the 1990s. The main change can be observed in the economic object of spending, which shifted from capital to current expenditures. As Table 3.7 illustrates, while in 1990 each of these types of expenditures represented almost half of the total programmable spending, by 2002 capital spending only represented 28% of total spending.⁵ In real per capita terms, this means that on average, from 1989 to 2002, the government of the DF spent \$3,800 pesos per capita on administrative affairs compared to \$2,100 on capital spending. The constant increase in current spending during the 1990s was basically due to an expansion in the number of government employees in the DF, and to an increase in their salaries and benefits.

⁵ Programmable spending excludes the expenditures of *participaciones* and debt payments.

Table 3.7: DF. Programmable spending per capita and as a proportion of total spending (constant 2002 pesos)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total spending	4,134	5,041	5,334	6,086	6,368	6,568	4,922	5,472	6,525	5,692	5,902	6,745	7,274	7,409
Current	2,390	2,509	2,945	3,451	3,706	4,092	3,178	3,425	4,619	4,013	4,372	4,916	5,147	5,336
Capital	1,744	2,531	2,388	2,635	2,662	2,476	1,744	2,046	1,906	1,678	1,529	1,829	2,126	2,072
<i>% of total</i>														
Current	57.8	49.8	55.2	56.7	58.2	62.3	64.6	62.6	70.8	70.5	74.1	72.9	70.8	72.0
Capital	42.2	50.2	44.8	43.3	41.8	37.7	35.4	37.4	29.2	29.5	25.9	27.1	29.2	28.0

Source: Author, based on ALDF (2004).

Similar to the aforementioned shift from capital- to current-account spending, the structure of spending by sectors also experienced some modifications in the period of study.⁶ Expenditures have also shifted from high levels of public investment in traditional infrastructure sectors, like water and transportation, to the financing of small-scale programs and also to more socially-oriented programs, like pensions and scholarships. In the case of the water sector, spending was reduced from 12% of total programmable spending in 1997 to 6% in 2002.⁷ Spending in the transportation sector has also seen a substantive decrease in the last few years. While spending represented \$14 billion pesos in 1989, it declined to \$6.4 billion pesos in 2002, a reduction of more than 50%.⁸ Garbage collection and solid waste treatment is another sector that has experienced substantial spending reductions. From 1995 to 2002, the budgetary allocation of this service decreased by about \$1 billion pesos, from \$3.383 billion to \$2.374 billion.⁹

While the water, transportation, and solid waste sectors have been losing importance in the DF's budget, the sectors that have been receiving more budgetary allocations are

⁶ Studying the sectoral allocation of spending is not easy because the prevailing accountable methods do not readily identify the items of spending. A way to do so is to dig into the DF's public accounts to trace the budgets that have been assigned to each of the institutions in charge of providing the particular services. Moreno et al. (2004) went through this involved process, and the analysis in this section is based on their findings.

⁷ Similarly, during this time current spending in the sector increased by 23.4% and capital spending decreased by 62.3%. These numbers refer to the two main institutions in charge of the water service in the DF, which are the General Direction of Hydraulic Operation and Construction, and the Water Commission (CADF).

⁸ These numbers correspond to the main three transport related programs: regulation of urban transportation, services of transportation and parking lots, and infrastructure for urban transportation.

⁹ These are real numbers and correspond to the Program of Solid Waste Control, which is the most important program in the sector.

public safety, housing, education, and health. Public safety has been one of the main concerns of the citizens of the DF, and this explains a 30% real increase in the spending allocations going to this sector from 1994 to 2003. Another sector that has experienced important budget increases is social welfare, which includes programs for scholarships, housing renovations, assistance to street children, and milk and medicine subsidies. These budgetary allocations have grown enormously from \$500 million in 1995 to \$9 billion in 2003. The health budget also grew during these years from \$1.800 billion in 1999 to \$5.1 billion in 2002. Similarly, the housing sector budget grew from \$1.25 billion in 1995 to \$2.048 billion in 2003.

Finally, the education sector deserves special consideration because, by and large, its financing still falls under the responsibility of the federal government. In 2001, the DF's budget for education began to increase slightly when its government decided to start participating in the provision of middle- and high-level education. In total, in 2001 and 2002, the DF spent only \$900 million in the education sector, which is negligible compared to the spending that most other entities allocate to the financing of their education sectors.

The special situation of the DF's education sector dates to 1992 when the federal government began decentralizing the services of basic education to all the states with the exception of the DF. At that time the National Education Workers Union (SNTE) established as a condition of the decentralization process that the DF would be excluded, because it did not want to lose direct control of the union in the capital city (Ibarra 2003). Since then the Federal Ministry of Education (SEP) has financed most of the DF's education budget. This arrangement has been very controversial because the rest of the states perceive it to be inequitable in terms of public spending. In contrast, the authorities of the DF argue that this situation is not totally inequitable because even though a high proportion of education resources go to institutions that are located in its territory,

actually these resources benefit the country's population at large.¹⁰ Both arguments are partially correct. It is true that people from all over the country come to the DF to study and that the budgets of various nation-wide education institutions are counted as part of the DF's total spending in education.¹¹ However, it is also true that another portion of the education budget is spent exclusively on DF residents, who do not directly contribute to these education expenses.

Since the beginning of the decentralization of education in 1992, states have asked that the DF be made responsible for its own education budget. At this point, most of the legal modifications that are needed in order to transfer educational services to the DF have already been made; now, it is only a matter of gaining the political majority to approve the reforms.¹² Recently, in May 2004, Congress approved a bill that obligates the DF to contribute \$9 billion pesos for education, which is the average amount borne by the rest of the states for education (*El Universal*, May 28, 2004). One of the States that has continuously insisted that the DF should cover its own education spending is the State of Mexico, the entity that spends the highest amount of its budget (about 50%) on its state educational system. Authorities from this state point to this situation to explain why the State cannot keep up with the high demands for services and infrastructure in the metropolitan area (Interview C).

3.3. The State of Mexico

In almost every sense, the State of Mexico is distinct from the DF. Despite the fact that they share a border and face similar demands for services and infrastructure, these two entities not only have different economic and social conditions, but also different revenue

¹⁰ It remains to be calculated what proportion of the federal education budget that goes to the DF is spent on programs or institutions that benefit the population at large, in comparison to those expenditures that only benefit the residents of the DF. Moreno et al. (2004) provide a rough proportion of about 60%.

¹¹ Some of these nation-wide institutions whose budgets are counted as part of the subsidy going to the DF are: the National Autonomous University (UNAM), the Polytechnic National Institute (IPN), the National Autonomous University (UAM), TV channel 11, the National Institute of History and Anthropology, and the National Council for Science and Technology (CONACYT).

¹² The original proposal for the 2004 Law of Revenue that President Fox sent to Congress mandated that the DF should cover the expenses of its basic education. All the deputies of the PRD and a fraction of deputies of the PRI (the 'elbistas') voted against it, and this provision was removed from the Law approved by Congress.

and expenditure structures. The State of Mexico is one of the most dynamic states in the country, with the largest population in Mexico. The decentralization policies of the 1980s and the 1990s in the areas of health, education, and infrastructure have had a substantial impact on this entity, which faces a continuous and increasing demand for goods and services. Because the fiscal condition of the State of Mexico derives from its social, demographic, and economic characteristics, I begin by providing a brief description of these characteristics.

After the DF, the State of Mexico has the second largest economy in the country, generating 10.2% of Mexico's total GDP. The state's most important economic activities have been the construction and manufacturing sectors, which respectively represent 10.5 and 16% of the nation's GDP in these sectors. The State of Mexico has the second largest manufacturing sector in the country, especially in the areas of metal production (32% of the total production in the country), food (21%), and chemical products (18%). In terms of employment, 51% of the population is in the work force (about the national average) mainly in the service sector, which has 60% of the employment. The other 31.4% of the jobs are in the industrial sector, and 5.6% in the rural sector (Cámara de Diputados 2001a).

Despite the economic importance of the State of Mexico, the state has experienced very rapid population growth, which has dramatically increased the demand for public services. From 1960 to 2000, its population grew by almost seven times, and in 2000 amounted to more than \$13 million people, representing 13.2% of Mexico's total population. The most rapid expansion took place in the 1960s when population grew at an average annual rate of 7.6%. In the next decade, the rate remained high at 6.8%, and in the decade of the 1980s, it declined to 2.7%. From 1990 to 2000, the growth rate slightly increased to 3%. Since the 1960s, the population growth rate of the State of Mexico has been above the national mean. This rapid population growth is largely the product of migration; in 1995 almost half of the population (46.3%) of the State of Mexico was born in a different part of the country. Most of the migrants arrive in the metropolitan area of

the state, where 75% of the total population is concentrated.¹³ In contrast, the natural-born growth rate in the state has been below the national average since the 1970s.

As a result of this rapid population growth, the state has experienced low per capita incomes; in 1999 its per capita GDP was \$33,240 pesos, an amount 23% below the country's average. Similarly, due to its large population, it has the highest absolute number of poor people in the country, which according to the World Bank (2003) is around 5 million, out of which 1.3 million live in extreme poverty. This level of poverty is reflected in various social indicators in which the State of Mexico scores low both in comparison with its richer neighbor the DF, and in some cases also with respect to the rest of the country. In the education sector, 6.6% of the population does not know how to read and write, in comparison to 3.3% in the DF, but this rate is much better than the national average of almost 10%. In terms of higher education, the State of Mexico is slightly below the national mean and well below the DF, which has twice the number of students who have received higher education. Similarly, in terms of health, the State of Mexico scores lower than the DF and the rest of the country. In 1999, the State of Mexico had 56 hospital beds per 100,000 inhabitants, compared to 189 in the DF and a national average of 79. Similarly, it had 35 consulting rooms in comparison with 89 in the DF and a national average of 89. In terms of doctors, the State of Mexico had 75 per 100,000 residents in comparison to 257 in the DF and a national average of 117 (Cámara de Diputados 2001a).

¹³ Almost 35% of the total population of the State lives in just four municipalities of the metropolitan area. These are: Ecatepec (12.4%), Nezahualcóyotl (9.3%), Naucalpan (6.6%), and Tlanepantla (5.5%).

3.3.1. Public Finances in the State of Mexico

The evolution of the State of Mexico's public finances has been largely determined by constant expansion in the demand for services—resulting from its rapid population expansion—and by the process of decentralization that has increased its responsibility for providing important services like education, health, and infrastructure. Both of these factors have directly impacted the revenue and the spending structures of the State of Mexico.

3.3.2. Revenue in the State of Mexico

In the State of Mexico, the process of decentralization has had a clear effect on its total revenue, which has increased from 5.6% of the State's GDP in 1995 to 8.2% in 2000. This increase is mostly due to federal transfers rather than the State's own-source revenue because the decentralization of spending responsibilities has been accompanied by a corresponding transfer of resources to cover the costs associated with new responsibilities.

Table 3.8: State of Mexico. Proportion of total revenue by source (percent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Own-source revenue	16.7	13.0	17.0	11.7	8.4	7.5	6.2	5.5	7.5	7.8	6.4	6.7
Taxes	37.3	46.1	30.7	36.2	47.9	41.3	47.9	55.3	52.4	43.3	54.2	55.3
Fees	16.7	32.5	25.7	27.7	35.0	31.5	31.6	25.2	30.2	24.5	31.2	33.6
Products	14.8	9.6	32.9	27.7	6.6	13.8	11.0	8.7	7.8	23.5	8.5	4.9
Aprovechamientos	31.1	11.6	10.5	8.3	10.3	12.6	8.9	10.2	9.3	5.9	5.7	5.8
Betterment levies	-	-	-	-	-	0.6	0.4	0.4	0.1	2.6	0.2	0.2
Participaciones	76.1	64.0	53.5	45.6	42.4	37.7	44.8	43.0	48.1	46.0	48.6	43.6
Aportaciones	0.1	8.7	11.7	27.5	24.0	26.4	27.1	44.2	43.3	41.8	44.9	45.0
Budgetary Item 33	100.0	1.8	1.3	99.9	99.6	99.5	99.7	95.5	93.8	99.2	95.5	92.6
Decent. Agreements	-	98.1	98.6	0.0	0.3	0.4	0.2	4.4	6.1	0.8	4.4	7.3
Other	6.8	14.1	17.6	15.0	25.0	28.3	21.7	7.1	0.9	4.3	-	4.5

Source: Author, based on INEGI's data. Bolded amounts are totals.

Compared to the DF, the State of Mexico has not been capable of generating a high percentage of revenue from its own bases. Table 3.8 shows that, on average, from 1990 to 2001, the State of Mexico's own-source revenue accounted for barely over 10% of its total revenue. However, taxes and fees are the most important own sources of revenue, accounting for almost 90% of the total. State fees come primarily from the registry of

various public transactions (like properties), license authorizations (mainly for informal commercial activities) and transit-related services. During the last few years, this source of funding has remained stable, representing only 2.2% of total revenue. Taxes, on the other hand, represent a more important own-source of revenue and primarily consist of payroll taxes, and more recently, taxes on used and new cars. In 1998 the federal government transferred to the states the collection of federal taxes on used vehicles (*tenencia*), and on the acquisition of new vehicles (*ISAN*). The federal government continued to set the rates of these taxes, but states were given the right to keep the entire receipts. Concerning the payroll tax, its rate in the State of Mexico is set at 2.5%, one-half percentage point higher than the rate in most other states.

Own-source revenue as a proportion of total revenue in the State of Mexico is rather small, but it is at the level of most states in the country. What makes the case of the State of Mexico particularly contentious is its actual proximity to the DF. Although it has not yet been studied because of the difficulty in accessing data, there is a common belief that the State of Mexico loses some of its payroll and vehicle taxes to the neighboring DF. To a certain extent, this is likely to be the case, as several firms in the State of Mexico often pay their payroll taxes in the DF, where they have their headquarters. This is also true in the case of the *tenencia*, as it is estimated that up to one-third of the vehicle fleet of the State of Mexico is registered in the DF (World Bank 2003 and Iracheta 2002).

Because the own-source revenue of the State of Mexico is unable to finance more than 10% of its budget, the state depends on federal *participaciones* and *aportaciones*. Up until 1998, the *participaciones* were the main transfers in the State of Mexico, and they were primarily used to cover the governments' current expenses. In 1998, the *aportaciones* were introduced to cover the financing of the decentralized services in the areas of education, health, and infrastructure. Since the year 2000, the *aportaciones* have represented a higher proportion of total revenue than the *participaciones*, and if no changes are made, this proportion will remain constant.

As in the rest of the States, the *aportaciones* in the State of Mexico are primarily for the education and health sectors. On average from 1998 to 2002, the education sector (composed of the FAEB and FAETA funds) received 61% of these funds, followed by the health sector (FASSA) with 14.4% (Table 3.9). The infrastructure fund, FAIS, represents 7.8%, but just 0.9% stays at the state level as the other 6.9% is passed down to the municipalities. The Fund for the Strengthening of the Municipalities (FORTAMUN), accounts for 13% of the state's total *aportaciones*, but it is directly allocated to the municipalities.

Table 3.9: State of Mexico. *Ramo 33* (million of current pesos)

	1998	1999	2000	2001	2002	Average	% of total
FAEB	5,866	8,108	10,109	11,598	12,249	9,586	59.7
FASSA	1,204	1,822	2,405	3,030	3,076	2,307	14.4
FAIS	678	1,024	1,279	1,525	1,780	1,257	7.8
FORTAMUN	865	1,855	2,129	2,641	3,017	2,101	13.1
FAM	208	257	292	386	417	312	1.9
FAETA			276	343	374	199	1.2
FASP		360	399	432	249	288	1.8
TOTAL	8,821	13,426	16,889	19,955	21,163	16,051	100.0

Source: Author, based on INAFED data.

FAEB: Fund for Basic Education. FASSA: Fund for Health Services. FAIS: Fund for Social Infrastructure. FORTAMUN: Fund for the Strengthening of the Municipalities. FAM: Fund for Multiple Purposes. FAETA: Fund for Tertiary and Technical Education. FASP: Fund for Public Security.

The increasing demands for public services and infrastructure faced by the State of Mexico as a consequence of its urbanization process have left the State with little other option but to rely extensively on the use of debt. For several decades, the political reality of the country, together with the regulatory framework for subnational borrowing facilitated the use of credit in the State of Mexico. However, in the year 2000, the system of subnational borrowing changed, making it more difficult for the State of Mexico to access new debt.

Prior to the reform of 2000, the State of Mexico was the most heavily indebted state in the country in absolute terms. Between 1993 and 1997, it ran substantial fiscal deficits that it covered largely by borrowing funds. These deficits accumulated despite a series of extraordinary and discretionary transfers negotiated and obtained from the federal

government. Most of these transfers were made to compensate the state for its very high education expenditures, which represented a huge financial burden for the state, as I explain below. In addition, on several occasions, namely during the peso crisis of 1995, the federal government stepped in to take over some of the state's debt commitments.

The State of Mexico was able to access credit relatively easy before the reform of the year 2000 because it had the implicit—and in various cases explicit—guarantee of the federal government. With the reform, however, the federal government introduced a new market-oriented system for subnational borrowing that was intended to impose a hard budget constraint by canceling the possibility of discretionary transfers and federal guarantees. The new system sought to create a real market for subnational borrowing, establishing a closer link between the lenders and the capacity of the states to pay back their loans. This objective was achieved through a system of credit ratings, based on the financial capacity of the states. The new credit rating system, although successful in establishing market discipline, has been disadvantageous for the State of Mexico because its low ratings prevent it from taking on new loans.

In addition, the State of Mexico has not been able to increase its own revenues, which together with the fact that it lacks control over its federal transfers, has put it in a very tight financial position. The state's financial problems continue today and will most likely persist as the demand for services and infrastructure continues to grow. This situation is not only due to limits on raising more revenue, but also to a series of spending rigidities, to which I now turn.

3.3.3. Expenditures in the State of Mexico

The decentralization of spending responsibilities in Mexico has been accompanied by corresponding transfers of monetary resources that are directly disbursed by the states. This explains why from 1989 to 2001 the total expenditures of the State of Mexico steadily increased in real terms from \$1,364 pesos per capita to \$3,719. Despite this increase, the state's budget has various rigidities that have prevented it from releasing resources to invest in the services and infrastructure projects that it so urgently requires.

An unpublished study by the World Bank (2003) estimates that the State of Mexico's programmable spending accounts for 75% of its total budget, 60% of which goes to education and the rest to health and other infrastructure projects. The remaining 25% is non-programmable spending, which goes to servicing its debt (7%) and to municipal transfers (18%).

In contrast to the DF, where education represents a minor proportion of its budget, the main characteristic of the State of Mexico's spending structure is its very high level of spending on education. The rapid demographic expansion and economic growth of the state in the past two decades has led to an increase in the demand for education services. This has resulted in the largest and most rapidly growing education system in the country, with a current student enrollment rate of more than 12% of the total number of students in Mexico. The situation has placed the state budget under severe pressure, to the point that for every peso spent by the state, more than 50 cents go to the education sector (World Bank 2003).

The State of Mexico's high level of spending on education is a direct consequence of the decentralization of the education sector. The story of this decentralization process is a long and complex one, but because it is central to understanding the state's finances, I provide a brief review. The process of decentralizing the education sector in Mexico began in 1992, when the federal government transferred responsibility for the provision of education to the states. At that time, the State of Mexico received funds to pay for physical infrastructure, teachers, financial resources, and administrative personnel to cover the provision of education. In this process, two education systems began to operate at the same time: the state education system, which was already functioning in the past, and the federalized system, which was being decentralized.

These two education systems are financed with both state and federal funds. Out of the 60% of its programmable spending, the State of Mexico covers 24.5% with its own revenue, and the remaining 35.5% with federal funds from the *aportaciones* system. Three funds in the *aportaciones* system cover the expenses of the federalized education

system: the FAEB, the FAETA, and a segment of the FAM. In addition to the *aportaciones*, the federal government contributes to the State's education spending through other means. For example, the federal government covers 50% of the construction, payroll, and operating costs of the State's institutions of higher education. Also, there are other programs of federal financial support such as OPORTUNIDADES, the National Program for Free Textbooks, and the Program to Provide School Breakfasts, among others.

Sources of both federal and state education financing have increased in recent years, but the increases have been much higher in federal than in state spending. While from 1995 to 2001 State spending in education increased 27% in real terms, the increase in federal spending reached almost 90%. In fact, the State of Mexico receives the highest absolute proportion of federal funding (FAEB) of all the states, but in terms of spending per student, it receives the least amount of federal spending. This is because the distribution of the FAEB punishes those entities, like the State of Mexico, that invest in their own education system, have large populations, and low levels of education and school attendance (Ibarra 2003).

In the decentralization process, federal funds are added to state contributions and administered as a single budget, which in principle should simplify budget administration, allocation, and control. Although in the past resources were closely earmarked by item and project, with the creation of the *aportaciones* system resources are no longer so tightly earmarked. The State of Mexico, however, has not been able to take advantage of this flexibility, as more than 95% of federal resources are allocated to salaries, 4% to operating costs, and less than 1% to investment (World Bank 2003).

The coexistence of these two education systems puts substantial pressure on the State's budget, as there are various cost duplications in terms of the number of schools, bureaucratic structures, etc. Originally, the 1997 Law of Education of the State of Mexico mandated the integration of the state and federal educational subsystems into a single structure, but this process of integration has proven to be extremely complicated and so

far incomplete. One factor contributing to this situation is the existence of various education unions, whose amalgamation would result in the loss of positions that represent union and political power. Also, there has been a series of managerial and technical difficulties in building a single education structure out of two distinct organizations, each with different salary structures, regulations, promotion schemes, benefit plans, etc.

In summary, the DF and the State of Mexico have very different revenue structures and spending obligations. The DF collects more revenue per capita, is still favorably treated by the federal government, and has relatively easy access to credit markets. In terms of its expenditures, it does not have the burden of an education budget and has been moving away from the financing of mega-projects. On the other extreme, the State of Mexico collects far less revenue, receives fewer transfers per capita than the national average, and cannot easily contract new debt. Also, the state's very large education burden together with other budgetary rigidities (debt payments and municipal transfers) prevents it from spending on its priority projects. These differences between the DF and the State of Mexico are not only present at the state level, but also, as I show in the next section, at the local level.

3.4. Local governments in the ZMVM

A complete fiscal picture of the ZMVM requires consideration of the public finances of its local jurisdictions, in addition to the previously discussed state finances. The ZMVM is currently composed of 74 local jurisdictions: 16 delegations in the DF, plus 58 municipalities in the State of Mexico. Although the delegations and municipalities lie side-by-side, they are financially distinct in their revenue sources and expenditures. This last section of the chapter completes the fiscal picture of the ZMVM by discussing the revenue and spending characteristics of the delegations and the metropolitan municipalities.

3.4.1. Fiscal structure of local governments in the ZMVM

Municipalities and delegations have different financial and organizational structures. The State of Mexico, like all other States in the country, divides its territory into

municipalities, which constitute the basis of their political and administrative organization. Currently the State of Mexico has 122 municipalities, all of which share the same legal and structural organization despite their enormous differences in population, infrastructure, poverty levels, and revenue-generating capacities. Each municipality is governed by an *ayuntamiento* that is composed of an executive and a legislative branch (see Appendix 3).

Municipalities in Mexico have fiscal autonomy to collect their own taxes and approve their own annual budgets. This autonomy, however, is delimited by the state congresses, which on a yearly basis approve the law of revenue of the municipalities, oversee their budgets, and authorize their borrowings. Moreover, the state congress is responsible for the approval of municipal rates for taxes and fees.¹⁴ The municipal revenue sources are defined in the federal and state constitutions. Like state finances, municipal revenue comes from three main sources: own-source revenue, intergovernmental transfers, and local borrowing. Own-source revenue is generated mostly by taxes and fees, but also by fines, products, and betterment levies.¹⁵ Also, through intergovernmental transfers, municipalities receive both *participaciones* and *aportaciones*. Finally, since the year 2000 municipalities are increasingly accessing credit markets and using local borrowing as a regular source of revenue.

In contrast to the State of Mexico, the DF is divided into delegations that have limited financial autonomy. The DF is a centralized entity and the delegations are administrative divisions with narrow tax and spending powers. Delegations receive a majority of their

¹⁴ Prior to the constitutional reform of 1999, state congresses had broad powers to determine the rates of municipal taxes and fees, but the reform gave municipalities the right to propose their rates to their state congress, which is still responsible for their approval. In a strict sense, the pre-reform period can be seen as one in which municipal taxes and fees were not truly local in the sense that the municipalities did not have control over the rates. While this is certainly true, in many cases municipalities (especially the small and financially weak ones) did not set their own rates, not because they did not have the right, but because they did not have the capacity to do so. Even today, many municipalities do not use their right to set rates, but instead let their state congress make the decision. However, the bigger and more affluent municipalities have benefited from this reform, as they now have greater ownership over their revenue sources.

¹⁵ By fees I mean *derechos*. Both *derechos* and products or *productos* could be classified as user charges. While *derechos* are fees paid in exchange for the provision of public services, *productos* are revenues that municipalities receive for the use and exploitation of their own patrimony, such as the rent or sale of municipal properties. By fines, I refer to what it are formally called *aprovechamientos*, which mainly include fines and surcharges, and all other revenues that do not fit in any of the other revenue categories.

revenue from budgetary appropriations authorized by the DF's Legislative Assembly (ALDF). The way this works is that the delegates propose a budget to the GDF, which, in turn, integrates the annual law of expenditure and submits it to the ALDF for yearly approval. Although the delegates participate in the budgetary process by developing the original proposal for their delegations, their authority is rather limited because the final budgets are entirely decided upon and approved by the central authorities. The budgetary appropriations of the delegations represent the highest proportion of their revenues, but as I will show, they also have other secondary sources of revenue. Finally, in terms of their spending responsibilities, both municipalities and delegations are in charge of the provision of a similar array of local public services.

3.4.2. Local revenue in the ZMVM

At the local level, there are a number of financial differences among the ZMVM's jurisdictions, both between delegations and metropolitan municipalities, and between metropolitan and non-metropolitan municipalities. Metropolitan and non-metropolitan municipalities have different revenue-generating capacities and expenditure responsibilities. This is largely because they have varying populations and levels of development (Chapter 2). The metropolitan municipalities have a higher proportion of revenue proceeds and spending obligations than the non-metropolitan municipalities. More concretely, the metropolitan municipalities account for about three-quarters of the total municipal revenues of the State of Mexico, collect 84% of the property taxes, and receive about 65% of total transfers (Table 3.10).

Table 3.10: Metropolitan and non-metropolitan municipalities in the State of Mexico. Main revenue and expenditure accounts (Average 1989-2000)

	Proportion of total (%)		Real per capita 2002 pesos (\$)		
	Metro	Non-metro	Metro	Non-metro	State mean
Total revenues	73.5	26.5	697.4	731.6	706.1
Property tax	84.0	16.0	99.3	55.0	87.9
Participaciones	67.7	32.3	254.8	352.5	279.9
Aportaciones	64.8	35.2	195.6	309.6	224.8
Total expenditures					
Total expenditures	72.6	27.4	601.0	631.5	608.8
Current	74.3	25.7	361.4	340.4	356.0
Capital	67.1	32.9	119.5	164.7	131.1

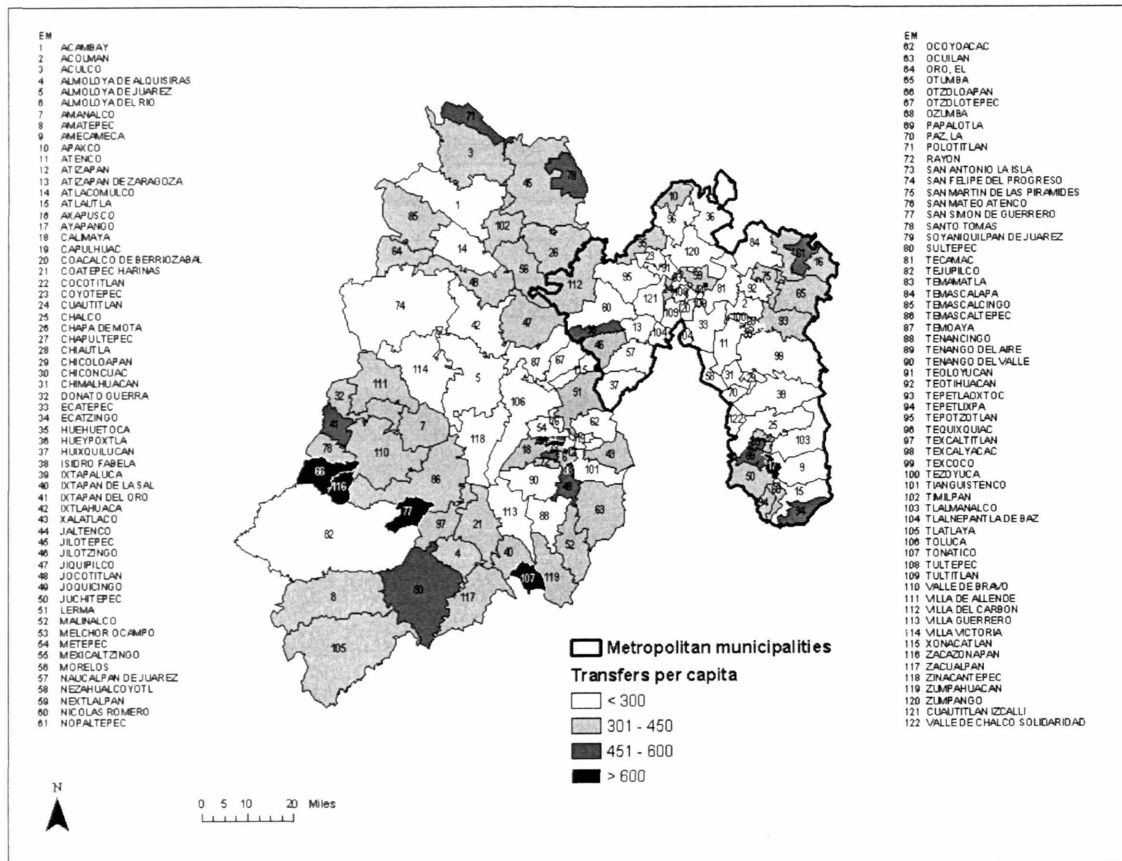
Source: Author, based on INEGI.

Note: The amount of total revenues and total expenditures is accounted for by the *aportaciones*.¹⁶
 Metro= Metropolitan municipalities, Non-metro= Non-metropolitan municipalities.

The concentration of fiscal resources in the metropolitan municipalities comes as no surprise, considering their large populations and economic vitality. However, what it is surprising is that in per capita terms, the finances of the non-metropolitan municipalities are more sound than those in the metropolitan area. As table 3.10 shows, this situation results not from differences in the collection of property taxes, but rather from the fact that the non-metropolitan municipalities received 40% more *participaciones* and 60% more *aportaciones* than the metropolitan municipalities. Actually, each person living in the non-metropolitan municipalities received substantially more federal transfers than a similar person in the metropolitan municipalities. Only a handful of metropolitan municipalities received a similar level of transfers per person than the non-metropolitan municipalities (Figure 3.1). This difference in the allocation of transfers arises both because *aportaciones* are for the financing of basic infrastructure which is more lacking in rural than in urban areas, and because the system of *participaciones* does not readily adjust for cases of rapid population expansion (see Section 4.2.3).

¹⁶ Data on the total revenues and expenditures come from INEGI. However, INEGI's data on *aportaciones* are incomplete, so I used the data directly provided by the Unit of Public Investment of the government of the State of Mexico. These make the totals reported by INEGI lower than the actual revenue, which explains why the numbers on total revenue and expenditures do not match.

Figure 3.1 Total transfers per capita in the metropolitan and non-metropolitan municipalities of the State of Mexico, Avg. 1989-2000

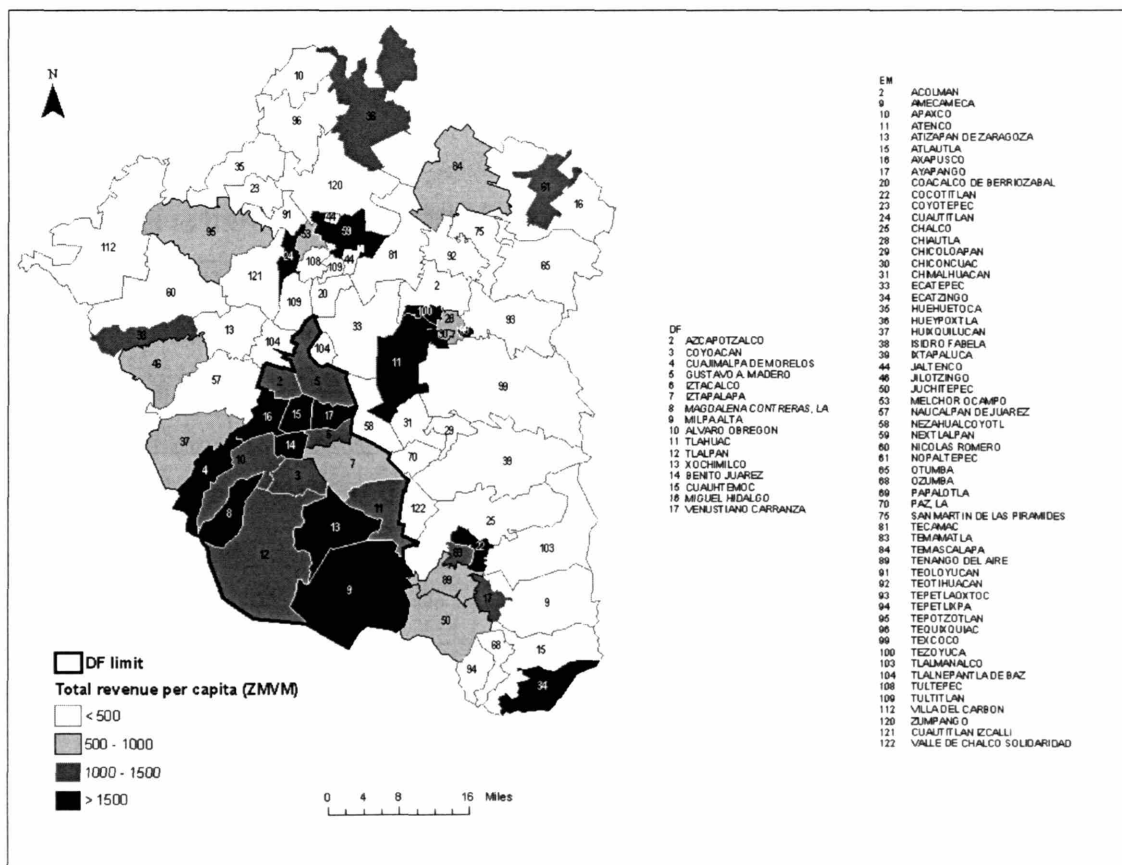


Source: Author

The contrast in revenue levels between the metropolitan and non-metropolitan municipalities is also present in their levels of public spending. Because the metropolitan municipalities contain a higher proportion of people and economic activity than the non-metropolitan municipalities, they spend three-quarters of the total local budget. However, in per capita terms, the metropolitan municipalities are worse-off than their non-metropolitan counterparts. On average, from 1989 to 2000 they received a smaller amount of total expenditures per capita than the non-metropolitan municipalities. Similarly, their level of capital spending per person was below that of the non-metropolitan municipalities; a person in the metropolitan municipalities received 45 pesos less in capital spending than a similar person in the non-metropolitan municipalities.

The disadvantages faced by the metropolitan municipalities with respect to the rest of the State of Mexico become more significant when compared to the public finances of the delegations of the DF. Metropolitan municipalities and delegations have important financial differences. The first and most significant is the disparity in their levels of total revenue. As Figure 3.2 shows, delegations have a much higher level of total revenue than the metropolitan municipalities. As a result of the process of fiscal decentralization, from 1989 to 2000 total revenue in the metropolitan municipalities grew from \$602 to \$883 real pesos per capita, a 45% increase (Table 3.12). Despite this increase, local revenue in the metropolitan municipalities is still below the average total revenue in the delegations. In the year 2000, for example, total revenue per person in the metropolitan municipalities was \$883 pesos, while the average total revenue for the delegations was \$1,283 pesos, 45% more than in the metropolitan municipalities.

Figure 3.2: Revenue per capita, DF and Metropolitan municipalities, 1989-2004*



Source: Author

The data on the DF are from the 1990-2004 average. The Metropolitan municipalities' data are from the 1989-2000 average.

Like in the metropolitan municipalities, revenue has been growing in all delegations of the DF for the last 14 years (Table 3.11). However, because the revenue structures of the delegations are so different from those of the metropolitan municipalities, the increase in revenue in these two types of local government cannot be interpreted in the same way. While in the metropolitan municipalities increases come from any of the municipal revenue sources, in the case of the delegations they come from an increase in their budgetary appropriations. The public finances of the delegations are centralized in the Treasury of the GDF; therefore these increases cannot be attributed to greater collection of revenue in the delegations, but only to higher budgetary appropriations, which are mostly allocated according to the delegations' populations. According to the DF's Fiscal Code (Art. 415A) the delegations' budgets should be allocated not only based on their populations, but also according to the delegations' poverty levels, urban infrastructure, urban services, and commuting population. However, the *ALDF* argues that budgets are allocated on a per capita basis because the *GDF* does not have official data on its commuting population, levels of extreme poverty, and urban services and infrastructure (*Diario Oficial de la Federación*. January 31, 2002 in Hernández and Sobarzo 2002).

Table 3.11: Delegations of the DF. Appropriated budgets per capita (Constant 2002 pesos)

	1990	1995	2000	2001	2002	2003	2004	Average	Change
Alvaro Obregón	653	904	1,020	1,752	1,603	1,632	1,612	1,094	8.7
Azcapotzalco	772	957	1,218	2,046	1,754	2,126	1,814	1,251	8.1
Benito Juárez	865	1,189	1,501	2,486	2,090	2,370	2,186	1,525	8.6
Coyoacán	621	850	1,024	1,657	1,569	1,661	1,597	1,102	9.9
Cuajimalpa	1,729	2,075	2,000	3,292	3,071	3,133	3,006	2,416	7.5
Cuauhtémoc	1,154	1,574	2,144	3,457	2,875	3,020	3,024	2,053	8.7
Gustavo A. Madero	528	728	1,124	1,697	1,548	1,600	1,584	1,001	10.0
Iztacalco	533	848	1,343	2,038	1,940	2,035	2,013	1,188	11.4
Iztapalapa	400	630	865	1,320	1,174	1,185	1,160	780	10.3
Magdalena Contreras	948	1,391	1,456	2,377	2,113	2,139	2,101	1,552	7.7
Miguel Hidalgo	1,111	1,426	2,046	3,105	2,862	3,257	3,009	1,978	8.6
Milpa Alta	2,693	3,231	3,558	5,038	4,803	4,799	4,595	3,641	5.4
Tláhuac	996	1,337	1,441	2,219	2,054	2,050	1,973	1,466	6.8
Tlalpan	776	964	1,102	1,744	1,640	1,667	1,618	1,135	7.4
Venustiano Carranza	964	1,186	1,620	2,690	2,445	2,622	2,553	1,642	8.7
Xochimilco	2,282	2,431	1,358	2,075	2,118	2,211	2,053	1,679	5.2
Distrito Federal	783	1,046	1,283	2,022	1,832	1,923	1,850	1,272	7.9

Source: Author, based on DF's Budgetary Laws, several years.

