URBAN INFRASTRUCTURE: THE SITUATION OF STATES AND MUNICIPALITIES. AN OVERVIEW
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NÚMERO 43

RODOLFO GARCÍA DEL CASTILLO

URBAN INFRASTRUCTURE: THE SITUATION OF STATES AND MUNICIPALITIES. AN OVERVIEW
Introduction

In recent years, concerns over Mexico's urban development have multiplied. Greater demands have been placed on the country for urban infrastructure by the growth of the largest and medium-sized cities. The absolute growth in the population living in cities is a permanent trend resulting in a concentration in metrópolis and a preference for locating economic activities in cities.¹

At the same time, the country is undergoing a period of crisis and public funds must be used more efficiently, taking advantage of forms of action that combine public and private sector intervention, together with the participation of society. In addition, the context of globalization opens new possibilities for the participation of new actors (corporations, non-profit organizations, international associations, etc.) and the emergence of different conditions governing the generation of infrastructure (greater competition in globalized markets, the need for internationally applicable standards, etc.). NAFTA also constitutes a set of challenges and opportunities that must be taken into consideration.

The process of devolution -or decentralization- of power to the states and municipalities opens the way to greater shared responsibility for urban infrastructure policy. However, these local levels of government suffer severe shortcomings in their administrative structures, the professionalism of their personnel and the availability of financial resources, in addition to the legal limitations that continue to restrict their decision-making capacity.

This document looks at some of the most important elements in the current discussion on the needs for basic developed infrastructure in states and municipalities, and the ability of government at these levels to respond to them, in the context of the redefinition of responsibilities the New Federalism is starting to sketch. The efficient integration of resources to achieve better results implies seeking a greater integration of the private sector and society in the formulation and implementation of public urban infrastructure policies.

For private and community involvement to take shape, there must be a confluence of conditions in both the bottom-up (participation by citizens and competition among agents participating in the market) and top-down (processes to deregulate markets, decentralization to local levels of government, guarantees for private and social participation, strategic plan or forms of finance) categories.

This text offers a panorama of the urban infrastructure conditions -with special attention on drinking water, drainage, sewage and solid waste services- and the challenges facing those who participate in providing it. There is an emphasis on

the role of local government (states and municipalities) in the formulation and implementation of public infrastructure and services policy.

I. INFRASTRUCTURE NEEDS IN STATES AND MUNICIPALITIES: the overall situation.

The rapid growth of urban areas has led to an increase in the requirements for basic urban infrastructure. Calculations indicate that by the year 2000 the population of Mexico will reach 99,199,000 with more than 60% concentrated in cities. The pressures on state and municipal governments, as the first point of contact between the citizens and their representatives, will grow as the demands made on them grow, and they will probably assume greater responsibilities in the process of decentralization.

According to the estimates presented in the Urban Development Program 1995-2000, almost 372,940 acres (1509.21 km²) - this is a similar area of the Federal District - are earmarked for inclusion as urban land in the plans and programs covering the four largest metropolitan areas (Mexico City - the Federal District and 18 municipalities in the State of Mexico), Guadalajara (G. City and ten municipalities), Monterrey (M. City and seven municipalities) and Puebla (P. City and 15 municipalities), the centers in the 100 Cities Program (116 medium-sized and small cities covering 207 municipalities) and the state-priority cities (places with more than 15,000 inhabitants).

The cities growth forecasting put serious pressure on activities to improve urban equipment, indispensable for an improved regional population distribution that, in turn, would allow the regions' comparative and eventually competitive advantages to be fully exploited. This could lead to self-sustaining regional development building on and consolidating cities' systems and networks.

However, the situation of national coverage in certain basic services such as drinking water, drainage and the disposal of solid waste are far from encouraging, as the following figures show:

1. Running drinking water and sanitation reach only 83.5% and 67% of the population, respectively.

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1 *Annual population Information provided by CONAPO (National Population Council).

2 This program is part of The National Development Plan 1995-2000 in charge of SEDESOL.


2. These percentages mean that 15.1 million Mexicans are without running water. And 30.2 million are without service of drainage.

3. Every day, the country's cities generate 89,540 tons of solid waste. However, only 70% - 62,700 tons - are collected, and out of this amount, only 25% (approx. 15,700 tons) are dumped in land-fills. These inadequacies in coverage are one reason 73,870 tons of garbage are dumped at illegal sites, in drains or in rivers and streams every day.

4. There are serious problems in the industrial waste handling - only 20% is treated in any way.

These statistics give us a better understanding of the problems facing services in Mexico. However, we must also present the situation in which potential participants in the generation of infrastructure find themselves. This article offers an approximate diagnosis of the conditions facing the public and private participants related to urban services policy. The intention is to highlight the opportunities and challenges they must take and overcome to meet the growing demand for urban services and equipment.

Furthermore of states overview is necessary to present a municipalities' perspective.

The basis of the information used in this section comes mainly from the preliminary data of the National Municipalities Census: Profile of Mexican municipalities, prepared in 1995 by CEDEMUN-INEGI.

The Census' data provide us with a clearer idea of the conditions and coverage of services in municipalities, the problems of providing them, the importance they are given and the proportion of the expense budget assigned to them.

According to the Profile of Mexican Municipalities Census, some of the inertia that prevented local development in the past persists. When the questionnaires were filled out, the total number of municipalities was 2,395. Today there are approximately 2,412.

Since 1983 with the amendments to article 115 of the Mexican Federal Constitution, the municipality is responsible for providing the following services: a) drinking water and sewage, b) street lighting, c) cleaning, d) wholesale and retail markets, e) cemeteries, f) abattoirs, g) streets, parks and gardens, h) public security and traffic policing, i) such others as local legislators deem in accordance with the municipality's capacities. In practice, for many municipalities, services such as water and sewage and to a large extent, street lighting, do not strictly depend on their administrative apparatus (or budgets) although their participation in maintenance and

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6These data have yet to be published. The CIDE has access to them thanks to a cooperation agreement with CEDEMUN (Secretariat of Government's Center for Municipal Development).

The relation between infrastructure and services is very close. In the answers over coverage and quality of services in Census' questionnaire, the municipal officials considered to benefited citizens and also the public works realized.

The coverage of public services is insufficient in Mexico. Inadequacies in services can even be found in *cabeceras* (the main town in a municipality). Table 1 offers a description of basic urban services coverage. The widest coverage (drinking water) is not greater than 80%. If we consider that outside of the main towns (cabeceras), in the villages and smaller settlements, rates are even lower, the backwardness of coverage in Mexico is obvious.

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>PERCENTAGE OF COVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking Water</td>
<td>79.55</td>
</tr>
<tr>
<td>Drainage and Sewage</td>
<td>51.25</td>
</tr>
<tr>
<td>Public Lighting</td>
<td>78.02</td>
</tr>
<tr>
<td>Public Security</td>
<td>73.39</td>
</tr>
<tr>
<td>Traffic policing</td>
<td>33.57</td>
</tr>
<tr>
<td>Street Cleaning</td>
<td>58.55</td>
</tr>
<tr>
<td>Garbage Collection</td>
<td>65.03</td>
</tr>
</tbody>
</table>

Source: Author’s elaboration based on preliminary data from *Censo Nacional de Municipios: Perfil de los Municipios Mexicanos*, CEDEMUN-INEGI 1995.

