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# **Mexico City in the Network of Global Cities**

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# Mexico City in the Network of Global Cities<sup>1</sup>

## Introduction

The emphasis of this paper is on the specific role of Mexico City<sup>2</sup> in the process of economic globalization. I argue that in the 1990s Mexico City has become part of the cross-border network of global cities that constitutes the basic structure of today's world economy. As part of this network, Mexico City takes on global city functions such as controlling, managing and servicing processes of globalization.

The theoretical approach of this paper is based on the global or world cities research, which re-emerged in the 1980s and which has since then created a theoretically and – to a lesser extent – empirically compelling body of literature (see, for example, Friedmann 1986; Sassen 1991; Knox/Taylor 1995; Lo/Yeung 1998). In short, the argument is that globalization processes give rise to a new form of centrality, in which a certain number of cities emerge as key places. These global cities articulate larger regional, national and international economies into the global economy, and by doing so they serve as nodal points where the flows of money, information, commodities and migrants intersect and from where they are directed. Concentrating command and control functions, global cities are both production sites and trade places for specific “goods”, namely financial and other advanced producer services, which are essential for global integration. Finally, global cities are linked to each other by flows of money, information, commodities and migrants, creating thus a cross-border network of cities. The emergence of a global urban system alters the geography of the world system (perceived traditionally as a collection or hierarchy of nation-states), because it operates both through nation-states and by bypassing their boundaries.

Until recently, global city research gave priority to metropolis in the centers of the world system. Most – not all – studies on “Third World” urbanization, on their part, used to place cities in a nation-state framework. In addition, they tended to have a strong bias towards demographic questions, the “urban primacy” and urban problems. There are, however, good reasons to expand global city research to “Third World” cities. First, there are serious limitations in the conceptual framework and database for adequate assessments of mega-cities. The deficiencies can be illustrated by the simple fact that the main cities in Latin America, Africa and Asia are still called simply “mega-cities”, which is of course a quantitative definition, compared to the qualitative approach of “global city”. Second, a country's position in the international division of labor

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<sup>2</sup> “Mexico City” refers to the whole Metropolitan Area, the “Zona Metropolitana de la Ciudad de México” (ZMCM), which in 1995 had, according to the “National Institute for Statistics, Geography and Computer Sciences” (Instituto Nacional de Estadística, Geografía e Informática, INEGI), 16.7 million inhabitants. The ZMCM is formed by the “Federal District”, which is the country's capital, and those communities (“municipios”) of the surrounding State of Mexico (30 in 1995), which have grown together with the Federal District. In 1995, the Federal District covered less than one third of the city's surface and housed slightly more than 50% of its population (INEGI 1996; Iracheta Carroll 1999, 73; Camposortega Cruz 1992, 4). The “National Population Council” (Consejo Nacional de Población, CONAPO) applies a slightly different definition. According to CONAPO, Mexico City had 18.6 million inhabitants in 1996 and contained the Federal District and 58 “municipios” of the State of Mexico and one of the state of Hidalgo (CONAPO 1999a).

influences its economic and social development. Accordingly, urbanization in the “Third World” is linked to broader dynamics such as colonialism, merchant capitalism, dependent industrialization or the crisis of the world economy. Third, if the postulate is taken seriously that today’s world economy is shaped as a network, and if cities are, as argued, nodal points in this network, then the major cities of the “Third World” should be expected to be key places for globalization, too. From this perspective, a city like Mexico City presumably is the place where the integration of economic activities, territories and societies of a “Third World” country such as Mexico into the global system is organized, controlled and managed. Thus, one can raise the hypothesis that the mega-cities of the periphery are indeed an essential element of the cross-border urban system.

### **Economic restructuring in the 1980s and 1990s**

Mexico City, which has been the unchallenged epicenter of the national economy until the 1970s (Garza 1985), suffered from a severe crisis in the 1980s. The collapse of import substitution, marked by the debt crisis in 1982, hit the “Zona Metropolitana de la Ciudad de México” (ZMCM) harder than other Mexican cities. A good part of the city’s manufacturing sector broke down, because many of the medium and small firms had to close down while many of the big companies shifted their production facilities either to nearby states in Mexico’s central region or to the Northern border region. Additionally, the Federal District lost importance as a national center of economic decision-making, indicated by a sharp decrease of firms having their headquarter in the nation’s capital. As a consequence of the crisis, both the share of Mexico City in the national GDP and in national employment decreased notably (for a longer discussion of the crisis of the 1980s and its relationship to globalization see Parnreiter 2000).