Despite the fact that delegations and metropolitan municipalities have different revenue structures, their revenue ultimately comes from similar sources. Therefore, by looking at these revenue sources, I can track the origin of the varied revenue levels in the ZMVM. Similar to the state level, at the local level the three main revenue sources are own-source revenue, intergovernmental transfers, and debt. There is a fundamental distinction between own-source revenue in the delegations and in the municipalities, in the sense that delegations only collect limited own-source revenue because all of their tax functions are centralized in the GDF. Their only own-source revenue comes from the provision of a few services that have private characteristics such as child nurseries, parking lots, and the renting of land for sports facilities. This revenue represents a minor component of the delegations' budgets.¹⁷ In contrast, own-source revenue in the metropolitan municipalities represents an important source of revenue; in the year 2000, for example, it amounted to 28% of total municipal revenue.

Although own-source revenue is an important source of revenue in the metropolitan municipalities, its importance decreased during the process of decentralization. From 1989 to 2004, the relative importance of own-source revenue declined by more than 50% with respect to the total revenue. In real per capita terms, that decline meant a reduction of \$140 pesos per person. As can be seen from Table 3.12, most of the decline in own-source revenue came from a reduction in the collection of fines, which decreased from representing almost one third of total own-source revenue to only 10%. Tax collection was stable during the period, maintaining its relative importance at more than 50% of the municipalities' own-source revenue. Specifically, property taxes remained constant at about 60% of total municipal taxes.

¹⁷ There is no available data to calculate the proportion of the total budget that this revenue represents, but according to all my interviews, the revenue is negligible.

Table 3.12: Metropolitan municipalities. Revenue per capita and as proportion of total (Constant 2002 pesos)¹⁸

	1989	1995	1996	1997	1998	1999	2000	Change*
Total revenue	602.7	531.1	593.8	576.1	734.2	861.9	883.5	4.5
%	100	100	100	100	100	100	100	
Own-source	365.0	256.7	263.7	230.9	261.4	246.4	226.3	(3.6)
%	68.3	56.7	52.8	45.7	38.3	29.6	27.8	
Taxes	130.8	151.3	151.4	140.0	127.7	119.6	131.1	1.6
%	35.8	59.0	57.4	60.0	48.9	48.6	57.9	
Property tax	83.2	129.3	132.8	86.2	78.3	82.0	79.0	0.9
%	63.6	85.5	87.7	61.5	61.3	68.6	60.3	
Fees	99.5	47.4	70.6	45.4	82.3	82.5	51.1	(0.1)
%	27.3	18.5	26.8	19.7	31.5	33.5	22.6	
Products	13.5	14.3	16.3	12.7	13.9	12.1	8.0	12.7
%	3.7	5.6	6.2	5.5	5.3	4.9	3.5	
Fines	121.2	33.9	17.4	26.8	26.5	22.6	25.5	(7.4)
%	33.2	13.2	6.6	11.6	10.1	9.2	11.3	
<i>Participaciones</i>	169.3	196.2	235.9	274.7	290.0	364.8	356.2	7.9
%	31.6	43.3	47.2	54.3	42.5	43.8	43.7	
<i>Aportaciones</i>	-	-	-	-	130.7	221.2	232.4	37.1
%	0	0	0	0	19.1	26.5	28.5	

Source: Author, based on INEGI and GEM (2003). The numbers in bold represent proportions of revenue sources out of the respective subtotals. * Refers to the average annual rate of change from 1989 to 2000.

In addition to fines, another reason for the decline in the relative importance of municipal own-source revenue was the increase in transfers during the decentralization period. Actually, the most salient financial characteristic of the metropolitan municipalities is their growing dependence on intergovernmental transfers. While in 1989, metropolitan municipalities generated almost 70% of their total revenue from their own-source revenue, by the year 2000 that proportion fell to 28%. By that time transfers (*participaciones* and *aportaciones*) increased from 30% to more than 70% of total municipal revenues. In per capita terms that represented an increase from \$602 real pesos in 1989 to \$883 in the year 2000. This high proportion of transfers was the result of a 10% increase in the relative weight of *participaciones* from 1989 to 2000, and of the creation of the *aportaciones*, which by the year 2000 already represented one-third of total municipal revenue.

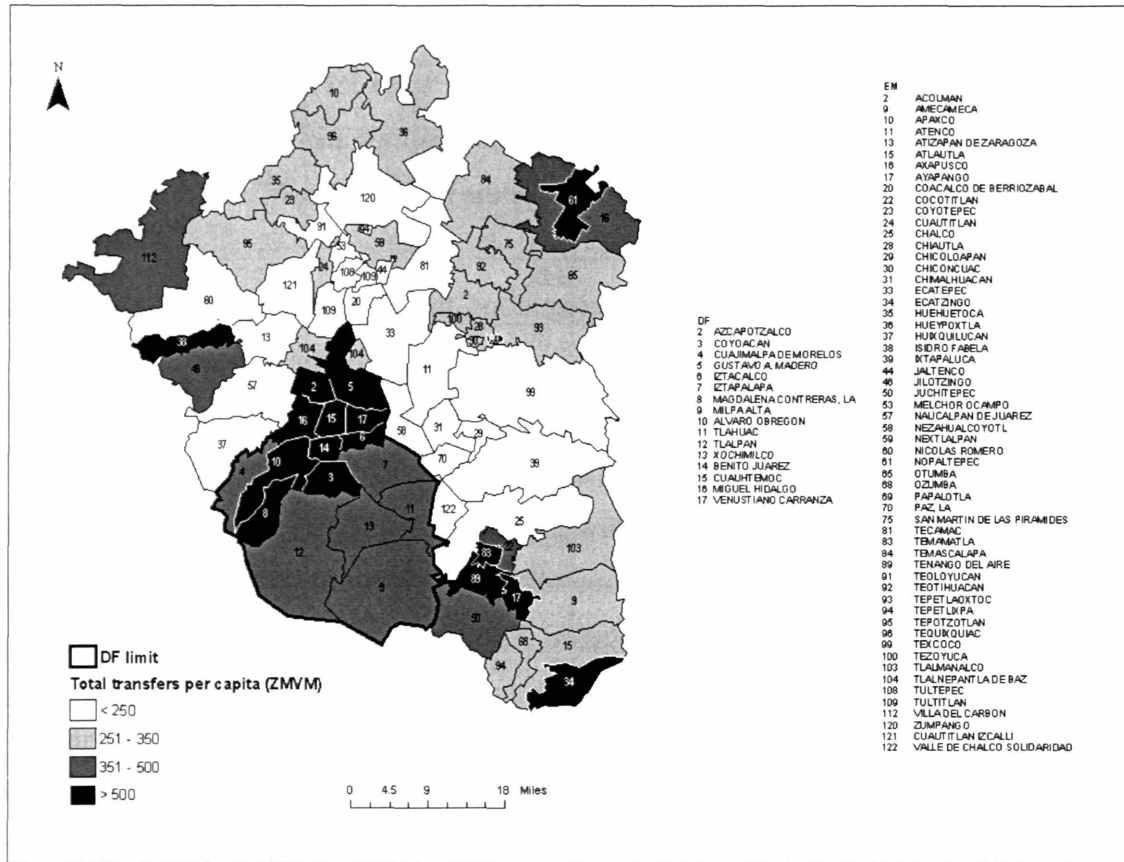
Like the metropolitan municipalities, delegations also have access to transfers, which represent a very important source of revenue. Actually, transfers to the delegations are at

¹⁸ Appendix 3 (tables A3.2 to A3.4) presents the data on total revenue and spending per capita and as a proportion of the total accounts for all the 122 municipalities of the State of Mexico.

higher total per capita levels than in the metropolitan municipalities. While in the delegations the average level of transfers is above \$1,000 pesos per capita, most metropolitan municipalities are well below that level (Figure 3.3). This is because of the rapid population expansion in the metropolitan municipalities and because in the State of Mexico an important proportion of transfers go to the non-metropolitan part of the State.

Despite the importance of transfers to its delegations, the DF is the only entity that does not have a Law of Fiscal Coordination that sets out explicit criteria for the allocation of *participaciones* and *aportaciones* to the delegations. When federal transfers reach the DF's Treasury, a portion is incorporated into the annual budgets of the delegations, distributed according to a population criterion. Thus, all transfers that delegations receive form part of their annual budgets, with some minor exceptions that are passed directly to the delegations according to federal legislation. This is the case with the Fund for Municipal Strengthening (FORTAMUN) which comes from the *aportaciones* system that was created in 1998, but has only been received by the delegations since the year 2001. This fund was created as part of *Ramo 33*, with the name of "Fund for 'Municipal' Strengthening" (FORTAMUN) and originally the DF was excluded because it does not formally have municipalities. In 2001 the DF became a recipient when the name of the fund was changed; at the end of the word "Municipalities" the authorities added the words "...and the Territorial Entities of the Federal District." The transfers that the DF receives from FORTAMUN represent 8.3% of the fund's total, and they are distributed among the delegations on an equal per capita basis. On average, from 2001 to 2004, each person in the DF received \$205 from this Fund (Appendix 3, Table A3.5).

Figure 3.3: Transfers in the ZMVM, Avg. 1989-2004*



Source: Author

* The data for the DF are only for the year 2004. Data for the metropolitan municipalities are averages of the years 1989-2000.

Delegations also receive federal transfers from the General Fund of Revenue-Sharing (FGP) and the Fund for Municipal Promotion (FFM) from the *participaciones* system. In the past, the DF's Ministry of Finance was not explicit about how these funds were allocated among the delegations, but in 2004 it publicized its formula, which specified that 100% of the funds from the FGP and FFM were disbursed on a per capita basis. In 2004, each resident of the DF received \$523 from the FGP and \$213 from the FFM, which together amounted to \$736 (Appendix 3, Table A3.6). In contrast to the metropolitan municipalities that receive their *participaciones* according to mixed criteria based on population and tax effort (Appendix 1), delegations receive them on a pure per capita basis. In the DF, no "fiscal effort" criterion can be incorporated into the allocation formulas because tax collection is currently centralized in the City's Treasury. In addition to *participaciones* and *aportaciones*, delegations receive a percentage of two other

transfer funds: the Program for Strengthening Federal Entities, PAFEF, and the Fund for Infrastructure Investment in Federal Entities, FIES (Interview D).

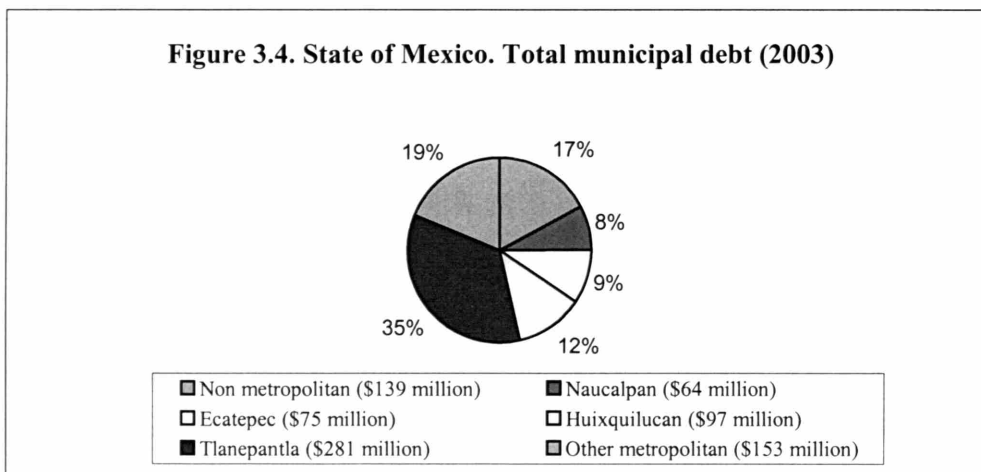
A final source of funding for the delegations and metropolitan municipalities is credit. In general, local governments in Mexico have not made extensive use of debt as a regular source of financing, but in the last few years both delegations and metropolitan municipalities have begun to contract debt. The institutional structure for debt management as well as the importance of this source of revenue varies substantially between delegations and metropolitan municipalities. Municipalities have the legal right to contract debt, provided they have the authorization of their state legislatures. Overall, municipalities face the same rules and incentives for borrowing as the states (Section 3.3.2).

In the State of Mexico, debt regulation establishes that local congresses must approve municipalities' debt ceilings as well as the projects to which the credit will be assigned. Debt ceilings are set every year when state Congress approves the Law of Revenues of the Municipalities. The State of Mexico's legislation maintains the "golden rule" of limiting the use of debt to capital investments. In addition to this requirement, in comparison to other states, the subnational credit system in the State of Mexico has a number of particularities, which include: (1) a mandate that municipalities present reports on their debt standings to the state government every three months; (2) a requirement that municipalities request the authorization of the state Congress to use their *participaciones* as collateral; (3) a stipulation that municipal debt must also be authorized by the state's executive; and (4) a lack of specification of the limits of municipal indebtedness (aregional.com 2002).

Municipal debt in the State of Mexico was historically kept at very low levels, but in the year 2000 this situation began to change with the new system for subnational borrowing, which enabled the most fiscally sound municipalities to access credit markets. Although one of the goals of the current system of subnational borrowing is to generate transparent data on municipal debt, up to now this information has been difficult to access. Through a

contact in the National Banking and Assets Commission, I was able to gain access to data that show that by December of 2003, the debt obligations of the municipalities of the State of Mexico amounted to \$810 million pesos (US\$74 million). Out of this total, metropolitan municipalities contracted \$664 million, and municipalities in other parts of the State borrowed the remaining \$146 million.¹⁹

In terms of the allocation of this debt, 38 out of the 122 municipalities of the State are responsible. Twenty of these 38 municipalities are in the non-metropolitan area of the State, but they account for only 17% of the total debt. The remaining debt is concentrated in the metropolitan municipalities. Municipalities with the highest revenue-generating capacity are the most able to easily access credit markets, so it comes as no surprise that most of the debt is concentrated in the metropolitan area of the state, particularly in four of the most developed municipalities that together account for 64% of the total debt (see Appendix 3, Table A3.8 for a list of debt by municipality). As Figure 3.4 shows, the municipality of Tlanepantla alone accounts for 35% of the total debt, followed by Huixquilucan (12%), Ecatepec (9%), and Naucalpan (8%).



Source: Author, based on information from the National Banking and Assets Commission.

As in the case of the metropolitan municipalities, delegations have also begun to use debt as a source of financing since 2001. The process for accessing credit for the delegations is

¹⁹ Out of the total amount of debt \$257 million was contracted with the development bank BANOBRAS, and the remaining \$552 million with commercial banks.

Table 3.13: Delegations of the DF. Total debt (Avg. 2001-2004)

Delegations	Average (million\$)	Per capita (pesos)	% of total	Population	Margin -ality*	Index** Infrastructure	Index** Services
Alvaro Obregón	112.6	163.8	7.6	687,020	-1.87	-0.6757	-0.4066
Azcapotzalco	88.4	200.4	6.0	441,008	-2.01	-0.3009	0.6916
Benito Juárez	17.6	49.0	1.2	360,478	-2.45	1.3546	1.6598
Coyoacán	101.0	157.8	6.9	640,423	-2.19	0.0969	0.3161
Cuajimalpa	32.7	216.0	2.2	151,222	-1.80	0.1047	-0.8708
Cuauhtémoc	26.8	51.9	1.8	516,255	-2.09	1.9831	1.3577
Gustavo A. Madero	214.8	173.8	14.6	1,235,542	-1.87	-0.2774	0.2929
Iztacalco	71.3	173.4	4.8	411,321	-1.93	-0.5966	0.6876
Iztapalapa	307.8	173.6	20.9	1,773,343	-1.73	-1.3021	0.1989
Mgda. Contreras	45.4	204.3	3.1	222,050	-1.76	-0.9457	-0.956
Miguel Hidalgo	65.2	185.0	4.4	352,640	-2.14	1.885	0.759
Milpa Alta	72.4	747.9	4.9	96,773	-1.31	0.334	-0.9315
Tláhuac	67.1	221.7	4.6	302,790	-1.73	-0.8751	-0.8876
Tlalpan	83.2	143.0	5.6	581,781	-1.88	-0.5273	-0.5868
V. Carranza	51.9	112.1	3.5	462,806	-1.94	0.542	0.81127
Xochimilco	115.0	311.0	7.8	369,787	-1.70	-0.7992	-1.1356
Distrito Federal	1,473.1	171.2	100.0	8,605,239			
CORR TOT. AVG.				0.92	0.27	-0.52	-0.09

Author's calculations, based on data provided by The General Direction of Public Debt, GDF.

* CONAPO's index of marginality. The higher the absolute value, the lower the level of marginality.

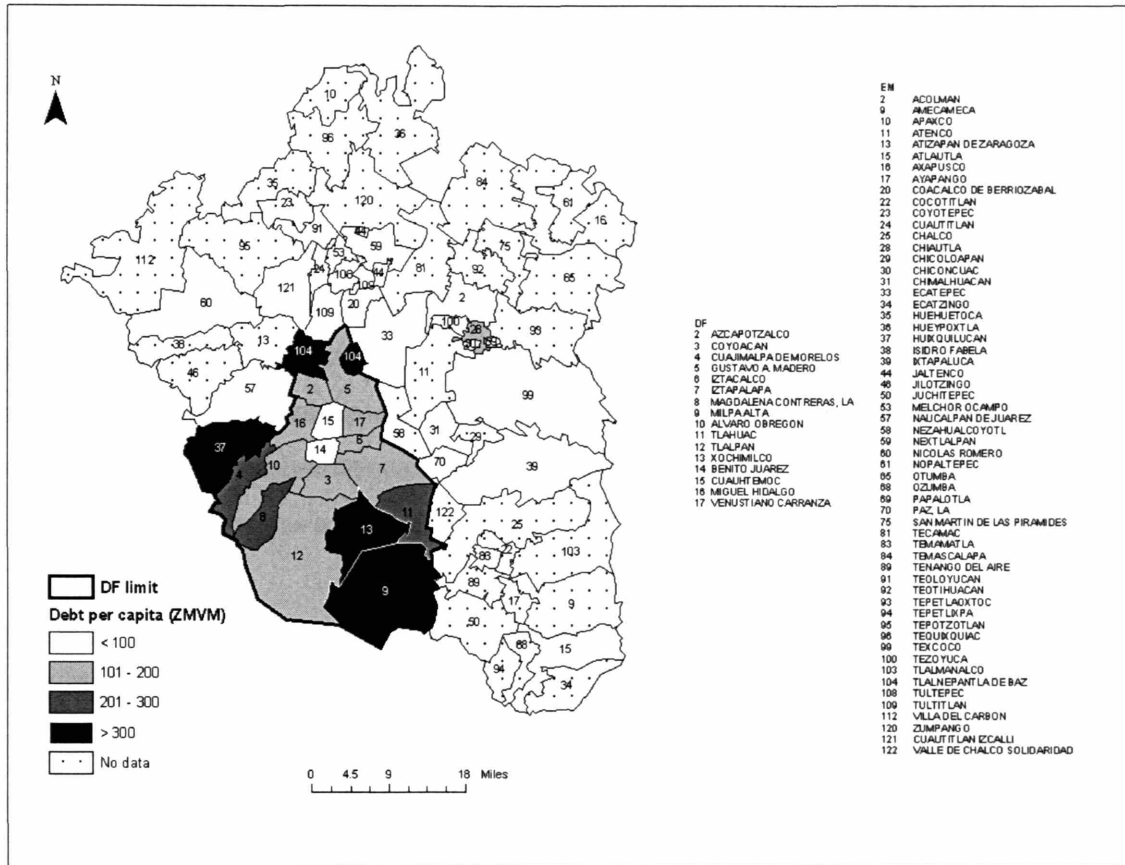
** Hernández and Sobarzo (2002). The urban infrastructure index includes: number of employees in the health and education sectors; number of medical units; number of schools; number of libraries; and number of public ministry agencies. The urban service index includes: extension of the secondary drainage network; number of water registers installed; volume of garbage collection; number of public lights; and the extension of the paved streets.

In comparison with the metropolitan municipalities, delegations manage more debt resources. In the year 2003, for example, the total debt of the delegations was almost double the total municipal debt. The only exceptions were the four most-developed municipalities, which had about the same level of debt as the delegations. In per capita terms, delegations have a much higher level of debt than the metropolitan municipalities. Excluding the delegations of Benito Juárez and Cuauhtémoc, the average debt per capita in the delegations is above \$100 pesos. In contrast, excluding the municipalities of Tlanepantla and Huixquilucan, the level of debt per capita in the metropolitan municipalities is well below that level (Figure 3.5).

different from that in the municipalities, mainly because delegations do not have the right to contract debt themselves, but instead the GDF appropriates a portion of its own debt for them, without any kind of market-based criteria. Specifically, the delegations submit a “technical report” to the Treasury where they specify the amount of money requested and the intended use. The Treasury then reviews the projects and adjusts the original request, making sure that credit is allocated to capital investments.

The process for debt allocation in the delegations is based on these technical reports, and also on the delegations’ absolute population. According to my own calculations, there is a very strong correlation between a delegation’s average total debt allocation from 2001 to 2004 and its total population (Table 3.13). Such debt allocation, however, is not correlated with either the potential creditworthiness of the delegations, or with any other explicit criteria, such as the level of poverty, or infrastructure and service needs. In fact, the average allocation of debt from 2001 to 2004 was very loosely correlated with the delegations’ poverty levels, and was actually negatively associated with their levels of service and infrastructure needs (Table 3.13). As a result, not only do the delegations with the highest needs receive the lowest levels of debt allocations, but also there is great variation from delegation to delegation. For example, in per capita terms, the allocation of debt among delegations from 2001 to 2004 was \$171, but at the extreme the delegation of Milpa Alta received 15 times less debt than Benito Juarez (see Appendix 3, Table A3.7 for a list of debt by delegation).

Figure 3.5. Debt in the ZMVM, Avg. 2001-2004*



Source: Author

* The data on the DF are only for the averages from the years 2001-2004. The data on the metropolitan municipalities are for the year 2003.

Despite the fact that the delegations manage more debt than the municipalities, they have been less efficient in their use of debt. The whole system for debt management in the delegations is removed from the rules of the credit markets—in favor of a more discretionary allocation of debt—and has made it difficult to ensure that funds are spent on productive projects. According to the Director of Public Credit of the DF, more ex-ante and ex-post controls are necessary to ensure that the delegations use the credit as originally expected according to their original contract—technical reports—with the GDF (Interview G). In contrast, in the metropolitan municipalities such controls have derived from the market systems in place, which regulate the overall use of municipal debt.

3.4.3. Local Expenditures in the ZMVM

Unlike the system of revenue, where there are substantive differences between delegations and municipalities, both types of local governments have similar spending responsibilities. Metropolitan municipalities, like the rest of the municipalities in the country, are responsible for the provision of an array of local public services, including water, sewer, sanitation, lighting, garbage collection, markets, cemeteries, streets, parks, and local police. Education, health and infrastructure are largely provided by states, but since the creation of the system of *aportaciones*, municipalities are increasingly engaging in the provision of these services, mainly with those related to basic infrastructure (see Appendix 3, Table A3.9 for the assignment of spending responsibilities across tiers of government in Mexico).

By and large, delegations are in charge of the same local public services as the municipalities, with the notable exception of water, which is mostly managed centrally by the “Water System of the DF,” a decentralized public entity. Delegations are responsible for the following services: public markets, sport facilities, parks and gardens, street cleaning, garbage collection, solid waste treatment, street lighting, civic protection, and public safety. In addition, delegations are also in charge of building, restoring, and maintaining secondary roads, sidewalks, pedestrian bridges, and speed bumps. They also participate in the restoration and maintenance of schools, libraries, museums, and cultural facilities; and in the promotion and coordination of programs against alcoholism, drug addiction, and family violence.

Concerning the provision of local services, municipalities and delegations have similar means of provision, but municipalities have more flexibility. According to national legislation, municipalities are “responsible” for the provision of local services; but that does not mean that they must “provide” services directly. There are various ways in which municipalities provide services, the most common being the direct provision of municipal services, provision with collaboration of the State, municipal associations, and various forms of privatization. The selection of each of these provision schemes has to do both with the characteristics of the municipalities and of the services themselves.

Unlike municipalities, delegations provide services either directly or concurrently with the central authorities of the GDF. Some of the local services that delegations can provide concurrently with the GDF are water provision and treatment, sewer systems and drainage, street construction, cleaning and maintenance of primary roads, public transportation for passengers, civil protection, fire protection, public safety, education, and health. Also, in some cases local services are provided by the GDF alone. According to the Statute of Government of the DF, there are three cases in which the GDF should be in charge of the provision—or concession—of public services. First, when the benefit of the services accrues to the whole city; second, when the impact of certain services spreads over two or more delegations; and third, when the service being provided at the delegation level requires a high level of technical expertise.

Statistics on local public spending at both the municipal and delegation levels are not easily accessible, and those available present highly aggregated information that only allows a user to perform a general analysis. No public information is available on the delegations' expenditure accounts, and in the municipalities of the State of Mexico, the current accounting system only allows a user to distinguish between the most aggregate categories of spending.²⁰ Because of this situation, in the rest of this chapter I am only able to describe the main categories of spending of the metropolitan municipalities.

²⁰ For years, INEGI's data on subnational finance reported on municipal spending divided into current and capital spending. While problematic, this reporting allowed a comparison of the proportion of current expenditures with those targeted to productive investments. Now the INEGI is in the process of changing its data tabulator to register the local expenditure data by the "object of spending," which reflects the categories of spending. While this is a move in the right direction, it has complicated the analysis of local public spending because various mistakes have happened in the process of converting the old data categories into the new nomenclature.

Table 3.14: Metropolitan municipalities. Spending per capita and as a proportion of total²¹ (Constant 2002 pesos)

	1989	1995	1996	1997	1998	1999	2000	Avg.
Total spending	602.7	531.1	593.8	576.1	734.2	861.9	883.5	601.0
Current spending	351.4	339.0	355.4	359.3	429.0	480.0	485.3	361.4
Capital spending	161.1	76.3	111.8	110.9	153.8	208.2	157.9	119.5
Other spending	90.3	115.8	126.5	105.9	151.4	173.8	240.2	120.2
Proportion of total								
Total spending	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Current spending	58.3	63.8	59.9	62.4	58.4	55.7	54.9	58.8
Capital spending	26.7	14.4	18.8	19.2	20.9	24.2	17.9	19.9
Other spending	15.0	21.8	21.3	18.4	20.6	20.2	27.2	21.4

Source: Author, based on INEGI (2003).

According to Table 3.14, total spending in the metropolitan municipalities increased in real per capita terms from \$603 pesos in 1989 to \$884 pesos in 2000. This increase is mostly explained by the fact that since 1998, municipalities have begun to receive federal *aportaciones* to finance the provision of basic infrastructure. These spending data suggest that an important proportion of the increase went to current spending (60%), while capital spending only accounted for 20% of the total budget. The difference between capital and current spending is a general indicator of the composition of the local budgets, especially of the portion that goes to cover recurrent government costs and the portion that goes to the creation of assets. Despite the fact that this difference allows the user to perform a basic analysis of public spending, it does not provide a measure for assessing the efficiency of local spending. Although a high proportion of capital spending is often associated with productive or efficient outcomes, this is commonly misleading, because current expenditures can go to productive uses (e.g., hiring a professional IT technician to improve the tax administration systems of the municipality) and capital spending can go to waste (e.g., building schools and public buildings that are unoccupied).

²¹ For the calculations of this table I followed the guidelines for correlating the old with the new nomenclatures, and I integrated the capital and current spending with the following accounts: Current spending = personal services (wages and salaries) + general services (office overheads) + equipment and inputs. Capital spending = acquisition of goods and properties (machinery, IT support, etc.) and public works and social actions (building of infrastructure and development of the commercial, industrial, and agrarian sectors). In “other spending” I incorporated the remaining spending categories not easily attributable to any of the two other categories.

In addition, the proportion of current to capital spending alone does not provide for a sufficient analysis of the allocation of municipal resources by sector. This is because it is difficult to identify which areas represent the highest priorities for the metropolitan municipalities, or where they face the highest demands. However, in aggregate terms, the previous analysis underscores the difficult financial conditions that the metropolitan municipalities are facing. Although in real per capita terms, total expenditures increased during the 1990s, if I were to exclude the *aportaciones*, it would become clear that most of that increase came from federal funding and not from the municipalities' fiscal effort. This may not always be the preferred pattern of financing, because when federal transfers decline, municipalities are left with a low capacity to finance capital outlays. Finally, the most worrisome situation is in relation to capital spending accounts. Capital spending represents one-fifth of all spending, but it has been decreasing in recent years. In the year 2000, each inhabitant of the metropolitan municipalities received less capital spending than 10 years before, which illustrates the inability of the municipalities to keep up with the high demand for public services and infrastructure.

3.5. Conclusion

This chapter illustrates the complex fiscal composition of the ZMVM, which has a number of particular characteristics. First, the area operates under five different fiscal regimes. Second, the federal government still treats the DF and the State of Mexico differently, mostly in favor of the former. Third, these two entities have very profound differences, both in terms of their general characteristics and their fiscal compositions. Fourth, while the DF is the richest entity in the country, and the only one capable of generating more than half of its revenues from its own tax base, the State of Mexico is the most highly populated entity, with an increasing level of expenditure needs. Finally, although municipalities and delegations have similar assignments of spending responsibilities, their organizational structures and financial capacities are different. In comparison to both delegations and non-metropolitan municipalities, metropolitan municipalities are facing the harshest financial situation, both because they receive the

lowest transfers per capita, and because they have the highest demands for services and infrastructure.

This discussion of the fiscal condition of the ZMVM complements the political and legal analysis of Chapter 2. In this two chapters, I make a diagnosis of a metropolitan area with significant complexities, contradictions, and challenges. Fiscally, it is an area that, although it operates as a functional unity where people live and work, it is comprised of local and state jurisdictions with very different revenue means and expenditure needs. The process of decentralization, by increasing the levels of subnational revenue and expenditures, has perforce affected the fiscal condition of the ZMVM. However, as I argue in Chapter 1, theories of decentralization have not yet begun to explore how such increases affect the fiscal condition of metropolitan areas in developing countries. In part this has been due to the lack of financial data at the metropolitan level. Having created a database on the finances of the jurisdictions of the ZMVM, I will now explore how and to what extent the process of decentralization has contributed to the current fiscal condition of this area. My data will be useful in investigating whether state intervention has equalized the finances of the local jurisdictions, enabling them to provide similar service levels, or if on the contrary, it has pushed them apart, increasing the level of fiscal fragmentation in the ZMVM. It is to this analysis that the next chapter turns.

CHAPTER 4

THE IMPACT OF FISCAL DECENTRALIZATION ON THE ZMVM: THE ROLE OF STATE INTERVENTION

4.1. Introduction

Chapter 3 illustrated the fiscal condition of the Metropolitan Zone of the Valley of Mexico (ZMVM). According to that analysis, the ZMVM is formed by a number of jurisdictions with very different revenue sources and expenditure needs. This has resulted in an area which, despite its functionality as a single territorial continuum, is confronted by deep fiscal fragmentation, mainly in the division between a rich pole in the DF and a poor pole in the State of Mexico. As I explained in Chapter 1, the process of fiscal decentralization in Mexico has consisted of the transfer of spending responsibilities from the federal to the subnational governments. From a public finance point of view, this process has meant increased federal transfers to states and municipalities, both to make up for their weak taxing capacities, and to cover their new spending responsibilities, mostly in the areas of education, health, and infrastructure. Because the process of fiscal decentralization has affected the revenue sources and the spending responsibilities of subnational governments, such a process has perforce impacted the fiscal fragmentation of the ZMVM. However, so far it is yet unknown what the characteristics of such an impact have been. In this chapter I explore the question of whether the decentralization policies of the 1990s mitigated or exacerbated the fiscal fragmentation of the ZMVM.

Because the focus of this chapter is on the process of fiscal decentralization, I center the analysis on the main instrument of this process, that is the system of intergovernmental transfers. According to public finance theory (Bird 2000), national governments may use intergovernmental transfers to close the gap between revenue means and expenditure needs at various levels of government (vertical imbalance) and to compensate for inequalities between revenue-raising ability and fiscal needs between different governmental units at the same level of government (horizontal imbalance). Using this theory as a point of departure, I follow two steps to explore how state intervention, through the system of intergovernmental transfers, has affected the fiscal condition of the ZMVM. First, I explore the position of the DF, the State of Mexico, and the ZMVM in

the country's system of intergovernmental fiscal relations, and second, I analyze the effect of the system of transfers on the level of fiscal disparity between the jurisdictions of the ZMVM.

Concerning the positions of the DF, the State of Mexico, and the ZMVM in the intergovernmental fiscal system, my objective is to explore the question of whether decentralization has increased or decreased the availability of revenue in these areas for the financing of their increasing expenditure needs. In all circumstances, subnational governments face an inevitable vertical imbalance between revenue sources and expenditure needs so states use transfers to correct these imbalances (Shah, 1994). The state distribution of federal transfers, however, follows national objectives, in which there are always winners and losers depending on the characteristics of the system in place. In Mexico the process of decentralization has been "symmetrical," meaning that it has been applied across the board to all states, regardless of the differences in geography development, or technical-capacity. The only exception is the DF, which, being the capital of the country, has always received special fiscal treatment from the federal government.

As I discussed in Chapter 3, the DF and the State of Mexico are the two federal entities with the most economic and political power in Mexico. Economically, they have the highest levels of production. Politically, they represent strategic power enclaves as, for example, they have the highest concentration of federal electoral districts in the country (36 in the State of Mexico and 40 in the DF). Because of these characteristics, the ZMVM represents a special interest for the national government, particularly the DF, which for decades has been at the forefront of Mexico's national development. Based on this political and economic importance, I hypothesize that the national government has given fiscally advantageous treatment to the ZMVM, and that a person who lives in the area receives more federal transfers than the average person in the country. In testing this hypothesis, I will examine how the national government has aided the ZMVM through the system of transfers to finance its expenditure needs, and I will advance a theoretical

understanding of how fiscal decentralization performs in a context of a metropolitan formation characterized by multiple jurisdictions and rapid population growth.

In addition to the role that transfers play in dealing with the problem of vertical imbalances between revenue sources and expenditure needs, transfers also adjust for the differences in needs and capacities between different jurisdictions at the same level of government—a situation currently referred as horizontal imbalance. In this way, transfers also address concerns about redistribution and equity, and are used by governments to ensure that jurisdictions provide similar levels of public services, at similar tax rates. Thus, in this chapter I also test the effect of Mexico’s fiscal decentralization on the level of horizontal imbalance in the ZMVM. Particularly, I directly measure the level of fiscal disparity between the local jurisdictions of the ZMVM during the 1990s and assess the extent to which disparities have resulted from the transfer system in place. Indirectly, this exercise tests the degree to which the Mexican transfer system follows a redistributive criterion.

4.2. The ZMVM in the intergovernmental fiscal system

The fiscal picture of the ZMVM presented in Chapter 3 has resulted—at least in part—from the intergovernmental fiscal system in place, which is characterized by the Mexican federal government’s intervention in the finances of subnational governments. However, the degree to which the fiscal fragmentation of the ZMVM has resulted from the transfer system still remains an empirical question. Answering this question is not a straightforward exercise. Mexico lacks legal recognition of metropolitan areas and this has prevented officials from consolidating data on the actual transfers going to the ZMVM. Therefore, as a first step, I generated such data, following the methodology that I explain below.

To calculate the total federal transfers of the ZMVM, I added the total transfers of the DF with those going to the metropolitan municipalities. Because the metropolitan municipalities are just one area of the State of Mexico, I named this area “Metropolitan

Zone of the State of Mexico” (ZMEM, for its name in Spanish) to differentiate it from the non-metropolitan area of the State of Mexico, which will be excluded from the analysis. To calculate the transfers of the ZMEM, I added the data on the transfers of all the 58 metropolitan municipalities. However, because data on transfers at the municipal level are not always available, for some calculations I took the State of Mexico’s annual transfer data, and assuming that the State allocates its federal transfers on a fixed per capita basis, calculated the proportion going to the ZMEM, according to the total population of this area.¹

In sum, I calculated the transfers of the ZMVM by adding those of the DF with those of the ZMEM. Because of the method of the data integration, these data can only be used to make comparisons between the ZMVM and other metropolitan areas, and not to analyze the allocation of transfers within the ZMVM. Even if the data reflect the transfers of this metropolitan area as a whole, the area is composed of two entities that receive very different transfer amounts. Therefore, the public finance data of the ZMVM is largely driven by the data of the DF, and just slightly affected by the public finances of the ZMEM. Thus, even if the analysis shows that per capita transfers in the ZMVM are some of the highest in the country, these data do not differentiate between the DF (which receives very high transfers per capita) and the ZMEM (which receives very low transfers per capita).

Following this methodology, I study the position of the ZMVM in the intergovernmental fiscal system from three different perspectives. First, I calculate the total amount in transfers that the federal government distributed to the DF and the State of Mexico from 1980 to 2001, and the proportion of those transfers that went to the ZMVM. This analysis focuses on the systems of *participaciones* and *aportaciones*, which represented 90% of the total subnational transfers in 2001–43 and 47%, respectively (see Appendix 1 for a detailed analysis of these transfer systems). Second, I complement the previous analysis by looking at the territorial allocation of federal spending in the DF and the State of Mexico in the year 2002. Third, I calculate the proportion of transfers that seven other

¹ When I use a different methodology to calculate the transfers of the ZMEM, I indicate that in the text.

metropolitan areas in Mexico received between 1980 and 2000, and compare them to the transfers received by the ZMVM.

4.2.1. Allocation of transfers in the ZMVM

According to my own calculations, since the creation of the National System of Fiscal Coordination (SNCF) in 1980 and until the late 1990s, the ZMVM received more transfers per capita than the country average. In 1998 this situation changed and since then, total transfers per capita in the ZMVM have been at similar levels as the rest of the country (Figure 4.1.). The evolution of federal transfers in the ZMVM has resulted from the combined effect of the two main transfer systems, the *participaciones* and the *aportaciones*, which I analyze separately.

The ZMVM experienced severe cuts in the allocation of *participaciones* during the period of study. From 1980 to 2001, it lost 10 percentage points, moving from 31 to 21% of the total *participaciones* in the country.² This decline resulted from the combined effect of the *participaciones* allocated to the DF and the State of Mexico. Since the creation of the SNCF, the DF and the State of Mexico have been the two entities receiving the highest absolute allocation of *participaciones*. Until 2002, the DF received the highest absolute allocation, but in that year the DF fell to second place and the State of Mexico moved to first place. Despite this situation, the coefficient of *participaciones* in the DF has been steadily declining from 23% in 1980 to 11% in 2004. This decline largely resulted from a reform to the SNCF in 1989 that changed the formulae for distributing the *participaciones* from a proportional to a compensatory system. This means that in 1989 the SNCF stopped rewarding the states with the highest levels of tax collection, and began compensating states on a population and tax effort basis.

Ever since the 1989 reform, the criteria used in the *participaciones* formulae have been disadvantageous for the DF (see Appendix 1 for a detailed description of these formulae). The General Fund of Revenue-Sharing (FGP) has three components, none of which favor

² For this calculation, I considered the total amount of *participaciones* in both the DF and the State of Mexico, not just the part being transferred to the local governments.