The municipalities' work in the field of infrastructure generation is complex because apart from implying a combination of factors and resources it involves a process of negotiation and agreement with government agencies at different levels and with society. The municipality must satisfy the demands of its citizens (interest groups, pressure groups and specific target groups) and also ensure the feasibility of projects receiving finance (ensuring the sources of resources with private banks, development banks or private or social agents), technical aspects (either directly, with federal and state support, or through a private developer) and continuity (establishing terms and operating conditions).

Some services present for the municipalities serious difficulties, generally by their high cost or technical difficulty for their providing. The Table 2, present the
officials municipal’s opinions, on those services that consider “most problematic”. The drinking water service is the “most problematic” and we’ll see in subsequent section that service is very spend in the mexicans municipalities budgets.

Of course the lack of financial resources -principally own resources- cause that the municipal expenditure is insufficient, and municipalities continued depend of federal and state government investment for public works.

**TABLE 2**

**MOST PROBLEMATIC SERVICES ACCORDING TO MUNICIPAL OFFICIALS**

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>NUMBER OF MUNICIPALITIES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking Water</td>
<td>872</td>
<td>36.4</td>
</tr>
<tr>
<td>Drainage and Sewage</td>
<td>249</td>
<td>10.4</td>
</tr>
<tr>
<td>Public Lighting</td>
<td>197</td>
<td>8.2</td>
</tr>
<tr>
<td>Public Security</td>
<td>352</td>
<td>14.7</td>
</tr>
<tr>
<td>Traffic Policing</td>
<td>23</td>
<td>1.0</td>
</tr>
<tr>
<td>Street Cleaning</td>
<td>110</td>
<td>4.6</td>
</tr>
<tr>
<td>Garbage Collecting</td>
<td>128</td>
<td>5.3</td>
</tr>
<tr>
<td>Paving</td>
<td>153</td>
<td>6.4</td>
</tr>
<tr>
<td>Markets</td>
<td>56</td>
<td>2.3</td>
</tr>
<tr>
<td>Whole Sale Markets</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>17</td>
<td>0.7</td>
</tr>
<tr>
<td>Abattoir</td>
<td>29</td>
<td>1.2</td>
</tr>
<tr>
<td>Parks</td>
<td>7</td>
<td>0.3</td>
</tr>
<tr>
<td>Gardens</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>107</td>
<td>4.5</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>0.3</td>
</tr>
<tr>
<td>Do not mention</td>
<td>70</td>
<td>2.9</td>
</tr>
<tr>
<td>No answer</td>
<td>14</td>
<td>0.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2395</td>
<td>100</td>
</tr>
</tbody>
</table>

**Sources:** Author’s elaboration based on preliminary data from *Censo Nacional de Municipios: Perfil de los Municipios Mexicanos*, CEDEMUN-INEGI 1995.

* *According to municipal officials.*
2. FEDERAL, STATES AND MUNICIPAL RESPONSE: The states and municipalities' limitations, given the need for greater infrastructure.

The independent production of urban infrastructure by states and municipalities is limited. Although New Federalism seeks to give local levels of government greater decision-making powers and autonomy in the use of their resources, today a marked centralism prevails. By now, let us offer a brief description of the financial problems for states and municipalities; in a latter section, we will describe the main legal problems -in infrastructure issues- for both governmental levels.

2.1 A general panorama of the financial situation of the states

There is no doubt that one of the main problems facing state governments in their commitment to produce wider urban infrastructure is the lack of financial resources. The facilities to assign resources and public funds are still centralized. The National Fiscal Coordination System (SNCF or SCF)\(^9\) has been severely criticized for the distribution formulas, its assignments and the restrictions it imposes on states and municipalities, limiting their ability to raise their own revenue. In the case of the states, some of the problems faced include:

1. The states depend to a large extent on federal budget allocations (participaciones of SNCF). According to studies, “on average, 60% of revenue comes from federal allocations (SNCF)” \(^10\). Before SNCF, in 1979, the federal allocation (participaciones) represented 25% of the states revenues, now are 60% or more.

2. Between 1994 and 1995, federal allocations ("participaciones" of SNCF National Fiscal Coordination System) fell by a real-terms (current prices) average of 12.1%, national fiscal revenue fell by 3.4% and, most important the interest rate rose, badly affecting states that had not restructured their debt.\(^11\)

3. A study carried out in 16 Mexican states found that: a) there are high levels of indebtedness, compounded by an increase in debt servicing between 1994 and 1995 (in cases such as Coahuila, the increase reached 231%) and, b) the recession's negative impact on tax collection; only six states saw real-terms (current

\(^9\)This system regulates: a) distribute budget allocations (participaciones) between the federation, states and municipalities; b) define competitions and capacities in tax collections; c) impel the administrative collaboration between these levels for fiscal questions.


prices) increases: Colima, Federal District, Guanajuato, Guerrero and Quintana Roo; in others, decreases reached 53% such as in Jalisco, the State of Mexico and Coahuila with 31% and Puebla with 29%.12

4. Mexico's states have serious problems of indebtedness. In the year, the states and municipalities restructured their debt with BANOBRAS. By the end of September 1995, 18 states had signed complete restructuring packages, 7 did it partially and 5 were at the study stage. By the end of 1995, BANOBRAS was talking in terms of 22 complete restructurings.13

5. Most public investment comes from the center; approximately 85% of all the public investment made in 1994 by the three levels of government (federal, state and local) came from the central public sector. In the same year, 12.7% of total public expenditure was for states and only 2.6% was channeled to municipalities.14

6. Public Works and Promotion Expenditure 15 accounted for 19.6% of state spending in 1990 and 21.2% in 1991 (only with state funds), according to data from the INEGI (National Statistics, Geography and Informatics Institute).16 According to case studies performed recently by the CIDE (Center for Economic Research and Studies), the trend has not varied greatly.

The states are facing serious obstacles to the development of urban infrastructure works that meet the ecological requirements of an adequate degree of urban order. The government has gone some way toward improving the situation but efforts made have been insufficient. On this note, it is worth considering aspects of the National Fiscal Coordination System.

In Mexico the allocation of financial resources initiate with National Collection (Recaudación Nacional). For 1996 of the total of these resources, approximately a 71.2%, will be assigned to the federal government (central) the one who decides what to do and how to spend.

The remaining resources (28.8% for 1996) integrate the Distributable Federal Collections or Distributable Federal Revenues (Recaudación Nacional Participable or Ingreso Federal Participable) that basically include: Revenue by federal taxes and a part of the rights over hydrocarbons and mining (does not includes the taxes of exportation of petroleum and derived, nor the additional rights over hydrocarbons).

12Ibid.
15This is a account of States Budgets.
16Ibid. p. 371.
For the allocation of this resources to states and municipalities -and definition of their responsibilities- the mechanism key is the National Fiscal Coordination System (SNCF or SCF). This is the system through of which:

a) It distribute budget allocations (participaciones) between the federation, states and municipalities.

b) It define competitions and capacities in the tax collections.

c) It impel the administrative collaboration between these levels for fiscal questions.

The distribution of most important federation’s resources to the states and municipalities goes through the so called “participaciones” (federal allocations).

“Participaciones”, are assignments or allocations of the federal government for the states and municipalities. These are regulated by the Fiscal Coordination Law and are determined through two funds:

1. Federal Allocations (Participaciones) General Fund. Is constituted by 20% of Distributable Federal Collections or Distributable Federal Revenues. Of this fund that receive the states must hand to the less a 20% to the municipalities. In the best of the cases this would signify for the municipalities to receive, by this mechanism, the 4% of the National Collection.

2. Fortifying Municipal Fund. That integrate with approximately the 1% of Distributable Federal Revenues. The 100% of this fund must be transfer to the municipalities.

In the case distribution of the federal allocations (participaciones) corresponding to both Funds, there are serious problems. Only 14 states have a clear juridical system for the allocation of these resources to the municipalities.

The participaciones of both funds are 21% of Distributable Federal Revenues. In 1996 the remainder of it (7.8%) represent little quantities that also were distributed by governmental programs to the states and municipalities. However is important to mention, that between 1995 and 1996 the increment of Distributable Federal Revenues was 5.85%. These passed of 22.95% to 28.8%. These little changes are result of the strategy of the New Federalism implanted by Ernesto Zedillo.

Once known the resources to be distributed is elaborate Federal Spending Budget, it establishes the government’ resources distribution. The resources go to the states and municipalities to divide in three items and some special programs: 1º) Item (in Mexico ramo) 00025 for basic education expenses; 2º) Item 00026 for

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17SNCF it’s same that Fiscal Coordination System (SCF)  
18In spanish: Fondo General de Participaciones and Fondo de Fomento Municipal
spending to overcome poverty (in the previous administration 1989-1994, included Solidarity Program) 3°) Item 00028 in federal allocations (participaciones) to the states and municipalities; 4°) Federal resources for public investment (through specific programs).

The financial resources of the states and municipalities, distribute through of the SNCF, are scarce. In the following section of the article we will analyze the changes proposed by the New Federalism, over all, item 00026. However these changes in the assignment of resources are not sufficient, haven’t sufficient resources for investment in infrastructure.

Furthermore the states diagnosis, is important for us to describe the situation of the municipalities in the financial field. Thus is possible to determine their limitations in the generation or construction of infrastructure.

Direct investment by the municipality is limited in most cases: of course, urban and metropolitan municipalities assign higher amounts to infrastructure. Overall the expenditure -according to the Census- municipalities dedicate around 30% to investment, 59% to current expenditure and the rest to extraordinary expenses. Bearing in mind the limited scale of federal allocations, it is obvious that important projects have to get support from development banks (mainly BANOBRAS) and other levels of government through specific programs.

In addition, the definition of schedules and action priorities is the result of a range of pressures brought to bear. The “service priority provide” is showed in table 3, according to municipal civil servants (officials).

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>NUMBER OF MUNICIPALITIES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking Water</td>
<td>1456</td>
<td>60.9</td>
</tr>
<tr>
<td>Drainage and Sewage</td>
<td>70</td>
<td>2.9</td>
</tr>
<tr>
<td>Public Lighting</td>
<td>223</td>
<td>9.3</td>
</tr>
<tr>
<td>Public Security</td>
<td>205</td>
<td>8.6</td>
</tr>
<tr>
<td>Traffic policing</td>
<td>1</td>
<td>0.0</td>
</tr>
<tr>
<td>Street Cleaning</td>
<td>129</td>
<td>5.4</td>
</tr>
<tr>
<td>Garbage Collecting</td>
<td>168</td>
<td>7.0</td>
</tr>
<tr>
<td>Paving</td>
<td>43</td>
<td>1.8</td>
</tr>
<tr>
<td>Markets</td>
<td>13</td>
<td>0.5</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>20</td>
<td>0.8</td>
</tr>
<tr>
<td>Abattoir</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Parks</td>
<td>16</td>
<td>0.7</td>
</tr>
<tr>
<td>Gardens</td>
<td>1</td>
<td>0.0</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>28</td>
<td>1.2</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>Do not mention</td>
<td>10</td>
<td>0.4</td>
</tr>
<tr>
<td>Do not specify</td>
<td>7</td>
<td>0.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2395</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: Author’s elaboration based on preliminary data from Censo Nacional de Municipios: Perfil de los Municipios Mexicanos. CEDEMUN-INEGI 1995.

* According to municipal officials.
Two figures are of great importance: the one showing the percentage of budget dedicated to services (including both current expenditure and investment) and the one on the services receiving the highest amount of resources. Tables 4 and 5.

**TABLE 4**
PUBLIC SERVICE PARTICIPATION IN MUNICIPAL BUDGET

<table>
<thead>
<tr>
<th>Range</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 24%</td>
<td>178</td>
<td>7.4</td>
</tr>
<tr>
<td>25 - 49%</td>
<td>512</td>
<td>21.4</td>
</tr>
<tr>
<td>50 - 75%</td>
<td>723</td>
<td>30.3</td>
</tr>
<tr>
<td>75 - 100%</td>
<td>471</td>
<td>19.7</td>
</tr>
<tr>
<td>Not specified</td>
<td>508</td>
<td>21.2</td>
</tr>
<tr>
<td>Total</td>
<td>2392</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author's elaboration based on preliminary data from *Censo Nacional de Municipios: Perfil de los Municipios Mexicanos*, CEDEMUN-INEGI 1995.

**TABLE 5**
SERVICES WITH THE HIGHEST SHARE IN MUNICIPALITIES BUDGET

<table>
<thead>
<tr>
<th>Service</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>709</td>
<td>29.6</td>
</tr>
<tr>
<td>Drainage</td>
<td>156</td>
<td>6.5</td>
</tr>
<tr>
<td>Lighting</td>
<td>782</td>
<td>32.7</td>
</tr>
<tr>
<td>Public Security</td>
<td>102</td>
<td>4.3</td>
</tr>
<tr>
<td>Sanitation</td>
<td>30</td>
<td>1.3</td>
</tr>
<tr>
<td>Paving</td>
<td>375</td>
<td>15.7</td>
</tr>
<tr>
<td>Other</td>
<td>103</td>
<td>4.3</td>
</tr>
<tr>
<td>No answer</td>
<td>135</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>2392</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author's elaboration based on preliminary data from *Censo Nacional de Municipios: Perfil de los Municipios Mexicanos*, CEDEMUN-INEGI 1995.

In the next section we’re present the diagnosis from the CIDE-INEGI 1993 National Municipal Administration Survey. The information from the survey provides a diagnosis of how local administrations operate considering a) administration and planning, b) the behavior of services and, c) the situation of their finances.
2.2 The elements of administration: CIDE-INEGI 1993 National Municipal Administration Survey.

The basis of the information used in this section comes mainly from the CIDE-INEGI 1993 National Municipal Administration Survey. The data in the CIDE-INEGI 1993 National Municipal Administration Survey are divided into three subject areas: planning and administration; public services; and municipal finances. In this section we only look at some of the most interesting findings related to the municipalities' ability to respond to the increasing demands for services by citizens.

2.2.1 Elements of administration and planning

a) The survey revealed that of the decisions made at the municipal level, "approximately 62%", are taken by the municipal president (centralized). This monopoly on decision-making favors presidents and one-party (non-pluralistic) cabildos.

b) Planning normally fulfills a role of "covering requirements". Municipal Development Plans are excessively general and do not set clear goals.

c) Planning is the responsibility of the cabildo (82% of planning tasks). However, it is not clear how citizens' demands are incorporated because processes are apparently an internal affair.

d) Plans are not adhered to closely. If you compare the percentage of success in specific municipal service plans to the forecasts made at the beginning of local administrations, results are poor. For example, only 7.9% of the upper group of municipalities comply with more than 75% of programs. In the lower group, this percentage falls to 6%.

e) The suitability of civil servants is very poor. In areas such as public services, almost 49% of employees only have a primary education. In fields such as finance, figures are better with 38% with higher education.

f) The training needs perceived by those in public administrations tend to be concentrated in technical and public finance areas.