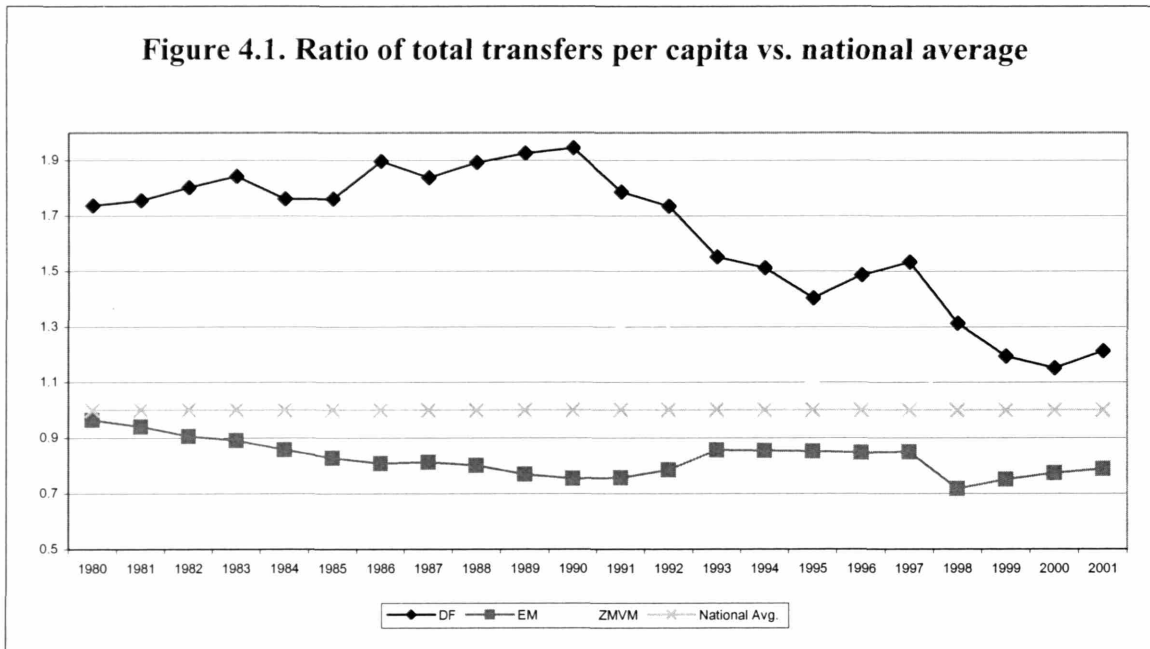
the DF. Component one is allocated according to population, so as other states become more populated, the DF loses in this portion of the formula. Component two is allocated according to the growth in the collection of “assignable taxes” (federal taxes on used and new cars, and a special tax on products and services, which includes gasoline, natural gas, diesel, beer, alcoholic beverages, processed tobacco, and water) and because this allocation follows the “growth rate” rather than the “absolute collection” of taxes, the DF also loses, because it already has a high absolute collection of these taxes. The third component is compensatory in that it is inversely allocated to the other two components (it is meant to compensate states that score low on the first two components), but since the DF still receives more absolute *participaciones* than most other states, it also loses in this component. In the Fund for Municipal Promotion (FFM), which is allocated according to the growth rate in the collection of property taxes and water fees in the last two fiscal exercises, the DF does not benefit because it already has high rates of collection. Finally, the 1989 SNCF reform created a contingency reserve to compensate states whose share in the Federal Revenue-sharing Pool (RFP) in a specific year do not reach the growth of the RFP in the year 1990. The DF has been entitled to use this reserve every single year since the 1989 reform, but because the quantum of this reserve is quite small (0.25% of the RFP), and other states are also entitled to this reserve, the DF has only received funds in 5 out of the last 14 years. In the other 9 years, the reserve ran out of funds (which went to other states) before it could distribute funds to the DF. Additionally, in the 5 occasions in which the DF received funds from this reserve, the funds only covered about 5% of the difference between its present allocation of transfers and what it should have been allocated if the pre-1990 system were still in place (Interview D).

In contrast to the decline in *participaciones* allocated to the DF, from 1980 to 2004 the share of *participaciones* allocated to the State of Mexico increased modestly, gaining around one percentage point in the last twenty years. However, in comparison to other states, the State of Mexico is also adversely affected by the current system of *participaciones*. In terms of the General Fund of Revenue Sharing (FGP), like the DF, the State of Mexico is also at a disadvantage. Until very recently, the calculation for the first

component was based on population data from the official census, so there was a lag in taking into account the rapidly growing population of the state. In Component two, the State of Mexico does not benefit because its tax growth rate is calculated according to the growth rate in assignable taxes rather than on the absolute collection. Finally, the State of Mexico receives only a small fraction from Component three because it is the state with the highest absolute allocation of *participaciones*, and this component is designed to help states that receive a low absolute allocation of *participaciones*.

The reduction in *participaciones* in the DF and the State of Mexico becomes more profound when analyzed in per capita, rather than absolute terms. In per capita terms, the DF receives more *participaciones* than the average person in the country and the State of Mexico receives less than the national mean, but both entities have been consistently losing from the current system. While in 1980 the DF received 73% more *participaciones* per person than the rest of the country, by 2001 that comparative advantage declined to 42%. In the case of the State of Mexico, the situation is even more dramatic. The State's per capita allocation decreased from a level 4% below the national mean, to 11% by 2001. For the ZMVM this combined effect meant that, although from 1980 to 2001 a person in this area received more *participaciones* than the average person in the country, the relative advantage declined from a level 44% above the mean in 1980 to 13% in 2001.

If in addition to the *participaciones*, I also take into account the allocation of the earmarked transfers or *aportaciones*, it becomes evident that since the creation of the *aportaciones* system in 1998 the ZMVM no longer occupies a favorable position in the federal fiscal system. Between 1998 and 2001 each person in the ZMVM received 15% fewer *aportaciones* (\$1,602 pesos) than the national mean of \$1,875 per capita (See Figure 4.1).



Source: Author, based on data from INEGI.

The total amount of *aportaciones* going to the ZMVM is equal to the sum of the *aportaciones* for the DF and for the State of Mexico, which follow very different patterns. Since the origin of the system in 1998, the State of Mexico has always been the federal entity receiving the highest absolute allocation of *aportaciones*, and the DF the entity receiving the lowest. The State of Mexico receives about 10% of the national total, largely because the most important *aportaciones* funds cover expenditures related to the decentralized health and education systems, which as I explained in Chapter 3, are quite large sectors in the State of Mexico. Despite the fact that the State of Mexico receives the highest absolute allocation of *aportaciones*, in per capita terms this proportion falls to the second lowest allocation of *aportaciones* in the country, after the DF.

In contrast to the State of Mexico, the DF receives a lower allocation of *aportaciones*, representing only 2% of the total *aportaciones* pool. This is because the DF is excluded from the education (FAEB, FAETA) and infrastructure (FAIS) funds, and because it began to receive the Fund for Municipal Strengthening (FORTAMUN) three years after the rest of the states. The DF's exclusion from the federal government education funds, which are by far the largest funds, has not been arbitrary but results from the fact that the federal government still covers the budget for the DF's basic education services. The

federal government covers this budget through a specific budgetary item, called Item 25. Note that although Item 25 does not form part of the system of *aportaciones* (budgetary Item 33), it has the same objective as the education funds that go to the rest of the states (FAEB and FAETA), so it must be added to the transfers of the DF. Figure 4.1. portrays the budgetary allocations of Item 25 as being added to the total transfers going to the DF; otherwise, the decline in the transfers of the DF and the ZMVM from 1998 to 2001 would have looked even steeper.

While there is a justification for the DF's exclusion from the education funds, there is no evident rationale for the DF's exclusion from the FAIS and of its delayed incorporation into the FORTAMUN. According to the federal authorities, this is because these funds are formally targeted to states and municipalities, and since the DF is a federal entity and not a state, and has delegations instead of municipalities, it is not entitled to these funds (Interview D). For this reason the FORTAMUN had to change its name to incorporate the territorial demarcations (delegations) of the DF before the DF could begin to receive this fund (see Section 3.4.2). Beyond these semantic and legalistic formalities, what this exclusion illustrates is the controversy around the political economy of the intergovernmental fiscal system, and particularly around the way the federal government treats the capital city. Unlike in the past, when the federal government provided financial support to the capital city, it is currently not in the interest of the federal government to do so. In the new context of political plurality, channeling funds to the DF would mean that the federal government is strengthening the financial position of its main political rival, and this goes against any rational electoral strategy. In fact, when I asked a former Minister of Finance about the way the federal government approaches the DF's system of federal transfers, he mentioned that "whenever possible, the federal government tries to reduce the flow of resources from the federation to the DF" (Interview A).

Even though the DF is still excluded from certain *aportaciones* funds, if the resources of Item 25 are included in the calculation of its total funds (as they should be) a person in the federal capital receives more *aportaciones* than the average person in the country. However, when this is combined with the low portion of *aportaciones* per capita in the

State of Mexico, the result is that a person in the ZMVM receives less *aportaciones* than the average person in the country. In fact, between 1998 and 2001 the national per capita mean was \$1,875 (\$1,280 in the State of Mexico and \$1,980 in the DF).³ In terms of the per capita allocation of *aportaciones* in the ZMVM as a whole, each person received \$1,602 pesos, which is 15% less *aportaciones* than the average person in the country.

In summary, there are two main findings that derive from this analysis. First, the DF has received very different treatment than the State of Mexico in the allocation of transfers. While a person in the DF has always received more transfers than the average person in the country, a person in the State of Mexico received less. This difference has decreased dramatically, but not because the State of Mexico has improved its position in the federal fiscal system, but because the DF has been receiving substantially fewer transfers than in the past. Second, while for many years the ZMVM received special treatment in the federal fiscal system, today it receives about the same amount in transfers per capita as the rest of the country. Some of the reasons underlying this situation are the continuous decline of the DF's *participaciones*, its exclusion from certain *aportaciones* funds, and the rapid population growth in the State of Mexico.

4.2.2. Other transfers and federal spending in the ZMVM

The previous analysis documented the position of the ZMVM in the systems of *participaciones* and of *aportaciones*, which together represent about 90% of the total formal transfers to subnational governments in Mexico. In addition to these two transfer systems, there are other programs through which the federal government channels resources to the subnational governments. These other programs also affect the quality and quantity of service and infrastructure in the ZMVM. In particular, as I discussed in Chapter 3, states also receive funds for specific services in the form of decentralization agreements and, more recently, from the Program for Strengthening Federal Entities (PAFEF). In addition, states also receive federal resources through each line ministry

³ This figure takes into account the education budget that the federation spends directly in the DF (through Item 25); if it is excluded, the DF only received \$320 in *aportaciones*.

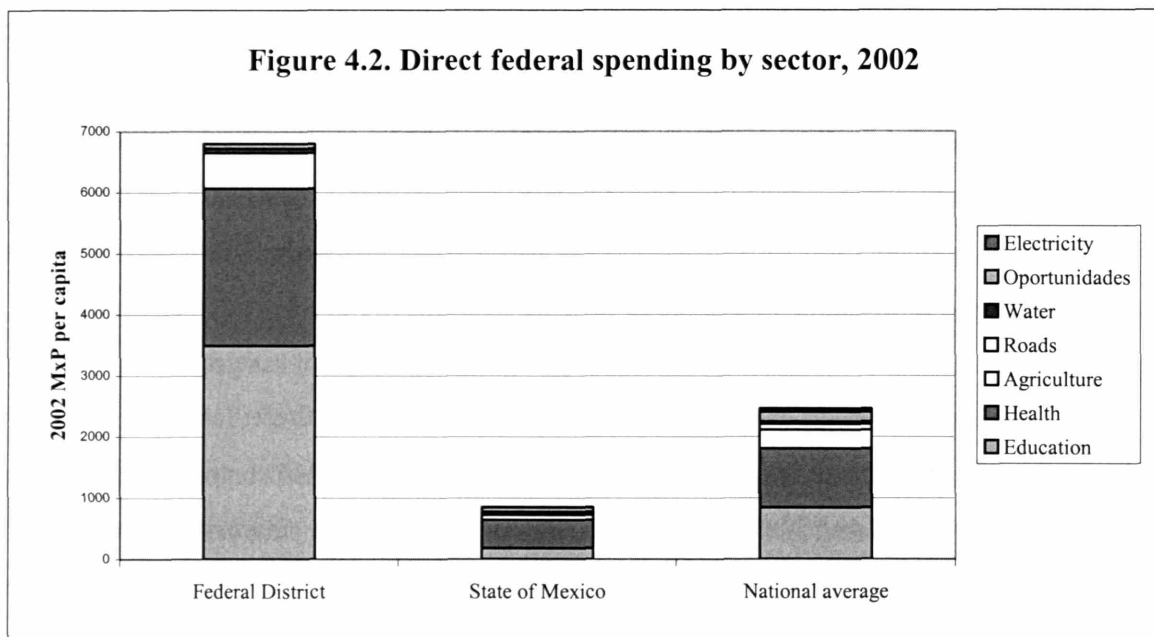
which, although they are not part of the formal system of intergovernmental transfers, represent a substantial amount of sectoral spending in each state.

The PAFEF and the decentralization agreements together account for most of the remaining 10% of the formal transfer system. According to my own calculations, the ZMVM received 18.2 and 2.9% respectively of the total resources of these programs. On average, from the year 2000 when the PAFEF was initiated to 2003, the DF received 9% of this program's total funds, and the State of Mexico received 12%. States use the PAFEF to cover some of their financial adjustment costs, and for infrastructure investments. Assuming that the allocation of the PAFEF in the State of Mexico was made on a fixed per capita basis, then in this period, the ZMVM received 18.2% of the total resources of the program. Unlike the PAFEF in which almost 1 out of 5 pesos went to the ZMVM, funding through decentralization agreements, which are intended to finance specific sectors, is not substantial in the ZMVM. On average, from 1998 to 2003 the DF received 0.3% of the total funds allocated through decentralization agreements, which makes it the entity with the lowest proportion out of all the states. Similarly, the State of Mexico only received 3.4% of the total, which means that overall, the ZMVM received only 2.9% of the total financial resources flowing to states in the form of decentralization agreements.

Although states do not have much control over territorially allocated sectoral spending, this spending is conducted in their territories, and can amount to a substantial proportion of the states' public spending. Therefore, taking this spending into account provides a comprehensive picture of states' intergovernmental funding. However, because of the complexity of tracking the numerous programs through which sectoral spending is channeled to states, and due to the difficulty of finding data, public finance analysts do not commonly study the territorial allocation of sectoral spending. For this study, I was able to take advantage of a data set from the World Bank to calculate the territorial

allocation of sectoral spending transferred by the federal government to the DF and the State of Mexico in 2002.⁴

Because the federal government allocates sectoral spending at the state level, the primary purpose of these data is to illustrate the contrast between the level of spending in the DF and the State of Mexico. As a secondary objective, the data allowed me to calculate the amount of sectoral spending that the federal government transferred to the ZMVM, but these calculations only provide an order of magnitude, as I allocated the spending on a fixed per capita basis. The data for this analysis include federal spending on the sectors of education, health, roads, agriculture, anti-poverty programs (*Oportunidades*), water, and electricity.



Source: Author, based on data from World Bank 2004.

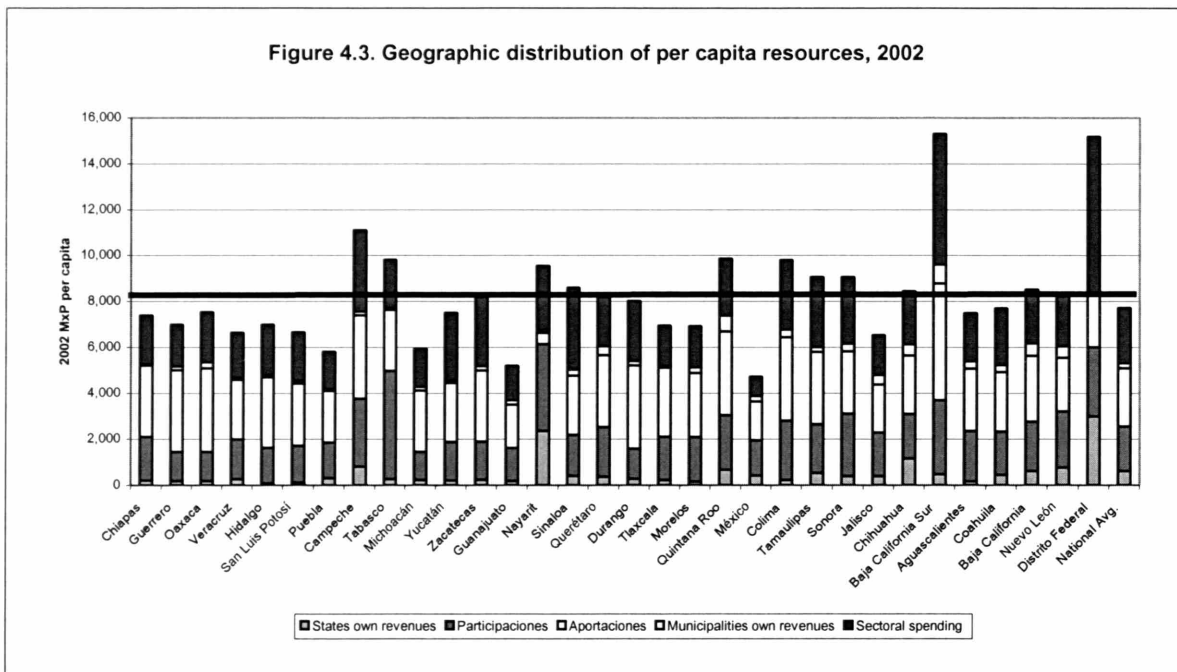
My analysis of the sectoral spending levels shows a puzzling contrast between the DF and the State of Mexico (Figure 4.2). Actually, these are the two federal entities that received the highest and the lowest allocation of sectoral spending per person in the country in the year 2002. While an average person in Mexico received \$2,460 pesos in

⁴ I obtained the data set from the preparation of the World Bank project on Mexico's Public Expenditure Review (2004).

sectoral spending, in the DF, he or she received \$6,800, as compared to \$850 in the State of Mexico. In other words, a person who lived in the State of Mexico in the year 2002 received three times less sectoral spending than the country's average person, and eight times less than a person in the DF. This enormous difference is mainly accounted for by the DF's high level of federal spending in education and health, which is explained by the fact that the capital district has the most specialized education and health facilities in the country.⁵ In addition to the differences in health and education, the State of Mexico has very low levels of sectoral per capita spending in virtually all other sectors, from roads and agriculture to anti-poverty programs (*Oportunidades*) and water and electricity subsidies. I am puzzled as to why the State of Mexico, which has the highest absolute number of poor people in Mexico, a significant rural sector and enormous infrastructure needs (see Chapter 3), is the state with the lowest level of direct federal spending by sector in the country.

The disparity in the amount of federal sectoral spending in the DF and the State of Mexico adds to the already different treatment that these two entities receive from the formal system of transfers (SNCF). To determine the combined effect of these direct and indirect transfers, I calculated the total amount of spending received by a person in the State of Mexico and the DF in comparison to the rest of the population in the country in 2002. Figure 4.3 presents this total amount of spending in the DF and the State of Mexico, together with the national average and the levels of total spending in the rest of the states. The figure also includes states' and municipalities' own-source revenue, which give an idea of the relative importance of transfers for local public finances. The purpose of including the other states in the federation is basically to allow comparison between the State of Mexico and various other states that are poorer than the State of Mexico but report higher levels of total spending per capita.

⁵ Various health and education services have benefits that spread through the nation (i.e., health research conducted in hospitals located in the DF, TV education channels of national coverage), but because they are located in the DF, their budgets are counted as part of the DF's budget. Ideally, the budgets of these nation-wide institutions located in the DF should be prorated throughout all states that derive some benefits, but data do not allow me to perform such a calculation (see Chapter 3, Note 12).



Source: World Bank (2004). States are sorted according to CONAPOS's index of marginality. The poorest state is to the left.

The addition of formal transfers (*participaciones* and *aportaciones*) to sectoral spending and state and municipal revenues in each entity underscores the critical financial condition of the State of Mexico, and its enormous contrast with the DF. After excluding the State of Baja California Sur, which is the least-populated state in the federation, I find that in 2002 the DF was the entity with the highest amount of financial resources per capita in the country, at \$15,180 pesos. In contrast, the State of Mexico was the entity with the lowest amount of financial resources per capita in Mexico, amounting to \$4,720 pesos. In other words, in 2002 a person who lived in the DF benefited three times more from public spending than a similar person who lived across the border in the State of Mexico. The critical condition of the State of Mexico's public finances stands out not only when compared with the DF, which is the richest entity in the country, but also when contrasted with other more similar states. For example, a comparison with the State of Veracruz, the third-most-populated and fourth-poorest state in the federation, shows that in per capita terms, Veracruz receives 40% more resources from public spending than the State of Mexico.

Government reports only provide information on the total amount of public spending at the state level (Figure 4.3), so this level of data aggregation does not allow me to precisely calculate territorial spending in the ZMVM. However, if I make the extreme assumption that all public spending in the State of Mexico is allocated on a fixed-per-capita basis, then my calculations show that in the year 2002 the ZMVM as a whole controlled 23% of the total public financial resources in the country. Out of this total, the ZMVM received 49% of all state revenue, 11% of municipal revenue, 21% of *participaciones*, 11% of *aportaciones*, and 28% of direct federal spending by sector. These numbers reveal that despite the decline in formal transfers of the ZMVM, this area still controls one quarter of the total public spending in the nation. Although most of this revenue comes from its own fiscal bases, it continues to be the recipient of substantive proportions of intergovernmental revenues. Notice, however, that this last calculation for the ZMVM is the result of aggregated data from two federal entities with very contrasting revenue levels, so this calculation is only a partial representation of the fiscal reality of the ZMVM as a whole.

4.2.3. Intergovernmental transfers in a metropolitan context

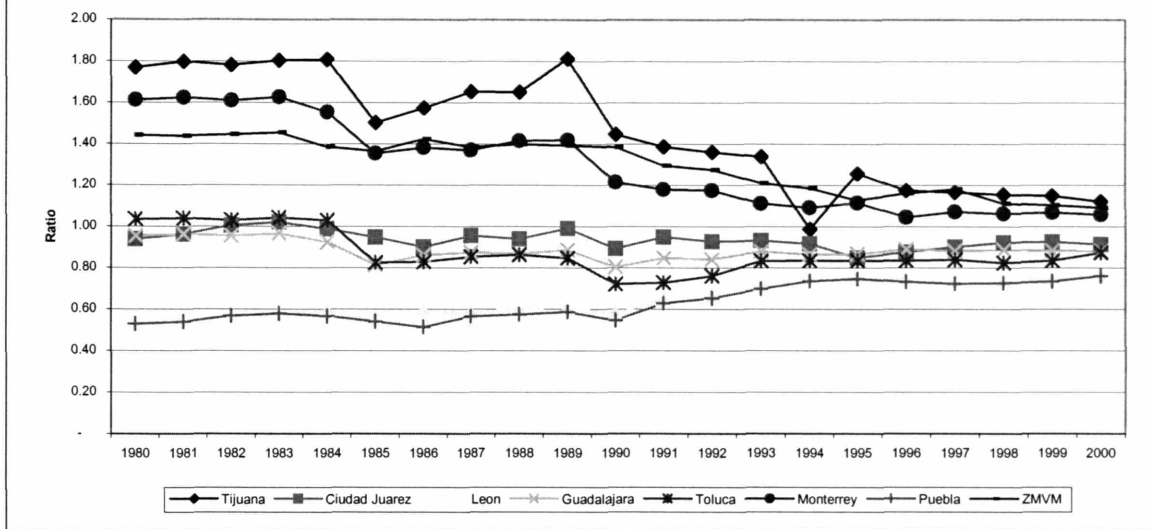
In the previous sections I compared the transfers of the DF with those going to the State of Mexico, and provided a broad metropolitan-wide analysis of the ZMVM. This analysis was of a broad nature because the available data only allow for the aggregation of the public finances of the DF and the metropolitan municipalities in calculating the finances of the ZMVM, rather than the calculation of specific transfers of the ZMVM. By calculating the transfers of the ZMVM this way, I was able to make a statistical construct for this metropolitan area. However, such a construct does not allow me to analyze the internal distribution of transfers within the ZMVM because, in reality, each jurisdiction (DF and ZMEM) receives and spends its own federal transfers. Despite this limitation, the statistical construct of the ZMVM is useful for making comparisons between the ZMVM and other metropolitan areas.

As I explained in Chapter 1, decentralization and public finance theory have not given much attention to the fiscal implications of metropolitan formations in developing

countries. Consequently there is not yet an analytical framework that I can use to test the fiscal impact of decentralization on the ZMVM. Thus far, I have conducted this test by exploring the public finances of the ZMVM's jurisdictions and by comparing them to the national average. This exercise, however, does not allow me to discern if the observed fiscal impact on the ZMVM results from a deliberate strategy of the national government to reduce fiscal transfers to the ZMVM, or if it is part of the overall process of fiscal decentralization in Mexico. Because the process of fiscal decentralization in Mexico has been symmetrical, treating all the states equally, I hypothesize that the federal government's fiscal policy treated other metropolitan areas in a similar manner as it treated the ZMVM. Such analysis helps to put the situation in the ZMVM into perspective, and to further the understanding of the redistributive nature of the SNCF.

To test my hypothesis, I compare the allocation of *participaciones* and *aportaciones* to the ZMVM from 1980 to 2000 with those allocated to the seven other metropolitan areas in the country with more than one million people. These metropolitan areas, together with their corresponding populations, are: Guadalajara, 3,491,540; Monterrey, 3,311,470; Puebla, 1,346,176; Leon, 1,333,576; Tijuana, 1,275,781; Ciudad Juarez, 1,217,818; and Toluca, 1,140,912. Like the ZMVM, all of these metropolitan areas are formed by an agglomeration of local jurisdictions, with the difference that none of them cross state boundaries. The overall results of this comparison show that the pattern of the federal distribution of transfers in the ZMVM is similar to that of other metropolitan areas in the country. These results can be directly interpreted as a manifestation of the symmetrical nature of the SNCF that has had a redistributive effect on the public finances of the country as a whole (Figure 4.4).

Figure 4.4. Participaciones per capita vs national mean



Source: Author, based on data from INEGI.

The allocation of *participaciones* to the metropolitan areas from 1980 to 2000 shows a clear pattern of convergence towards the national mean, underscoring the redistributive nature of the Mexican system of *participaciones*. The ZMVM followed a trend similar to that of other metropolitan areas whose allocation of *participaciones* per capita was above the average of the country. During these two decades, the metropolitan areas of Tijuana and Monterrey, in the north of the country, received more *participaciones* per capita than the ZMVM, and their *participaciones* steadily declined at an even faster rate (measured as the annual rate of change) than in the ZMVM. While Monterrey experienced a negative annual rate of change of almost 2% from 1980 to 2000, and Tijuana a rate of 1.6%, the *participaciones* per capita in the ZMVM declined at an annual rate of 1.3%. While the ZMVM, Tijuana, and Monterrey, which received more *participaciones* per capita, decreased their amounts over the entire period, the areas of Leon and Puebla, which were below the mean, increased to a level similar to the average per capita allocation in the rest of the country. The metropolitan areas of Toluca, Ciudad Juarez and Guadalajara, whose *participaciones* per capita were close to the national average in 1980, experienced slight declines during the following two decades, but stayed close to the national mean.

For the calculations in Figure 4.4, I assumed that states where the metropolitan areas are located allocate their *participaciones* evenly throughout their whole territory, and I calculated the allocations to these metropolitan areas on a fixed per capita basis. However, if instead of considering the total amount of State *participaciones*, I calculate the actual *participaciones* received by the municipalities in these metropolitan areas, then I find a very similar trend of convergence towards the national mean from 1989 to 1999.⁶ In this case, the ZMVM, Monterrey and Tijuana were the metropolitan areas that received the highest amount of *participaciones* per capita, but they also steadily lost their advantage with respect to the rest of the country. The metropolitan area of Guadalajara was also above the national mean, receiving an average of 30% more than the rest of the country. Leon and Puebla were still the least favorably treated metropolitan zones, but they increasingly moved toward the national mean. The metropolitan areas of Cd. Juarez and Toluca received about the same *participaciones* per capita as the rest of the country.

Table 4.1. Ratio of *participaciones* per capita of selected metropolitans areas vs. the national mean

Metropolitan Zone	1989	1990	1995	1996	1997	1998	1999	Avg.	National/State mean
Tijuana MZ	1.91	2.03	1.68	1.39	1.57	1.71	0.79	1.61	1.05
Cd. Juárez MZ	0.97	1.15	0.82	0.76	0.89	0.70	0.84	0.99	0.82
Leon MZ	0.76	0.73	1.02	0.88	1.03	1.01	0.93	0.91	1.04
Guadalajara MZ	1.29	1.28	1.32	1.20	1.38	1.36	1.32	1.31	1.00
Toluca MZ	0.89	0.86	0.97	0.94	1.11	1.19	1.36	0.99	1.08
Monterrey MZ	1.93	1.73	1.43	1.19	1.47	1.58	1.51	1.54	0.89
Puebla MZ	0.73	0.73	0.68	0.74	0.76	1.07	1.40	0.84	1.01
ZMVM	2.90	2.78	2.02	2.23	2.61	2.43	2.44	2.44	0.91*

Source: Author, based on data from INEGI.

* Refers to the State of Mexico only.

Similarities in the pattern of *participaciones* allocation exist not only between the ZMVM and some of the other metropolitan areas in the country, but also between the amounts allocated to the metropolitan areas and the average for their respective states. According to my own calculations, the ZMVM together with the metropolitan areas of Cd. Juarez

⁶ The main difference between this and the previous calculation is that in the previous calculation I assumed that states distribute 100 of their *participaciones* to municipalities, while in this calculation I only include the actual *participaciones* received, which are about 20% of the total state *participaciones*. Notice that for the case of the DF, because it is not known what proportion of its *participaciones* are distributed to the delegations, I assumed an allocation of 20%, the minimum established by law for the rest of the states.

and Monterrey are the only three areas that receive a lower per capita allocation than their respective states, meaning that there is not always an urban bias in the distribution of *participaciones* in the country (see Table 4.1). In fact, it appears that in cases of rapid urbanization, the system of transfers does not automatically adjust to compensate for the rapid population expansion. This happens mostly because there is a lag in the incorporation of the data on the increasing population into the formulae.

In order to present a thorough comparison of the transfers of the ZMVM with those of other metropolitan areas, I made a number of additional calculations on the distribution of *aportaciones* by metropolitan area. The overall result of these calculations is that the low proportion of *aportaciones* per capita in the ZMVM is also present in six out of the seven other metropolitan areas (Table 4.2). This result is not completely surprising as many of the *aportaciones* funds finance basic infrastructure projects located in the poorer, more rural parts of states, and because the costs of service provision can be quite high in rural areas.⁷ Concerning the comparison of the allocation of *aportaciones* in the ZMVM and the rest of the metropolitan areas, when I take the total *aportaciones* into account, the ZMVM receives the lowest allocation, mostly because of the DF's exclusion from the education funds.⁸ However, when I correct this exclusion by adding the resources that the federal government spends directly on education in the DF (Item 25), the ZMVM becomes the metropolitan area with the highest allocation of *aportaciones* per capita, with each person receiving 50% more than the average person in the country (see the two numbers in parentheses on Table 4.2).

⁷ In the provision of education services in the State of Mexico, for example, there is an agreement with the Teachers Union that forces the state to pay higher salaries to teachers in the rural than in the urban educational districts.

⁸ For this calculation I distributed the total *aportaciones* in direct proportion to the population of the metropolitan areas.

Table 4.2. Allocation of *aportaciones* in real per capita 2002 pesos and as a ratio of the national average in selected metropolitan areas (avg. 1998-2002)

	All Funds		FAIS and FORTAMUN	
	Pesos per capita	Ratio	Pesos per capita	Ratio
Tijuana	1,930	1.10	202	0.83
Ciudad Juarez	1,687	0.97	176	0.91
Leon	1,489	0.85	224	0.88
Guadalajara	1,445	0.83	223	0.88
Toluca	1,318	0.75	239	1.00
Monterrey	1,486	0.85	213	0.81
Puebla	1,623	0.93	259	0.98
ZMVM	899 (2,578)*	0.51 (1.49)*	301	1.59

Source: Author, based on data from INAFED and Cámara de Diputados (2003).

* Includes Budgetary Item 25 that covers the federal education expenses in the DF.

If instead of considering all the *aportaciones* funds together and allocating them on a per capita basis according to the population of the metropolitan areas, I only consider the two funds for which municipal information is available (FAIS and FORTAMUN), then the ZMVM appears to be favorably treated. In this case, the ZMVM is the only metropolitan area that receives more *aportaciones* per capita than the national average. This situation is a direct consequence of the DF's inclusion in the distribution of the FORTAMUN in 2001. Since that year, the DF has received about 10% of the fund's total national resources.

In summary, the comparison of transfer allocations among metropolitan areas confirms my hypothesis that the observed fiscal impact on the ZMVM is the result of the overall process of fiscal decentralization in Mexico. The ZMVM receives similar fiscal treatment from the national government as the other metropolitan areas. In respect to the rest of the country, the ZMVM has experienced a decline in its level of federal transfers. However, when compared to other metropolitan areas, my analysis shows that there is nothing special about this decline, as it is also occurring in other highly populated metropolitan areas. Actually, the ZMVM's situation is less critical than other metropolitan areas that in the past also received transfers far above the national mean. For example, Tijuana and Monterrey not only received less *aportaciones* per capita during the period of study, but also experienced a more rapid convergence of their *participaciones* toward the national mean.

It is important to note that the objective of the calculations in this section and the two previous sections is to document the level of vertical fiscal imbalance in the ZMVM, and not to make any normative statement about the “fairness” of the transfer system in Mexico. According to my findings, the ZMVM is currently worse-off than before, but from a national perspective this means that the current system of transfers is redistributive. Although this redistribution does not directly benefit the ZMVM, it is beneficial from a national perspective because it addresses the problem of regional fiscal inequalities. This strategy is congruent with public finance theory, in which transfers are a tool for governments to push for national objectives, beyond the interest of specific states.

4.3. Intergovernmental transfers and fiscal disparity within the ZMVM

So far, the analysis has focused on how state-lead intervention, through the transfer system, affected the fiscal condition of the ZMVM during the decentralization process of the 1990s. According to this analysis, during this period the ZMVM constantly received lower transfers, to the point that currently a person in this area receives less transfers than the average person in the country. However, this applies to the ZMVM as a whole without differentiating the impacts of fiscal decentralization policies on the constituent jurisdictions of this area. Because the ZMVM is comprised of very diverse jurisdictions, it is to be expected that fiscal decentralization policies had a differentiated effect on these jurisdictions and, consequently, on the level of fiscal disparity within the ZMVM.

According to the theory of metropolitan finance reviewed in Chapter 1, the differences among jurisdictions’ tax and spending levels arise from a spatial misallocation of resources. The fiscal picture presented in Chapter 3 illustrates the uneven distribution of resources between the DF and the State of Mexico, which has directly contributed to the tax and spending differentials of the ZMVM’s jurisdictions. In such a context, poor jurisdictions have little alternative but to increase their tax rates or reduce their spending levels. Due to the weak tax bases in poor jurisdictions, they often opt for the latter, thereby reducing the provision of public services, which in turn reinforces the unequal

distribution of resources in the metropolitan area. In this situation of horizontal imbalance, which characterizes the current condition of the ZMVM, public finance theory argues that states may use their redistributive powers to intervene through the transfer system in order to help mitigate the differences in needs and capacities among jurisdictions. Based on this theory, I hypothesize that federal transfers have mitigated fiscal disparity in the ZMVM.

To test this hypothesis, in this last part of the analysis I explore the effects of decentralization on the level of fiscal disparity in the ZMVM. In particular, I examine the conditions under which fiscal decentralization policies mitigated or exacerbated the level of fiscal disparity in the ZMVM during the 1990s. I begin the analysis by measuring the level of fiscal disparity in the 1990s, and then I assess the extent to which the system of transfers accounts for the observed level of fiscal disparity.

4.3.1. Transfers and fiscal disparity in the ZMVM

Following the literature on fiscal disparity in the United States, I begin with an analysis of the difference in total spending per capita between the DF and the metropolitan municipalities of the State of Mexico (ZMEM). As already noted, the DF and the metropolitan municipalities have very different levels of wealth and economic activity. As such, it is not surprising that total spending per capita is higher in the DF than in the metropolitan municipalities. During the 1990s, a person in the DF received one-third more public spending than a similar person living across the border in the metropolitan municipalities (Table 4.3). To compare the differences in total spending between the DF and the metropolitan municipalities, I measured the ratio of central city spending to outside central city spending (CC-OCC), following the ACIR (1973) and Bahl et al. (1992) methodology. As I discussed in Chapter 1, this measurement is a simple ratio in which the numerator is the per capita spending (or, alternatively, transfers and taxes) of all the local governments of the central city area (DF), and the denominator is the per capita spending of all the local governments (metropolitan municipalities) outside the central city area (ZMEM).

Table 4.3. DF and ZMEM: Total spending per capita (Constant 2002 pesos)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
DF	783.0	993.9	993.1	1,002.4	1,133.7	1,046.5	974.4	1,182.1	922.3	1,147.7	1,283.3
ZMEM	663.5	673.5	685.9	771.4	732.1	531.1	593.8	576.1	734.2	861.9	883.5
Ratio	1.18	1.48	1.45	1.30	1.55	1.97	1.64	2.05	1.26	1.33	1.45

Source: Author, based on data from INEGI.

During the 1990s both the DF and the metropolitan municipalities increased their per capita spending, but because the former experienced higher increases than the latter, the CC-OCC disparity ratio increased during the period. While in 1990 the total amount of spending per person in the DF was 18% higher than in the metropolitan municipalities, by the year 2000 that difference grew to almost 50%. Despite this increase in fiscal disparity, the figures on total spending per capita alone do not allow me to assess the extent to which this increase resulted from the fiscal decentralization policies. This is because the total spending of the ZMVM's local jurisdictions comes from a number of revenue sources including transfers and own-source revenue. Thus, in order to assess the impact of fiscal decentralization I need to examine the CC-OCC ratios of transfers alone.

The disparity in transfers between the DF and the metropolitan municipalities decreased during the 1990s, underscoring the redistributive nature of the transfer system. Because the structure of public finances in the DF is still centralized, I cannot use the available data to show the amount of transfers that are allocated to each delegation. Therefore, I calculated the allocation of transfers based on two differing assumptions: one, that delegations received 20% and the other that they received 100% of DF's total transfers. These are sensible assumptions considering that 20% is the minimum set by law for the rest of the states. Under both assumptions, my results show that the level of disparity in transfers per capita between DF and the metropolitan municipalities declined during the 1990s (Table 4.4).

Table 4.4. DF and ZMEM: Total Transfers (*participaciones* and *aportaciones*) per capita (constant 2002 pesos)

20%	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
DF	479	511	527	535	562	523	415	426	528	486	521	585
ZMEM	168	172	201	214	254	263	196	236	275	421	586	578
Ratio	2.84	2.97	2.63	2.50	2.21	1.99	2.11	1.81	1.92	1.16	0.89	1.01
100%	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
DF	2,393	2,553	2,636	2,676	2,808	2,614	2,074	2,129	2,639	4,274	4,451	4,902
ZMEM	944	966	1,066	1,094	1,307	1,296	998	1,256	1,265	2,003	2,470	2,874
Ratio	2.53	2.64	2.47	2.45	2.15	2.02	2.08	1.70	2.09	2.13	1.80	1.71

Source: Author, based on data from INEGI (2004).