20In the municipalities "Ayuntamiento" is the politician's group elected in the voting. It's a "Cabildo" when its members decide by meeting. The "Ayuntamiento" (City Hall) is made up for appointment and elected official. The "cabildo" is the body of elected officials in the municipality and the maximum authority of the "Ayuntamiento". Each municipality is obliged to elect: a municipal president, (mayor); a number of "regidores", (council members or aldermen) with responsibility for check a particular aspect of the administration; and "síndicos" (usually 1 or 2), they have juridical responsibility for the "Ayuntamiento" in criminal or civic proceedings.
2.2.2 Public services

a) The most serious problem in the provision of services is the lack of financial resources. The greatest investment requirements are in services such as water, street cleaning, street lighting and street maintenance.

b) Those responsible for public services have an extremely limited knowledge of the institutional channels (sources of credit and technical support, procedures, etc.) that could facilitate the provision of services.

c) Direct provision is by far the predominant administrative system for the provision of public services. Consideration should be given to increasing private and social participation.

The quality of municipal services measured in terms of efficiency, effectiveness and the existence of quality standards is critical. The most serious obstacles in the way of greater quality were: non-compliance with programs; dependence on extra resources to meet goals; poor or no recovery through rights (fees), further exacerbating financial shortcomings; and the poor tradition in the establishment of controls in results and accountability to citizens.

2.2.3 Municipal Finances

Some of the main points in the diagnosis of municipal finances made by the CIDE in 1993 included:

a) The lack of financial resources in general and the inadequacy of federal allocations (participaciones) in particular. Allocations are small and there are few possibilities for raising extra local revenue.

b) Current expenditure is much greater than spending in investment, highlighting the limited degree to which municipalities may make autonomous investments in infrastructure. Investment continues to depend on the state and federal government levels that, in the last instance, define amounts and targets for investment expenditure.

c) With 60% considered to be the ideal amount for self-finance, only 7% of municipalities throughout Mexico have an independent financial capacity.

d) Although a fiscal balance is a legal requirement, a very high percentage of municipalities do not balance their budgets, the deficits being covered by “extraordinary” items. This underlines the crisis resulting from the gap between demands and the resources available to meet them. If to the above we add the fall in real terms in the value of resources, we can understand why local administrations find it increasingly difficult to meet optimum goals.
e) The municipalities' ability to collect revenue is extremely limited. Property taxes are their main source of income and only 30% of the national sample collect more than 50% of the registered amounts due.

3. **PUBLIC SECTOR AND CAPACITY ISSUES.**

3.1 *Fiscal Federalism: the challenge of change*

New Federalism has outlined a strategy of decentralization, granting local governments greater decision-making capacity and larger flows of resources. This policy implies a greater degree of joint responsibility and needs a strengthening of state and municipal finances, in addition to support to improve administrative structures, working methods, technology and training (professionalization) of employees. So far, the most important steps in decentralization have been:

- The federalization of education, transferring resources and responsibilities to state governments, although the resources arrive "labelled" and there is little discretion in their use.
- The decentralization of health services. This is a process that began during the Miguel de la Madrid administration but progress has yet to be consolidated. The intention is to integrate State and Municipal Health Systems.
- The initiative to deconcentrate and/or decentralize the resources, powers and roles of the Secretariat of Agriculture, Farming and Rural Development. The results can already be seen in some cases, such as in Aguascalientes.
- The transfer to municipalities of responsibility for the handling (administration and allocation) of 50 percent of item 00026 resources.

It should be remembered that, in accordance with the Federal Spending Budget, most revenue for the states comes from:

a) Item (in Mexico *ramo*) 00025 for basic education expenses.

b) Item 00026 for spending to overcome poverty (in the Carlos Salinas's administration included the Solidarity Program).

c) Item 00028 in federal allocations (*participaciones*) to the states and municipalities.
d) The funds from federal public investment (channeled through specific programs).21

Furthermore, Item 00026 (which in the last administration included the Solidarity Program) is in turn made up of three funds, with the following amounts:22

<table>
<thead>
<tr>
<th>Municipal Social Development Fund</th>
<th>7,150,000,000.00 pesos</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Priorities Fund</td>
<td>500,000,000.00 pesos</td>
</tr>
<tr>
<td>Employment Promotion Fund</td>
<td>3,350,000,000.00 pesos</td>
</tr>
<tr>
<td>TOTAL item 00026</td>
<td>11,000,000,000.00 pesos</td>
</tr>
</tbody>
</table>

In this year (1996), amendments to facilities the allocation of Municipal Social Development Fund, what is called item 00026, will allow states and municipalities to administer these specific resources. Apart from poverty sub-programs, these are some priorities established for appending public infrastructure such as: drinking water; sewage; sanitary construction; urbanization; support; construction and maintenance of basic educational infrastructure; construction and maintenance of health infrastructure; credit on trust and construction of roads and rural infrastructure. The new formulas for allocating this fund seek to grant greater resources to those areas with high levels of poverty.

Although New Federalism would offer a better distribution of public funds, (participaciones from federal government to the states and municipalities, SNCF) rose by only 5.85% as a percentage of the total Federal Distributable Revenues from 1995 to 1996 growing from 22.95% to 28.80%. (table 6)23 On the other hand, there has been a real fall in amounts channeled toward public works, as can be seen in the section describing the situation of the construction industry.

The proportions of variation percentage between 1995 and 1996 are describe in the table 6.

21 The 1996 Spending Budget forecasts: 00025 spending on basic education (includes Federal District) 40,783,190,000.00 pesos; 00028 allocations (participaciones) to states and municipalities 73,041,300,000.00 pesos; 00026 overcoming poverty 11,000,000,000.00 pesos.


23 Treasury Committee of the Chamber of Deputies, quoted in: Torres Clara, Federalismo: asignatura pendiente, newspaper: Reforma, Mexico City, January 1, 1996.
TABLE 6
DISTRIBUTABLE FEDERAL REVENUES ASSIGNED TO STATES AND MUNICIPALITIES

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>1995</th>
<th>1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>18.51</td>
<td>20.00</td>
</tr>
<tr>
<td>Coordination of Rights</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Based Special in Taxes</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>Fortifying Municipal Fund</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Contingency Reserve</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Property vehicle tax</td>
<td>1.40</td>
<td>1.40</td>
</tr>
<tr>
<td>Commerce Exterior</td>
<td>0.136</td>
<td>0.136</td>
</tr>
<tr>
<td>Right additional over extraction of the petroleum</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Incentives Economic</td>
<td>0.44</td>
<td>0.44</td>
</tr>
<tr>
<td>Participation in Special Taxes over products services</td>
<td>0.00</td>
<td>0.42</td>
</tr>
<tr>
<td>Solidarity Programs (by local government administration)</td>
<td>0.00</td>
<td>2.47</td>
</tr>
<tr>
<td>Basic Education Resources</td>
<td>0.00</td>
<td>0.44</td>
</tr>
<tr>
<td>Restructure of Debt</td>
<td>0.00</td>
<td>1.03</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22.95</td>
<td>28.80</td>
</tr>
</tbody>
</table>

Source: Congress Commission of Treasury and Public Credit (Comisión de Hacienda de la Cámara de Diputados).