To calculate the actual level of fiscal disparity between the transfers of the DF and those of the metropolitan municipalities, I used the available data on transfers in two main ways. First, I considered the real allocation of transfers to the metropolitan municipalities from 1990 to 2000, and I assumed that the DF distributed to its delegations 20% of its total *participaciones*.⁹ Second, I took into account the total transfers of the State of Mexico and calculated the proportion received by the metropolitan municipalities according to their populations. In addition, I assumed that 100% of the transfers of the DF reached the delegations.

Each of these sets of calculations has strengths and weaknesses. In the first calculation, I focus on the actual transfers that the municipalities received, but I had to make an assumption about the amount of transfers reaching the delegations. In the second set of calculations, I take into account all the available data on transfers, both at the municipal and state levels, but I assume that these transfers are equally allocated on a per capita basis. This last assumption complicates the analysis of the metropolitan municipalities in two fundamental ways.¹⁰ First, it overlooks the non-population (formal and discretionary) criteria that governments follow in allocating transfers. Second, by only relying on a population criterion, I ignore any potential territorial bias in the allocation of transfers, as

⁹ This is a sensible assumption considering that 20% is the minimum set by law for the rest of the states. However, I also made these calculations assuming a higher (30%) and a lower (10%) proportion of *participaciones*, and in both cases, I found that the level of disparity decreased.

¹⁰ This is not so problematic for the DF because, after all, most of the transfers are distributed throughout its whole territory.

I assume that a person in a metropolitan municipality receives the same in transfers as a person in the rural part of the state, which is not the case. Beyond these problems, what emerges from my analysis is that both calculations unambiguously show a decline in the level of disparity in transfers both to the DF and to the metropolitan municipalities from 1989 to 2000.

From 1989 to 2000 transfers to the metropolitan municipalities and the DF increased, but more in the former than in the latter. As a consequence, the disparity ratio decreased, both because of the overall reduction in the DF's transfers and as a result of the creation of the *aportaciones* system in 1998. While the decline in the DF's transfers explains the reduction from 1989 to 1997, the creation of the *aportaciones* system accounts for the high level of equalization that took place from 1998 to 2000, and that has taken place since then. When assuming that all transfers are allocated on an equal per capita basis, I show that while in 1989 a person in the DF received one and a half more transfers per capita than a similar person in the metropolitan municipalities, by 2000 that difference declined by half. This result is important because by including all the *aportaciones* funds, it shows that in various spending areas (i.e., health, education, and infrastructure) transfers are reducing the gap between the DF's delegations and the metropolitan municipalities. Despite this reduction, however, the level of disparity is still high: 70% more transfers are allocated to a person in the DF than to a similar person in the metropolitan municipalities.

If instead of assuming that all state and local transfers are allocated to the municipalities and the delegations, I only consider the actual transfers that reached these local governments, the reduction in the disparity ratio is even greater (Table 4.4). From 1989 to 2000 the level of disparity declined by almost two times. As in the previous set of calculations, I find that the decrease experienced from 1989 to 1997 was mainly due to the reduction in the DF's *participaciones*, and the even steeper decline from 1998 to 2000 was caused entirely by the exclusion of the delegations from some of the *aportaciones* funds.

In order to complement the previous calculations, and to further test the effect of transfers on fiscal disparity, I correlated the transfers of municipalities and delegations with their corresponding GDPs. In all cases, the correlation was negative, meaning that transfers are inversely allocated to the wealth of the jurisdictions, which again provided evidence for the redistributive nature of the transfer system. In the case of the metropolitan municipalities, the correlation in the year 2000 was -0.37. The strength of the correlation is higher in the *aportaciones* (-0.50) than in the *participaciones* (-0.32), which comes as no surprise considering that several *aportaciones* funds specifically target poor areas. For the DF, because actual data on the *participaciones* that reach the delegations do not exist, I assumed that these are allocated using the same proportion as the rest of the budget (which is primarily based on population) and found a negative correlation of -0.17. For the *aportaciones*, I analyzed the allocation of the FORTAMUN fund, which is the only fund that specifically targets the delegations (also on a per capita basis), and found a negative correlation of -0.18. Thus, as all these data show, transfers have a redistributive effect both in the DF and in the metropolitan municipalities.

In summary, all my calculations illustrate the redistributive nature of the transfer system. The results of Table 4.4, despite measurement problems, show that the disparity in the allocation of transfers in the ZMVM is declining. These results are also supported by the negative relationship between GDP and transfers in the local jurisdictions of the ZMVM. Together, these findings unambiguously support my hypothesis that state intervention through the transfer system has followed redistributive objectives and has reduced fiscal disparities in the ZMVM.

4.4. Conclusion

There are three main conclusions in this part of the analysis. First, the DF and the State of Mexico receive very different amounts in federal transfers; second, the ZMVM is no longer a winner in the federal fiscal system; and third, transfers have had an equalizing effect on fiscal disparities within the ZMVM. These three conclusions point to the redistributive nature of the intergovernmental transfer system. From a national

perspective this shows how state intervention has enabled a more balanced system of regional development. While such intervention has served national objectives, it has caused some areas to be net losers from the redistribution system. In particular, the current situation does not present a very optimistic picture for the ZMVM. Federal transfers have decreased while the demand for spending on services and infrastructure has been on the increase. In addition, despite the horizontal equalization of transfers, rich tax bases continue to concentrate in one part of the metropolitan area (DF) while most service demands fall in the other part (the metropolitan municipalities) with the lowest revenue-generating capacity.

At the beginning of this chapter, I hypothesized that because of the economic and political importance of the ZMVM at both the local and national levels, this area must have been a winner in Mexico's intergovernmental fiscal system (i.e., that transfers per capita are above the national mean). According to this analysis, my hypothesis was only partially verified, as this area is made up of two entities with very different financial conditions. Although the State of Mexico receives the highest absolute allocation of transfers, due to its very high population, it receives the lowest per capita amount of both transfers and total financial resources in the country (Figure 4.3). Conversely, the DF is still the federal entity with the highest amount of financial resources per person, and one whose transfers per capita were above the national average for almost two decades. However, the policies of fiscal decentralization of the 1990s have adversely affected the finances of the DF, to the point that nowadays this entity is far from the financially advantageous position it once held.

The decline in transfers to the DF has reduced the fiscal gap between this entity and the State of Mexico (Figure 4.1). However, when in addition to the own-source revenue I consider the direct sectoral spending, the financial fragmentation between the DF and the State of Mexico becomes immense (Figure 4.2). This comparison between the DF and the State of Mexico shows a metropolitan area composed of the two entities that respectively receive the lowest and the highest amount of financial resources per person in the country. This not only explains why the DF's residents enjoy a very different quality and

quantity of services and infrastructure than residents of the State of Mexico, but it also underscores a number of problems associated with a federal fiscal system that treats very differently two entities, that for many practical matters, only differ from the fact that they are separated by a territorial boundary.

The second conclusion derives from an understanding of the ZMVM as an independent unit of analysis, rather than seeing the DF and the State of Mexico as two separate entities. Although the fiscal analysis of the ZMVM is largely a statistical construct—and will remain this way until a metropolitan body with autonomous tax and spending powers is created—using a comparative analysis aids in understanding the position of ZMVM in the fiscal system, both with respect to the rest of the country and to other metropolitan areas. In comparison with the rest of the country, the ZMVM shows a continuous tendency to converge towards the national mean. While for many years people in this area received more transfers than the average person in the country, since 1998 (with the creation of the system of *aportaciones*) they have received fewer. In comparison to other metropolitan areas, the ZMVM receives similar fiscal treatment from the national government to that of other metropolitan areas. This is evidence that Mexico's process of fiscal decentralization has been symmetrical, and that there is nothing special about the way in which the federal government treats the ZMVM in comparison to other highly populated metropolitan areas.

The third conclusion is that the redistributive effect of transfers that is observed in the vertical allocation of transfers to states is also present in the horizontal distribution of transfers across local jurisdictions within the ZMVM. According to public finance theory, higher levels of government may use transfers to compensate for inequalities between revenue-raising ability and fiscal needs among units at the same level of government. Consistent with this theory, my analysis found that the level of fiscal disparity in the allocation of transfers in the ZMVM decreased by more than 50% during the 1990s. This means that the distribution of transfers within the ZMVM is becoming more equal.

From a national perspective my conclusions add evidence to claim that the intergovernmental transfer system has redistributive results. According to public finance theory, one main function of national governments is to undertake redistributive policies in order to attain national goals (Musgarve 1973). Consistent with this theory, the Mexican national government has intervened in order to address the problems of regional fiscal inequalities in the country. However, from the point of view of the ZMVM, this state intervention has not been advantageous as it has not been benefitting from the current National System of Fiscal Coordination. Actually, my conclusions paint a very dismal picture for the ZMVM. This area is losing the comparative fiscal advantage that it once had, at a time when demands for services and infrastructure on both sides of the border are rapidly increasing. Additionally, the jurisdictions that comprise the ZMVM have very different fiscal capacities and differing levels of services and infrastructure. The combined effect of these two realities compromises the fiscal sustainability of this metropolitan area. Suffice to say that a recent report by the National Council of Population (CONAPO) argues that 4.5 million people who live in conditions of high and very high levels of marginality are concentrated in the ZMVM, 75% of whom live in the metropolitan municipalities (*Reforma* June 26, 2003).

According to my analysis, state intervention through the system of transfers has partially solved this horizontal imbalance by creating a more equal distribution of transfers among the local jurisdictions of the ZMVM. Despite the redistributive effect of these transfers, it should be noted that this has not been sufficient to equalize the fiscal disparities of the ZMVM entirely. According to Table 4.3., fiscal disparity in total spending per capita increased during the period of study. This means that the redistributive nature of the transfer system is being offset by other factors that account for the current fiscal fragmentation of the ZMVM. In fact, the fiscal fragmentation of the ZMVM is the result of complex interactions between multiple factors. State intervention is only one factor, and despite its equalization effect, it has not been able to mitigate fiscal disparity in the ZMVM. In the next chapter, I explore the factors that have been exacerbating the level of fiscal disparity in the ZMVM.

CHAPTER 5

DETERMINANTS OF FISCAL DISPARITIES IN THE ZMVM: PROPERTY TAXES AND BEYOND

5.1. Introduction

In Chapter 3, I illustrated the differences in the public finances of the jurisdictions of the Metropolitan Zone of the Valley of Mexico (ZMVM). In Chapter 4, I analyzed the extent to which the fiscal decentralization process has contributed to the level of fiscal disparity in this metropolitan area. The analysis proved that state intervention through the transfer system has mitigated the level of fiscal disparity. Despite the equalizing effect of transfers, the analysis also showed that total spending per capita in the ZMVM remains highly unequal. This conclusion suggests that in addition to transfers, other factors affect the fiscal condition of the ZMVM. This conclusion is partially based on the fact that in Mexico the fiscal decentralization process has been symmetrical, meaning that—with the exception of the DF—decentralization policies have been applied in the same way across the board to all states and municipalities. Therefore, the fiscal condition of the ZMVM cannot be only attributed to the transfer system, because such a system also responds to the demands of all states in the federation and not just to those that conform the ZMVM. In fact, Mexico's fiscal pact is the axis of the country's federalist structure, and in order to hold this pact together, the Mexican state must follow national objectives—even if some of them go against the objectives of specific states.

If the observed level of fiscal disparity in the ZMVM is not only the result of the direct intervention of the State via the system of transfers, then what other factors account for this situation? In this chapter, I argue that the current fiscal condition of the ZMVM is also the result of the complex interaction of fiscal, political, historical, and spatial factors. Particularly, I argue that the property tax system has greatly contributed to the level of fiscal disparity in the metropolitan area. Property taxes are the main own-source revenue in the jurisdictions of the ZMVM; in 2002, they accounted for 53% of total tax collection. Property taxes are also the main fiscal tool in full control of local governments to autonomously increase their revenues. Therefore, the composition of the property tax structure is directly related to the level of fiscal disparity. According to the theory

presented in Chapter 1, decentralization gives rich jurisdictions a larger tax base and a lower tax rate than poorer jurisdictions, and this tends to increase the income gap between jurisdictions (Prud'homme 1995). Based on this theory, I test the hypothesis that during the process of fiscal decentralization in the 1990s, property tax collection increased the level of fiscal disparity in the ZMVM.

In order to test this hypothesis, I look at four different determinants of property tax collection in the ZMVM. First, I move beyond the analysis of the direct impact of transfers conducted in Chapter 3, and examine the indirect effect of transfers on the collection of property taxes in the ZMVM. As I discussed in Chapter 1, the field of public finance has two main models, known as the “flypaper” and fiscal laziness models, to test the impact of transfers on the fiscal behavior of local governments. In Mexico, subnational governments depend heavily on intergovernmental transfers, so I expect that transfers have a negative indirect effect on tax collection; this is that as dependence on transfers increases, the level of local tax collection decreases (fiscal-laziness).

Second, I look at the role that the ZMVM's spatial composition plays in the level of property tax collection. During the 1990s the population of the metropolitan municipalities grew by 3 million people; therefore I expect to observe a substantial increase in property taxes. My analysis explores the conditions under which rapid population expansion results in an increase in property taxes. I do this by comparing property tax collection in the metropolitan and non-metropolitan municipalities of the State of Mexico and also in the DF's delegations. Additionally, I look at the effect of household mobility on tax collection in eight of the largest metropolitan municipalities.

Third, I look at the political and administrative costs associated with tax collection in the ZMVM. Since my analysis of property tax collection indicates that the level of collection has been particularly low in the metropolitan municipalities, I explore the question of whether the politico-administrative characteristics of these municipalities explain their low levels of tax collection. Fourth and last, I explore the impact of the different governance structures and systems of incentives in the ZMVM's jurisdictions on the level

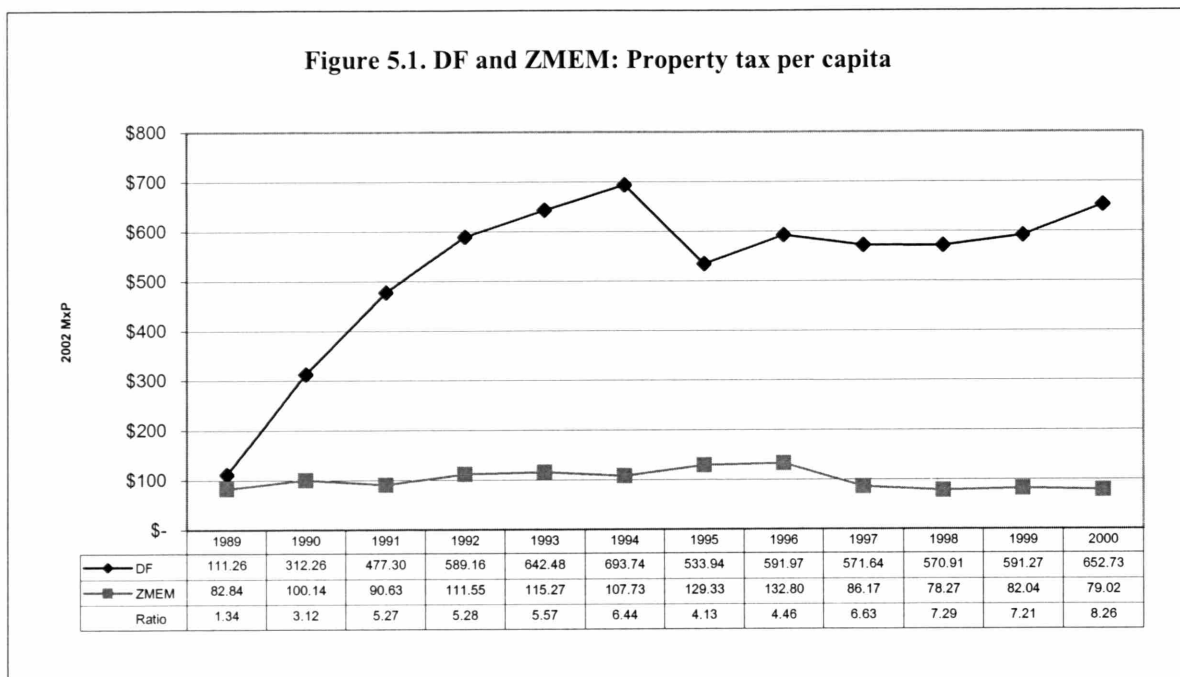
of fiscal disparity. The tax systems of the DF and the State of Mexico are very different. While the former has a centralized tax structure, the later is decentralized and therefore municipalities have the autonomy to set and collect their property taxes. Based on the theory of fiscal decentralization discussed in Chapter 1, I hypothesize that the level of fiscal disparity among the metropolitan municipalities is higher than in DF's delegations. Because the exploration of this hypothesis is relevant to the current discussion about the political reform in the DF, I make some general remarks about the advantages and disadvantages of having a centralized versus a decentralized system of local public finance.

5.2. Property taxation as a determinant of fiscal disparity

According to the results of Chapter 4, transfers have a redistributive effect in the ZMVM. These results confirm the hypothesis that transfers are reducing fiscal disparity in the ZMVM (see Table 4.4). Despite the redistributive effect of the transfer system, my analysis also shows that the ratio of total spending per capita in the DF to that of the metropolitan municipalities increased during the 1990s (see Table 4.3). This means that despite the effect of transfers, the level of fiscal disparity increased during this period. Thus, if transfers are mitigating the level of fiscal disparity, then something else should be accounting for its exacerbation. In order to find out, in the following analysis I explore the characteristics of the local governments' own-sources of revenue, particularly of property taxes, which are the most important source of local revenue in the ZMVM—and elsewhere in the country.

In the ZMVM, property taxes account for a substantial proportion of local governments' own-source revenues. This proportion varies between the DF (20%) and the metropolitan municipalities (35%), but in both cases property taxes represent the single most important own-source of revenue (see Tables 3.3 and 3.12). Property taxes in the DF and in the metropolitan municipalities vary both in their general characteristics and in their collection levels. One major result of these differences is that the Center-to-Outside Center disparity ratio (CC-OCC) in property taxes grew substantially during the 1990s.

While in 1989 the Treasury of the DF collected 34% more property taxes per person than the metropolitan municipalities, by 2000 the ratio of that difference grew almost eight times.



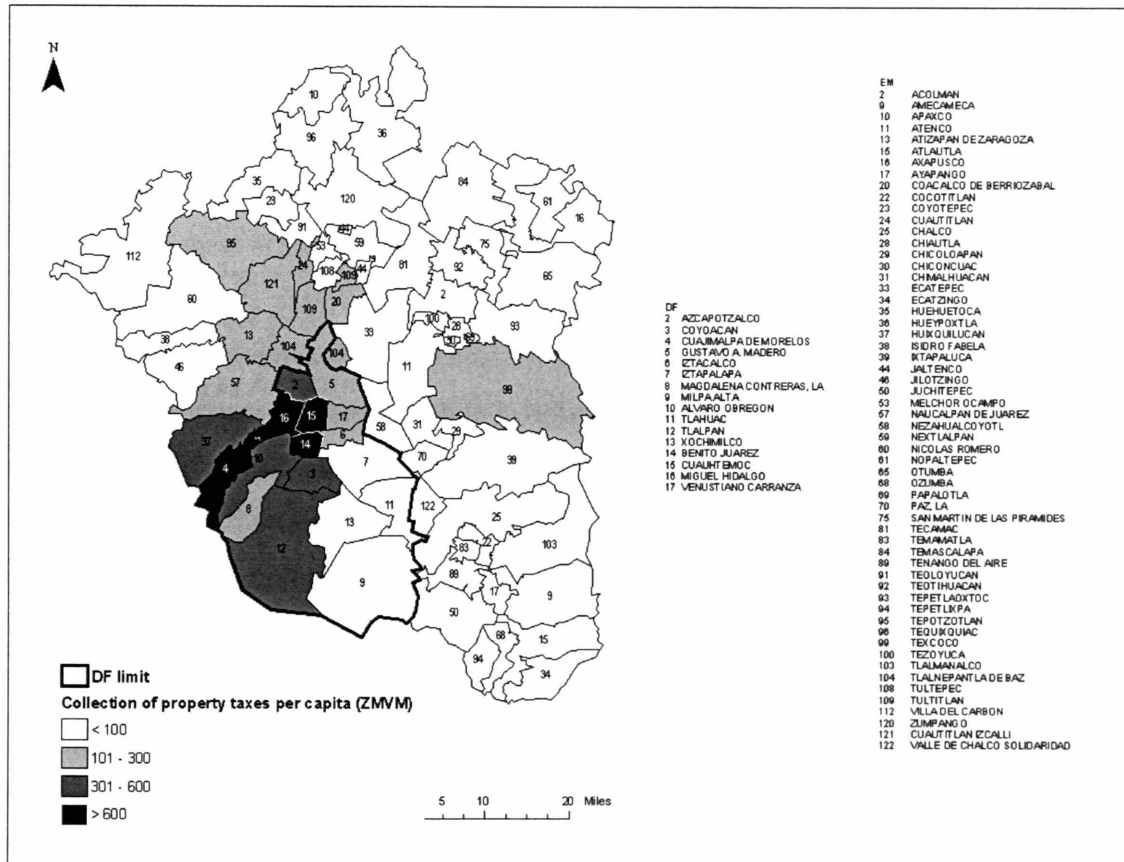
Source: Author, based on data from INEGI (2004).

As Figure 5.1 illustrates, the increase in the property tax disparity ratio responds to two factors: first, to a steep increase in property tax collection in the DF, and second to a relative decline in collection in the metropolitan municipalities. From 1989 to 2000 the DF increased its levels of property tax collection from \$111 pesos per person to \$653 pesos per person. In real absolute terms this represented an increase of \$4.5 billion pesos. In sharp contrast to the DF, the metropolitan municipalities experienced an absolute real growth of just \$183 million pesos during the decade. Such a modest increase in property tax collection, together with a population expansion of three million people during the 1990s in the metropolitan municipalities, resulted in a decline in the level of property taxes per capita from \$83 pesos in 1989 to \$79 pesos in the year 2000.¹ This contributed

¹ According to Figure 5.1, the collection of property taxes per capita in 1995 and 1996 was particularly high. This is unusual, considering that the economic crisis of 1994 had an adverse effect on the country's public finances. Because of this observation, I closely analyzed the data for those years and found that neither in 1995 nor in 1996 did the metropolitan municipalities report data on the tax on property

to the already deep polarization of property tax collection between the DF's delegations and the metropolitan municipalities (Figure 5.2). Both the increase in tax collection in the DF and the decrease in the metropolitan municipalities are due to a number of characteristics of the property taxation system, to which the analysis now turns.

Figure 5.2. Property tax collection per capita in the ZMVM, Avg. 1989-2004*



Source: Author

The data on the DF is from the 1999-2004 average. The data on the metropolitan municipalities is from the 1989-2000 average.

transactions, which is the second most important tax on properties. This is clearly an error in the data because it is not possible that for two years no property transactions happened in a place with such a dynamic real estate market. The person in charge of the municipal and state database in INEGI did not know the reason for this lack of data, but I would guess that for some reason it was actually included as part of the collection of property taxes, which could be accounting for the high level of property tax collection in 1995 and 1996.

5.3. Indirect effect of intergovernmental transfers on property tax collection

According to the public finance theory of tax effort presented in Chapter 1, transfers may either stimulate (flypaper effect) or inhibit (fiscal laziness effect) tax collection. Based on this theory, I explore the extent to which the transfers caused the increase of property taxes in the DF or the lack of growth in property taxes in the metropolitan municipalities. Due to the differences in the property tax systems of the DF and the State of Mexico, I will follow a different methodologies to test the impact of transfers on tax collection in these two jurisdictions.

Since the metropolitan municipalities have autonomy over their property taxes, the data allow me to test if the increase in federal transfers during the 1990s is responsible for the lack of growth in of property taxes during this period. From 1989 to 2000 the proportion of transfers as a percentage of total municipal spending more than doubled from 30 to 66%; therefore, based on the theory of tax effort, I expected that the increase in transfers had a negative effect on the collection of property taxes (fiscal laziness effect). In order to find out, I tested this assertion by performing a regression analysis on panel data of the 58 metropolitan municipalities for the eleven-year period (1989-2000) under study. This statistical method controls for omitted variables and calculates coefficients that take into account both the differences between the municipalities and across time. Empirical analysts do not agree as to which variables should be included in the regressions, but they commonly use property taxes (or any other tax variable) as the dependent variable and transfers and other wealth or tax-base measurements as independent variables. For this study, I selected property tax collection per capita for the dependent variable and the total amount of transfers (both *participaciones* and *aportaciones*) per capita for the independent variable. Because property tax collection per capita is a function of GDP per capita, I included the municipal GDP per capita as a control variable in the model (Prud'homme 1998: 10). I used property tax collection and *participaciones* data from INEGI's database on subnational finance, *aportaciones* data from INAFED, and

municipal GDP data from the Human Development Indicators of the UNDP 2001 Report on Human Development.²

Table 5.1. ZMEM and ZMNL: Impact of transfers on tax collection
Dependent variable: Collection of real property taxes per capita

	Fixed-effects model	Fixed-effects model	Random-effects model	Random-effects model
	Coefficient	Standard Errors	Coefficient	Standard Errors
ZMEM				
GDP per capita (PPP \$US)			.0334	.005***
Transfers per capita	-.018	.007**	-.016	.006*
ZMNL				
GDP per capita (PPP \$US)			.021	.002***
Transfers per capita	.009	.003***	.105	.030***

p ≤0.10 ** p ≤0.05 *** p ≤0.01

PPP = purchasing power parity.

ZMVM = Metropolitan Zone of the Valley of Mexico. ZMNL = Metropolitan Zone of Nuevo Leon.

Source: calculations by the author.

The results of my statistical regression confirm my hypothesis that transfers had a negative and significant effect on the collection of property taxes in the metropolitan municipalities. In Table 5.1 the coefficients show that an increase of \$100 pesos in transfers has an associated decline in property taxes of about \$2 pesos. These results were consistent using both a fixed and a random-effects model. The evidence in favor of the fiscal laziness model in the metropolitan municipalities is consistent with other quantitative studies as well as with some qualitative evidence. Concerning the results of other quantitative analyses, a recent study by Sour (2004) on municipal tax effort in Mexico found that the ten municipalities with the lowest level of tax effort in Mexico—out of a sample of 155 urban municipalities—are all located in the metropolitan area of the State of Mexico. Similarly, a research project from the National University (UNAM) found that in the State of Mexico “the *aportaciones* have deepened the fiscal dependency of the municipalities and have weakened their own-sources of revenue, especially their property taxes” (Ruiz Durán, 2002).

² Data on municipal GDP are only available for the year 2000, and they are reported in adjusted dollars (PPP US\$). Because municipal GDP is only available for one year, I ran two models, first a fixed-effects and then a random-effects model.

In addition to these studies, I also found qualitative evidence of fiscal laziness in the metropolitan municipalities. According to a former president of the metropolitan municipality of Texcoco, “of course, the federal transfers generate a negative incentive to collect taxes; they are so big, that sometimes they represent almost the total revenue of many municipalities in the State” (Interview E). According to this official, even if transfers generate a negative incentive to increase the collection of property taxes, municipal officials often prefer this source of funding over the collection of taxes. This preference relates to the political economy problems that arise from the proximity of local authorities to the source of funds. While transfers flow in a regular—and automatic—way to the municipalities without creating too much friction with the upper tiers of government that allocate these funds, in the case of property taxes, there is close proximity between taxpayers and local authorities. This proximity can reduce tax collection for a number of reasons. First, it is not unusual for social ties to exist between local authorities and taxpayers. Second, authorities are often faced with the dilemma of enforcing property tax compliance in poor and marginalized households. And third, municipalities with important commercial or industrial tax bases are tempted to make “informal concessions” (i.e. a voluntary lack of tax enforcement) to keep these tax bases in their municipalities to generate employment and economic growth (Interview E).

The coefficients in Table 5.1 and the additional quantitative and qualitative evidence I have discussed demonstrate the presence of the fiscal laziness effect in the metropolitan municipalities. This evidence alone, however, is not sufficient to prove that the fiscal laziness effect is specific to the metropolitan municipalities, as it may also be present in the rest of the municipalities in the country. Therefore, in order to determine if the observed fiscal laziness effect derived from the particularities of the metropolitan municipalities, I compare them with municipalities in other metropolitan areas. Ideally, I would have performed the same type of regression analysis on a large number of metropolitan municipalities throughout the country, but due to data limitations (especially on reliable data on property tax collection) I was only able to perform the analysis for the nine metropolitan municipalities of Monterrey. For the analysis, I used the same methodology as I did for the metropolitan municipalities of the State of Mexico, and I

also expected to find that transfers had a negative impact on local tax collection. In this case, however, my expectation turned out to be wrong, as transfers had a positive impact on the collection of property taxes in the metropolitan municipalities of Monterrey from 1991 to 2000. As can be seen in Table 5.1, the coefficients in both models were positive and significant. These results show the presence of the flypaper effect, which means that these municipalities use their transfers for the purposes for which they were given. One interpretation is that municipal authorities in Monterrey are not taking advantage of the fungibility of money to redirect part of their transfers to cover the provision of services currently provided with tax money.

Like in the case of Monterrey—and unlike the metropolitan municipalities—property tax collection in the DF increased (five times) during the period of study (Figure 5.1). To find out the extent to which this increase resulted from the reduction in *participaciones* in the DF, ideally I should perform a similar analysis to that of Table 5.1 and test for the impact of transfers on tax collection. However, the lack of data on the actual transfers reaching the delegations, together with the centralized nature of property tax collection in the DF, prevents me from performing this quantitative test. In order to determine if the increase in the level of property tax collection was the result of decentralization, or of other independent factors like secular changes in property values, or of an increase in payment of tax arrears, for example, I conducted a series of interviews with key stakeholders, including the DF's Ministry of Finance who implemented the reform.

According to the DF's Minister of Finance, the decentralization policies of the 1990s, and concretely the reduction of *participaciones*, created incentives for the DF to increase tax collection. To use his own words: “after the reduction in *participaciones*, which resulted from the changes to the transfer system in 1990, we were left with no choice but to increase our own sources of revenue” (Interview B). He made this same point in a previous publication, where he argued that “as a *consequence* of the change in the *participaciones* formula and of the federal decision to cancel all the transfers to the transport system of Mexico City, a substantial reform was introduced to increase the water fees and the property and payroll taxes” (Beristain and Rodriguez 2001: 179-180).

Italics are mine). To accomplish this objective, the administration of Mayor Camacho (1988-1994) implemented a major tax reform which accounts for the steep increase in property tax collection from \$111 pesos per capita in 1989 to \$694 pesos per capita in 1994 (Figure 5.1). Tax reforms are always difficult to implement, and in this case two factors were crucial to the success of the reform: the good fiscal condition of the DF prior to the reform, and the support of the federal government. Concerning the first factor, when Mayor Camacho came to power at the end of 1988 the finances of the DF were in good shape because the federal government had just taken over all financial dues of the DF after the earthquakes of 1985. According to Camacho's Minister of Finance "it is much easier to make changes when you have healthy public finances, than when you are in fiscal distress" (Interview B). In terms of the second factor, Mayor Camacho himself told me that the strong support the DF received from President Salinas was critical for the success of various reforms of his administration (Interview F).

The reduction in *participaciones* in the DF in 1990 was motivated by the discontent of other states in the federation with the special financial treatment the DF had received from the national government in the past. During the 1980s the federal government cancelled all the direct spending that it formerly channelled to the DF for the financing of its mega projects, mainly in the transportation and water sectors. Similarly, the 1989 changes to the SNCF cut the DF's coefficient of *participaciones*, starting with a reduction of two percentage points. The DF's authorities at the time knew that the new SNCF formulae would continue to decimate the finances of the capital city, so they saw the tax reform as a necessary strategy to keep up with the levels of services and infrastructure that the capital city required.

The 1990 tax reform sought to increase the DF's collection of own-source revenue through various policies including the modernization of information technology services, administrative simplification, better tax enforcement policies, and the restructuring of the whole system of tax administration. The reform also made a number of specific changes to the property tax system, which according to Morales (2002) included: (1) an increase in tax rates by making the system more progressive, subdividing the upper-value

brackets, and raising the minimum payments of the lower-value brackets; (2) the establishment of a single system to set the tax bases, streamlining the previous system in which rental-based and value-based methods for calculating the base of the property tax coexisted; and (3) an extension of the practice of self-determination of the tax base from only including commercial properties to include the valuation of all type of properties. Despite these changes, the reform was not able to solve a number of deficiencies that are still present in the property tax system in the DF, which include errors in the cadastral registries, failures in the notification process for non-compliance, and mistaken information on the tax forms (Moreno et al. 2004).

Although the tax reform of the 1990s left a few unresolved problems, the collection of property taxes in the DF increased constantly from the start of the reform until 1994, when the peso crisis negatively impacted the finances of the capital city. The economic crisis was so severe that, by the year 2000, the DF was unable to reach the levels of property tax collection from 1994. The economic crisis affected the collection of property taxes in the second half of the 1990s primarily by reducing the prices of properties, and generally by decimating the purchasing power of consumers. In addition, Morales (2002) argues that the crisis brought about a number of changes that included a virtual disappearance of all credit for housing for medium- and high-income level households, an increase in the costs of construction and in the rental prices of the few properties in the rental market, and an accumulation in arrears on the existing credits.

The qualitative information that I obtained from my interviews provides evidence that a reduction in the *participaciones* created an incentive to raise taxes. However, this information does not reflect the “intensity” of such an incentive to increase tax collection. In other words, even if I could establish a causal relationship between the reduction of *participaciones* and the increase in local tax collection, it would not mean that taxes were increased to their maximum potential. Actually, due to the technical and political factors associated with any tax reform, local tax increases almost always fall behind the optimal level. In fact, according to a high-ranking official in the DF Treasury, “the current property tax system is rigid, baroque, and could certainly be improved; there is capacity

to increase the level of collection, but that is politically sensitive” (Interview N). Along the same line, Carlos Urzúa, a former Minister of Finance in the DF declared to the press in 2001 that “easily, if we get our act together and make the non-compliers pay, instead of collecting 6 billion pesos in property taxes, we can collect 10 billion, without raising taxes” (Cited in Moreno et al. 2004).³ In summary, the case of property tax collection in the DF shows that, even if State intervention through the system of intergovernmental transfers can indirectly create incentives to increase tax collection, states and municipalities face political and technical constraints to collecting taxes to their fullest potential.

5.4. Spatial determinants of fiscal disparity in the ZMVM

In the previous analysis, I showed how State intervention through the system of transfers indirectly increased the level of fiscal disparity in the ZMVM both by reducing tax effort in the metropolitan municipalities, and by pushing for a tax reform that led to increased property tax collection in the DF. This indirect impact of transfers, however, is not the only determinant of fiscal disparity in the ZMVM. The level and variation in property tax collection also responds to other structural characteristics that affect the composition of the property tax base and the efficiency of tax collection. In this section, I explore the extent to which the spatial locations of the ZMVM’s jurisdictions account for the differences in property tax collection during the 1990s. In particular, I analyze the impact of the metropolitan municipalities’ territorial location on property tax collection with respect to both the non-metropolitan area of the State of Mexico and, most importantly, the DF.

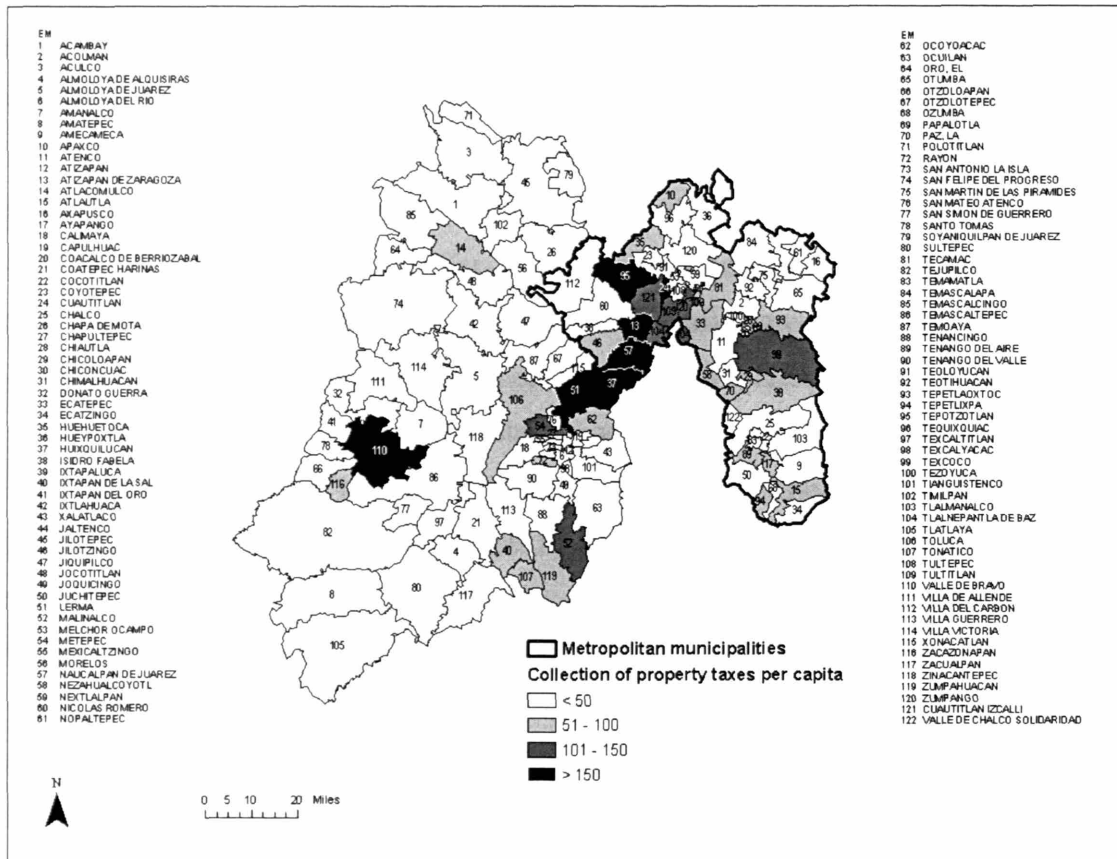
³ It has been a general policy of Mayor López Obrador not to raise taxes. For example, according to the 5th transitory article of the constitutional reform of 1999, by year 2002, properties should be assessed at their real commercial values. In reaction to this, Mayor López Obrador made a public commitment that he was able to comply with this law, without creating any additional burden to taxpayers, and he was right. What he did was multiply the property tax bases by ten (to comply with the regulation) but simultaneously divided the tax rate by the same proportion, so that, in the end, the total tax collection remained the same.

5.4.1. Property tax collection in metropolitan and non-metropolitan municipalities

The comparison of the metropolitan with the non-metropolitan municipalities shows that the State of Mexico is clearly fragmented into an urban and a rural area. Most metropolitan municipalities are located in the urban part of the state and, aside from the state capital of Toluca and four other adjacent municipalities (Lerma, Metepec, San Mateo Atenco, and Zinacantepec), the non-metropolitan area has a much lower level of urbanization than the metropolitan area. According to the last census (INEGI, 2000) 97% of the population in the metropolitan municipalities had access to electricity, 94% had access to water provision, and 78% had access to sewer services. In contrast, in the non-metropolitan part of the state these percentages were 95%, 84%, and 62%, respectively. Similarly, while in the metropolitan municipalities just 25% of the population lives in communities of less than 2,500 inhabitants and 2% of the population speaks an indigenous language, in the non-metropolitan municipalities 50% of the population lives in communities of less than 2,500 inhabitants, and 4% of the population speaks an indigenous language.

The differences in urbanization between the metropolitan and the non-metropolitan parts of the State of Mexico are also present in the collection of property taxes. According to my calculations, on average, from 1989 to 2000, for each peso collected in property taxes in a metropolitan municipality, a non-metropolitan municipality only collected 55 cents. This comes as no surprise considering the acute differences in the state's urbanization levels, and the fact that most marginalized municipalities are concentrated in the non-metropolitan area. With the exception of the capital State of Toluca and a handful of other urbanized municipalities, the non-metropolitan area of the State is far poorer, and therefore collects fewer taxes, than the metropolitan area (Figure 5.3). In fact, the non-metropolitan municipalities have a GDP per capita equivalent to two-thirds of that in the metropolitan area. GDP is strongly and positively correlated with property tax collection; therefore these differences in GDP account for the low level of property tax collection of the non-metropolitan municipalities.

Figure 5.3. Property tax collection per capita in the metropolitan and non-metropolitan municipalities of the State of Mexico, Avg. 1989-2000



Source: Author

Despite their different levels of property tax collection during the 1990s, the ratio of property taxes per capita between the metropolitan and non-metropolitan municipalities experienced a substantial decline from 2.4 in 1989 to 1.6 in 2000 (Table 5.2). This is particularly surprising because during that decade the population in the metropolitan area grew five times more than the population in the non-metropolitan area, so I would have expected that this resulted in a higher increase in tax collection. There are at least two factors that account for the decline in the ratio of property tax collection in the metropolitan and the non-metropolitan areas of the State. First, it took longer for the metropolitan municipalities to recover from the peso crisis of 1994, as most of the taxable base of the state is concentrated in their territory. The second factor is related to the scale of collection, or to the effort that at the margin municipalities must exert to increase taxes. Usually rural and small municipalities have lower levels of tax collection than

urban and large municipalities, so at the margin a similar tax effort results in greater tax increases in the rural than in the urban municipalities.

Table 5.2. State of Mexico: Fiscal disparity ratio between the metropolitan and the non-metropolitan municipalities, 1989-2000

Per Capita	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Total spending	1.07	1.03	1.31	1.04	0.96	0.93	0.90	0.98	0.93	0.90	0.86	0.86	0.95
Property tax	2.41	2.34	2.08	1.93	1.67	1.88	1.61	1.75	1.72	1.56	1.76	1.63	1.80
<i>Participaciones</i>	0.77	0.75	0.80	0.85	0.70	0.69	0.69	0.63	0.66	0.69	0.76	0.77	0.72
<i>Aportaciones</i>										0.59	0.65	0.64	0.63
FAISM										0.29	0.29	0.29	0.29
FORTAMUN										1.03	1.03	1.03	1.03

Source: Author, based on data from INEGI.

FORTAMUN = Fund for the Strengthening of the Municipalities

FAISM = Fund for Municipal Social Infrastructure.

Even though the ratio of property tax collection between the metropolitan and non-metropolitan municipalities declined during the 1990s, by the year 2000 tax collection per person in the former was still 60% higher than in the latter (Table 5.2). This difference, however, is not translated into more spending per person in the metropolitan municipalities. According to my calculations, the ratio of total spending per capita between the metropolitan and the non-metropolitan areas steadily declined during the 1990s, and by the year 2000, a person in the metropolitan area received 15 cents less for each peso spent than a similar person in the non-metropolitan area. This decline was caused both by the dramatic population increase in the metropolitan municipalities and by the higher assignment of transfers to the non-metropolitan municipalities. In terms of *participaciones*, on average for each peso received by a person in the non-metropolitan area, a similar person in the metropolitan area only received 72 cents. This difference is even more acute with the *aportaciones*. On average, a person in the metropolitan area received 63 cents for each peso received by a similar person in the non-metropolitan area. The most dramatic difference is present in the allocation of the *aportaciones* infrastructure fund (FAISM) that is targeted to basic infrastructure projects, which are common in the rural parts of the State. The Fund for the Strengthening of the Municipalities (FORTAMUN) is an exception, because the fund is allocated on a per capita basis, so that each person in the state receives the same proportion, regardless of location.

5.4.2. The DF and the metropolitan municipalities: a symbiotic relationship

The ratios in Table 5.2 show that the metropolitan municipalities faced more financial constraints than municipalities in the rest of the state. Financial pressure came from both their limited own-source revenue and from the reduction in federal transfers. This financial pressure was accompanied by a very rapid increase in the demand for all kinds of public services. One factor that contributed to these increasing service demands is the enormous population growth that has been taking place in the metropolitan area in the last fifteen years. This growth originates partly from the area's proximity to the DF, as these metropolitan municipalities received an important influx of households leaving the capital city during the 1990s. During this decade, population grew in almost all the metropolitan municipalities, and the overall population of the area increased by about three million people (see Chapter 2). This increase resulted both from natural birth and from migration; in 1995, 47% of the total population of the State of Mexico came from another state (Cámara de Diputados 2001a). According to Eibenschutz (2004), from 1995 to 2000, metropolitan municipalities accommodated a net migration of 65,700 households, exclusively coming from the DF. During that five-year period, 201,000 households left the DF, and 53% established themselves in the metropolitan municipalities. Similarly, during that period, 102,000 households moved out of the metropolitan area, and 40% of them moved to the DF.⁴

In this context of population growth and household mobility into the metropolitan municipalities, I expected to observe a corresponding increase in the collection of property taxes in this area. The rationale was that if the number of people and households increase, then the tax base of the jurisdictions where they reside must expand and so must the collection of taxes. However, despite the population increase, the average annual rate-of-growth in property tax collection in the metropolitan municipalities during the 1990s was only 4% (Figure 5.1). As already mentioned, one reason was the peso crisis at the end of 1994 that reduced the value of properties and had a generally negative impact on the economy.

⁴ The delegations from which most households moved to the metropolitan municipalities—but also to other parts of the DF—were Iztapalapa, Gustavo A. Madero, Coyoacán, Alvaro Obregón, and the central delegations of Cuauhtémoc, Miguel Hidalgo, Benito Juárez, and Venustiano Carranza.

In addition to the peso crisis, the income level of the households moving into the metropolitan municipalities, together with the type of real estate production in this area are other factors that account for the inability of the metropolitan municipalities to increase their tax collection during this period of rapid population growth. Tax collection levels depend not only on the number of households that moved into the metropolitan municipalities, but also on their wealth levels. The ZMVM is composed of jurisdictions with very different wealth levels. One way of measuring the levels of wealth in the jurisdictions is by looking at the percentage of households that earn more than ten times the minimum wage. In the year 2005, the minimum wage in Mexico is \$43.5 pesos or around US\$4. In the DF, most delegations have between 20 and 30% of households earning more than 10 times the minimum wage. In contrast, jurisdictions in the ZMEM have in general about 10 to 15% of the households earning as much. Between 60 and 80% of the households in the ZMEM earn less than 5 times the minimum wage, while in the DF, this proportion is about 50% of the households. Because of this disparity in wealth, the ZMVM can be envisioned as an area characterized by two different poles: a rich pole that is largely located in the DF, in the southern and western parts of the metropolitan area, and a poorer pole mostly located in the State of Mexico, particularly in the southeastern and northeastern parts of the ZMVM.⁵

As I argue previously, the general pattern of household mobility during the 1990s was from the DF to the State of Mexico. To determine the impact of this household mobility on tax collection, I need to establish the income level of these households. In a recent study, Duhau (2003) showed that most rich households moving into the DF between 1995 and 2000 relocated either to other parts of the DF or to some well-off metropolitan municipality. With the exceptions of V. Carranza and Azcapotzalco, which lost a net number of rich households, all other delegations and some rich metropolitan municipalities (eg. Naucalpan, Atizapan, and Huixquilucan) experienced increases in the number of rich households in their territories during this period. In contrast, between

⁵ Although this is an accurate picture of the social distribution of space in the ZMVM, not all the rich jurisdictions are in the DF and not all the poor ones are in the State of Mexico. For example, there are fairly well-off municipalities, like Tlanepantla and Naucalpan, in the State of Mexico, and relatively poor delegations, like Milpa Alta and Xochimilco, in the DF.

1995 and 2000, most metropolitan municipalities experienced a negative mobility rate of rich households. This suggests that since the number of households establishing in the metropolitan municipalities did not come from jurisdictions with high income levels, they must have come from poorer jurisdictions. In the same study, Duhau (2003) examined the intra-metropolitan mobility of the poorest households (less than three times the minimum wage) and found that only a group of nine jurisdictions, which have gone through highly informal processes of urbanization (mainly through irregular settlements), experienced increases in the number of very poor households in their territories; the other jurisdictions had negative mobility rates for such households.⁶ Unfortunately, Duhau's study does not look any further into the intra-metropolitan mobility of the households with low- and medium-wealth levels (between 3 and 20 times the minimum wage); however, because the study covers the mobility of households of all other income levels, I assume that most of the households moving into the metropolitan municipalities were at low- and middle-income levels. The fact that the DF has retained upper-middle- and high-income households, while the metropolitan municipalities (with few exceptions like Huixquilucan and Naucalpan), are mostly occupied by lower-middle- and low-income households, has directly contributed to the concentration of different tax bases on each side of the border between the DF and the State of Mexico.

The causes of this intra-metropolitan mobility into the State of Mexico closely relate to the characteristics of the real estate market in the metropolitan area. Primarily, there is a marked difference in property prices between the DF and the metropolitan municipalities. For example, while an apartment of 80 square meters in the DF costs over \$1 million pesos (US\$100,000), in the metropolitan municipalities a house of 60 square meters, including land and construction, costs less than one-fourth of that price (\$230,000 pesos or US\$23,000) (Interview H). These real-estate price differentials, together with the high cost of living in the DF, have been pushing low- and middle-income households to look for more affordable housing elsewhere. These price differentials result in part from

⁶ These nine jurisdictions are Coyotepec, Teoloyucan, Acolman, Chimalhuacán, La Paz, Chalco, Chicopolapan, Chalco and Milpa Alta.

location, and in part because of the unequal distribution of urban infrastructure in the DF and the State of Mexico.

The pattern of intra-metropolitan migration in the ZMVM was closely linked with the expansion of real estate construction during the 1990s. According to a real estate developer, around 100,000 houses were, and are still being built each year in the metropolitan municipalities, 60% of which are “social interest” affordable housing for low- and middle-income households. The other 40% is split between informal settlements and housing for middle- and high-income households.⁷ The expansion of “social interest” housing, resulting from the mobility of low- and middle-income families into the metropolitan municipalities, was facilitated by the availability of credit for financing these types of properties. After the economic crisis of 1994, credit for middle- and high-income households virtually disappeared, and most of the available credit went to the private construction of “social interest” housing. At that point, the government decided to provide credit for this type of housing through a series of housing solidarity funds such as Infonavit and Fovissste, and also through the Financial Fund for Housing, now the Federal Mortgage Society (Morales, 2002).

The fact that most people who moved into the metropolitan municipalities belonged to low- and middle-income groups who moved into “social interest” housing or informal settlements, explains why the housing expansion of 100,000 units per year in the metropolitan municipalities only resulted in a 4% annual average rate increase in property taxes. Those in “social interest” housing pay very low property taxes, and those in informal settlements do not pay any property taxes at all. According to a real estate developer, on average, the owner of an affordable housing unit pays between US\$1.5 and US\$2 per month on property taxes. These payments represent less than .001% of the average property value and less than 1% of the total income of a low-income household (Interview H).

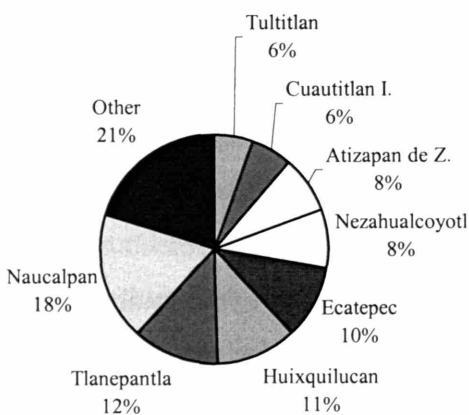
⁷ According to the Joint Center for Housing Studies at Harvard University (2004: xvi) “informal settlements continue to be created because the government has limited control over some lands, poor administration of ejidal land, and lack of affordable formal housing alternatives.”

So far, I have explained why the population expansion in the metropolitan municipalities has not generated a corresponding increase in property taxes. In order to more clearly understand how the increase in population and the expansion of the housing stock has affected the collection of property taxes, I turn to a more detailed exploration of those metropolitan municipalities that account for the largest share of property tax collection in the area.

5.4.2.1. Effect of household mobility and real estate construction on property tax collection in the metropolitan municipalities

In the metropolitan area of the State of Mexico, similar to the rest of the urban areas in the country, property tax collection is concentrated in a few of the richest and most populated municipalities. On average, from 1989 to 2000, 9 of the 122 municipalities in the whole state collected almost three quarters (72%) of the total property taxes. Eight out of those nine municipalities form part of the metropolitan area, and the other is Toluca, the capital of the State of Mexico. Excluding Toluca, these eight metropolitan municipalities collected 67% of the total property taxes in the state and 80% of the total collection in the metropolitan area (Figure 5.4). Note that with the exception of Cuautitlán Izcalli and Atizapan, all these municipalities are contiguous to the DF.

Figure 5.4. Proportion of total property tax collection in the metropolitan municipalities (avg. 1989-2000)



Source: Author, based on data from INEGI.

Because of the relative importance of these eight metropolitan municipalities for overall tax collection in the metropolitan area, I focus the rest of the analysis specifically on these cases. But before doing so, I review some of the general characteristics of the other 49 metropolitan municipalities, which together collect the remaining 20% of the property taxes in the metropolitan area. During the 1990s these municipalities experienced spectacular population growth. With only one exception, all experienced increases of 30% or more in their populations, and a few of them even doubled their populations. Consequently, most of them (40 of the 49 municipalities) experienced positive property tax growth rates, but the absolute collection of taxes remained low. This lack of a relationship between population expansion and an absolute increase in tax collection resulted from the fact that most households moving into these municipalities in the southern and northeastern parts of the metropolitan area belong to low-income groups, which traditionally pay very few, if any, property taxes. For my study, I define low-income households as those receiving less than three times the minimum wage per day.

Concerning the eight metropolitan municipalities that collect 80% of the total property taxes, Table 5.3 provides information to test if there is any association between the level of property tax collection in these municipalities and their rate of population growth, household mobility, and type of urbanization pattern. Specifically, Table 5.3 presents data on (1) the municipalities' annual rates of change in property tax collection per person (dependent variable), and three independent variables: (2) the change in the absolute number of people during the 1990s, (3) the percentage of intra-metropolitan mobility of high-income households (for my study, high-income households are defined as those that earn more than 20 times the minimum wage per day, equivalent to a daily income of US\$80) and (4) the type of urbanization pattern. At the far right of the table, there is a set of arrows that indicate the direction and the intensity in which variables (1), (2), and (3) moved during the 1990s.

Ideally, Table 5.3 would have included a column with the number of new properties built in each municipality during the 1990s (to capture the expansion of the tax base); however, these data were not available, in part because in Mexico there is no single

national housing plan, and municipalities have broad autonomy to decide their housing policies. In the metropolitan municipalities the government of the State of Mexico sets general guidelines for the housing sector, but in the end, municipalities have broad control over their housing policies. One real-estate developer described this situation as “the law of the jungle: because instead of following an ordered plan, municipalities based on their own discretion decide the type and number of construction projects that they wish to build every year or three-year period” (Interview H). Such decisions are commonly politically motivated, and municipal authorities often base their decisions on whether or not they see the newcomers as potential supporters for their political machines. At other times, they may restrict the amount of new construction because, after all, massive provision of low-income housing brings deep social changes, high demands for services, and the potential for social and economic conflicts.

Table 5.3. Rate of property tax collection and other indicators in selected metropolitan municipalities, 1990-2000

Type of urbanization pattern	METROPOLITAN MUNICIPALITIES	Annual rate of change of property taxes per capita 1990-2000* (percentage) (1)	Population increase, 1990-2000* (absolute) (2)	Mobility of high-income residential households, 1995-2000** (percentage) (3)	Change in tax rate collection vs. population and high-income mobility*** (1), (2), (3)
Important industrial tax base component	TLALNEPANTLA	7.8	36,260	-2.5%	↑↑, ↑, ↓
	NAUCALPAN	2.3	92,720	2.4%	↑, ↑↑, ↑
Highly populated and urbanized/many poor households	ECATEPEC	(2.6)	453,497	-0.2%	↓, ↑↑↑, ↓
	NEZAHUALCOYOTL	(2.0)	(4,792)	-0.2%	↓, ↓, ↓
High number of irregular settlements and “social interest”	TULTITLÁN	8.9	203,313	-3.9%	↑↑, ↑↑, ↓
	CUAUTITLÁN I.	8.7	141,235	-6.6%	↑↑, ↑↑, ↓↓
High number of middle and high income households	HUIXQUILUCAN	13.9	68,357	2.7%	↑↑↑, ↑↑, ↑
	ATIZAPAN	(****)	168,230	5.8%	↓, ↑↑, ↑

Source: Author, based on data from *INEGI, ** Duhau (2003).

The number of arrows represent the intensity of the change, *less than 0.5%.

Table 5.3 pairs municipalities with similar patterns of urbanization and divides them into four groups of municipalities that have gone through different urbanization patterns. Naucalpan and Tlanepantla became part of the urbanized area of the DF in the 1950s, and since then, they have been hosts to very intense industrial activity, constituting an

important part of their tax base. Other municipalities like Ecatepec and Nezahualcoyotl became part of the metropolitan area during the 1960s when they began to experience rapid levels of urbanization that enormously increased the number of popular dwellings, irregular settlements, and low-income housing in their territories. As a result, these two municipalities have the highest population densities, and they consist mostly of low-income households. Ecatepec is the most populated municipality in the State of Mexico with 1,671,623 people, followed by the municipality of Nezahualcoyotl with 1,251,323 people. In contrast, municipalities like Huixquilucan and Atizapan, which were annexed to the metropolitan area during the 1970s, have a large number of middle- and high-income households. During the last decade, these municipalities have built luxurious urban complexes to accommodate the increasing number of households that are moving out of the DF. Finally, the municipalities of Tultilán and Cuautitlán Izcalli have experienced rapid processes of urbanization through both informal settlements and the massive expansion of low-income housing projects.

The differences in the urban configurations of these municipalities are manifested in their levels of property tax collection. Of all these municipalities, Naucalpan and Tlanepantla make up one-third of absolute tax collection in the ZMEM; but their patterns of tax collection are quite different (Table 5.3). While property tax collection in Tlanepantla experienced an average annual rate of growth of 7.7%, Naucalpan's rate was 2.3%. Interestingly, this is the case despite the fact that Naucalpan experienced a net positive immigration of rich households, and experienced an absolute population increase three times that of Tlanepantla. There are at least two factors that account for this situation. First, during the second half of the 1990s, Tlanepantla began to modernize its cadastre and to reassess properties according to market values (Cabrero et al. 2001), and second, these municipalities have important industrial tax bases that generate substantive property taxes.

Tultitlán and Cuautitlán are also comparable in that they followed similar urbanization patterns and had similar tax-collection rates during the 1990s. However, despite these similarities, Cuautitlán experienced a lower population increase and a higher rate of

departure of high-income households, which suggests that there is no significant relationship between population and high-income residential mobility, and tax collection. Another comparison is observed between Atizapan and Huixquilucan, which having gone through similar types of urbanization patterns during the 1990s, experienced very different tax-collection rates. This comparison is illustrative, because, while Huixquilucan experienced high increases in tax collection, Atizapan, which registered higher population increases and an influx of rich households, experienced a negative annual rate of property tax collection during the 1990s. The final comparison is between the municipalities of Ecatepec and Nezahualcoyotl, which despite having very different population increases during the 1990s registered similar negative tax-collection rates. The decline in the levels of tax collection in Nezahualcoyotl is partially explained by its position as one of the very few metropolitan municipalities whose population decreased during that decade. But the case of Ecatepec is more serious because despite its almost half-million increase in population, the rate of tax collection declined. This was mostly due to the migration of low-income people into the municipality, and to the fact that its pattern of urbanization was characterized by a high degree of informality, especially in the incorporation of land into residential uses with the result that large numbers of newcomers did not become part of the tax base.

5.5. Politico-administrative determinants of fiscal disparity

So far, I have explored the effect of population expansion and household mobility on the level of tax collection in the metropolitan area, specifically on the richest and most populated municipalities. Despite the explanatory power of these factors, tax collection is a complex state function and there are other factors that account for the differences in tax collection levels in the ZMVM during the decentralization process of the 1990s. Based on the theories of public finance reviewed in previous chapters and on a number of interviews, I identify three interrelated factors that account for these differences. These factors are the political costs of taxation, the characteristics of tax administration, and the local governance structure. In the rest of this section, I discuss the first two factors, leaving the third factor for the next section.

5.5.1. Political costs

Taxing property is a process with high political costs (see section 1.2.1). Although all local governments face these costs to a certain extent, in the State of Mexico the political costs of taxation have been particularly high. According to Ruiz Durán (2002) although many urban municipalities in other states in the country have increased their capacity to collect property taxes, the levels of tax collection in the State of Mexico have remained low. This is mainly because municipalities have not kept up with the updating of cadastral values, which is a politically sensitive exercise. In the words of a long-time student of local public finance, “in the State of Mexico municipal cadastres and property tax regulations are often obsolete, but authorities do not update them for a simple reason: because it is too politically costly” (Interview D). To illustrate his point, this specialist emphasized that currently Mexico’s National Development Bank (BANOBRAS) has a program in place that helps municipalities to self-finance the updating of cadastres, but very few municipalities have made use of it. Similarly, a former president of a metropolitan municipality made this point even clearer by arguing that “people are sensitive to the payment of property taxes and water fees, so if authorities increase taxes, they will be forced out of office” (Interview E).

An additional factor that further increases the political costs of taxation is the fact that most households that are settling in the metropolitan municipalities are at low- and middle-income levels, and it is socially sensitive to tax the poor. Moreover, since local authorities often build strong constituencies out of tax and other concessions to low- and middle-income groups, it is politically suicidal to enforce tax collection in these constituencies, as they have a high capacity to mobilize against authorities.

To avoid such confrontations, local authorities often opt for lax enforcement of property tax compliance, granting exemptions, and maintaining low tax rates and assessment values for these constituencies.

According to all my interviews, levying property taxes in the metropolitan municipalities is politically costly, but it was unclear whether these costs vary according to the political party in office. To determine the effect of local political composition on property

tax collection levels, I performed a regression analysis that, controlling for municipal GDP, did not show any statistically significant association. One interpretation of this result is that there is no significant difference between the PRI (Institutional Revolutionary Party), the PAN (National Action Party), and the PRD (Democratic Revolutionary Party) in their proclivity to increase tax collection. Despite this finding, some of my interviewees suggested that the PAN is the political party that faces the lowest political costs. This is because the PAN won control of some of the metropolitan municipalities about 15 years ago, and therefore does not have the long-standing political commitments of the PRI and is not obligated to reward its social mobilizations in the same way as the PRD. In sum, the PAN seems to have fewer political commitments than the other political parties, so the municipalities under its control may be facing lower political costs for taxation. However, this conclusion comes from a limited number of interviews and should be verified by additional research.

5.5.2. Tax administration

In addition to the political costs of taxation, the weak administrative capacity of most metropolitan municipalities is another determinant that accounts for their low property tax collection levels. Metropolitan municipalities, with the exception of a few richer municipalities adjacent to the DF, face a number of interrelated tax-administration problems, particularly in the areas of property registration and tax enforcement. In the registration of properties, the problem is that new construction in the State of Mexico is not automatically recorded in the public registry of properties. When a real estate developer sells a property, the new owner pays the municipality a one-time tax on the transfer of property ownership, but this tax does not cover the registration of the property. The municipality does not automatically record the deed in the property registry, as this registration is left to the discretion of the buyer. New property owners often take advantage of the discretion they are given, and delay the registration of the property deed, to avoid paying taxes. When new property owners decide to register their deeds to prove land tenure or to use the property as collateral, they have to go through an “obscure, highly bureaucratic, and corrupt process, that takes an average of two years to complete” (Interview H). For tax-collection purposes, this situation is highly problematic because

the tax obligation is not created until the property is registered. Thus, the rapid expansion of new construction together with the inability of the public registry to record these properties is creating a situation in which “the population growth is superseding the tax base” (Interview H). That is, the tax administration system is not able to incorporate the very high number of new properties into the tax base of the metropolitan municipalities, which results in a low level of tax collection.

An additional administrative problem of the property tax system in the metropolitan municipalities is that, with few exceptions, the level of tax enforcement is relatively low. To put it simply, there is no credible punishment system for non-compliance. The system varies from municipality to municipality, but in general when the tax authorities detect a case of non-compliance, they send a reminder of payment and if taxpayers do not respond, authorities do not force collection any further. Moreover, once taxpayers decide to cover their arrears, they often receive tax discounts, reductions, and amnesties. This situation has proven deleterious for the municipal tax system because from a pure cost-benefit perspective, it is actually “irrational” to pay taxes, as a citizen can use public services at minimal or no cost. A real estate developer illustrated this point to me with the following example: “If I pay my property tax on time, then that money is gone from my disposable income, but if my neighbor does not pay, he can invest that money and gain interest for a couple of years until payment becomes inescapable. Of course, throughout that time, interest on the unpaid tax bills accumulates, but since I know in advance that I will be paying at a discount rate, then it make sense for me to delay my payment. Additionally, in the last thirty years, I have never seen a confiscated property in the State of Mexico, so I know that my risk of being punished is very low” (Interview H).

In comparison with the metropolitan municipalities, the DF has a more efficient property tax administration system. In terms of tax regulation, the DF’s fiscal code is more detailed and comprehensive than the State of Mexico’s code. Concerning the level of tax enforcement, all my interviewees agreed that there is no comparison between the DF and the State of Mexico. According to a real estate developer: “in the DF, you can be sure that the tax bill will come, and if you don’t pay you’ll accumulate fines that sooner or

later you will have to pay” (Interview H). Tax rates in the DF are higher than in the State of Mexico. A study by Morales (2003) calculates the property tax of two parcels of industrial land with very similar characteristics, one located in the State of Mexico and the other in the DF. The study shows that the owner of a parcel in the metropolitan municipality of Ecatepec (State of Mexico) pays only 25% of the total taxes paid by the owner of a similar parcel in the delegation of Gustavo A. Madero in the DF.

In addition to higher tax rates, the DF also has a wealthier tax base than the metropolitan municipalities, which also accounts for their very different levels of tax collection. As I explained in Chapter 1, for historical, political and economic reasons the ZMVM’s jurisdictions have followed a divergent pattern of urban development, characterized by an acute concentration of office and commercial tax bases in the DF. For a tax analysis this is crucial because the composition of the tax base is central for the determination of the tax yield. Based on data provided by the Treasury of the DF, I calculated that out of the total amount of property tax collected in the DF, 72% comes from non-residential tax bases, accounting for 11% of the total tax bills. The other 28% of the total tax collection comes from residential properties, which account for the remaining 89% of the tax bills. Clearly, taxes on non-residential properties are much more important to total revenue than those on residential properties. In 2004, the average annual tax bill of a residential property was \$1,055 pesos (US\$100), while the tax bill of a non-residential property was \$14,605 pesos (US\$1,400).

Due to data constraints I could not calculate the composition of the property tax base in the metropolitan municipalities, but in examining the State of Mexico’s economic activity, it became evident that it has a weaker tax base than the DF. In terms of its non-residential property tax base, the service and commercial activity in the State of Mexico, is respectively one-half and one-third lower than in the DF. Similarly, the DF has a larger residential tax base than the State of Mexico. Thus, even though a very important component of the ZMVM’s economic development is taking place in the metropolitan municipalities, there are still notable differences between the tax-base composition of the

DF and that of the metropolitan municipalities, which partially accounts for the fiscal disparity in the ZMVM.

The aforementioned political, spatial, and administrative differences among the local jurisdictions of the ZMVM help explain why the level of fiscal disparity increased during the 1990s, even if the system of intergovernmental transfers reduced the gap in total spending within the metropolitan area. There is, however, one additional factor that is crucial to understanding fiscal disparity in the ZMVM. This factor relates to the different governance structures of the ZMVM's jurisdictions and to the system of incentives that each of these structures generates towards the collection of property taxes. In the next section I turn to this analysis.

5.6. Governance structures as determinants of fiscal disparity

The ZMVM is the only metropolitan area in the country that is comprised of two entities with different political and administrative structures. While the DF's local governance system is centrally structured, the State of Mexico is politically, administratively, and fiscally decentralized. This situation provides a unique opportunity to assess the extent to which these governance structures generate different incentives for tax collection. Particularly, it allows me to explore whether a fiscally centralized or decentralized structure generates incentives that are more conducive to increased tax collection. This comparison of governance systems is of the highest importance at the present time because a proposition for decentralizing property taxes to the delegations has been on the political reform agenda of the DF for several years. As part of the debate on this reform, academics and political parties have taken positions for and against the measure, but so far no one has explored how the level of fiscal disparity of the DF would be in such case.⁸

Both the PRI and the PRD have taken positions against the decentralization of property taxes in the DF. Their arguments include concerns about equity and efficiency. On equity grounds, they fear that decentralization may increase the level of fiscal polarization

⁸ To the best of my knowledge, no one has done this exercise. Similarly, Beristain agrees that no exercise of this kind has been attempted (Interview B).

among delegations. Concerning efficiency, they argue that by breaking down the tax administration of the DF into 16 smaller tax administrations, the current advantages of the DF's tax administration scale will be lost (Interviews B, F, J, and K). The PAN, on the other hand, has been more supportive of decentralization. This support comes from a political rather than a technical perspective. While the PAN has never won and has no real chances of winning control of the government of the DF, it has won control of a few important delegations. Therefore, it is in the interest of the party to take power away from the central DF government, and decentralize it to the delegations.⁹ On the academic front, the debate about the decentralization of taxes in the DF has not yet caught the attention of many researchers. Morales (2001)—one of the few researchers who has carefully looked at this proposition—has made a strong theoretical argument for the decentralization of property taxes to the delegations. According to his analysis, delegations should have the same fiscal functions as the municipalities; that is, they should have control over their property taxes.

So far, neither the political parties nor academics have supported their arguments for or against decentralization with empirical evidence. In response, in this part of the study I explore the potential effects of property tax decentralization in the DF—especially in terms of the potential change in fiscal disparity levels in the ZMVM. Because the consequences of having a system of decentralized fiscal institutions go beyond the specific impact on local fiscal disparity, I complement this analysis by exploring how decentralization affects other public finance variables such as spending assignments and access to local credit markets.

As I discussed in Chapter 1, according to the theory of local public finance there are political and economic benefits associated with the decentralization of property taxes. These theories draw extensively on the U.S. reality, where local governments have the capacity to take responsibility over property taxes, and where states have fiscal powers to design equalizing grant systems to compensate for the fiscal disparity generated by

⁹ This was the position of the Delegate from Miguel Hidalgo in the 2000-2003 administration (Interview L).

decentralized systems. In a developing country like Mexico, however, these two conditions are rarely present, so local governments cannot always take full advantage of the benefits suggested by this theory. On the contrary, in the absence of these conditions, creating a system of decentralized fiscal institutions may change incentives around tax behavior and could create unintended consequences, such as an increase in fiscal disparity. In the following analysis, I explore how fiscal disparity would look in the ZMVM if the DF were to accommodate to the ideology of decentralization.

Presently, the structures of local taxation in the State of Mexico and in the DF are very different. While in the former, tax collection levels are determined by the composition of the tax bases and the administrative capacity of the municipalities, in the latter, they are the product of a centralized budgetary process that ignores the composition of the delegations' tax bases. Although the DF's fiscal code dictates that the delegations' budgets should be allocated according to factors like infrastructure and service needs, thus far the DF's assembly (ALDF) has assigned the budgets mostly based on their populations (Chapter 3, Section 3.4.2). Table 5.4 compares the delegations' budgets in the year 2000 with the property taxes collected in each of the delegations, and shows how the tax bases of the delegations do not correspond with the current criteria for appropriating their budgets. Instead, budgets are allocated using a redistributive criterion. At the extreme, while a person in Milpa Alta who only contributed \$16 pesos to the DF's Treasury received corresponding expenditures of more than \$3,500 pesos, a person in Miguel Hidalgo received about \$500 pesos less than what he or she contributed to the DF's budget.

Table 5.4. DF: Property tax and total spending per capita by delegation in the year 2000 (constant 2002 pesos)

	Per Capita Property tax		Per Capita Total spending
MILPA ALTA	16	IZTAPALAPA	866
TLAHUAC	44	ÁLVARO OBREGÓN	1,021
XOCHIMILCO	89	COYOACAN	1,025
IZTAPALAPA	98	TLALPAN	1,102
GUSTAVO A. MADERO	160	GUSTAVO A. MADERO	1,125
M. CONTRERAS	193	AZCAPOTZALCO	1,218
V. CARRANZA	199	AVERAGE	1,283
IZTACALCO	217	IZTACALCO	1,344
TLALPAN	324	XOCHIMILCO	1,358
COYOACAN	396	TLAHUAC	1,441
AVERAGE	462	M. CONTRERAS	1,457
AZCAPOTZALCO	506	BENITO JUÁREZ	1,502
ÁLVARO OBREGÓN	613	V. CARRANZA	1,621
CUAJIMALPA	699	CUAJIMALPA	2,001
BENITO JUÁREZ	1,275	MIGUEL HIDALGO	2,046
CUAUHTEMOC	1,523	CUAUHTEMOC	2,144
MIGUEL HIDALGO	2,533	MILPA ALTA	3,559

Source: Author, based on data from GDF.

Delegations have different opinions of the current budgetary system, mostly depending on whether they are winners or losers in the current arrangement. On the one hand, delegations with rich tax bases find the current system unfair and want central authorities to return all or part of the tax receipts originating in their jurisdictions. When I asked a Delegate from one of the richest jurisdictions about the current budgetary process, he argued in favor of changing the budget allocation rules; however, he did not make a strong case for the complete devolution of tax autonomy. Most of his recommendations consisted of either including a tax-origin (compensatory) parameter in the formulas or transferring a proportion of the centrally collected taxes to the delegations of origin (Interview L). His answer suggests that Delegates are aware of the political costs of taxation. They seem to want to benefit from the rich tax bases in their delegations without incurring any of the costs associated with complete fiscal autonomy.

Conversely, delegates of jurisdictions with poorer tax bases argue in favor of the redistributive nature of the current system, and some of them insist that they need even

more resources to meet their increasing demands. This is the case in delegations like Ixtapalapa that are heavily populated and do not have enough resources to meet their increasing demands. According to a former Delegate of Ixtapalapa “the budget of the DF should make some special provisions for the most populated delegations” (Interview M). In general, the main concern of these delegations is that the decentralization of the property tax system will reduce or even end the current redistributive budgetary appropriations. This potential for tax polarization has also been a main concern of the fiscal authorities in the DF. When I asked the former Finance Minister of the DF from the last PRI administration why his party did not push to include fiscal decentralization on the agenda for political reform of the DF, he answered that “this would have been a very unpopular measure because of the (fiscal) divisions that it would have created in the city.” Similarly, the current PRD government has been skeptical about decentralizing taxation because of its potential for tax polarization. According to a high-ranking official in the DF’s Ministry of Finance: “it would be unfair to have 4 delegations keeping 80% of the total property tax yield of the city” (Interview N).

The concerns of the DF authorities about the potential fiscal-disparity effect of decentralizing property taxes are well grounded. As discussed in Chapter 1, local public finance theory cautions that decentralization may increase fiscal disparity because it grants richer jurisdictions larger tax bases that allow them to lower their tax rates, thus attracting businesses and households. This expected fiscal polarization, however, has not yet been tested in the DF. Taking advantage of the available data on the property taxes originating in each delegation, I calculated the likely level of fiscal disparity between the delegations in a scenario of decentralized property taxation in the DF. This exercise is intended to show how negative the consequences would really be if the DF were to decentralize property taxes to the delegations. Based on the results of Table 5.4, which illustrate that the current budgets of the delegations do not take into account their tax bases, I compared the budget allocation for the delegations in the year 2000 with an allocation based on the proportion of property taxes that originate in each delegation (Table 5.5).

Table 5.5. Total spending per capita in the DF's delegations in the year 2000. (Constant 2002 pesos)

Current budget allocation		Proportional to tax base	
IZTAPALAPA	866	MILPA ALTA	46
ÁLVARO OBREGÓN	1,021	TLAHUAC	123
COYOACAN	1,025	XOCHIMILCO	246
TLALPAN	1,102	IZTAPALAPA	271
GUSTAVO A. MADERO	1,125	GUSTAVO A. MADERO	443
AZCAPOTZALCO	1,218	M. CONTRERAS	537
IZTACALCO	1,344	V. CARRANZA	553
XOCHIMILCO	1,358	IZTACALCO	604
TLAHUAC	1,441	TLALPAN	901
M. CONTRERAS	1,457	COYOACAN	1,100
BENITO JUÁREZ	1,502	AZCAPOTZALCO	1,406
V. CARRANZA	1,621	ÁLVARO OBREGÓN	1,704
CUAJIMALPA	2,001	CUAJIMALPA	1,943
MIGUEL HIDALGO	2,046	BENITO JUÁREZ	3,543
CUAUHTEMOC	2,144	CUAUHTEMOC	4,232
MILPA ALTA	3,559	MIGUEL HIDALGO	7,039
Coefficient of variation DF	0.42	Coefficient of variation DF	1.23
Coefficient of variation ZMVM	0.50	Coefficient of variation ZMVM	0.89

Source, Author, based on data from the GDF.

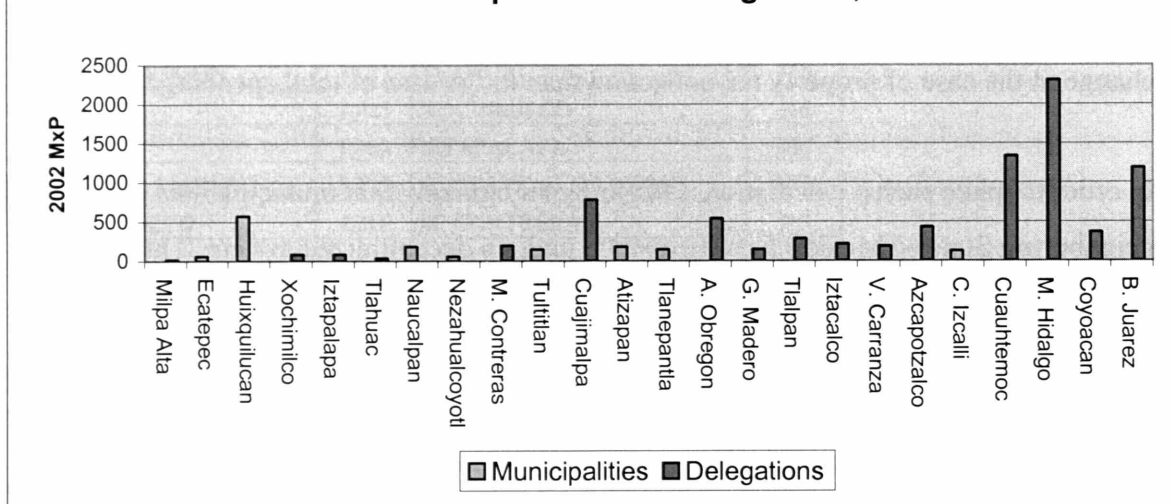
According to these calculations, a budgetary allocation based on the property tax bases of the delegations would substantially change the current distribution of total spending by delegation. The primary impact would be a strong concentration of the budget in the three central delegations, and a steep increase in the level of fiscal disparity among delegations. The two rows at the bottom of Table 5.5 show the coefficients of variation for these two different budgetary allocations. The coefficients of variation serve as indicators of the level of fiscal disparity in the DF and the ZMVM as a whole.¹⁰ These coefficients show that if budgets were assigned according to the delegations' property tax bases, their total spending per capita would be more polarized. In the case of the DF, the level of disparity would increase three times (0.42 to 1.23), and in the metropolitan area as a whole, the coefficient of variation would almost double (0.50 to 0.89). However, in this calculation I assume that all spending will be assigned according to the delegations' property tax bases

¹⁰ I calculated the level of fiscal disparity using the coefficient of variation rather than the CC-OCC ratio. This is because, in this case, I am calculating the fiscal disparity among the local jurisdictions within a single area, rather than comparing two different jurisdictions. The coefficient of variation is a statistical measure of dispersion that results from dividing the standard deviation by the mean.