Since the amendments to article 115, the intention has existed to make property tax (predial) a key source of municipal revenue. However, it has not been possible to turn property tax into an alternative source of self-finance. It is collected directly by only approximately 65% of town halls and the amounts collected are very low. Therefore, the percentage of revenue (of the total) from this source is not as significant as would be desirable (Table 7).
TABLE 7
PROPERTY TAX AS A PROPORTION OF TOTAL TAX REVENUE IN MEXICAN MUNICIPALITIES

<table>
<thead>
<tr>
<th>INTERVAL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50 %</td>
<td>1011</td>
<td>42.2</td>
</tr>
<tr>
<td>Between 50 % and 85 %</td>
<td>777</td>
<td>32.4</td>
</tr>
<tr>
<td>Between 86 % and 99 %</td>
<td>235</td>
<td>9.8</td>
</tr>
<tr>
<td>100 %</td>
<td>179</td>
<td>7.5</td>
</tr>
<tr>
<td>Does not exist</td>
<td>194</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>2395</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author’s elaboration based on preliminary data from Censo Nacional de Municipios: Perfil de los Municipios Mexicanos, CEDEMUN-INEGI 1995.

In view of this situation with the New Federalism the possibility is also emerging of states and municipalities acquiring greater influence in tax collection. Talks have been held on “abrogating federal taxes such as the ISAN (New Vehicle Tax) and local taxes -which of course are optional- are being established on accommodation, vehicle ownership, advertising and the sale of alcoholic beverages; the revenues raised by local governments themselves are being strengthened, the coefficient of allocations is being increased and some taxes previously collected by the federation are being ceded.”

Some of these changes remain promises for 1997, such as the tax on vehicle ownership or use (in addition to the tax the states already collect on vehicles more than ten years old). The New Vehicle Tax will not be collected in 1996 but is set to be charged by the states in 1997. In the area of fees, plans exist for charges for the placement of advertising and licenses for establishments selling alcoholic beverages to be ceded to the states.

Although in real terms there has been a reduction in the resources available to the states and municipalities, the possibility of granting them wider decision-making powers means their future importance must be reconsidered. Local governments are facing the challenge of improving their administrative apparatus, making better use of resources and seeking to incorporate private and social agents, not simply seeking efficiency in the use of resources but also in the generation of consensus.

In the municipalities the progress in urban works is still scarce, but some positive signs are appearing. For example, according to the data in the census, 61.5%
of municipalities have an office responsible for urban development or performing similar tasks.

3.2. Government infrastructure promotion projects.

Government programs to support development and infrastructure are one response to the needs and demands of different sectors of society. The importance of some of them lies in the impact they can have on local policy formulation. In this section there are descriptions of the working of those that have had an effect on the development of infrastructure at a local level.

The first is the 100 Cities Program, implemented by the SEDESOL (Secretariat of Social Development). It involves planning and development for 116 medium-sized cities, covering 207 municipalities. It is important because it incorporates a scheme based on urban policy in which apart from respecting the role of local governments, the attempt is being made to reach agreement with private and social groups that are directly involved in urban development. The 100 Cities Program is benefiting 32 million Mexicans in the urban areas in question.\(^{25}\)

Although the investments made are modest (around 5% of the Solidarity Programs), the multiplier from private sector involvement should be highly beneficial. The priorities were determined based on consultation with the cities in the program. The credits required are granted low rates at interest normally through BANOBRAS.

In the National Urban Development Program 1995-2000, four major urban programs (including the 100 Cities Program) and their action plans are set out, as summarized in Table 8.

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### TABLE 8
**STRATEGIC PROGRAMS**
**NATIONAL URBAN DEVELOPMENT PROGRAM 1995-2000**

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>ACTION PLAN (or sub-program)</th>
</tr>
</thead>
</table>
| 1. 100 Cities Program                       | a) Regulation of land use and urban administration  
b) Incorporation of urban land and territorial reserves  
c) Traffic and transportation  
d) Environmental aspects  
e) Urban renovation of city centers (economic and social revival of city centers)                                                                                      |
| 2. Consolidation of Metropolitan Areas Program | a) Urban improvement of poor areas  
b) Intermunicipal and interstate coordination for the administration of metropolitan areas  
c) Sustainable metropolitan re-ordering  
d) Promotion of multimodal transportation systems                                                                                                                |
| 3. Territorial Order and Urban Development Promotion Programs | a) Coordination for the strengthening of state urban development planning  
b) Federal intergovernmental coordination to support the orderly consolidation of human settlements  
c) Consolidation of the legal framework for state and municipal level urban development.                                                                                           |
| 4. Promotion of Social Participation in Urban Development Program | a) Coordination with state and municipal governments to support the strengthening of processes to ensure social participation in urban development.  
b) Federal intergovernmental coordination for the consolidation of offices for social participation in urban development.  
c) Agreement with the national representatives of social, civil and academic organizations.                                                                 |


The five sub-programs, the 100 Cities Program pick up on the need to bring together local governments and citizens to agree upon action. The amounts involved in these investments are summarized in Tables 9 and 10.
According to the data, until 1994, of the total of resources invested in the 100 Cities Program, 42.5% were federal, 22.7% were local and 34.8% were private resources and loans.

As regards credit for infrastructure, there are programs run by different government agencies such as NAFIN (Nacional Financiera - National Development
Bank), BANOBRA$S (Banco Nacional de Obras y Servicios Públicos - National Public Works and Services Bank), BNCI (Banco Nacional de Comercio Interior - National Domestic Trade Bank) and the BANCOMEXT (Banco Nacional de Comercio Exterior - National Foreign Trade Bank). Given its importance in projects at the local level, BANOBRA$S programs are highly important. Table 10 lists the most important ones.

**TABLE 10**

**BANOBRA$S PROGRAMS**

<table>
<thead>
<tr>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Drinking water, sewage and sanitation</td>
</tr>
<tr>
<td>2. Infrastructure for communications and transportation</td>
</tr>
<tr>
<td>3. Urban infrastructure</td>
</tr>
<tr>
<td>4. Saving and efficient use of electric power</td>
</tr>
<tr>
<td>5. New urban developments</td>
</tr>
<tr>
<td>6. Ferrocarriles Nacionales de México (Mexican National Railroads)-Banobras</td>
</tr>
<tr>
<td>7. Urban equipment</td>
</tr>
<tr>
<td>8. Municipal equipment</td>
</tr>
<tr>
<td>9. Improvement and rehabilitation of urban image in city centers</td>
</tr>
<tr>
<td>10. Traffic and transportation</td>
</tr>
<tr>
<td>11. Urban transportation</td>
</tr>
<tr>
<td>12. Housing</td>
</tr>
<tr>
<td>13. Environmental protection</td>
</tr>
<tr>
<td>14. Solid waste</td>
</tr>
<tr>
<td>15. Studies and projects</td>
</tr>
<tr>
<td>16. Support for public works contractors</td>
</tr>
<tr>
<td>17. Modernization of land registration</td>
</tr>
<tr>
<td>18. Modernization of the Public Property and Trade Registry</td>
</tr>
<tr>
<td>19. Modernization of the Civil Registry</td>
</tr>
<tr>
<td>20. Training of municipal administrators</td>
</tr>
<tr>
<td>21. Services</td>
</tr>
<tr>
<td>22. Trust services</td>
</tr>
<tr>
<td>23. Appraisals</td>
</tr>
<tr>
<td>24. Transfer of state and municipal goods</td>
</tr>
<tr>
<td>25. Socioeconomic assessment of projects</td>
</tr>
<tr>
<td>26. Arrendadora Banobras (leasing)</td>
</tr>
</tbody>
</table>


Apart from these programs, mention must also be made of the FINRA (Infrastructure Investment Fund). Through of it will channel 1.7 billion pesos in a move expected to trigger off -assuming an average 15% public participation- investment worth 11 billion pesos in infrastructure.\(^{26}\)

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\(^{26}\) Reyes Heroles, op. cit. p. 6.
These 1.7 billion pesos were drawn from the Contingence Fund (Fondo de Contingencia) and the ports privatization incomes. Also, future privatization will increase these resources.