(using compensatory criteria), which is an extreme assumption as it is likely that the process of budget allocation would also take into account other more distributive criteria. For this reason, it is more accurate to explore how the levels of fiscal disparity would change in the case of property tax collection than in the case of total spending.

In order to make such a calculation, I begin by recognizing that municipalities in the DF's neighboring State of Mexico already operate under a decentralized system. Thus, exploring the level of fiscal disparity in the State of Mexico should provide an idea of how fiscal disparity levels would change in the DF if property taxes were decentralized. The conditions for comparing these two systems are favorable because some metropolitan municipalities have similar tax levels to those in the DF's delegations, and because in both systems the majority of property tax revenue is concentrated in a few local governments. While in the State of Mexico, nine municipalities collect three-quarters of the total property tax revenue, in the DF two-thirds of the total property tax revenue originates in four delegations (the three central delegations and Alvaro Obregón). In terms of the level of property tax collection per capita, some metropolitan municipalities have similar levels of collection as those of certain delegations. Likewise, some metropolitan municipalities have similar wealth levels to the DF's delegations. Figure 5.5. orders municipalities and delegations according to their wealth levels (from left to right) and shows that the municipality of Huixquilucan, for example, generates a similar level of property tax collection to rich delegations, like Alvaro Obregón or Cuajimlpa. Similarly, municipalities like Ecatepec and Nezahualcoyotl collect about the same amount in property taxes per capita as delegations of similar wealth levels, like Iztapalapa.

**Figure 5.5. Collection of real property taxes per capita.
Selected municipalities and delegations, 2000**



Source: Author, based on data from INEGI. Jurisdictions sorted according to CONAPO's marginality index. The poorest jurisdiction is to the left.

I use this comparison of municipalities and delegations with similar wealth and property tax collection levels to explore if the centralized or decentralized structure of these jurisdictions affects their levels of tax collection—and therefore their disparity levels. In the DF's current centralized system, property taxes do not generate fiscal disparity because they are not related to the delegations' budgets. However, if taxes were to be decentralized, the level of disparity in property tax collection would be similar to that currently observed in the metropolitan municipalities. As Table 5.6 shows, from 1989 to 2000 the coefficient of variation for property tax collection in the metropolitan municipalities was 1.12 and, if property taxes were to be decentralized in the DF, that coefficient would have a value of 1.21. Also, the coefficient of variation in the metropolitan municipalities has been growing, which may suggest that, over time, rich municipalities take advantage of their tax capacity, while the less-developed municipalities fall behind.

Table 5.6. DF and ZMEM: Coefficients of variation in property tax collection

	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Avg
DF							1.20	1.23	1.23	1.30	1.10	1.10	1.21
ZMEM	0.75	1.02	1.50	1.39	1.26	1.12	1.12	1.39					1.12

Source: Author, based on data from INEGI and GDF.

In principle, there is no reason to expect that such a deepening of fiscal disparity would be different in the case of the DF.¹¹ Particularly, it seems plausible to expect that the four richest delegations—and perhaps one or two others—would take full advantage of tax decentralization. However, it remains unclear if poor delegations would be in a position to extract from their existing tax bases more taxes than they receive under the current centralized system. Decentralization could result in a higher level of fiscal disparity within the DF, and perhaps in a decline in the overall level of tax collection depending on whether or not the increases in tax collection in the rich delegations surpass the decline in tax collection in the poor delegations.

The coefficients of variation in Table 5.6 only represent a decentralized allocation of the current level of tax collection, without taking into account any variation in the levels of tax effort. However, since a full devolution of tax powers generates different tax collection incentives in the recipient jurisdictions, it is possible that the process of fiscal decentralization would deepen fiscal disparity among the delegations even further. In fact, the scenario in Table 5.6 looks more like a situation in which the central authorities collect all the delegations' property taxes and redistributes them according to a compensatory criterion, rather achieving a true devolution of tax authority. If instead of using this scenario, I assume that the decentralization process will also entail returning full tax autonomy to the delegations, then in order to gauge the potential effects of this process I need to take into account some additional considerations.

One important consideration relates to the distribution of property tax functions between the DF and the delegations. So far, I have ignored any difference in the level of tax collection that might originate from having different levels of government in charge of administering the system of property taxation. Local public finance theory has made a strong case for assigning local jurisdictions control over their property tax bases and rates so they can take advantage of the benefits of taxation (see Chapter 1). However, the theory on tax assignment does not yet provide a clear normative structure to disentangle

¹¹ In the last two years of the time series, the coefficients of variation in the DF were smaller than at the beginning of the period, but the series includes so few years that no meaningful trend can be established from these data.

which level of government should be in charge of which tax function in order to produce an efficient system of property taxation. For example, the efficiency implications of separating the assessment, collection, and enforcement of property taxes among different tiers of government are not yet clear.

Although a specific analysis of this distribution of tax functions goes beyond the scope of this study, I will argue that, when all else is equal, the deeper the devolution of tax powers and responsibilities to the delegations, the higher the potential increase in the level of fiscal disparity. Alternatively, the centralization of the most involved tax-related functions, like the update of the property values and the keeping of cadastral records, can minimize the potential reductions in tax collection in the poor delegations, thereby reducing the possible increase in fiscal disparity. Therefore, one assignment of tax functions that would minimize the potential for fiscal disparity is one in which delegations are given full autonomy to set the tax bases and rates, which would cause them to be more accountable and responsive. However, since property taxes are not necessarily easy or cheap to administer, such assignment must keep the most involved functions centralized or, at least, the GDF must provide full and constant technical support to the poor delegations. This support could take many forms, from providing assistance for very specific functions like cadastral mapping or billing, to almost completely contracting out property tax functions to the GDF. In the State of Puebla, for example, poor municipalities pay the state government a percentage (10%) of their total tax collection, and the state remains in control of most property tax functions such as assessment, billing, and enforcement.

Another important consideration in giving back full tax autonomy to the delegations is that this exercise reduces the distance between taxpayers and collectors. Unlike the metropolitan municipalities where there is a close proximity between local authorities and taxpayers, in the DF this relationship is kept at arms-length, which seems to be conducive to maintaining high levels of tax collection. Although in this analysis, I did not statistically test the association between tax collection levels and the proximity between tax authorities and taxpayers, several of my interviewees suggested that the decentralized

system in the State of Mexico gives more discretion to the authorities, which may reduce the level of tax collection. In contrast, in the centralized system of the DF, citizens do not interact directly with their local tax authorities in making their tax payments, but with the GDF Treasury. From a political economy perspective, this lack of proximity reduces the discretion of tax authorities, as it is not in their interest to reduce the tax obligations of citizens and voters because they do not directly form part of their political constituencies. If this were the case, then tax decentralization in the DF could have a negative impact on the levels of tax collection. Note however, that the theoretical and empirical discussion about the impact of proximity between government and citizens on corruption and other administrative malpractices is far from finished. While some argue that proximity reduces corruption by increasing transparency and accountability (von Braun & Grote 2000), others argue the opposite (e.g. Rose-Ackerman 1997 and Tanzi 2000).

The previous analysis illustrates the potential of decentralization to increase fiscal disparity. However, this analysis represents an extreme case in the sense that it does not take into account policy measures that are used by governments to mitigate the unintended consequences of decentralization. Specifically, it has not dealt with the use of transfers to reduce fiscal disparity. One of the main rationales of intergovernmental transfers is that of fiscal equity; according to which the upper tiers of governments can make use of their redistributive powers to close the fiscal gaps that may result from decentralization. Actually, if the transfer system is properly designed, it can help reduce the level of fiscal disparity without endangering the efficiency of local tax collection. It is unlikely that the DF would employ a system of transfers without a redistributive component, so it is only in an extreme case that the predicted levels of fiscal disparity would be observed. However, in the case of the DF, incorporating these kinds of redistributive parameters would be difficult because the local transfer system would have to be created from scratch, and the drafting of new fiscal pacts is always politically sensitive. In fact, some of my interviewees, including the current tax authorities, are skeptical about whether it is possible to create a truly equitable transfer system that is technically sound and that receives political support from the majority of stakeholders.

So far, the analysis has dealt with the direct effects of decentralization on fiscal disparity and tax collection levels in the DF and the ZMVM. However, a system of decentralized fiscal institutions has other more general effects, which have both advantages and disadvantages with respect to a more centralized governance structure. There are at least two advantages that require consideration: the positive impact of decentralization on incentives to increase tax collection, and the operation of a more efficient system of subnational borrowing.

The first advantage relates to incentives for the strongest local governments to increase their tax collections in a decentralized system. As things stand today in the DF, delegations are only able to keep a very small portion of the taxes generated in their territories (such as rent paid on their properties and fees for the use of public sports facilities), so that they have no incentive to increase their own revenues. Some delegations have substantial local revenue potential, but because they know that these tax yields will go to the central Treasury and they will only receive a small fraction of the benefits through the annual budget, they have little incentive to bear the full cost of taxation. However, this may only be a concern for the richest delegations, as they are the only ones that would gain from a system of tax autonomy. Also, because the richest delegations benefit more, decentralization may actually increase or reinforce the fiscal disparity between the delegations.

Concerning the second advantage, moving toward a more decentralized structure provides favorable conditions for local jurisdictions to access credit markets. As Chapter 3 shows, metropolitan municipalities like Naucalpan, Ecatepec, and Tlanepantla are beginning to access credit markets and, although it is still too soon to assess what their overall credit performance will be, so far their experience with the use of credit has been positive. This is in part because they are being disciplined by market forces. Conversely, in the DF, where the delegations' debt is managed centrally and without any direct role of the market system, the experience with the use of credit has not been totally

satisfactory.¹² There are a number of causes for the inefficient use of credit in the delegations, but they can be reduced to the absence of market regulations to hold local authorities accountable for their debt management. Because the authorized levels of indebtedness depend solely on a delegation's capacity to produce technical reports to justify its need for credit and are not related to fiscal discipline and performance, delegations do not have incentives to use these funds efficiently. Additionally, because local authorities do not generate their own revenues to pay back the loans, the link between the productive use of credit financing and debt repayment is missing. Therefore, when it comes to the local use of credit, fiscal discipline seems to thrive more readily in a decentralized system with market mechanisms, than in a centralized structure based on hierarchical rationale or other discretionary systems of norms.

Despite these two potential advantages, there are some general disadvantages associated with decentralization. In addition to the specific problem of fiscal disparity, decentralized fiscal structures can increase the competition for political power and the complexity of allocating expenditure responsibilities. Concerning the first political consideration, devolving tax powers to delegations may create very strong Delegates, who may directly challenge the political power of the Mayor. This is more likely to happen in the three or four richest delegations, as the series of political confrontations from 2000 to 2003 between the DF's mayor and the former delegate from Miguel Hidalgo illustrate. During his administration, Delegate Aus den Ruthen presented three constitutional controversies against the mayor: one concerning the jurisdiction over the Park of "Chapultepec," and two others related to the delegations' budgetary process. Delegate Aus den Ruthen knew that the legal solution to these controversies would take a long time to be settled, so he decided to confront the mayor directly by organizing a public demonstration in front of the mayor's office (Interview L). Presently, although delegations have been given semi-autonomous political powers, they are still fiscally dependent on the DF's Executive and Legislative powers. This situation has kept the delegations relatively in line with the DF's

¹² In some cases, delegations have mismanaged their debt. For example, during the first half of 2004, there were various corruption scandals related to the illegal use of funds in various delegations—like in Gustavo A. Madero (PRD) where the Delegate was forced to resign. Some of these scandals relate to the illegal use of credit funds for procurement and for political campaigns.

authorities, but if they become financially independent, and thus politically stronger, the mayor may have trouble limiting the power of the strongest delegates, and maintaining political cohesion in the DF.

The last problem of decentralized fiscal systems relates to the simultaneity with which taxes and expenditures must be transferred to the delegations. In the case of the municipalities, the constitutional reform of 1983 dealt with this situation by giving them control over property taxes, together with extensive responsibilities for providing basic public services. In the case of the DF, however, this is still a pending issue. So far, discussions about revenue decentralization have not directly addressed the assignment of expenditure responsibilities. Before discussing the decentralization of taxation, those involved in the debate should first specify the services for which the delegations would be responsible before giving them more taxing powers (Ruiz-Funes 1999)

Fiscal policy theorists insist on the importance of maintaining congruence between the decentralization of revenues and expenditures. However, this may not be an easy task in the DF both because of the notable differences in the spending capacities of the delegations, and because presently many services are provided concurrently between the delegations and the GDF—often without following a congruent scheme of service provision. An additional complexity relates to the fact that redesigning the system of expenditure functions entails a movement of personnel either across delegations or between delegations and the GDF. This movement of personnel would most likely create serious conflicts with the DF's workers union, because as things stand today, it is difficult to relocate personnel within the DF. According to a former delegate, this is a very serious problem because it has a direct effect on the quality of service provision. For example, a delegation may have a shortage of street cleaners and an excess of firefighters, but there is little delegates can do to shuffle this personnel either to the GDF or to other delegations that may have different needs (Interview L). In addition, at present the allocation of spending assignments is not clearly regulated, and such regulation would entail both a substantial revision of the current norms (mainly the Statute of Government, but also a large number of specific laws), and the design of an efficient system of transfer

equalization to compensate for the differences in spending needs among the delegations. The need for this kind of regulation and clarification of fiscal functions has been rapidly increasing since the beginning of the political transition in the DF. According to an astute observer of the DF, “before the political reform, when all delegates belonged to the same political party, the regulation of the revenue and spending functions was not crucial, but now in the current context of continuous political struggles, it is urgent to clarify which level of government should do what” (Interview O).

5.7. Conclusion

As I originally hypothesized, the level of fiscal disparity of the ZMVM increased during the process of fiscal decentralization in the 1990s. This resulted from the combined effect of three factors: the impact of transfers on property tax collection, the spatial characteristics of the ZMVM, and the coexistence of both a centralized and a decentralized governance structure in the ZMVM, each with different tax institutions. This shows that the current fiscal condition of the ZMVM is accounted for by multiple determinants, and although the federal transfer system has had a redistributive effect as shown in Chapter 4, the fiscal, spatial, and structural differences between the jurisdictions of the ZMVM are so pronounced that the fiscal disparity of this area still increased during the 1990s.

Concerning the impact of transfers on property tax collection, my calculations showed an eightfold increase in the gap of property tax collection in the ZMVM. This gap resulted from both an increase in taxes in the DF and a constant pattern of collection in the metropolitan municipalities. While the DF’s tax reform generated substantial increases in tax collection, in the metropolitan municipalities the average level of tax collection remained constant despite the massive increase of people and new housing. Another factor that contributed to the increase in fiscal disparity is the type of urbanization pattern in the ZMVM. This pattern has been characterized by a high degree of informality in the incorporation of land into residential uses, which has resulted in large numbers of potential taxpayers falling outside of the tax net. In other cases, more structured types of

urbanization patterns have occurred, but this has mostly produced low-income housing, which does not generate a substantial property tax yield.¹³

My analysis also found that the heterogeneous composition of the ZMVM contributes to its fiscal fragmentation. Such fragmentation not only results from the jurisdictions' differences in revenue capacities and expenditure needs, but also from the fact that each jurisdiction has a different capacity to respond to the decentralization process. In general, resource requirements and public service demands are running counter to each other in the current situation. While communities in the DF have an abundance of resources and public services, those in the metropolitan municipalities not only have limited access to tax bases and resource endowments, but also face a continuous and growing demand for services and infrastructure in virtually all areas. In this sense, decentralization is contributing to a deepening of the longstanding differences in the levels of services and infrastructure between the DF and the metropolitan municipalities. This, in turn, is generating a process of urban segregation driven by the real estate market that is accentuating the fiscal fragmentation of the ZMVM.

Concerning the third and last factor, my analysis found that the type of governance structure also affects the level of fiscal disparity between the jurisdictions of the ZMVM. The study of the ZMVM was ideal for performing this kind of analysis because, while some delegations and metropolitan municipalities have very similar characteristics, they have different governance structures. Namely, the former are centrally structured and the latter have full autonomy over their property taxes. I show that if taxes were given back to the delegations according to a purely compensatory criterion, this would increase fiscal disparity in the DF and the ZMVM as a whole. Despite this effect, policy measures exist that can mitigate fiscal disparities without losing the benefits of a decentralized system of local taxation. In the DF, one such measure would be the creation of a compensatory transfer system for the GDF. Other measures include a detailed division of the tax functions between the GDF and the delegations that would leave the most involved

¹³ There are some exceptions of municipalities with either high industrial tax bases (Tlanepantla) or high-income residential projects (Huixquilucan) that have been able to increase their tax revenue substantially.

functions at the central level. At the metropolitan level, there are also policy alternatives to mitigate the potential fiscal disparity caused by decentralization. Some of the more technically feasible and politically viable alternatives include the creation of metropolitan funds, and the formation of special districts for the metropolitan provision of specific services. In the final chapter I turn to a close consideration of these two alternatives.

CHAPTER 6

MOVING FORWARD: ALTERNATIVES TO MITIGATE FISCAL DISPARITY IN THE ZMVM

6.1. Introduction

In this study I explored the issue of fiscal disparity within the Metropolitan Zone of the Valley of Mexico (ZMVM). According to my analysis, during the 1990s fiscal disparity in the ZMVM resulted from the combined effect of two factors: the differing characteristics of its jurisdictions and the process of fiscal decentralization. On one level, fiscal decentralization mitigated jurisdictional differences through the use of a system of redistributive transfers. On another level, in contrast to the equalization effect of transfers, decentralization exacerbated the level of fiscal disparity by accentuating the difference between the jurisdictions' expenditure needs and their capacities to collect local taxes. The combined effect was such that the level of fiscal disparity in the ZMVM increased during the 1990s. This result corroborates my original hypothesis that because decentralization may give rich jurisdictions larger tax bases and lower tax rates than poorer jurisdictions, fiscal disparity between jurisdictions may increase.

This is consistent with the results of U.S. analysts who have found that in decentralized contexts, fiscally independent local governments tend to exclude those individuals who require extra expenditures in excess of their marginal contributions to locally-raised revenue (Oakland 1979, Chernick and Reschovsky 2001). Both because decentralization has a tendency to increase fiscal disparity, and because policies of decentralization are likely to continue, solutions are needed to ensure that services are fairly and efficiently provided and financed. The current financial and governance arrangements are not directly dealing with these unintended consequences of decentralization, so specific solutions must be devised. According to M. Jerome-Forget (in P. Hobson and F. St-Hilaire, 1994: i) "Local government structures are often unwieldy, tax and transfer systems are ill-adapted to the form and function of modern city-region economies, and government policies, in general, seldom recognize or address the particular needs of cities." Similarly, an OECD report (2001: 95) argues that "there is

considerable scope for countries to improve the present situation by developing national/regional frameworks, which provide more appropriate financial support for a more strategic approach to metropolitan governance.”

In response to this situation, countries have devised a number of policy solutions to deal with problems of fiscal disparity and more generally, with the financing and governance of metropolitan areas. Most of these solutions, however, have been structured for developed countries (OECD: 2001), while metropolitan areas in developing countries continue to be too fragmented for effective and equitable service financing and provision. In Latin America, for example “there appears to be no country that has a government structure that adequately encompasses the economically relevant metropolitan region” (Bird and Slack 2004: 46). Looking at the available policy options might be a good first step in beginning to devise solutions for developing countries.

In this last chapter, I first discuss the main policy options for dealing with fiscal disparity in metropolitan areas and assess their viability for the ZMVM. Second, I focus the discussion on the two policy alternatives that I believe to be the most technically and politically feasible for the ZMVM. Third, I discuss the obstacles to reducing fiscal disparity in the ZMVM and point to some of the conditions that would lead to an improvement of the situation. Finally, I conclude by discussing the extent to which my results can be generalized, and by underscoring the importance of solving the problem of fiscal disparity in other metropolitan areas.

6.2. General solutions to fiscal disparity in metropolitan areas

Public finance theorists have identified a number of alternatives to mitigate problems of fiscal disparity, especially in the United States where for more than four decades disparities have generated locational distortions and intra-metropolitan differences in metropolitan areas (Oakland 1979). Before discussing the available alternatives, I note that there are two factors that policymakers must bear in mind. First, despite the technical differences between the alternatives, all share the same objective, which is to ensure that municipalities with the highest needs—or lowest tax capacities—receive resources in an

efficient and equitable way, so that they can provide adequate public services at reasonable tax rates. In other words, additional resources should target those local governments that, usually through no fault of their own, are in the weakest fiscal condition either because of relatively high costs, large service responsibilities, or low revenue-raising capacity (Green and Reschovsky 1994). Second, an optimal alternative does not exist, because, as Bird and Slack (2004: 46) argue, “the precise nature of the ‘best’ system for any particular region remains highly context-dependent in both theory and practice.”

Policy solutions to fiscal disparities in metropolitan areas are numerous, but I will focus on the five main alternatives that either directly address problems of fiscal disparity in metropolitan areas or are the most technically and politically feasible for the ZMVM. These alternatives are intergovernmental assistance, the centralization of expenditure functions, the creation of a metropolitan government, the formation of a compensatory metropolitan fund, and the creation of a special purpose authority. In the remainder of this section I discuss the first three policy solutions, which directly pertain to the problems of fiscal disparity in metropolitan areas. In the next section, I discuss the last two alternatives, which are the most technically and politically feasible for the ZMVM.

6.2.1. Intergovernmental assistance

One way to deal with the problem of fiscal disparity in metropolitan areas is by pursuing fiscal equalization through the use of intergovernmental assistance—either in the form of transfers or aid. By increasing the flow of financial assistance from higher governmental levels and targeting it to the most distressed jurisdictions, intergovernmental assistance helps reduce fiscal disparity (Bahl 2000). In this way, local jurisdictions increase their revenue in order to provide services without increasing the tax burden imposed on their residents. Such assistance could come from either the state or the federal government, and it could be categorical or completely unrestricted (Oakland 1979).

In the case of the ZMVM, such an alternative would entail compensating for the unattractiveness of the metropolitan municipalities relative to the DF by offsetting their

lower levels of infrastructure and service quality and coverage. This would be accomplished by targeting higher-level government assistance to jurisdictions with low per capita income (Rothenberg 1970). Notice that although income would be an appropriate criterion to use in determining governmental assistance, the objective of this assistance is not *per se* to raise the income of poor jurisdictions. Instead, the aim is to neutralize the locational distortions and distributional inequities brought about by the spatial concentration of poor people (See Oakland 1979: 348-349). The assistance from higher-level governments in the ZMVM would most likely have to come from the federal government. This is so because the ZMVM crosses state boundaries and because, unlike the United States and other developed countries, state-level finances in Mexico are rather weak.¹ Nevertheless, states are by no means precluded from assigning resources to their metropolitan areas. For example, in July 2003 the Congress of the State of Mexico approved a constitutional reform to recognize the existence of metropolitan areas in the State and to create a fund with state and municipal revenues for the financing of metropolitan projects (see Section 6.3.1).

Although in theory, intergovernmental assistance is a straightforward way to reduce fiscal disparity among jurisdictions, in practice this may not be a viable option for the ZMVM. This is due to at least two reasons. First, federal assistance to metropolitan areas would have to be made in addition to the current transfer programs of *participaciones* and *aportaciones*. Otherwise, this would mean a reduction in federal transfers going to the non-metropolitan areas, a measure that would most likely be opposed by the jurisdictions that stand to lose from the creation of such an assistance program. Second, and most important, is the problem of selective targeting of federal funds. Mexico is a federal republic that does not legally recognize intermediate tiers of government. Therefore, any intergovernmental assistance to metropolitan areas would have to be channeled to the states and not directly to the metropolitan areas. This problem could perhaps be solved by establishing a federal mandate that states must assign such assistance entirely to their

¹ In developed countries, state governments rely on the most elastic and productive tax bases (i.e., income and sales), so that they can generate funds to relieve the fiscal problems of the most distressed jurisdictions. In Mexico, however, state taxes are very low, and in fact during the 1990s the rate of increase of state taxes was lower than the rate of municipal taxes.

metropolitan areas; however, policymakers must acknowledge that the selective targeting of jurisdictions is politically sensitive.

Even if a mechanism is found to target universalistic intergovernmental assistance to metropolitan areas, there is an additional problem with this alternative. Mexico's federal system does not allow for asymmetric policies. This means that federal assistance to metropolitan areas cannot be restricted to the ZMVM, but would have to be directed to all other metropolitan areas as well. Although from a national perspective, this might be appropriate in equity terms, for the ZMVM this could result in low levels of assistance. The amount of assistance would depend on the size and the allocation formulas of the federal assistance, but there is reason to believe that such assistance would not be sufficient to compensate for fiscal disparities in the ZMVM. For example, previous urban development programs have shown that it is commonly not in the interest of the federal government to channel substantive resources to such programs. This was the case with the "100 Cities Program" (*Programa de 100 Ciudades*), which was one of the few national programs focused on land use and urban infrastructure in Mexico. During the 1990s—the decade in which the program existed—the 100 Cities Program received twenty times fewer resources than PRONASOL (*Programa Nacional de Solidaridad*), which was another national development program that was implemented during the 1990s (Garza 2003: 104). Thus, through this alternative the ZMVM would be able to reduce its fiscal disparity levels only in the unlikely case that federal assistance is large and is targeted to metropolitan areas.

6.2.2. Centralization of expenditure functions

Because problems of fiscal disparity arise either from low tax capacity or extensive expenditure needs, one additional way to mitigate these problems is to shift the locus of responsibility for the financing of certain expenditure needs to higher tiers of government—usually to metropolitan or regional governments (Oakland 1979). This solution would discharge local jurisdictions from the spending responsibility of the centralized service, and therefore fiscal disparity would decline. In the case of the ZMVM this would entail shifting the provision of local services from the municipalities

and delegations to either the DF and the State of Mexico or to the federal government. State-wide services such as education and health would have to be shifted to the federal government.

Although in theory shifting expenditure functions to higher levels of government would reduce the financial pressure on state and local governments and might help reduce fiscal disparity, there are various problems associated with this alternative. First, the centralization of public services is expected to result in a uniform provision of services. In the ZMVM this is particularly critical because the area is comprised of jurisdictions with very different levels of service needs. Thus, the uniform provision of services will not satisfy these different needs adequately. Second, it is not easy to identify which services should be centralized and at what level. In other words, the issue of spending assignments in metropolitan regions is not yet resolved. As a matter of general strategy, the centralized services should be those in which the poorer jurisdictions (metropolitan municipalities) devote substantially more resources to the service than the richer jurisdictions (delegations). Additionally, the services should also have the characteristic that the efficiency loss from centralization should be small. Third, such an alternative does not resonate well with the current context of decentralized governance. For the last three decades, the centralized provision of services has been identified with a number of inefficiencies, so this option may not be attractive to policymakers. Some of the problems with centralization include the inability to allocate resources efficiently, the lack of response to the individualized service needs of the jurisdictions because of the uniform provision of services, the inability of central governments to meet an increasing demand for public goods and services, and being anti-democratic in the sense that local taxpayers do not make their own spending decisions (Bangura, 2000; Smoke, 2001; and Tanzi, 2001).

There is one last problem with this alternative that is especially problematic in countries with a history of decentralization similar to Mexico's, which is that centralization implies a new financial and political balance that the central government may not be willing to accept. A very good example of this problem can be found in the inability of a number of

states to recentralize the provision of education services in 2001. At that time, the states of Oaxaca, Sinaloa, Zacatecas, Chiapas, Baja California Sur, and most notably, Tlaxcala repudiated their responsibilities for the provision of basic education, which was given to them in 1992, and requested that the federal government recentralize their education services (*Reforma*. December 5, 2001 and December 19, 2001.) Their main complaint was that the federal government had not adhered to the decentralization agreement and had not transferred enough resources for the financing of basic education. The situation became so contentious that in 2003, the states of Tlaxcala and Quintana Roo filed a constitutional controversy against the federal government (*Reforma*. March 21, 2003.) Despite these demands, the federal government—through the Ministries of Finance and Education—opposed the measure to take over the education services and condemned the states for failing to assume their responsibility to provide basic education (*La Jornada*. December 5, 2001.) Thus, although technically viable, in practice the centralization of services can be so politically sensitive that it is not a feasible solution to the problem of fiscal disparity.

6.2.3. Creation of a metropolitan government

The third and most comprehensive way to mitigate fiscal disparity is to integrate local jurisdictions into an all-encompassing metropolitan government. There are two rationales for treating a continuous agglomeration of local jurisdictions as a single entity: externalities and redistribution. First, economic theory recommends that to the extent possible, users should pay for local services. However, for a local government that finds itself embedded in an increasingly built-up area with a constant influx of citizens from other jurisdictions, this is not always possible as non-residents consume some of the locally provided services. The problem of externalities is particularly visible in the provision of infrastructure because spillovers are generated due to the large scale of infrastructure that can only be internalized by coordination with, or provision from higher tiers of government (Sharpe 1995). The second rationale for creating a single authority for the whole metropolitan area has to do with redistribution and social segregation. Under a fragmented scheme of local governance, high-income groups will try to avoid the costs of redistributing local services, so they will tend to cluster, separating

themselves from the low-income groups (Sharpe 1995). Under such conditions, forming a metropolitan government is the most direct way to deal with the problem because it fully internalizes the inter-jurisdictional externalities.

In the case of the ZMVM, such a measure would entail the amalgamation of the metropolitan municipalities into the DF. Although the creation of a metropolitan government in the ZMVM would directly eliminate fiscal disparity and would increase the financial capacity of metropolitan municipalities, currently a number of technical, political, and legal obstacles render this alternative inoperable. Suffice to say that one of the central principles of the federalist Mexican system is that of state sovereignty, with which the creation of a metropolitan government in the ZMVM would conflict. In addition to this limitation, there are a number of general shortcomings associated with the creation of a metropolitan government that would also apply to the ZMVM. Therefore, any serious attempt to create a metropolitan government in the ZMVM would have to deal with these shortcomings, which include:

(1) *Resistance of wealthier jurisdictions to redistribution:* The more affluent jurisdictions resist taking on the severe problems confronting the poorer jurisdictions and are convinced that they can escape these problems through physical separation.

(2) *Moving the government away from the people:* There is a general concern both in the poor and the rich jurisdictions that a metropolitan government would be further removed from the citizens and would not be as responsive to their needs.

(3) *Lack of good technical rationale on efficiency grounds:* The chief gain from area-wide governance would be equity, but not necessarily efficiency. A metropolitan government may improve the provision of services to low-income communities, but it may not necessarily increase technical efficiency (i.e., cost-cutting) in the delivery of public services. It seems intuitively correct that fragmentation of government leads to duplication of services and diseconomies of scale, but there is little evidence that consolidation captures economies of scale.

(4) Vertical inter-jurisdictional tensions: The creation of a metropolitan government may introduce tension with both the upper and the lower tiers of government. According to Sharpe (1995: 22) “above may be a senior government concerned about a potential rival, and below the traditional system of local government, which can be resentful of an interloper that will limit its authority.” Moreover, when the metropolitan area is the capital city, tension with the upper tier of government may be more acute, as the central government may be reluctant to give up any power on the grounds that a capital is the territorial representation of the entire nation.

(5) Metropolitan boundaries: When creating a metropolitan government, policymakers must decide where to draw the boundaries. Based on a pure externality principle, the boundaries should encompass the core city’s “influence area” which is the area encircling the built-up core that is functional to the core in terms of employment and services (Sharpe 1995). The problem with such an approach is that it is not easy to keep the level of internalization at a reasonable level, as there is tendency to increase the scope of the government to efficiently perform certain functions.

(6) Loss of the advantages of fragmented governance: According to the public choice tradition, there are a number of advantages associated with having a fragmented governance structure that would be lost in a more integrated arrangement. For example, a variety of local governments provide greater responsiveness to diverse citizen needs and preferences than a more integrated arrangement. Similarly, when services are delivered by a variety of governments and private vendors, this provision is more efficient, effective, and responsive. This type of governance also prevents the monopolistic provision of services and provides more opportunities for citizens to get involved in government (Stephens and Wikstrom 2000).

6.3. Specific solutions to fiscal disparity in the ZMVM

In the previous section I discussed some of the main policy tools that have been proposed to ameliorate fiscal disparities in metropolitan areas. I also underscored some of the

problems that make them unviable solutions for the ZMVM. Public finance and metropolitan governance analysts have proposed further policy alternatives that are meant to alter the financial and governance arrangements of metropolitan areas in order to improve their fiscal condition (see, for example, OECD 2001 and Sharpe 1995). Because the utility of any alternative is context-specific, I focus on the two that in my opinion are the most viable for the ZMVM, the formation of a compensatory metropolitan fund and the creation of a special-purpose authority.

6.3.1. Compensatory metropolitan fund for the ZMVM

Under the current legal scheme, the creation of a compensatory metropolitan fund would be a feasible alternative that would mitigate fiscal disparity in the ZMVM. The objective of such a fund would be to create a system of compensation in order to redistribute the burdens and benefits among the jurisdictions of the ZMVM. There are three phases to the creation of a compensatory metropolitan fund: the integration of the pool of funds, the establishment of the distribution criteria, and the development of specific projects. Through these three phases, compensatory funds can be designed so as to target those areas with lower income levels than the region's average, which would then reduce fiscal disparity.

In the integration of a compensatory fund for the ZMVM, optimally, financing must come from all three levels of government. State and municipal governments must contribute their own resources to the fund. Their contribution could be calculated as a function of the aggregate value of their fiscal bases. The financial contributions of the states and the municipalities are beneficial to the operation of the fund, both because they would increase the size of the fund, and because this would foster ownership and engagement in the allocation and management of the fund. However, due to the low fiscal capacity of the metropolitan municipalities and the limited revenue autonomy of the delegations, the fund's resources would most likely have to come from the upper tiers of government.

In terms of state-level finance, resources would have to come from an increase in the DF's and/or State of Mexico's budgets for metropolitan projects. However, judging from the low level of resources that the DF and the State of Mexico assign to the financing of the existing metropolitan bodies, there is reason to believe that these increases would not be substantial. Therefore, most financing would probably have to come from the federal government. The federal government could contribute to the financing of the metropolitan fund in two main ways. First, it could divert some of the existing federal transfers (*participaciones* and *aportaciones*) to the metropolitan fund. The problem with this alternative is that it requires a reform of the National System of Fiscal Coordination that may not be feasible in the near future. In November of 2003 a group of federal deputies from the Revolutionary Democratic Party (PRD) presented a bill to Congress that would have reformed the Law of Fiscal Coordination precisely to divert resources from the *aportaciones* system to an Earmarked Fund for Metropolitan Development, but the bill was rejected. The proposal from the PRD was very well thought of and truly captured the need for more resources in metropolitan areas, but it is clear that the proposal was not supported by the deputies of those non-metropolitan constituencies that would not have gained from such measure.

A second way in which the federal government could contribute to the financing of the metropolitan fund is by expanding the level of resources that the jurisdictions in metropolitan areas currently receive. Note that because of the federalist nature of the Mexican system, these resources would not be exclusively targeted to the ZMVM but to all other metropolitan areas as well (see Section 6.2.1.). However, in the case of the ZMVM this may be the only option that would convince the political actors to agree on the creation of a metropolitan fund, as currently jurisdictions do not have incentives to share their scarce revenues with their neighbors.² Nevertheless, due to the current political fragmentation of the ZMVM, it should not be assumed that the federal government will commit additional resources to this area.

² The Delegate of Miguel Hidalgo and the Ex-delegates of Ixtapalapa and Cuajimalpa told me that they agree that it is crucial that the federal government contribute with additional resources.

Even if the federal government does not commit additional resources to form a compensatory metropolitan fund, there are ways in which the current system could generate resources to finance the metropolitan fund. A first option would be to charge an additional “metropolitan rate” on some of the existing state and municipal taxes. These surcharges would be levied on top of the existing rates and the receipts would go to the metropolitan fund. The rationale for establishing a metropolitan rate would be to capture the tax base of the better-off jurisdictions of the metropolitan area to finance metropolitan services. What this actually means is a system of tax-base sharing in which a percentage of the tax base coming from the rich part of the metropolitan area goes into a pool that is further redistributed according to certain parameters that ultimately benefit the more fiscally distressed jurisdictions.

In the case of the ZMVM, the idea would be to capture the tax base of the DF to finance services in the whole metropolitan area. However, since the metropolitan area does not exist as a legal entity, it does not have the political autonomy to impose taxes. Thus, in the current situation the only way this would work is through an agreement between the DF and the State of Mexico to levy such rates and pool the tax yields that would be further distributed to the metropolitan area.

In principle, such a surcharge could be levied on a number of local taxes, including payroll taxes (like in Australia), which are easily administered and relatively productive at low rates, and vehicle and fuel taxes (like in the United States and Canada), for which there is a strong economic and administrative rationale for their leverage on a metropolitan scale. Alternatively, metropolitan surcharges could be levied on property taxes, as in the case of the Minneapolis-St. Paul region of Minnesota, where 40% of the region’s taxes on commercial and industrial property are distributed throughout the region according to a formula based on each jurisdictions’ population and fiscal capacity. Another financing mechanism could be higher rates on development charges, which are a “one-time levy imposed on developers to finance growth-related capital costs associated with new development” (Bird and Slack 2004).

For the case of the ZMVM, perhaps the most viable option would be to levy a metropolitan surcharge on fuels, as it was levied in the past. From 1995 to 1997 the Environmental Trust Fund for the Valley of Mexico (*Fideicomiso Ambiental del Valle de México*) received money collected from the application of a surcharge of MX\$ 0.02 per liter of gasoline sold in the ZMVM. At that time, the surcharge existed exclusively to support the projects of the Metropolitan Commission for the Environment (Molina and Molina in Molina and Molina eds. 2002),³ so there is no reason why this type of surcharge could not be again applied to finance metropolitan projects. The use of development charges also appears to be a good financing option, considering the very large amount of construction projects that take place in the metropolitan municipalities. These charges could at least partially cover some of the high costs of infrastructure and service provision that the metropolitan municipalities face as a consequence of their dramatic development.

In addition, the fund's structure should also ensure that it is distributed equitably. Ideally, the distribution of a compensatory fund should be carried out according to local needs and the differing costs of service provision. In practice, these criteria are not always easily quantifiable, so to obtain an equitable distribution, policymakers may have to resolve some technical difficulties (Green and Reschovsky 1994.) Although ensuring this kind of compensatory distribution may not be an easy task, the creation of a metropolitan fund faces fewer challenges than other alternatives. Actually in the last few years this option has caught the attention of policymakers in the country. At the national level, for example, the 2001-2006 National Program of Urban Development and Territorial Ordering established the creation of a Regional Compensatory Fund as one of the main objectives of regional policy in Mexico. Unfortunately, the Plan did not establish when and how this fund would operate (Garza 2003), but at least it recognized the fund as a strategic objective. Although yet limited, at the level of the ZMVM, steps towards the creation of a metropolitan fund have also been taken.