The FINFRA's main objective is to maximize the investment of Public Sector Resources.

The approval of High Risk Investments will be submitted to a joint committee, constituted by BANOBRAS, the SHCP, the SECODAM, the SCT and the CNA. All the decisions must be taken by these colleges.

The priorities for the FINFRA are in the following fields: roads, ports and airports, water, sewer and drainage, urban transport and solid wastes.\(^\text{27}\)

The financial resources channeled by BANOBRAS in 1995 amounted to 7.594 billion new pesos. The SHCP (Secretariat of the Treasury and Public Credit) and Congress authorized a 1996 figure for BANOBRAS of 9.0869 billion pesos (the Mexican currency dropped the "new" January 1, 1996).\(^\text{28}\)

Currently, BANOBRAS develops state and local government financial resource programs; 31 and almost 240 at each one of these levels. In 1996 the credit flows will be around 9.0869 billion pesos. Also, there will be a re-orientation in the main recipients; the main challenge is to fortify the Institutional Programs with strategic reduction in the fields of roads construction and re-financing, basically debts. An increase of 38.30% is expected for 1996.

Although development bank loans are generally growing in nominal terms in 1996, the effect of the crisis has led to real-terms reductions in credit, making new facilities that optimize the use of public resources necessary.

3.3. The need for change in regulation.

One of the problems facing the development of infrastructure is the need for clear rules governing private and social participation. The government's concerns regarding strengthening safeguards and guarantees for the continuity of projects is starting to be reflected in legal changes that affect priority projects.

The projects undertaken by states and municipalities need a clear regulatory framework that allow for the handling of long-term investments. In this respect, one of the important changes made recently is the one established in the Decree of December 21, 1995, which came into effect January 1, 1996. It sets forth additions and amendments to articles 18 of the Public Debt Act and 30 of the Budget, Accounting and Public Expenditure Act. The addition to the first of these articles seeks to promote investment in long-term productive infrastructure projects with

\(^{27}\) Sales Sarrapy Carlos, *Fondo de Inversión en Infraestructura*, in *Federalismo y Desarrollo*, Year 9, nov.-dec. 1995, Number 52, México, 1995

\(^{28}\) Reyes Heroles, op. cit. pp.5-6.
authorization from the SHCP, because only the amounts of finance to be paid in the current financial year and the next one are taken to be direct liabilities, the rest of the finance is considered a contingent liability until it is completely paid. The addition to the second article mentioned grants preference in the payment of debt services that 1) are projects included in priority programs and, 2) have received authorization from the SHCP because the corresponding finance scheme was considered the most recommendable given the conditions, project structure and flow of resources generated.29

These legislative changes permit greater flexibility in the administration of liabilities and promote private sector investment.

However, there are still serious obstacles posed in some laws and rules. Some of the most important of these are:

a) Of the 32 states in Mexico, only 15 have specific laws related to fiscal coordination. The others do not have a clear basis for the handling of amounts, bases and terms for the distribution of allocations.30

b) Although all states have provisions on the Revenue and Spending Budget Act in their local constitutions, the conditions differ from state to state. Only 22 states have issued specific legislation on budgetary matters, accounting and public expenditure (Baja California, Baja California Sur, Campeche, Chiapas, Durango, Guanajuato, Guerrero, Hidalgo, Michoacán, Morelos, Nayarit, Nuevo León, Oaxaca, Puebla, Quintana Roo, Querétaro, San Luis Potosí, Sonora, Tabasco, Yucatán and Zacatecas). The others have ambiguous provisions for the handling of governmental accounts and the control and assessment of government spending.

c) Of the 22 states that have legislation on accounting and public expenditure, only seven (Baja California, Chiapas, Michoacán, Morelos, Nayarit, Tabasco and Yucatán) apply it at the level of municipalities. This means that around 2,004 municipalities in Mexico have no rules applicable to this field. Hence the difficulty involved in maintaining standardized accounting across states and municipalities.

d) Only 20 states have laws governing public debt and they are ambiguous, especially in the area of facilities and registration systems.31

29 Dirección Adjunta de Planeación Promoción y Asistencia Técnica, Subdirección de Asistencia Técnica - gerencia de ingeniería Legal, BANOBRAS, Local Legislative Study on Budget, Accounting and Public Expenditure, (mimeo), Mexico City, March 1996, sec. II.
30 Ibid.
31 Dirección Adjunta de Promoción y Asistencia Técnica. The Design of investment funds and source of payment of guaranteed bonds from allocations of federal revenue, BANOBRAS (mimeo), Mexico City, February 1996.
e) One of the major forms of bringing private participation into infrastructure has been concessions. However, the regime regulating them varies widely from state to state; there are few provisions adequately guaranteeing the concession both for the granter and the concessionaire.\(^{32}\)

f) In 20 states there are ordinances regulating the concession of public service goods (Aguascalientes, Baja California, Coahuila, Chihuahua, Durango, Guanajuato, Guerrero, Hidalgo, Jalisco, Michoacán, Morelos, Nuevo León, Oaxaca, Puebla, Sinaloa, Sonora, Tamaulipas, Tlaxcala, Veracruz and Yucatán). In seven (Aguascalientes, Durango, Guanajuato, Guerrero, Morelos, Sinaloa and Tlaxcala), the municipality has jurisdiction over this area.\(^{33}\)

g) Only 18 states regulate the transfer of state and municipal real-estate. Six of them provide for the transfer of municipal property.\(^{34}\)

It should be remembered that apart from the limitations mentioned, many decisions by municipalities are subject to authorization by State Congresses, such as in the case of approving revenue and expenditure; loans; and concessions when they exceed the three-year mandate.

4. **PRIVATE SECTOR RESPONSE.**

4.1. Private participation: problems and possibilities

The importance of private participation in the execution of public works is huge. Today, most federal public works are currently performed by central agencies. However, *New Federalism* could bring about a change of direction, granting greater decision-making powers to the states and municipalities in areas such as handling resources for urban infrastructure.

The crisis that broke at the end of 1994 seriously affected the construction industry. According to a study by the National Chamber of the Construction Industry, the factors that magnified the effects of the crisis were:

- “Its (the industry’s) leaning toward the domestic market (contraction of domestic demand).”
- The long periods before completion of projects (long-term recovery of capital).

\(^{32}\) Gerencia de Desarrollo de Mercados. *Legal regime for the provision of public drinking water and sanitation services*, BANOBRAS (Mimeo), Mexico City, October 1995.

\(^{33}\) Dirección Adjunta de Promoción y Asistencia Técnica, Gerencia de Ingeniería Legal, *Legal Regime for the concession and transfer of goods in the local public domain*, BANOBRAS (Mimeo), Mexico City, March 1996, sec. V.

\(^{34}\) Ibid
• The type of credit required (mainly long-term) and high interest rates.
• Cuts in government physical investment budgets.
• The increase in the price of materials.”

The National Chambers of the Construction Industry (CNIC) groups up to 15,313 of construction enterprises with the more than average of participation in the activity. This guarantees the representative of the results.

GDP for the construction industry fell by 22% in 1995, three times greater than the fall in national GDP (6.9%). The value of the public works realized, in agreement with survey’s enterprises, fall in 1995 in 54.15%, publics works descended 37.14%

The cuts in public investment in projects such as toll roads, highways, roads, subway and light train, and urbanization and traffic works had a negative impact on the sector. For example, in 1992 the National Toll-Road Program was considering the possibility of extending coverage to around 4,100 miles -in August of that year 39 concessions had been granted for four-lane roads totaling 2,441 miles but “now the target has been cut by more than 50%”.

The difficulties that have arisen for some of the toll roads in concessions have resulted in the Program to Improve Conditions in the Concession Toll Road Network which specifies support mechanisms available.

In general, public works performed by companies in the formal construction sector were cut by more than half. Accumulated production in 1995 was 19.971

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35 Department of Economics of the National Chamber of the Construction Industry, National Survey of the Formal Construction Industry Sector (Annual Report 1995), in Revista Mexicana de la Construcción, no. 494, march 1996, p. 16-42. This National Survey is elaborate by Department of Economics of the National Chamber of the Construction Industry (CNIC) in collaboration with the National Statistics, Geography and Informatics Institute (INEGI). Therefore the validity of results is similar to the officials dates or also major and of best quality.


37 CNIC's Department of Economics, op. cit. p.16.


This program establishes: “a) extension of the term for concessions to the legal maximum; b) restructuring of the balance of bank loans for the project in Investment Units; c) in the coming 12 to 24 months, the Federal Government could undertake to contribute the difference observed between net toll-road earnings and servicing of the already restructured direct debt, and, d) at the end of the 12 to 24 months, the portion of the debt not covered by the project will be assumed by the Federal Government. The Federal Government will recover said resources through exploitation of the toll road after the concession expires.”
billion pesos, a annual real-terms fall of 54.15%. Works in concessions were only worth 3.174 billion pesos, a real-terms fall of 37% compared to 1994.39

To reduce the effect of the crisis and promote private investment in infrastructure with public resources, the FINRA (Infrastructure Investment Fund) was created, administered by BANOBRAS. In 1996, it will channel 1.7 billion pesos in a move expected to trigger off -assuming an average 15% public participation-investment worth 11 billion pesos in infrastructure.40

Proposals such as the AMICO (Mexican Association of Infrastructure in Concessions) have even been put forward to create facilities (such as a Guarantee Fund) that would put life back into the sector.41 In this respect, public works at the local government level must slowly be given greater importance because apart from the economic injection, such projects would have a greater regional effect.

4.2. Relevant experiences.

After the changes in governmental megapolicies, options for the improvement of the handling of public funds gave preference to the participation of private agents. In the Mexican case it was necessary to implement measures to deregulate markets, making investment attractive. Projects have involved fields such as banking, mining, railroads, ports and telecommunications. The process to grant toll-road concessions also received enormous support but, as has been described above, today this area faces serious problems.

On a local level, concessions have had to face serious problems and many could be considered failures. In this section the intention is to highlight some of the difficulties faced by concessions on a municipal level. Generalizations based on examples will be used because longer documents exist that explain individual cases.

-Drinking water in Aguascalientes.42 This concession (in the Build, Operate, Transfer -BOT- mode) was in principle attractive because it involved one of the largest construction companies in Mexico - Grupo ICA (Ingenieros Constructores Asociados - Associated Construction Engineers) through an affiliate (CAASA). On the other hand, the stability of the state and the municipality seemed to guarantee the continuity of the concession. However, increases in charges had a negative impact and were a deciding factor in elections. In 1995, the PRI (Institutional Revolutionary Party) lost the mayoral elections for the first time since the Mexican revolution and the new mayor, from the National Action Party (PAN), withdrew the concession.

39 Ibid. p.20-21
40 Reyes Heroles, op. cit. p. 6.
41 Elena Zuñiga, Maria, Reactivaría plan a la construcción, in newspaper: Reforma, Mexico City. May 3, 1996.
CAASA (Concesionaria de Aguas de Aguascalientes, S.A. - Aguascalientes Water Concessionary Company), an affiliate, was granted the concession in 1993 and expected to record earnings for 2.670 billion pesos. However, difficulties in indexing charges in accordance with the agreed formulas meant the concessionaire operated at a loss. Financial problems and political pressures made continuation with the project unfeasible.

Waste handling in Torreón, Coahuila. Operated by the Promotora Ambiental de Monterrey company (Monterrey Environmental Promotion) and, to date, operating with positive results. As early as the signing of the contract, the creation of a control and surveillance body was provided for (made up of members of the city hall, private sector and concessionaires). The body allows for administration by agreement. A fund was also established for ecological promotion campaigns. The municipality required a loan to be able to reach settlements with 600 employees and purchase the area used for the land-fill. At the beginning the number of complaints increased (partly because reporting was more effective) but dropped off to between 2 and 4 each day. The land-fill project is about to start.

Solid waste handling in Naucalpan. This is one of the most controversial concessions in recent years. In November 1992, the concession was granted to DESONA (Desechos Sólidos de Naucalpan, S.A. - Naucalpan Solid Waste) and in March, 1994 is was declared null and void by the town hall. However, a suit was initiated for compensation, with DESONA originally asking for 18 million dollars in an action that was taken to Dallas, Texas, and handled by Akin and Gump, because in International Right, declare null a concession is same to the expropriation figure (Mexico can will be accused in NAFTA panel). The company reduced its claim and the municipality took recommendations from the Secretariat of Trade and the Mexican embassy in Washington. doubling their initial offer of 750,000 dollars to 1.5 million. Agreement was reached in March 1995.

Concession of the Integral Sanitation Plan and control of Avenues in the Rio Hondo Basin in Naucalpan. This plan began as an ambitious project to grant concessions in treatment plants, drainage, drinking water and recycling installations to a large group of companies: EPYCSA, TRIBASA and Thames and Water Services, Ltd., in the Compañía Agua del Valle de México, S.A. (Valley of Mexico Water Company). The move was approved by a majority vote in February, 1994 but the initial aims were slowly reduced. December 6, 1994 the plan was modified but the cost (708.8 million new pesos) was still too high for the municipality. As of that

45 The basic information was provided by Dr. Carola Conde B. Researcher and lecturer at the Colegio Mexiquense.
46 Ibid.
moment, despite the approval in February, the Concession Title had not been actually issued. January 13, the plan was suspended.

These are only a few examples but there are others with highly diverse results. For example: in Benito Juárez (Cancún), Quintana Roo, there have been positive results in water and drainage (Grupo Mexicano de Desarrollo, S.A.) and water treatment plants; in Zapopan, Jalisco, the municipality complains the Arrow company committed fraud worth 4.5 million dollars; in Córdoba, Veracruz, a solid waste handling project was completed; in Nuevo Laredo there have been problems with establishing charges for garbage collection by Servicios de Tecnología Ambiental, S.A., etc.

The results so far vary and many factors contribute to this. When the decision is made to grant a concession, advantages are sought in the provision of services such as: saving in operating costs, greater coverage and quality of service, rapid response to demands and complaints, rapid solutions to failings in the provision system (installations and management), and the use of better and more advanced technology.

However, a concession involves more than simply implementing a project. A successful concession demands considering factors of technical feasibility but also elements of political feasibility. Assessing political and social impact can be useful in concessions. On the other hand, the need to improve guarantees -as has been mentioned- for concessionaires and establishing systems to advise on the most suitable legal and financial mechanisms are two key requirements. The conditions governing credit, operation and terms and charge fixing are especially sensitive points.

In the concession process the main points are:

1. The need for a better regulation (legal instruments) of the concession process.
2. Subsequently, instruction about the process to develop and redesign concessions for the municipalities, so they find out what is the real meaning of the concessions and their possibilities for regional or local development (infrastructure projects).
3. Long term guarantees for investors, mainly in the field of amortization of their investment.
4. Political and Social evaluation of decision making for public services concessions.