³ The administration of the surcharge had the active participation of the Ministry of Finance, which was responsible for its annual renewal. The surcharge ceased to operate in 1998. According to Claudia Scheinbaum, head of the DF's Ministry for the Environment, such a decision was "absolutely political." *La Jornada*. June 15, 2002, in Davis and Raich (2003).

First, in September of 2003, the State of Mexico amended its constitution to acknowledge the legal existence of metropolitan zones within the State (art. 61/XLIII/b) and to facilitate inter-jurisdictional coordination within municipalities, between municipalities and delegations, and between municipalities and the State of Mexico. That same year, the Congress of the State of Mexico created a fund with state and municipal resources to handle problems of metropolitan scope in the areas of transportation, environment, health, and human settlements, amongst others. Originally, 60% of the fund was to be financed with municipal resources and the remaining 40% with funds from the State of Mexico. In those cases when municipalities did not have enough resources, they were given the legal right to exempt their contributions (*La Jornada*. July 30, 2003.)

Second, and perhaps more important, in March of 2000 the governments of the State of Mexico and the DF signed an agreement requesting the federal government to finance the creation of the Fund for Metropolitan Services and Infrastructure (*Fondo de Obras y Servicios Metropolitanos*). According to this agreement, in addition to federal funding, the DF and the State of Mexico would also assign resources for the creation of the Fund “in a proportional and equitable manner.” Similarly, the agreement stated that these governments “will make their respective municipalities and delegations contribute to the fund when they are directly benefited” (*Acuerdo*. May 4, 2000).

Although the agreement shows that the DF and the State of Mexico have been able to work together to move the metropolitan agenda forward, thus far not much has been achieved. According to my interviews with members of the Executive Commission of Metropolitan Coordination, this is due to the absence of a clear definition detailing how the DF, the State of Mexico, and the Federal government would contribute to the financing of the fund (Interview P). An additional limitation of the agreement is that it does not specify the way the Fund should be designed. Unlike the proposal introduced to Congress in November of 2003 that presented a well-thought design for a metropolitan fund, the 2000 agreement did not propose any specific design. In February of 2003 the Ministry of Metropolitan Development of the State of Mexico designed a mechanism for allocating the Fund, but the mechanism reduced the Fund to a tool for financing big

infrastructure projects, rather than a true redistributive mechanism. In its proposal, the State of Mexico presented a list of 36 metropolitan projects in the areas of transportation, roads, highways, environment, water, and sanitation, and suggested that these projects be financed according to their priority and the availability of resources.

Although a truly compensatory fund that redistributes burdens and benefits among jurisdictions has not been yet created in the ZMVM, I argue that past attempts to establish such a fund reveal the feasibility of such a policy option. More than failures, past attempts underscore those issues that must be addressed to make this policy option an effective tool for reducing fiscal disparities. The two issues that need to be dealt with are the financing of the fund and its allocation. In term of the financing, it is reasonable to expect that given the current political fragmentation of the ZMVM, the federal government will not readily assign resources to an area of the country that presents a direct political challenge. Thus, the fund could more realistically be financed by a metropolitan rate on certain local taxes of the ZMVM, rather than with federal assistance. The case of the Environmental Trust Fund for the Valley of Mexico is a good illustration of the viability of this kind of measure and its ability to generate funds for issues of metropolitan scope. Concerning the allocation of the Fund, at least two problems must be solved if it is to help mitigate fiscal disparity in the ZMVM. First, the allocation criteria must be based on purely technical grounds to avoid the metropolitan financing of projects that disproportionately benefit one part of the metropolitan area. Second, the technical design must take into consideration the jurisdictions' spending needs and the costs of service provision. Often these elements are not easily to calculate, but even rough calculations would help in targeting the metropolitan fund to the jurisdictions with the highest expenditure needs or the lowest tax capacities.

6.3.2. Creation of a Special Purpose Government in the ZMVM

In Section 6.2.3 I argued that the creation of a metropolitan government would solve the problem of fiscal disparity in the ZMVM, but I mentioned a number of problems associated with such a measure that make it unviable for the ZMVM. There is, however, a variant on this metropolitan-wide solution that would require less effort to change

governmental structures and may constitute a viable alternative for the ZMVM; this is the creation of a Special Purpose Government (SPG). An SPG helps reduce fiscal disparity by generating allocative gains that would compensate or offset any resulting income redistributions (Rothenberg 1970). Note, however, that unlike the creation of a regional government that directly solves the problem of fiscal disparity by expanding the city boundaries and pursuing redistribution from rich to poor jurisdictions, an SPG is more widely used to correct for the under-provision of area-wide public goods (Oakland 1979). Because an SPG indirectly solves problems of fiscal disparity by redistributing burdens and benefits related to specific services, and because it could become a middle ground in the formation of a metropolitan government, I argue that it is a viable alternative for the ZMVM.

An SPG encompasses both special districts and public authorities, which are both independent public agencies that deal with specific functions such as fire protection, water supply, or transportation, and occasionally are responsible for a limited combination of functions. For each function, special district boundaries are designed to comprise the operational efficiencies connected with scale and the degree of population agglomeration necessary to provide a minimum level of services at a reasonable financial burden. This means that, in principle, an SPG may operate within whatever it defines as the metropolitan area, depending on the problem to be solved, even if the problem crosses state lines.

The purpose for creating a SPG in a metropolitan area is to provide metropolitan-wide functions without having to create any additional jurisdiction that would control all local functions. The metropolitan jurisdiction would be a special district, exercising a few special functions, side-by-side with the existing jurisdictions, only moderately changed. In most cases, these metropolitan entities coexist with the local governments that remain in charge of the provision of some local services, but in some cases the metropolitan entity attends all the services.⁴ Thus, in comparison to creating a metropolitan

⁴ It is desirable that, at least in the beginning, the creation of any metropolitan agency should be supplemental to, and should not substitute for, the functions already performed by local governments.

government, SPGs have the advantage that they do not require the amalgamation of jurisdictions or the creation of an additional tier of government. SPGs have a number of other advantages, which include facilitating the financing of investments that go beyond jurisdictional limits; allowing policymakers to take advantage of economies of scale; fostering the efficient provision of services, both because they help to avoid overlaps, duplications, and omissions of functions, and because they use technologies that are not commonly available to individual local governments; avoiding the political opposition that is commonly waged against proposals for regional government because they deal with technical issues; and enjoying considerable fiscal and political independence from state and city governments, once they are in operation (ACIR 1964, Foster 1997 and Frug 2002).⁵

Concerning the structure and operation of SPGs, various international experiences show that these agencies can be organized relatively easily, either by the upper tiers of government or by the association of several local governments in a metropolitan area. SPGs are governed by independent boards whose members can be appointed or elected. Board sizes range from a few to several dozen members. An extreme example, the governing board of the Metropolitan Water District of Southern California, has forty-seven members representing over 130 constituent municipalities and 26 constituent water districts (Foster 1997). In terms of their financing, it is desirable that these metropolitan agencies be independent from the constituent governments in order to be technical entities isolated from political control. Commonly, their budgets are substantial, and they are financed through various means, including transfers, contributions, and subsidies from the other tiers of government; credit with commercial and development banks for projects where costs can be recovered; their own tax bases; fees and user charges; different mixes of public and private capital; and the extraction of profits and the redistribution of gains (Morales and García 2002).

⁵ These advantages are especially recognized in the literature on metropolitan governance in the United States, because in this country SPGs are the most common mechanism to deal with inter-jurisdictional service provision.

The attributes of an SPG make it a desirable mechanism for moving toward a more balanced provision of services in the ZMVM. One sector that seems optimal for the formation of such an SPG is transportation, which is a sector that in big cities lends itself naturally to regional management (Gakenheimer et al. 2002). In the ZMVM, transportation is one of the few sectors that already has some experience in metropolitan service provision. Additionally, due to the current deficiencies in the system of transportation in the ZMVM, it is likely that the demand for integrated metropolitan-wide solutions will continue in the future. Therefore, it is useful to explore the viability of establishing an SPG—in the form of a special authority—for transportation in the ZMVM. In the rest of this section, I reflect upon past experiences of metropolitan transportation in the ZMVM, with the objective of exploring what it would take to create a viable metropolitan transportation authority for this area.

One of the most notable experiences with the provision of metropolitan transportation services in the ZMVM was the construction of the metro B line. This metro line extends from the northern part of the DF to the eastern part of the State of Mexico. It is 23.7 km long and has 21 stations, of which 13.5 km and 13 stations are in the DF, and 10.2 km and 8 stations in the State of Mexico. Ever since its initiation (in 1989) Mayor M. Camacho in the DF and governor I. Pichardo in the State of Mexico conceived of the metro B line as a metropolitan project. It was projected that it would serve 600,000 users per day, and although it currently serves half that number, it is still the most important metropolitan transportation project in the ZMVM.⁶ Because the metro B line is a true metropolitan project in the sense that it crosses state boundaries and was planned to meet the transportation demands of the whole metropolitan area, it is a case that reveals the current status of metropolitan planning in the ZMVM. In the rest of this section, I discuss the main legal, technical, political, and financial aspects of the metro B line and then comment on what needs to be done in each one of these areas to create a metropolitan transportation authority.

⁶ However, the metro B line was not the first metro line that crossed the boundary between the DF and the State of Mexico. Its predecessor is the metro A line—built during the government of Mayor Camacho—that stretches 4 km with 3 stations into the municipality of La Paz in the southeastern part of the State of Mexico. Originally, it was planned that the route of the metro A line was going to be run as a suburban rail, but at the end the authorities opted for the metro.

Legally, the metro B line's construction shows that there is a legal framework in place for metropolitan projects. Current legislation provides for the establishment of intergovernmental agreements and metropolitan commissions that were the legal pillars supporting the construction of the metro B line. Specifically, the DF, with the participation of the Metro Corporation, and the State of Mexico, with the participation of the municipalities of Nezahualcoyotl and Ecatepec, signed an "Agreement of Coordination for the Construction of the Metro B Line." This agreement dictated the creation of the "Metropolitan Commission for the Construction of the Metro B Line" to oversee the construction of the project.⁷

From a technical perspective, during the construction of the metro B line the levels of communication and cooperation between the DF and the State of Mexico were constant throughout the six years of the project. This technical cooperation took place in several ways: the State of Mexico had representation on the board of directors of the Metro Corporation, so that it was regularly consulted on the technical aspects of the project; meetings between the DF and the State of Mexico occurred regularly in metropolitan fora such as the "Metropolitan Commission for the Construction of the Metro B Line," and the COMETRAVI (*Comisión Metropolitana de Transporte y Vialidad*); and constant collaboration took place between the DF's COVITUR (*Comisión de Vialidad y Transporte Urbano*) and the State of Mexico's General Direction of Mass Transportation. Overall, transportation officials in the DF and the State of Mexico have similar levels of technical capacity and understanding of the transportation problems of the whole metropolitan region. Technicians from the Metro Corporation and the transportation sector in the DF and the State of Mexico know each other personally, respect each other professionally, collaborate regularly, and even agree on some of the transportation solutions for the ZMVM (Interviews C and R).

The construction of the metro B line was meant to be financed *pari passu*, whereby for each peso contributed by the federal government, the DF and the State of Mexico would

⁷ In addition to these two formal mechanisms, people in the DF and the State of Mexico told me that there was an informal agreement between the Mayor of the DF, the Governor of the State of Mexico, and the President for expanding the B line from the DF to the State of Mexico (Interviews C and Q).

contribute an additional peso. Apparently, it was also agreed that the federal government would cover the State of Mexico's portion of the financing.⁸ Despite the original agreement to split the costs of the project, with the 1994 peso crisis the federal government was unable to keep up with its financial commitment, so the DF was left on its own to cover the total cost of the project. The project cost US\$620 million without trains, plus an additional US\$540 million for 45 new trains that were acquired in 2002 (*GDF-Secretaría de Obras y Servicios* 2001). From 1994 to 1997 the DF financed all the construction costs with its own operating revenue. In 1997 it changed its financing strategy to the use of credit, and that same year the SHCP authorized three lines of credit for the DF, using its revenue shares as guarantees of both the capital and the service of the debt.⁹ The financial contribution of the State of Mexico was negligible. During the whole project, it disbursed \$550 million pesos to cover the confiscation costs of the lands where the lines were built and to relocate two water plants. The financial contribution of the State of Mexico was so marginal that one official from the State of Mexico told me: "the metro B line was a gift from the DF to our State" (Interview C).

Politically, the single most important factor that enabled the expansion of the metro B line into the State of Mexico was political partisanship. When the project was envisioned in 1989, the federal, state, and local governments linked to the project were all controlled by the PRI. When interviewed about how metropolitan coordination has changed since the days when the ZMVM was a PRI enclave, one interviewee in the Ministry of Metropolitan Development in the State of Mexico stated: "in the past when everybody was from the same party, of course there were differences, but coordination was easier; the spirit was different" (Interview T). To illustrate how things changed with the onset of political plurality in the ZMVM, one of my contacts in the Metro Corporation shared with me two examples in which the municipalities of Nezahualcoyotl (PRD) and Ecatepec (PAN) hindered the operation of the metro B line.¹⁰ The first took place when

⁸ Interviewees in both the Metro Corporation and the DF's Treasury assured me that this agreement was made, but none of them have seen written proof of this agreement (Interview Q and S).

⁹ The credit lines were contracted with Development Banks (BANOBRAS) for US\$250 million; International Banks (Sumitomo-Japan) for US\$250 million; and Commercial Banks for US\$150 million.

¹⁰ The PRD has controlled the municipality of Nezahualcoyotl since 1996. The PRI controlled Ecatepec until the year 2000, when the PAN captured it.

the line began its operation, and the municipality of Ecatepec refused several times to supply water to the metro stations. The second occurred when the rails of the metro flooded, and the municipal authorities refused to drain them. On that occasion, the DF's security forces violated the sovereignty of the State of Mexico and entered into the state to clean up the flood (Interview S).

This review of the main factors that led to the construction of the metro B line provides information that leads me to believe that a metropolitan transportation authority for the ZMVM is a viable solution. Both legally and technically, the conditions are already in place. Legally, the creation of the necessary authority does not require substantial institutional engineering. Intergovernmental agencies, such as the Metro Corporation and the COMETRAVI already have representatives from the DF, the State of Mexico and the federal government.¹¹ Actually, the COMETRAVI already has the mandate to propose solutions and provide technical assistance to resolve problems of transportation in the ZMVM. Technically, these intergovernmental agencies as well as the departments of transportation in the DF and the State of Mexico have a shared technical vision and understanding of metropolitan problems and possible solutions for the ZMVM. Therefore, what is needed is to build on the existing legal framework and technical capacity to transform the current set of fragmented transportation projects into an integrated metropolitan transportation authority.

According to my review of the metro B line, the establishment of a transportation authority for the ZMVM, however, would not be simple. There are at least two factors that would need to be resolved prior to the establishment of this authority: its financing, and its political support. The limited financial contributions of the State of Mexico and

¹¹ The COMETRAVI is formed by a group of specialists from the DF, the State of Mexico, and the Federal Government, all of whom have a voice and a vote. The representatives of these three units of government form the plenary of the commission, which is headed by the Minister of Communications and Transportation (SCT), the Governor of the State of Mexico, and the Mayor of the DF. The commission has eleven working groups, formed of representatives of the Ministries of Transportation and Communication (SCT) of the Federal, DF, and the State of Mexico governments. The administrative council of the Metro Corporation is headed by the Mayor of the DF, but has representatives from the Ministry of Finance (SHCP), Transportation (SCT), Control and Administrative Development (SECODAM), from the National Financing Corporation (NAFIN), and from the governments of the State of Mexico and the DF.

the fact that the DF covers most costs of metropolitan projects with its own revenues compromise the viability of a metropolitan authority. The State of Mexico's limited financial contribution is a true constraint to metropolitan financing in the sense that its finances are not sustainable and will likely not improve in the near future (see Chapter 3). Authorities in the State of Mexico recognize this situation, but argue that since their fiscal condition is the result of unfair treatment from the DF and the federal government, the State on Mexico should be compensated.¹² They complain that the State of Mexico is unjustly treated by the National System of Fiscal Coordination in the sense that it is the state with the second highest GDP, but is only number twenty-nine when it comes to the distribution of federal transfers. Another complaint is that the State of Mexico spends half its budget on education, while the DF is excluded from such expenditures. According to one official from the State of Mexico, "if the State were freed from its education burden, of course we would have resources to invest in the transportation sector" (Interview C).

The other factor that compromises the viability of a metropolitan authority is the fact that the DF covers most of the costs of metropolitan projects with its own revenue. From the DF's point of view, the financing of the metro B line was inequitable because the DF covered all the costs but the benefits were shared with the State of Mexico (Interview Q). According to my own back-of-the-envelope calculations, if the total cost of the project's construction was US\$620 million, then the DF subsidized the State of Mexico with US\$266 million to cover the construction costs of 10.2 km of rails (US\$26.1 million per km). Additionally the DF has covered the total costs of the new metro B line trains for a total of US\$540 million (with \$232 million corresponding to the State of Mexico) and is subsidizing the operation of the metro B line with about US\$21 million per year.¹³ All

¹² Authorities from the State of Mexico argue that such compensation could come in the form of metro expansion. According to the transportation authorities of the State of Mexico "it is ridiculous that the metropolitan municipalities, with a population of 8 million people, only have 13 km of metro lines. The international standard is 20 km of metro line for each million people." (Interview C).

¹³ I made this calculation by assuming that 50% of the users live in the State of Mexico. In this case, there are 150,000 daily users that pay \$2 pesos for each ticket. The real ticket cost is \$6.2 pesos as the metro subsidizes the price with \$4.2 pesos per ticket (See: *Sistema de Transporte Colectivo/Gerencia de Contabilidad "Indicadores financieros Enero-Diciembre 2003. Resumen del Costo de Programas,"* March 2004). A subsidy of \$4.2 pesos per ticket for 150,000 users results in a daily subsidy of \$630,000 pesos. That quantity multiplied by 365 days at an exchange rate of \$11 pesos per US dollar, results in a total subsidy of about US\$21 million per year.

this amounts to a total accumulated subsidy from the DF to the State of Mexico of about \$US600 million for the construction, trains, and operation of the metro B line since the year 2000.

One problem with the current financing situation is that these subsidies are mostly financed through the use of credit, so that the repayments will be borne by the future residents of the DF. In the past, when the DF was still a Department of the Federal Government, on various occasions the federal government indirectly subsidized the operation of the metro by taking over DF's debt. However, in the current situation of political fragmentation, it is uncertain whether the federal government will be taking over the DF's debt, which increased from \$11 billion pesos in 1997 to \$44 billion in 2003, most of which went to finance the metro. As I discussed in Chapter 3, when C. Cárdenas became mayor in 1997 he requested that the federal government assume the DF's debt, but the federal government declined the request. Thus, unless some kind of political agreement is reached between the DF and the federal government, the residents of the DF will have to bear the financial burden of such debts.

The present financial arrangement is disadvantageous for the DF, as its current and future taxpayers must carry the financial burden for the provision of transportation services to many users that do not reside in their jurisdiction. As a result, the DF is focusing only on the provision of metro services in its jurisdiction, thereby compromising the efficiency of the metro service as it is not being responsive to the demands of the whole metropolitan area. The mayor's opposition to the construction of four new metropolitan metro lines in April of 2004 is a clear illustration of this strategy. At that time, the federal congress approved the creation of a fund to finance the construction of four metro lines from the DF to the eastern part of the State of Mexico that would have benefited 1 million users from the State of Mexico (*El Universal*. April 22, 2004). Right after the congressional approval, the Director of the Metro Corporation declared to the ALDF, "that no new metro lines will be build, because this would not solve the problems of transportation in Mexico City." (*El Universal*. April 27, 2004.) Similarly, Mayor López Obrador declared

that no new metro lines would be built in his administration, as “the DF already has enough rails—200 km—that just needs good maintenance.” (*El Universal*. April 29, 2004.)

The main reason the mayor gave for his opposition to building new metro lines was financial. According to him “the DF would have to invest \$600 million pesos per kilometer of new rail, so we have to analyze if we have the budget.” (*El Universal*. April 29, 2004.) Such a statement suggests that unless the financial arrangements for the metro system change, the DF will not be willing to invest its own resources to generate benefits for a larger constituency. There are at least two alternatives that would help reduce the metro-related financial pressure on the DF, and therefore would make the financing of metropolitan transportation more viable. The first alternative is to build on the existing financial mechanism of the metro, and try to increase its revenue. Currently, the metro has three main financing mechanisms, its own revenue, which comes from the sale of tickets and publicity, and from the rent of space; funding through financial institutions; and a Trust Fund for Investments, which has existed since 2003.¹⁴ Out of all these financing mechanisms, the one that would most directly contribute to the finances of the metro would be to reduce the subsidy for the ticket price, as the current price only covers 30 percent of metro system costs. Reducing this subsidy would generate huge savings that could be used to finance the metropolitan lines. However, this measure is too politically sensitive, which explains why the current government of the DF has neglected to pursue this option on several occasions.¹⁵

The second alternative that would allow the further expansion of the metro to the metropolitan area is an increase in federal aid. As I already explained, one of the factors that led to an agreement between the DF and the State of Mexico about the expansion of the metro B line into the metropolitan municipalities was that the federal government agreed to cover the metropolitan municipalities’ portion of the costs. Therefore, if a

¹⁴ 2003 was the first year that the states received the FIES (*Fideicomiso de Inversión de los Estados*), which is a fund to finance infrastructure projects. The fund is composed of additional resources coming from variations in oil prices. In 2003 the DF received \$800 million pesos, and assigned \$647 million to the metro.

¹⁵ *Noticieros Televisa*, “No aumentarán impuestos, ni el Metro: AMLO.” October 22, 2004 (<http://www.esmas.com/noticierostelevisa/mexico>, 2005).

similar arrangement were to be put in place, perhaps it would provide the DF with incentives to plan the metro on a metropolitan-wide scale. Another option would be for the federal government to take over some part of DF's metro-related debt, as in the past. However, although federal financing through any of these alternatives may be necessary, it is not a sufficient condition to expand the jurisdiction of the metro to the whole metropolitan area. A good illustration is the April 2004 proposal to build four new metro lines into the State of Mexico, which had federal funding and was still rejected. The proposal was approved by 158 federal deputies (mostly from the PRI and some of the PAN) and the federal Congress authorized the creation of a special fund to begin studies on the technical and financial viability of the four lines (*Cámara de Diputados, LIX Legislatura*. Ordinary Session April 20, 2004), but the mayor opposed the project. The reason, as I explain more thoroughly in the next section, was mainly political. Expanding the metro into the metropolitan municipalities would be politically irrational for the DF, as the costs would be born by the DF's taxpayers and most of the benefits would accrue to the political constituency of the State of Mexico. Besides, investing in the metro would force the mayor to reduce other 'soft' projects such as scholarships for the young and pensions for the elderly that are very popular and generate political payoffs.

In summary, transportation policy in the ZMVM is formed without a metropolitan vision. Particularly, the metro system's current financing causes its planning to be focused on the DF, rather than on the ZMVM as a whole. This situation has also precluded the metro from becoming a more comprehensive transportation system that would allow it to harmonize with other transportation alternatives such as lightweight trains and trolleys. This situation has led to the fragmented, unequal and inefficient provision of transportation services in the ZMVM. However, this situation could be reversed—at least partially—by the creation of a metropolitan transportation authority that would allow for the metropolitan-wide planning of transportation, and would help balance the coverage, quality, and infrastructure of transportation in the area. The legal and technical conditions for the creation of such an authority are already in place. The two factors that are currently preventing its creation are financing and political will. In terms of finance, it seems that one of the few ways to move forward would be to have the federal

government cover some of the State of Mexico's transportation costs. Political will, unfortunately, is as absent as it has ever been in the ZMVM. However, I would argue that devising a fair and efficient financing mechanism—one in which the richer jurisdictions do not feel that they are financing a service that is not generating benefits for them—would clear the way for establishing such authority. Moreover, once such authority is in place, it would be relatively impervious to political control, as it would perform mostly technical functions.

6.4. Conditions for reducing fiscal disparity in the ZMVM

In the previous section, I argued that there are two viable alternatives that could mitigate fiscal disparity in the ZMVM. I also argued, however, that they may not necessarily be easy to implement. This is because these are technical solutions to a problem that is mainly political. The reduction in fiscal disparity is directly related to a redistribution of resources from rich to poor jurisdictions, which will not happen automatically or through market forces alone. Instead such redistribution requires policy interventions that must count on the political support of the relevant policy actors. In fact, as Frug (2002) suggests, solutions must be technically sound and have the appropriate expert advice and assistance, however the basic policy decisions are political, not technical.

In the case of the ZMVM, academics and policymakers have recognized the importance of politics in solving the region's metropolitan problems. According to one advisor to Mayor López Obrador, the fact that different political factions have been opposing the DF's political reform shows how little can be accomplished without political will (Interview K). Similarly, one former leader of the ALDF told me that in order to move the metropolitan agenda forward "we need financial support, legal provisions, and political will" (Interview U). On the academic front, a 2003 report on Metropolitan Coordination in the ZMVM found that the main obstacle to coordination in this area is politics (Davis and Raich 2003). The main argument is that despite the urgency of solving metropolitan problems, the contemporary political and institutional environment of Mexico and the ZMVM stands in the way of the available technical solutions.

Unlike the past, when a single hegemonic party (PRI) made most urban policy decisions at both the local and national levels, the ZMVM is now a politically plural area with significant political barriers to solving metropolitan problems. The federal government, the DF, and the State of Mexico's leaders belong to different political parties, and they have become rivals in the control of this key political stronghold that has the highest concentration of federal electoral districts in the country (36 in the State of Mexico and 40 in the DF).¹⁶ This current situation of extreme political fragmentation serves many powerful local interests, and it is realistic to expect that politicians will focus on their political constituencies. Specifically, confronting inequality is not a high priority on many legislators' agendas, as that would imply some sort of redistribution that would not be politically rewarded. In other words, as Frug (2002) argues, what is missing is a "constituency for metropolitan government."

Finding ways to create this metropolitan constituency for the ZMVM is beyond the scope of this study, but according to my research, there are at least three factors that policymakers must reflect upon in their attempts to generate political solutions to the problems of the ZMVM.¹⁷ The first is the indispensable presence of the federal government. With the advent of full democracy in Mexico, the federal government abdicated its assistance to the ZMVM, but unless it again assists the ZMVM, fiscal disparity is not likely to decline. The national government is in charge of redistributive policies, and in its absence, fiscal disparity will continue to increase—as it did in the 1990s. The DF surely will not take charge of compensating for the tremendous differences in income and infrastructure that exist between the metropolitan municipalities and the delegations. The federal government must deal with this situation

¹⁶ Political rivalry exists both between the federal government and the DF, and between the DF and the State of Mexico. In terms of the DF-federal relationship, suffice it to say that ever since the beginning of the current administration of President Fox in the year 2000, he and Mayor López Obrador have fought endlessly, to the point that in 2005 the federal government requested that the mayor be stripped of his political immunity so as to ban him from running in the 2006 presidential election. Concerning the rivalry between the DF and the State of Mexico, this arises from the fact that they are the two strongest economic and political jurisdictions in the country. Actually, as things stand today, it is quite likely that the Mayor of the DF and the Governor of the State of Mexico will be the respective PRD and PRI candidates who will be running against the incumbent PAN government in the presidential election of 2006.

¹⁷ For an interesting discussion on how to create metropolitan constituencies in the United States, see G. Frug's (2002) proposal to form regional legislatures.

directly. Recently, the interim mayor of the DF and the newly elected governor of the State of Mexico got together to begin discussing the formation of a metropolitan agenda, and they declared to the press that the “first” issue that they would discuss was presenting a proposal to the federal government to channel resources to the ZMVM and to the other metropolitan areas in the country (*El Universal*. September 1, 2005).

The second issue for policymakers to reflect upon is the idea of creating a metropolitan identity. As I argued in Chapter 2, despite the fact that metropolitan areas are politically, legally, and administratively fragmented, in practice they are organic territorial continuums whose functional components are interlinked. Theorists who study metropolitan formations in the U.S. have suggested that the linkage of these components can take either of two forms: a zero-sum game, or a positive-sum game (Haughwout 1999). The first theory holds that the overall level of metropolitan activity is predetermined, so that the distribution of those activities throughout the metropolitan area may be a source of competition between the jurisdictions in the metropolitan area. The second sustains that the metropolitan area’s growth is not a fixed quantity to be distributed across jurisdictions, but instead the fortune of the metropolitan area as a whole depends on a healthy and positive relationship among its jurisdictions.

In the case of the ZMVM, politicians from both the DF and the State of Mexico have understood the linkage of the functional components of the area as a zero-sum game; what is lost by one part of the metropolitan area is gained by the other. Indeed, thus far the language of the metropolitan debate has been based on sovereignty, legal rights, and externalities, rather than cooperation, understanding, and the common good. However, politicians in the ZMVM must begin to understand that the fortune of the metropolitan area depends on the healthy and positive relationship between the parts. Problems of pollution, security, water provision, etc. accrue to the metropolitan area as a whole, so that stakeholders must begin to recognize that if they do not move beyond their narrow political views and approach these problems in a collegial way, everybody will lose in the long run.

Third, and last, is the necessity of getting started. Back in 1967 Oldman et al. pioneered a study on the financing of urban development in Mexico City which found that metropolitan planning in Mexico City was at an embryonic stage and that underscored the necessity of finding gradual, rather than comprehensive solutions to the urban problems of Mexico City. Since then, many alternatives have been discussed—and some even implemented—but metropolitan problems prevail (see Davis and Raich 2003). In this study, I suggest what seem to me to be the two policy options that have the best chance of succeeding in a political environment so adverse to metropolitan cooperation. Although there are many others, these options represent a first step upon which other more ambitious solutions could be designed. When I asked Myron Orfield, one of the main institutional engineers of the metropolitan solution in Minnesota, what political strategy was undertaken to create a metropolitan agenda in that region, he emphasized that a step-by-step approach was used. The political status quo serves so many local interests that the only way to gain political support is to start small. In Minnesota, they started by forming a coalition around the metropolitan problems related to specific services, and then they relied on those coalitions to expand the metropolitan agenda to other services (Interview V). Thus, the formation of a metropolitan agenda is an organic process that comes into being gradually, piece-by-piece, and it needs to start somewhere. In the case of the ZMVM, creating a transportation authority for the metropolitan area could be a first step upon which other metropolitan coalitions could be formed in the future.

6.5. Conclusion

According to theory, fiscal disparity within metropolitan areas arises as a consequence of the existence of jurisdictions with significantly different levels of income, public resources, and demands. Fiscal decentralization exacerbates these disparities by allowing rich jurisdictions a large tax base and lower tax rates than less-rich jurisdictions. As a consequence, jurisdictions seek to retain individuals who yield "fiscal surpluses" and repel those who create "fiscal losses." This process becomes self-reinforcing as rich jurisdictions grow richer and poor jurisdictions grow poorer (Oakland 1979: 352). To deal with this situation, countries have come up with a number of models and policy

solutions to mitigate this unintended consequence of decentralization. However, this situation has no easy solutions, as these tools should be tailored to specific contexts and must confront strong political opposition.

In this study, I show how Mexico's process of decentralization increased fiscal disparity in the ZMVM during the 1990s. As I explain, this was the result of the interaction of multiple factors, in which fiscal decentralization both mitigates and exacerbates disparities. On the one hand, federal transfers followed a redistributive pattern that mitigated disparity. On the other hand however, decentralization accentuated the differing characteristics and capacities of the jurisdictions to collect local taxes. As a result, during the 1990s the ZMVM became a more fiscally fragmented area; this is, an area in which 18 million inhabitants live in communities with very different levels of income, tax capacities, and revenue needs. This is a negative situation for the ZMVM as the geographical concentration of poor households favors the reproduction of inter-generational poverty, social alienation, and informality (Rojas 2002). In this study, I also underscore that this situation does not have an easy solution, but I suggest a few policy measures that could be pursued to begin the process. But no matter how technically viable these policies are, my study emphasizes that in the ZMVM's current condition, little will be accomplished without a basic political agreement between the State of Mexico, the DF, and the federal government.

Because of the complexity of analyzing the impact of fiscal decentralization in metropolitan areas, I have focused on a single case. However, as I argued in the introduction, the reality of the ZMVM is similar to that of other metropolitan capitals in Latin America, such as Santiago, the Greater Buenos Aires, or Metropolitan Lima. The question is then, to what extent can my results be applied to these other metropolitan capitals? Although the results of a single case study cannot be generalized, I would argue that there are abundant similarities between the ZMVM and other metropolitan capitals in Latin America that cause me to expect similar processes of urban segregation and fiscal fragmentation. Not only does the ZMVM share with these other Latin American capitals similar past experiences with industrialization and urbanization (see Rojas 2002 and

Klink 2002), they are also currently going through similar processes of fiscal decentralization (see Prud'homme et al. 2004 and Linder 2004). Like the ZMVM, these capitals are centers of political and economic power, they have similar legal status, and they are characterized by rich central cores surrounded by significantly poorer metropolitan areas.¹⁸

Although, I am not aware of studies that have sought to directly assess the impact of fiscal decentralization on the fiscal disparity of other Latin American capitals, my results conform to those of other studies from broader perspectives, which have also found that urban segregation and inequalities have increased in the last ten or fifteen years. Pérez, (n.d.: 14) for example, argues that “the new metropolitan configuration of the Greater Buenos Aires is characterized by high levels of inequality that tend to create polarization.” According to him, it was precisely due to the decentralization process that the Greater Buenos Aires became more heterogeneous in the 1990s, with the suburbanization of the upper and middle-income classes and their contiguity with lower income groups. Similarly, on a more general level, Rojas (2002), argues that spatial segregation is another characteristic of urban poverty in large Latin American cities. According to him, decentralization aggravates this situation, as there are no efficient mechanisms for intergovernmental coordination and local governments often lack resources to finance their newly-assigned responsibilities. Other studies, like Linder’s on Metropolitan Lima (2004: 7), underscore that “the process of fiscal decentralization that is beginning in Peru will have important consequences for metropolitan municipal public finances,” and mentions that further studies must further investigate this issue.

As I have shown, my results conform to those of other available studies and to the expectation that decentralization may increase fiscal disparity in metropolitan areas. It is still too soon, however, to reach any sound conclusions. Only one year ago, Bird and Slack, two long-time students of public finance, published a study on the “Fiscal Aspects

¹⁸ The Greater Buenos Aires, for example, has a proportion of poor households three times higher than that of the City of Buenos Aires (INDEC). The Greater Buenos Aires (11.8 million inhabitants) is comprised by the city of Buenos Aires (2.7 million inhabitants) and by 25 municipalities (9.1 million inhabitants) of the province of Buenos Aires.

of Metropolitan Governance” (2004) in which they emphasized the lack of studies on metropolitan finances in Latin America. They underscored the necessity of serious fieldwork in order to produce regional databases and to conduct meaningful analyses at the metropolitan level. I trust that this study is a first step in that direction.

Appendix 1. Basic characteristics of Mexico’s system of intergovernmental fiscal relations

The structure of intergovernmental fiscal relations in Mexico has two main components: a system of unconditional revenue-sharing (*participaciones*) and a system of earmarked transfers (*aportaciones*). The *participaciones* system was created in 1980 and its funds come from Item 28 of the federal budget. The *aportaciones* system was formed in 1997 with resources from Item 33 of the federal budget. Both systems are regulated by the National System of Fiscal Coordination (SNCF), whose main characteristics I describe below.

I. Unconditional revenue sharing system: Participaciones

The SNCF guides the distribution of resources between tiers of government in Mexico. This system was created in 1980 with the objective¹ of increasing the total revenue of the government, avoiding the use of one tax source by more than one tier of government, and improving the regional distribution of resources. In order to do so, the SNCF dictates that subnational governments must yield a part of their tax bases to the central government, in exchange for an increase in *participaciones*.

The SNCF is a contract between the federal government and the states; however, the Law of Fiscal Coordination (LCF) incorporates the municipalities in this agreement by mandating that states should transfer at least 20 percent of their federal revenue shares to their municipalities.² Each state’s law of fiscal coordination specifies the ways in which it must allocate the *participaciones* to its municipalities, which must be done according to the national guidelines set in the LCF. Subnational governments receive their revenue shares through various funds that are calculated as a proportion of the Federal Revenue-Sharing Pool (*Recaudacion Federal Participable*, RFP) that is composed of the shared taxes collected from the federal income tax, the value-added tax, and fees from the

¹ Up to 1980, the revenue shares that the subnational governments received from the central government came from only two sources: taxes on commercial transactions (ISIM), and “special” taxes. In 1980, with the creation of the SNCF, the ISIM was supplemented by a general sales tax (IVA), and it became part of the tax base that was further transferred to the subnational governments.

² The LFC is the legal document that regulates the operation of the SNCF.

extraction of minerals and oil. In 2002, the system of *participaciones* absorbed 23 percent of the RFP (SHCP 2003).

The characteristics of the revenue-sharing funds as well as their allocation formulas have varied greatly over time. Currently, the *participaciones* are composed of two main funds, the General Fund of Revenue-Sharing (*Fondo General de Participaciones*, FGP) and the Fund for Municipal Promotion (*Fondo de Fomento Municipal*, FFM). The FGP is formed (as of 2002) by 21.2 percent of the RFP and is distributed according to a formula based on the following three criteria: (i) 45.17 percent is distributed to the states on an equal per capita basis; (ii) 45.17 percent is allocated according to a coefficient that reflects the taxable capacity and the revenue-raising efforts of the states; and (iii) 9.66 percent is allocated in inverse proportion to the previous two criteria. The FGP revenue-raising coefficient is calculated according to the following formula:

$$B^i = \frac{(CP_{t-1}^i)(IA_{t-1}^i)}{IA_{t-2}^i}; \quad CP_t^i = \frac{B^i}{TB}$$

where

IA_{t-1}^i = assignable taxes collected in state i in year $t-1$,

IA_{t-2}^i = assignable taxes collected in state i in year $t-2$,

$TB = \sum B^i$ = total entitlements,

CP_{t-1}^i = revenue-sharing coefficient for state i in year $t-1$, and

B^i = entitlement to state i .

This formula takes into account two elements: (1) a fiscal effort indicator, which includes “assignable” taxes collected in state i (federal taxes on the ownership of vehicles, on new cars and on production excises), and (2) the state’s share in total entitlements from the preceding year. The former is derived by dividing the “assignable” taxes collected the preceding year by those collected the year before. As rightly noted by Amieva-Huerta (1997: 579), “this formula generates a pie that must be divided so that one state’s loss is another’s gain.”

The other important *participaciones* fund since 2002 is the FFM, which is made up of 1 percent of the RFP and is directly transferred from the states to the municipalities according to the following federal formula, based on the collection of property taxes and water fees:

$$CE^i = \frac{A^i}{TA}; \quad A^i = \frac{(CE_{t-1}^i)(IPDA_{t-1}^i)}{IPDA_{t-2}^i}$$

where

A^i = revenue sharing to state I ,

$TA = \sum A^i$,

CE_{t-1}^i = revenue-sharing coefficient for state i in year $t-1$,

$IPDA_{t-1}^i$ = total property tax and water fee collections of state i in year $t-1$, and

$IPDA_{t-2}^i$ = total property tax and water fee collections of state i in year $t-2$

In addition to the FGP and the FFM, the system of *participaciones* is supported by other minor funds such as a contingency reserve (0.2% of RFP) and a proportion of the Special Tax on Products and Services (0.4% of RFP). States also receive 2.4 percent of the RFP in economic incentives, mostly generated from the taxes on used (1.6% of the RFP) and new cars (0.6% of RFP).

II. Unconditional revenue sharing system: Aportaciones

In 1997 Congress created the *aportaciones*, a single system of earmarked transfers for states and municipalities. The *aportaciones* system is comprised of seven funds that together amount to 26% of the RFP (as of 2002). The funds are targeted to the decentralization of three main areas: health, education and infrastructure. The following table presents the funds of the *aportaciones* system together with the relative weight of each one of these funds.

Table A.1. Aportaciones system by fund. Relative weight and as proportion of RFP

	% Total	% RFP
FAEB- Fund for Basic Education	62.0	17.9
FASSA- Fund for Health Services	11.6	3.5
FAIS- Fund for Social Infrastructure (Total)	9.7	2.8
FISE- Fund for Social Infrastructure (State)	12.1	0.3
FISM- Fund for Social Infrastructure (Municipal)	87.9	2.5
FORTAMUN- Fund for Municipal Strengthening	9.2	2.8
FAM- Multiple Fund	3.2	0.9
Infrastructure in basic education	n.a.	n.a.
Infrastructure in higher education	n.a.	n.a.
Social assistance	n.a.	n.a.
FAETA- Fund for technological education and for the elderly	1.5	0.4
Fund for technological education	n.a.	n.a.
Fund for education of the elderly	n.a.	n.a.
FASP- Fund for Public Security	2.8	0.4
TOTAL	100.0	28.7

Source: Author, based on SHCP (2003) and www.inafed.gob.mx (2004).

FAEB and FASSA are by far the most important funds, but they are targeted only to the State level. States use these funds to finance the decentralized systems of health and education. At the municipal level, the most important funds are the “Fund for Municipal Social Infrastructure” (*Fondo para la Infraestructura Social Municipal*, FISM) and the “Fund for Municipal Strengthening” (*Fondo para el Fortalecimiento de los Municipios*, FORTAMUN). The FORTAMUN is composed of approximately 2.8 percent of the RFP, and is automatically distributed on a monthly basis from the states to the municipalities. This fund is distributed on a per capita basis. The FISM is composed of approximately 2.5 percent of the RFP, and these resources are distributed from both the federal government to the states, and the states to the municipalities according to a poverty formula. Most states allocate the FISM to their municipalities according to a simple formula that adds the following four variables, assigning an equal weight to each:³

³ The *SEDESOL* distributes the FISM to the states according to an elaborate poverty formula based on the calculation of a Global Poverty Index. Originally, states were expected to distribute the *FISM* to their municipalities according to this formula, but because of the complexity of the formula and the lack of data to make the calculations, only six states have been able to use it. The rest of the states distribute the *FISM* to their municipalities according to the simple average formula.

- 1) Employed population earning more than two times the minimum wage.
- 2) Illiterate population fifteen years of age or older.
- 3) Drainage availability
- 4) Electricity availability

The Secretariat of Social Development (*SEDESOL*) distributes the FISM to the states, and the local legislatures determine the allocation of this fund among the municipalities. Once they receive the FISM, each municipality, together with the local population, decides upon the allocation of these resources amongst the following infrastructure projects: water, sewers, drainage, urbanization, electricity in rural areas and poor neighborhoods, basic health and education, roads, housing improvements, and productive rural infrastructure. The FISM transfers are earmarked to these projects and municipalities may only use up to 2 percent of the FAISM for “institutional programs” (Scott 2000).

Appendix 2. Characteristics of the ZMVM on the state and local level
Table A2.1. General characteristics of the ZMVM

Metropolitan municipalities	Population	Territory (Km ²)	Population Density	GDP*	Index**	Rank***
Acolman	61,250	52	1,178	4,546	0.78	305
Amecameca	45,255	169	268	8,274	0.81	138
Apaxco	23,734	86	276	3,762	0.77	462
Atenco	34,435	140	246	3,528	0.77	457
Atizapán De Zaragoza	467,886	75	6,238	7,619	0.82	102
Atlautla	25,950	135	192	2,146	0.71	1,102
Axapusco	20,516	285	72	2,707	0.73	897
Ayapango	5,947	57	104	3,038	0.76	597
Chalco	217,972	234	932	3,612	0.76	558
Chiautla	19,620	25	785	4,171	0.78	364
Chicoloapan	77,579	63	1,231	4,381	0.77	393
Chiconcuac	17,972	17	1,057	3,789	0.78	335
Chimalhuacán	490,772	34	14,434	4,462	0.77	414
Coacalco De Berriozábal	252,555	45	5,612	6,238	0.83	73
Cocotitlán	10,205	17	600	4,380	0.79	301
Coyotepec	35,358	45	786	3,629	0.76	538
Cuautitlán	75,836	37	2,050	6,083	0.82	124
Cuautitlán Izcalli	453,298	110	4,121	6,816	0.83	77
Ecatepec De Morelos	1,622,697	126	12,879	4,621	0.79	259
Ecatzingo	7,916	55	144	1,810	0.70	1,291
Huehuetoca	38,458	149	258	4,315	0.78	379
Hueypoxtla	33,343	270	123	3,715	0.74	799
Huixquilucan	193,468	110	1,759	10,066	0.83	71
Isidro Fabela	8,168	59	138	3,131	0.74	829
Ixtapaluca	297,570	202	1,473	4,598	0.79	288
Jaltenco	31,629	39	811	5,041	0.80	221
Jilotzingo	15,086	144	105	4,384	0.76	582
Juchitepec	18,968	66	287	2,813	0.73	893
Melchor Ocampo	37,716	32	1,179	4,341	0.78	350
Naucalpan De Juárez	858,711	155	5,540	8,211	0.82	108
Nextlalpan	19,532	50	391	6,471	0.80	231
Nezahualcóyotl	1,225,972	62	19,774	6,151	0.81	148
Nicolás Romero	269,546	206	1,308	4,389	0.78	365
Nopaltepec	7,512	32	235	3,166	0.74	805
Otumba	29,097	205	142	2,936	0.73	847
Ozumba	23,592	52	454	3,098	0.75	684
Papalotla	3,469	9	385	4,739	0.79	273
Paz, La	212,694	37	5,748	6,031	0.80	208
San Martín De Las Pirámides	19,694	59	334	4,316	0.78	370
Tecámac	172,813	137	1,261	4,915	0.79	252
Temamatla	8,840	49	180	4,871	0.79	261

Table A2.1. Cont.

Metropolitan municipalities	Population	Extension	Density	GDP*	Index**	Rank***
Temascalapa	29,307	145	202	3,091	0.74	833
Tenango Del Aire	8,486	61	139	3,378	0.76	585
Teoloyucán	66,556	35	1,902	4,234	0.78	362
Teotihuacán	44,653	69	647	4,321	0.78	387
Tepetlaoxtoc	22,729	235	97	3,419	0.75	656
Tepetlixpa	16,863	104	162	2,828	0.74	809
Tepotzotlán	62,280	209	298	5,345	0.80	240
Tequixquiac	28,067	127	221	3,767	0.76	540
Texcoco	204,102	504	405	5,706	0.80	203
Tezoyuca	18,852	17	1,109	4,125	0.78	310
Tlalmanalco	42,507	162	262	4,572	0.79	264
Tlalnepantla De Baz	721,415	82	8,798	6,812	0.82	116
Tultepec	93,277	22	4,240	4,838	0.79	262
Tultitlán	432,141	56	7,717	4,855	0.80	193
Valle De Chalco Solidaridad	323,461	45	7,188	4,890	0.78	363
Villa Del Carbón	37,993	94	404	2,113	0.68	1,495
Zumpango	99,774	209	477	4,167	0.77	456
Average	168,019	105	2,230	4,548		
Delegations (DF)						
Alvaro Obregón	687,020	97	7,094	21,315	0.88	7
Azcapotzalco	441,008	33	13,455	16,203	0.87	9
Benito Juárez	360,478	27	13,442	35,594	0.93	1
Coyoacán	640,423	54	11,940	24,943	0.90	4
Cuajimalpa de Morelos	151,222	70	2,160	21,927	0.87	8
Cuauhtémoc	516,255	33	15,751	20,018	0.89	5
Gustavo A. Madero	1,235,542	88	14,056	14,556	0.86	17
Iztacalco	411,321	22	18,405	15,027	0.87	14
Iztapalapa	1,773,343	113	15,662	12,184	0.85	32
Magdalena Contreras, La	222,050	63	3,549	18,356	0.87	10
Miguel Hidalgo	352,640	46	7,635	27,819	0.90	3
Milpa Alta	96,773	286	338	8,206	0.82	127
Tláhuac	302,790	100	3,033	11,582	0.84	36
Tlalpan	581,781	308	1,886	20,015	0.88	6
Venustiano Carranza	462,806	33	14,120	15,032	0.87	12
Xochimilco	369,787	118	3,142	14,806	0.86	16
Average	537,827	93	9,104	18,599		

Source: Author, based on INEGI and UNDP data.

* Expressed in per capita adjusted \$USD.

** UNDP Human Development Index

*** National ranking according to UNDP's Human Development Index

Table A2.2. Presidents, Mayors, and Governors from 1946 to the present.

President	Mayor (DF)	Governor (State of Mexico)
M. Alemán Valdez (1946-1952)	E. Casas Alemán (1946-1952)	A. del Mazo Vélez (1945-1951)
A. Ruíz Cortines (1952-1958)	E. P Uruchurto (1952-1958)	S. Sánchez Colín (1951-1957)
A. López Mateos (1958-1964)	E. P Uruchurto (1958-1964)	Gustavo Baz Prada (1957-1963)
G. Díaz Ordaz (1964-1970)	E. P Uruchurto (1964-1966) A. Corona del Rosal (1966-1970)	J. Fernández Albarrán (1963-1969)
L. Echeverría Álvarez (1970-1976)	A. Martínez Domínguez (1970-1971) O. Senties (1971-1976)	C. Hank González (1969-1975)
J. López Portillo (1976-1982)	C. Hank González (1976-1982)	J. Jiménez Cantú (1975-1981)
M. De la Madrid Hurtado (1982-1988)	R. Aguirre Velázquez (1982-1988)	A. del Mazo González (1981-1986)
C. Salinas de Gortari (1988-1994)	M. Camacho Solís (1988-1993)	A. Baranda García* (1986-1987) M. Ramón Beteta (1987-1989) I. Pichardo Pagaza* (1989-1993)
E. Zedillo Ponce de León (1994-2000)	O. Espinoza Villareal R. Robles Verlanga C. Cardenas Solorzano	E. Chuayffet Chemor (1993-1995) C. Camacho Quiroz* (1995-1999)
V. Fox Quesada (2000-2006)	A.M. López Obrador (2000-2005) A. Encinas (2005-2006)	A. Montiel Rojas (1999-2005) E. Peña Nieto (2005-2010)

Source: Author, based on data from Davis (1994), Iracheta (2002), and others.

Appendix 3. The ZMVM, the DF, and the State of Mexico: Several calculations

Section 3.1. Basic characteristics of the municipal structure

In Mexican municipalities the executive power is vested in the municipal president or mayor, and the legislative branch is composed of two groups of representatives, the legal trustees (*sindicos*) and the councilors (*regidores*). The *sindicos* are the legal representatives of the *ayuntamiento* and serve as liaisons with the control agency of the state legislature (*Contaduría General de Glosa*), which oversees the financial management of the municipalities. The *regidores* govern the regular activities of the municipality. The *sindicos* and the *regidores*, together with the mayor form the *cabildo*, the highest authority in the municipality. The *cabildo* is a sort of local legislative branch but it has a deliberative rather than a normative nature. Its legislative capacity is restricted to the authorization of ordinances and administrative regulations. Due to this limited legislative capacity, the state legislature passes legislation on behalf of the municipalities. The state legislatures have a vast amount of power over municipal life. State legislatures not only have the power to suspend or remove from office the *ayuntamiento* as a whole or any of its members, but are also in charge of delimiting the territories of the municipalities and of creating and abolishing them.

Table A3.1: Property tax by state 1989-2001 (In thousands of real pesos of 2002)

	1989	1994	1995	1996	1997	1998	1999	2000	2001	%
Aguascalientes	11,186	56,325	41,877	36,346	46,992	49,556	51,783	60,738	67,525	0.4
Baja California	100,155	327,232	262,061	228,833	240,692	244,688	244,819	292,746	348,102	2.6
Baja California S.	27,875	70,212	48,764	44,577	48,981	51,291	62,559	73,109	84,661	0.6
Campeche	5,850	26,876	26,248	18,550	18,166	17,704	22,468	24,426	28,097	0.2
Coahuila	71,118	144,785	122,725	129,419	123,809	140,521	151,267	182,939	202,669	1.4
Colima	10,671	36,141	26,447	26,263	33,551	35,602	37,499	43,955	51,477	0.3
Chiapas	19,728	80,113	62,843	64,078	65,338	66,464	62,979	78,408	92,180	0.7
Chihuahua	96,585	510,799	360,449	322,853	323,513	334,197	345,545	442,170	491,632	3.4
Distrito Federal (DF)	912,255	5,773,904	4,477,120	5,012,476	4,804,207	4,822,988	5,047,955	5,793,733	6,511,742	47.2
Durango	35,537	67,164	50,526	50,841	55,644	51,426	56,360	54,965	60,282	0.5
Guanajuato	145,733	489,139	354,240	339,323	329,481	313,320	333,167	385,113	415,391	3.4
Guerrero	77,272	278,742	240,044	249,850	291,804	129,045	137,469	163,804	195,511	1.9
Hidalgo	32,496	90,343	67,532	68,792	86,401	94,844	73,152	83,569	141,637	0.8
Jalisco	150,026	654,036	449,816	509,552	506,113	515,276	518,807	670,798	724,107	4.7
Estado de México (State of Mexico)	672,297	1,107,558	866,728	1,019,905	932,297	931,115	992,332	1,120,719	1,351,824	9.8
Michoacán	36,090	83,658	75,676	77,829	94,187	105,301	111,199	156,485	179,065	0.9
Morelos	21,939	120,416	100,973	115,626	115,323	112,566	103,385	160,460	219,582	1.1
Nayarit	4,717	57,673	34,871	30,698	42,615	55,943	55,550	39,710	53,480	0.4
Nuevo León	30,028	602,956	490,089	470,877	484,766	484,645	517,282	597,114	703,349	4.4
Oaxaca	6,626	90,268	68,614	58,527	53,354	46,351	47,548	49,915	60,470	0.5
Puebla	60,055	205,955	179,464	147,657	159,578	154,706	190,974	207,984	226,812	1.5
Querétaro	18,201	114,496	100,990	96,906	116,312	98,259	112,699	153,865	210,146	1.0
Quintana Roo	49,005	167,832	129,751	137,914	154,782	159,487	191,017	220,489	250,636	1.5
San Luis Potosí	16,240	75,160	61,655	64,602	75,766	68,600	84,786	94,033	114,525	0.7
Sinaloa	127,632	357,669	248,377	250,827	233,292	239,556	222,996	255,804	288,342	2.6
Sonora	123,844	430,257	287,904	265,132	252,299	216,206	225,289	265,111	304,804	2.9
Tabasco	3,371	48,861	33,636	35,806	34,955	44,126	46,685	53,275	62,987	0.3
Tamaulipas	28,676	196,446	149,563	130,165	139,740	146,178	169,101	242,136	238,113	1.6
Tlaxcala	2,076	13,382	11,644	15,377	13,763	13,342	12,650	17,596	20,834	0.1
Veracruz	23,765	280,812	200,714	162,492	166,930	155,868	154,214	182,024	211,946	1.8
Yucatán	9,975	37,857	36,636	37,567	40,685	39,141	39,604	50,617	67,811	0.4
Zacatecas	22,542	70,822	49,374	41,390	40,570	46,496	51,271	58,501	69,020	0.5
Total	2,953,565	12,667,891	9,717,348	10,261,050	10,125,907	9,984,809	10,474,411	12,276,309	14,048,759	100

Author's calculations based on data from INDETEC

Table A3.2: State of Mexico (all municipalities). Relative weight of revenue accounts (percent of total and subtotal)

	1989	1995	1996	1997	1998	1999	2000	Average
Own-source	58.7	43.5	39.8	35.7	31.2	24.8	22.7	41.9
Taxes	32.0	57.7	56.9	60.0	50.1	48.7	56.5	51.8
Property tax	63.5	85.2	87.4	61.0	60.2	67.3	60.3	62.0
Other taxes	36.5	14.8	12.6	39.0	39.8	32.7	39.7	37.9
Fees	23.8	18.6	25.8	20.4	30.3	32.3	24.5	25.2
Products	3.7	6.3	7.4	6.1	6.4	6.3	4.5	6.4
Fines	40.5	13.4	6.8	11.1	9.4	8.9	10.2	14.6
Betterment levies	-	4.0	3.2	2.5	3.8	3.7	4.2	1.7
Participaciones	30.7	40.1	45.4	53.0	42.7	43.9	41.6	38.9
Aportaciones	-	9.3	4.6	1.6	16.6	20.2	27.4	6.6
Other	10.5	7.2	10.2	9.7	9.4	11.1	8.3	12.4

Source: Author's calculations, based on INEGI (2003)

Table A3.3: State of Mexico (all municipalities). Municipal revenues per capita (2002=100)

	1989	1995	1996	1997	1998	1999	2000	Annual rate
Total revenue	592.3	546.6	597.1	587.9	755.2	898.2	921.4	5.1
Own-source	347.9	237.6	237.7	210.0	235.8	222.5	208.9	(4.01)
Taxes	111.3	137.2	135.2	126.0	118.1	108.5	118.0	2.1
Property tax	70.7	116.8	118.2	76.9	71.1	73.0	71.2	1.5
Fees	82.8	44.1	61.4	42.8	71.4	72.0	51.2	(0.1)
Products	12.9	14.9	17.6	12.8	15.1	14.0	9.5	8.8
Fines	140.9	31.9	16.1	23.3	22.2	19.8	21.3	(9.6)
Participaciones	181.9	219.0	271.2	311.5	322.6	394.5	383.2	8.0
Aportaciones	181.9	219.0	271.2	289.4	294.1	377.4	368.8	7.7

Source: Author's calculations, based on INEGI (2003)

Table A3.4: State of Mexico (all municipalities). Total municipal spending

	Spending per person (constant 2002 pesos)							Proportion of total spending							
	1989	1995	1996	1997	1998	1999	2000	1989	1995	1996	1997	1998	1999	2000	Avg.
Total spending	592.3	546.6	597.1	587.9	755.2	898.2	921.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Current spending	321.4	336.7	356.9	373.1	429.7	481.9	498.1	54.3	61.6	59.8	63.5	56.9	53.6	54.1	58.9
Capital spending	175.2	87.8	122.7	106.2	159.7	234.1	194.8	29.6	16.1	20.6	18.1	21.1	26.1	21.1	21.5
Other spending	95.7	122.1	117.5	108.6	165.8	182.3	228.5	16.2	22.3	19.7	18.5	21.9	20.3	24.8	19.6

Author's calculations, based on INEGI (2003).

Table A3.5: DF. Allocation of FORTAMUN by delegation (pesos)

	2001	2002	2003	2004
Alvaro Obregón	129,250,328	147,690,297	151,410,912	159,404,033
Azcapotzalco	82,967,641	94,804,522	97,192,838	102,323,737
Benito Juárez	67,817,385	77,492,799	79,444,998	83,638,973
Coyoacán	120,483,949	137,673,231	141,141,496	148,592,485
Cuajimalpa	28,449,671	32,508,547	33,327,503	35,086,892
Cuauhtémoc	97,123,997	110,980,545	113,776,368	119,782,727
Gustavo A. Madero	232,444,774	265,607,355	272,298,537	286,673,428
Iztacalco	77,382,571	88,422,638	90,650,181	95,435,688
Iztapalapa	333,622,259	381,219,694	390,823,383	411,455,310
Magdalena Contreras	41,774,672	47,734,608	48,937,139	51,520,575
Miguel Hidalgo	66,342,808	75,807,846	77,717,598	81,820,381
Milpa Alta	18,206,081	20,803,518	21,327,601	22,453,504
Tláhuac	56,964,436	65,091,475	66,731,260	70,254,064
Tlalpan	109,451,523	125,066,823	128,217,507	134,986,227
Venustiano Carranza	87,068,538	99,490,489	101,996,854	107,381,362
Xochimilco	69,568,704	79,493,977	81,496,589	85,798,869
Distrito Federal (DF)	1,618,919,338	1,849,888,363	1,896,490,761	1,996,608,257
Real per capita allocation	193.24	208.91	205.97	213.51

Source: GDF, Ministry of Finance.

Table A3.6: DF. Allocation of FGP and FFM by delegation (in thousands of pesos)

	July to December of 2003				2004				
	FGP	%	FFM	%	FGP	%	FFM	%	Total
Alvaro Obregón	135,784	6.06	11,293	6.06	335,789	7.98	29,696	7.98	365,486
Azcapotzalco	124,643	5.56	10,366	5.56	215,548	5.12	19,063	5.12	234,611
Benito Juárez	139,619	6.23	11,611	6.23	176,188	4.19	15,582	4.19	191,770
Coyoacán	127,750	5.70	10,624	5.70	313,014	7.44	27,682	7.44	340,697
Cuajimalpa	66,594	2.97	5,538	2.97	73,912	1.76	6,537	1.76	80,448
Cuauhtémoc	284,849	12.70	23,690	12.70	252,326	6	22,315	6	274,641
Gustavo A. Madero	242,132	10.80	20,137	10.80	603,886	14.36	53,406	14.36	657,292
Iztacalco	102,713	4.58	8,542	4.58	201,038	4.78	17,779	4.78	218,817
Iztapalapa	256,142	11.42	21,302	11.42	866,743	20.61	76,653	20.61	943,395
Magdalena Contreras	67,960	3.03	5,652	3.03	108,530	2.58	9,598	2.58	118,128
Miguel Hidalgo	158,307	7.06	13,166	7.06	172,357	4.1	15,243	4.1	187,600
Milpa Alta	60,997	2.72	5,073	2.72	47,299	1.12	4,183	1.12	51,482
Tláhuac	81,138	3.62	6,748	3.62	147,992	3.52	13,088	3.52	161,080
Tlalpan	123,964	5.53	10,310	5.53	284,352	6.76	25,147	6.76	309,500
Venustiano Carranza	182,838	8.15	15,206	8.15	226,202	5.38	20,005	5.38	246,207
Xochimilco	87,056	3.88	7,240	3.88	180,738	4.3	15,984	4.3	196,722
TOTAL	2,242,488	100	186,497	100	4,205,914	100	371,961	100	4,577,875

Source: Author, based on data from the "Gaceta Oficial del Distrito Federal," April 22, 2004 and January 3, 2005.

Table A3.7: DF. Debt by delegation (in millions of pesos)

	2001	2002	2003	2004	Average	per capita*	% of total
Alvaro Obregón	171.6	124.0	101.7	52.9	112.6	163.8	7.6
Azcapotzalco	92.9	144.8	77.7	38.2	88.4	200.4	6.0
Benito Juárez	40.8	18.2	6.3	5.3	17.6	49.0	1.2
Coyoacán	183.1	84.0	90.1	46.8	101.0	157.8	6.9
Cuajimalpa	66.6	25.4	25.4	13.2	32.7	216.0	2.2
Cuauhtémoc	47.6	22.0	24.3	13.2	26.8	51.9	1.8
Gustavo A. Madero	388.1	175.4	179.2	116.4	214.8	173.8	14.6
Iztacalco	143.9	46.7	56.9	37.8	71.3	173.4	4.8
Iztapalapa	517.8	281.8	278.5	153.0	307.8	173.6	20.9
Magdalena Contreras	73.9	40.8	43.8	22.9	45.4	204.3	3.1
Miguel Hidalgo	84.4	96.9	52.5	27.2	65.2	185.0	4.4
Milpa Alta	108.6	72.2	68.0	40.6	72.4	747.9	4.9
Tláhuac	120.5	56.6	60.0	31.3	67.1	221.7	4.6
Tlalpan	127.9	89.0	72.7	43.2	83.2	143.0	5.6
Venustiano Carranza	89.5	44.5	48.1	25.2	51.9	112.1	3.5
Xochimilco	161.1	111.1	123.3	64.5	115.0	311.0	7.8
Distrito Federal (DF)	2,418.3	1,433.6	1,308.6	732.0	1,473.1	171.2	100.0

Author's calculations. Based on data provided by The General Direction of Public Debt, GDF. * Pesos

Table A3.8: State of Mexico. Total Municipal debt 2003 (in pesos)

MUNICIPALITY	DEBT	%	MUNICIPALITY	DEBT	%
ACOLMAN	169,997.00	0.02	NAUCALPAN	64,493,151.00	7.96
ALMOLOYA DE JUAREZ	10,341,599.00	1.28	NEXTLALPAN	349,457.00	0.04
ATIZAPAN	17,755,320.00	2.19	NICOLAS ROMERO	15,005,745.00	1.85
ATLAUTLA	1,684,409.00	0.21	ORO, EL	1,001,317.00	0.12
CAPULHUAC	5,000,000.00	0.62	OTZOLOTEPEC	6,568,000.00	0.81
CHIAUTLA	2,503,182.00	0.31	RAYON	1,500,000.00	0.19
CHIMALHUACAN	25,000,000.00	3.08	SAN FELIPE DEL PROGRESO	9,014,235.00	1.11
COACALCO	20,000,000.00	2.47	SAN JOSE DEL RINCON	6,200,000.00	0.77
CUAUTITLAN IZCALLI	26,522,080.00	3.27	TEMASCALCINGO	5,493,224.00	0.68
ECATEPEC	75,396,828.00	9.30	TEOLOYUCAN	3,001,170.00	0.37
HUIXQUILUCAN	97,037,827.00	11.97	TEXCALYACAC	800,000.00	0.10
IXTAPALUCA	5,000,000.00	0.62	TEXCOCO	20,000,000.00	2.47
IXTAPAN DE LA SAL	1,002,202.00	0.12	TIANGUISTENCO	4,000,000.00	0.49
IXTAPAN DEL ORO	1,027,770.00	0.13	TLALNEPANTLA DE BAZ	95,333,984.00	11.76
IXTLAHUACA	14,003,456.00	1.73	TLALNEPANTLA DE BAZ	185,908,445.00	22.94
JILOTEPEC	12,686.00	0.00	TONATICO	3,003,952.00	0.37
LA PAZ	7,677,372.00	0.95	TULTITLAN	35,728,928.00	4.41
LERMA	16,599,788.00	2.05	ZACAZONAPAN	852,337.00	0.11
METEPEC	9,909,577.00	1.22	ZINACANTEPEC	12,503,082.00	1.54
MORELOS	3,001,170.00	0.37	TOTAL	810,402,290.00	100.00

Source: CNBV. Normal font: Credit with commercial banks. Bold font: Credit with BANOBRAS.

Table A3.9: Mexico's expenditure assignments

Expenditure function	Federal government	State governments	Municipal governments
Defense	<ul style="list-style-type: none"> • 100 percent 		
Foreign Affairs and Economic Relations	<ul style="list-style-type: none"> • 100 percent 		
Labor policies	<ul style="list-style-type: none"> • 100 percent 		
Monetary and Financial policy	<ul style="list-style-type: none"> • 100 percent 		
Post and telecommunications	<ul style="list-style-type: none"> • Government and private providers 		
Education	<ul style="list-style-type: none"> • Setting policies and norms (SEP) • High schools and colleges (concurrent) • Federal technological institutes of higher education • Evaluation and audit of subnational performance • Labor relations and wage-setting • School construction supervision • All education in the Federal District • Approximately half of the technical schools • Most production of textbooks • Most teacher training 	<ul style="list-style-type: none"> • Financing, implementation, maintenance and equipment (concurrent) • High schools and state universities • Administration of programs and self-evaluation • Half of the technical schools • School construction (concurrent) • Adult education programs 	<ul style="list-style-type: none"> • Minimal role, school maintenance, and some school construction (concurrent)
Health	<ul style="list-style-type: none"> • Setting policies and norms (social security administration) • Evaluation and audit of subnational performance • Secondary and tertiary hospitals • Labor relations and wage determination • Most capital infrastructure decisions 	<ul style="list-style-type: none"> • Primary care for the rural population and the urban poor • Partly responsible for financing • Administration of programs • Epidemiology and preventive care • Reproductive health 	
Police and internal security	<ul style="list-style-type: none"> • Federal transfers to the states to strengthen state police • Federal and border police • Special police (concurrent) • Coordination of state and municipal public safety 	<ul style="list-style-type: none"> • Special police (concurrent) • State public order and safety 	<ul style="list-style-type: none"> • Local public order and safety
Agriculture and irrigation	<ul style="list-style-type: none"> • Funding for state programs in irrigation, water supply, and hydroelectric exploration • National irrigation programs and funding research • Rural development, rural roads and forestry • Funding for research 	<ul style="list-style-type: none"> • Rural development • Extension services • Drilling • Some research 	
Parks and recreation	<ul style="list-style-type: none"> • Biosphere reserves • National monuments • National parks (concurrent) 	<ul style="list-style-type: none"> • National parks (concurrent) 	<ul style="list-style-type: none"> • Local parks
Public transportation	<ul style="list-style-type: none"> • Most railways and airport operations have been privatized • Seaport operations being privatized 	<ul style="list-style-type: none"> • Some airports 	<ul style="list-style-type: none"> • Local transportation and transit

Environmental protection	<ul style="list-style-type: none"> • National standards • Approval of National Institute of Environment, National Water Commission, the Ministry of Health and the Ministry of Industry 	<ul style="list-style-type: none"> • States can adopt their own standards 	<ul style="list-style-type: none"> • Land use permits
Roads	<ul style="list-style-type: none"> • Federal highway construction and maintenance • Financing of rural road development 	<ul style="list-style-type: none"> • Construction and maintenance of state roads • Implementation of rural road development • Maintenance of secondary federal roads (with federal funds) 	<ul style="list-style-type: none"> • Local streets
Housing	<ul style="list-style-type: none"> • National programs for housing development 	<ul style="list-style-type: none"> • Some states have housing agencies 	
Price subsidies	<ul style="list-style-type: none"> • Market intervention programs (mostly phased out) 		
Tourism	<ul style="list-style-type: none"> • National programs (concurrent) 	<ul style="list-style-type: none"> • State programs (concurrent) 	
Industrial policy	<ul style="list-style-type: none"> • Concurrent 	<ul style="list-style-type: none"> • Concurrent 	
Social assistance and social security	<ul style="list-style-type: none"> • Concurrent 	<ul style="list-style-type: none"> • Implementation of school-lunch programs • Food assistance to the poor • Other programs in coordination with the Ministry of Social Development 	<ul style="list-style-type: none"> • Implementing of social infrastructure programs
Other infrastructure	<ul style="list-style-type: none"> • Social infrastructure for the poor 	<ul style="list-style-type: none"> • "State infrastructure" 	<ul style="list-style-type: none"> • Cemeteries • Abattoirs • Public markets • Street lights
Culture and libraries		<ul style="list-style-type: none"> • Public libraries 	
Water, sewerage and sanitation		<ul style="list-style-type: none"> • Water supply and sewage (concurrent) 	<ul style="list-style-type: none"> • Garbage collection • Water supply and sewage. Many water systems have been privatized, but municipalities retain debt liability (concurrent)

Source: Cabrero and Martinez-Vazquez (in Giugale and Webb eds. 2000).

Appendix 4. List of Interviews⁴

Interview A: José Ángel Gurría. SHCP (Ministry of Finance). Former Minister. March 2004.

Interview B: Javier Beristain. GDF (Ministry of Finance). Former Minister. March 2004.

Interview C: Jorge Mondragón. GEM (Ministry of Communications). Director of Construction. March 2004.

Interview D: Emilio Barriga. GDF (Ministry of Finance). Director of Fiscal Policy. June 2003.

Interview E: Horacio Duarte Olivares. Municipality of Texcoco. Former Municipal President. Querétaro Mexico, April 2001.

Interview F: Manuel Camacho Solís. GDF. Former Mayor. January 2003.

Interview G: Gabriel Yorio González. GDF (Ministry of Finance) Director of Public Debt. March 2004.

Interview H: Grupo Inmobiliario HIR. September 2004.

Interview I: Raúl Martínez Almazán. Municipality of Naucalpan. Former Chief of Staff. E-mail correspondence. July 7, 2004.

Interview J: María de los Ángeles Moreno. ALDF. Former Deputy. January 2003.

Interview K: Ignacio Marván. GDF. Advisor to the Mayor. January 2003.

Interview L: Arne aus den Ruthen Haag. Delegation of Miguel Hidalgo. Former Delegate. January 2003.

Interview M: Marco Antonio Michel. Delegation of Iztapalapa. Former Delegate. March 2004.

Interview N: Antonio García Carreño. GDF (Ministry of Finance). Under-Treasurer of Cadastre and Territorial Registries. June 2003.

Interview O: Alfonso Valencia. ALDF. Advisor to Former Deputy María de los Ángeles Moreno. March 2004.

Interview P: Rubén Ramírez Rivera. GDF. General Coordinator of Metropolitan Programs. January 2003.

⁴ Unless indicated these were personal interviews and were conducted in Mexico City.

Interview Q: Jorge Fernández Meré. GDF (Ministry of Finance), Assistant Director of Financial Administration. March 2004.

Interview R: Mario Curzio Rivera. METRO, Assistant Director of Construction. March 2004.

Interview S: Arturo Blancas y Calderon. METRO. Assistant Director of Budgeting. March 2004.

Interview T: Miguel Ángel Cerbón Navarrete. GEM (Ministry of Metropolitan Coordination). Director of Transportation and Urban Development. March 2004.

Interview U: María de los Ángeles Moreno. Weatherhead Center for International Affairs. Cambridge MA. February 2004.

Interview V: Myron Orfield. The Brookings Institution. Senior Fellow. In-class personal conversation. Harvard Law School Cambridge MA. November 2002.

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Gaceta Oficial del Gobierno del Distrito Federal

Gaceta Oficial del Gobierno del Estado de México

Diario Oficial de la Federación

List of Acronyms and Equivalences

ACIR	Advisory Commission on Intergovernmental Relations
ALDF	Legislative Assembly of the Federal District <i>Asamblea Legislativa del Distrito Federal</i>
AMCM	Metropolitan Area of Mexico City <i>Área Metropolitana de la Ciudad de México</i>
ARDF	Representative Assembly of the Federal District <i>Asamblea de Representantes del Distrito Federal</i>
BANOBRAS	National Bank of Public Works and Services <i>Banco Nacional de Obras y Servicios</i>
CADF	Water Commission for the Federal District <i>Comisión de Aguas del Distrito Federal</i>
CAM	Metropolitan Commission of the Environment <i>Comisión Ambiental Metropolitana</i>
CIDAC	Center of Research for Development (Mexico City) <i>Centro de Investigación para el Desarrollo</i>
COMETRAVI	Metropolitan Commission on Roads and Transportation <i>Comisión Metropolitana de Transporte y Vialidad</i>
CONACYT	National Council for Science and Technology <i>Consejo Nacional para la Ciencia y la Tecnología</i>
COVITUR	Commission of Urban Transport (DF) <i>Comisión de Vialidad y Transporte Urbano</i>
CNBV	National Banking and Assets Commission <i>Comisión Nacional Bancaria y de Valores</i>
CONAPO	National Council of Population <i>Consejo Nacional de Población</i>
COVITUR	Commission on Roads and Urban Transportation (DDF) <i>Comisión de Vialidad y Transporte Urbano</i>
DDF	Department of the Federal District <i>Departamento del Distrito Federal</i>

DF	Federal District <i>Distrito Federal</i>
FAEB	Fund for Basic Education <i>Fondo de Aportaciones para la Educación Básica</i>
FAETA	Fund for technological education and for the elderly <i>Fondo de Aportaciones para la Educación Tecnológica y de Adultos</i>
FAIS	Fund for Social Infrastructure <i>Fondo de Aportaciones para la Infraestructura Social</i>
FAISM	Fund for Municipal Social Infrastructure <i>Fondo de Aportaciones para la Infraestructura Social Municipal</i>
FAM	Multiple Fund <i>Fondo de Aportaciones Múltiples</i>
FASP	Fund for Public Security <i>Fondo de Aportaciones para la Seguridad Pública</i>
FASSA	Fund for Health Services <i>Fondo de Aportaciones para los Servicios de Salud</i>
FFM	Fund for Municipal Promotion <i>Fondo de Fomento Municipal</i>
FGP	General Fund of Revenue Sharing <i>Fondo General de Participaciones</i>
FIES	Fund for Investment in Federal Entities <i>Fondo de Inversión para los Estados</i>
FORTAMUN	Fund for Municipal Strengthening <i>Fondo para el Fortalecimiento Municipal</i>
GDF	Government of the Federal District <i>Gobierno del Distrito Federal</i>
GEM	Government of the State of Mexico <i>Gobierno del Estado de México</i>
IADB	Inter-American Development Bank

INAFED	National Institute for Federalism <i>Instituto Nacional para el Federalismo</i>
INDETEC	Institute for the Technical Development of Public Finances <i>Instituto para el Desarrollo Técnico de las Haciendas Municipales</i>
INEGI	National Institute of Statistics <i>Instituto Nacional de Estadística, Geografía e Informática</i>
IPN	Polytechnic National Institute <i>Instituto Politécnico Nacional</i>
ISAN	Tax on new cars <i>Impuesto sobre automóviles nuevos</i>
ISIM	Tax on commercial income <i>Impuesto sobre ingresos mercantiles</i>
IVA	Value Added Tax <i>Impuesto al Valor Agregado</i>
LCF	Law of Fiscal Coordination <i>Ley de coordinación fiscal</i>
OECD	Organization for Economic Cooperation and Development
PAFEF	Program for Strengthening the Federal Entities <i>Programa para el Fortalecimiento de las Entidades Federativas</i>
PRI	Institutional Revolutionary Party <i>Partido Revolucionario Institucional</i>
PAN	National Action Party <i>Partido Acción Nacional</i>
PRD	Democratic Revolutionary Party <i>Partido de la Revolución Democrática</i>
Ramo 33	Budgetary Item Number 33
RFP	Revenue Sharing Pool <i>Recaudación Federal Participable</i>
SEP	Secretariat of Public Education <i>Secretaría de Educación Pública</i>

SHCP	Secretariat of Finance and Public Credit <i>Secretaría de Hacienda y Crédito Público</i>
SNCF	National System of Fiscal Coordination <i>Sistema Nacional de Coordinación Fiscal</i>
SNTE	National Education Workers Union <i>Sindicato Nacional de Trabajadores de la Educación</i>
UNAM	National Autonomous University <i>Universidad Nacional Autónoma de México</i>
UAM	Autonomous Metropolitan University <i>Universidad Autónoma Metropolitana</i>
ZMVM	Metropolitan Zone of the Valley of Mexico <i>Zona Metropolitana del Valle de México</i>
ZMEM	Metropolitan Zone of the State of Mexico <i>Zona Metropolitana del Estado de México</i>
ZUVM	Urban Zone of the Valley of Mexico <i>Zona Urbana del Valle de México</i>

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