Private participation in public works and services has suffered due to the crisis. In recent years, construction projects have accounted for up to 70% of earnings from "heavy construction" for some companies. However, projects have

generally operated at a loss because of falls in the demand for the service (as in the case of lower than expected earnings at toll booths) and problems related to setting charges. Although projects normally receive government support if financial flows turn out to be insufficient, facilities should be arrived at that can improve results based on the same project.

5. **THE NEED FOR INNOVATION ON MUNICIPAL WORK TEAM.**

The problem of requirements for basic infrastructure in the years to come undoubtedly will require a change in the rules of the game (laws and regulations) and the system of inter and intragovernmental relations. But it also demands a promotion of individual abilities -sometimes local ones- to improve management. Various groups of researchers in Mexico have explored the processes of change. Although it is difficult to know which factors produce innovation, any examination must consider at least: the modification of intergovernmental relations or the implementation of new programs; leadership by an individual or a ruling group; political change or new citizens' perceptions; novel yet flexible technologies and citizen participation.48

In the case of the development of infrastructure, the legal and administrative conditions of work must be considered and projects must be presented with a full impact study (technical, financial, political and social).

One of the main decisions in the field of services is choosing the form of provision. Legislation provides for direct provision; concession; contracts and subcontracts; agreement with the state; intergovernmental agreements; decentralized bodies; paramunicipal companies; trusts and intermunicipal associations.

In general, these are the modes most commonly used and provided for in the local constitutions of the different states. However, this list is not exclusive because other forms, such as joint investment, can be explored as long as laws are not broken and municipalities' capacities are sufficient.

Joint investment brings together the government's interest in providing a service and an individual's interest in participating in a public project or process. In this case the municipality -normally with state or federal support- extends facilities to the investor such as tax exemptions, localization, reduction of fees, bank loans,

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etc. This makes participation attractive and makes a competitive return on investments possible.

Infrastructure projects can include the use of innovative schemes that make attracting private participation easier. Some of these models imply different compositions or combinations of public and private resources. The best known are:49

**BLT- (Build, Lease, Transfer)**

In this model, the developer constructs then leases the result to the government. Once the loans used in the construction have been paid, venture capital returned and the agreed profit made, ownership is transferred to the government (sponsor).

**BOT- Build, Operate, Transfer**

The project is carried out with finance obtained by the developer. It proceeds to operate the scheme to pay loans, recover its investment and make a profit. Upon maturity the assets are returned to the sponsor (in this case, the government). The developer's liability is normally proportional to the flows involved in the project. This was the mode used for the National Toll-Roads Program.

**BOO- Build, Operate, Own**

In this mode, the developer carries out the project and once completed, it remains the owner of the assets. Ownership may be transferred. Although this mode would in principle appear to be inflexible or classical, it can be changed into a BOT after a time.

**BOLT- Build, Operate, Lease, Transfer**

Here, the concessionaire is responsible for construction. On completion, it operates the installations under lease to the government. When the investment (and corresponding costs and profit) is recovered, it transfers ownership to the government (sponsor).

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These mechanisms offer alternatives to optimize resources and make private investment more attractive. Projects in the public good are generally developed in two major stages, integration and development. They are summarized in Table 11.

### TABLE 11
EXECUTION OF PROJECTS IN THE PUBLIC GOOD

<table>
<thead>
<tr>
<th>STAGES</th>
<th>REQUIREMENTS</th>
</tr>
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| INTEGRATION   | Tentative plan satisfying the objectives of the owner  
Definition of the total investment. Preparation of pre-engineering to size project components and obtain costs  
Economic feasibility. Specifying market, operating and economic behavior that will cover costs (including finance and profit)  
Initial finance negotiations based on a financial plan describing the financial engineering used  
Design of the legal structure for execution, including the definition of states, trusts, association, etc. and their contractual relations |
| DEVELOPMENT   | Draft a master plan covering engineering, construction, fitting out and start-up, defining target dates  
Design the organization needed to meet the goals in the master plan  
Obtain an investment budget, execution costs and ensure the flow of funds  
Design and implement procedures to ensure the development and continuity of the project in economic, technical and administrative terms in accordance with approved programs |

**FINAL REFLECTIONS**

The descriptive nature of this document leads to reflections rather than definitive conclusions. Some of the points worth considering are:

1. The overwhelming needs for urban infrastructure -especially in water, drainage and solid waste- that Mexico's cities will face cannot possibly be met by public funds alone. The private sector and society must work together more closely in public works and the urbanization of the 371,000 acres earmarked for inclusion in urban areas in official programs.

2. The conditions in which local administrations operate are inadequate. Introducing the states and municipalities to more effective forms of administration will need greater technical support than that provided to date. In Mexico is necessary increasing the abilities of state and municipalities to respond to local infrastructure priorities.

3. The resources that arrive at local government for invest in infrastructure are very low. The local governments follow depend the federal investment for the large works. The municipalities depend of the federal and state governments. Large scale infrastructure development, however, is currently beyond the resources and capabilities of many Mexican state and municipal governments.

4. Changes to the Fiscal Coordination System must be more wide-ranging but be introduced gradually. Local governments must have greater fund-raising powers.

5. In addition to debt restructuring and greater autonomous fund-raising powers, local finances must be strengthened by improving the exploitation of existing sources of revenue. This need is obvious in the light of the low collection rates of such taxes as property tax. The general support packages available in different public institutions such as the National Public Works and Services Bank (BANOBRAS), the Secretariat of the Treasury and Public Credit (SHCP) and the Institute for the Development of Public Treasuries (INDETEC) should be made more extensive.

6. Alternative forms of providing public services and carrying out projects can not be consolidated without a much clearer and standardized legal framework of guarantees (it should be remembered that concessions have regulations in only 20 states and that such legislation is ambiguous).\(^{50}\)

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\(^{50}\) In Mexico, where the concession projects involve high degrees of risk the private sector requires a clear regulatory framework and some incentive to participate.
7. The recovery of institutional instruments such as COPLADES and COMPLAMUN\(^\text{51}\) could provide a framework for the improvement of planning processes. In some cases results are positive as they bring together private agents and society.\(^\text{52}\)

8. A point worthy of consideration in devolutionary processes (decentralization) is the generation of conditions that can facilitate the deconcentration of urban industrial production. Relocation would strengthen alternative forms of town planning, breaking the mold of large, overcrowded metropolitan areas.

9. Support should be given to changes that can widen and clarify the regulations governing municipal financial powers. The different levels of government must be given consistent powers in the problems of setting rates and determining bases (establishing rates and updating tax bases).

10. The construction sector must be brought into attractive projects that will lead to an upturn in activities. Programs such as the FINRA, apart from greater resources, must extend their coverage. The private sector must take greater responsibility in the implementation of projects.

11. Finally, the true potential of the resources generated by property taxes should be considered. They should be managed in a more wide-ranging manner, seen not just as a source of finance per se, but as the most logical tool in the promotion of urban development. Their impact on urban growth and the form it takes are directly related. Therefore, this category of taxes should be considered an important variable in the definition of projected increases in the size of towns and cities and the growing demand for services. The possibilities offered by this tax revenue as a tool in town planning would be magnified if accompanied by a coordinated policy regulating the real-estate market.

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\(^{51}\) Both the COPLADES and COMPLAMUN are responsible for the planning process in states and municipalities. But their implementations capacity is uneven.

\(^{52}\) In studies of the project: Intergovernmental relations, CIDE in cooperation with the University of Texas, at least two states (Aguascalientes and Guanajuato) show this trend.
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