Thus, the 1980s were a period of (unintentional) decentralization, which can be attributed to the specific spatial expression of the collapse of import substitution. Decentralization happened, on the one hand, towards the Northern border region, and, on the other hand, to the central region, particularly to the so-called “crown cities” (Toluca, Cuernavaca, Pachuca, Puebla and Tlaxcala). The key question for the 1990s and the future is how the restructuring and re-orientation of the national economy towards global markets have affected and still affect Mexico City. In order to discuss this question, it is necessary to sketch out very briefly some cornerstones of the recent economic development.

The breakdown of import substitution and the debt crisis forced Mexico to a radical change in its economic strategy. In order to find ways to guarantee the payment of the interest (and, to a lesser extent, the re-payment of the debt) and to restore public finance, Mexican governments opted for neoliberal policies and for globalization. A good part of the economy and labor market were deregulated, the financial sector liberalized, land reform halted, tariff protections dismantled, state-owned enterprises privatized, manufacturing and agriculture re-orientated towards foreign markets, wages and social transfers reduced, and markets opened up to foreign products, firms and investors. By joining GATT (today: WTO) in 1986 and the North American Free Trade Area (NAFTA) in 1994, the country’s government institutionalized its course towards globalizing Mexico.

The outcome of these policies are rather ambiguous. Some economic indicators show favorable results – exports, for example, grew more than fivefold between 1982 and 1999, with

“maquiladoras”<sup>3</sup> making for an ever growing share (45% in 1998, compared to 13.9% in 1980). Foreign capital flew in unprecedented dimensions to the country (between 1989 and 1998, 80.9 billion dollars flew in as Foreign Direct Investment, replenished by about the same amount that flew in as portfolio investment), and inflation sank to less than 20%. Regarding the economy as a whole, however, the results of neoliberalism and globalization are less favorable. The annual growth of GDP amounts only to an average of 2% (1982–1999), GDP per capita did not grow at all in the last two decades, and both the balance of trade and the current account are strongly negative in the 1990s. Not meeting the economic expectations raised by government, neoliberalism and globalization failed even more obviously to alleviate the social crisis. Living conditions for most Mexicans deteriorated in the last two decades, so that at the beginning of the year 2000 more than 40% (according to the World Bank) or even 70% of the population (according to Mexican researchers) live in poverty. Real wages decreased thoroughly (amounting in 1999 to less than a third of its value in 1980) and precarious working conditions expanded notably – between 50% and 60% of the economically active population work in the informal economy (for a more detailed discussion see Parnreiter 2000).

The focus of this paper lies on the spatial impacts of neoliberal modernization and globalization, and in particular, on its impact on Mexico City. Some argue that in an open economy a trend towards decentralization is sustained, because principal markets are located abroad, which reduces the advantages for firms to be located in the main urban agglomerations. Given the relatively high costs of land, labor, transportation etc. in Mexico City, companies would tend to locate in cheaper areas or/and closer to their markets (Livas Elizondo 1994; Connolly 1997). However, others maintain that globalization increases competition, and thus forces companies to rely more on scale production. That would imply the concentration of production, infrastructure etc. in a limited number of places, of which Mexico City would be the most important. Likewise, the growing importance of finance reinforces centralization even more (Rivera 1997; Pradilla Cobos 1997; Parnreiter 1998).

Although until now data do not allow for a definitive conclusion, there is some support for the second hypothesis. By the end of the 1980s, Mexico City’s economy recovered from the crisis. Its share in the national GDP rose again, although without reaching the level of the 1970s. The recovery of Mexico City’s economy was driven mainly by an upswing of the Federal District, where GDP grew by 3.5% annually (1988–1996), which is markedly above the national average. Consequently, the share of the capital in the national GDP rose from 21 to 23%, and the Federal District’s GDP per capita exceeded the national average by 3.3 times in 1995 (compared to 2.6 in 1980)(INEGI, various years [a]).

This recovery stems mainly from two trends. First, the manufacturing sector in the Federal District overcame the crisis regaining annual growth rates of nearly 3% (1993–1997) and stabilizing its share in the country’s manufacturing GDP by slightly more than 20%. Thus, Mexico City is still by far the most important single city for manufacturing in Mexico although federal states like Tamaulipas, Aguascalientes, Chihuahua or Baja California have far higher growth rates (INEGI, various years [a]). Economic recovery of Mexico City results also from the growth of the service sector, which became the most important sector both in terms of the GDP and in employment. The expansion of the service sector does not simply reflect a tertiarization of

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<sup>3</sup> Maquiladoras are in-bond-industries geared to foreign markets (mostly in the U.S.) which are mainly located in the Northern border region and which process imported semi finished products in order to re-export them.

the economy, since the growth was concentrated on the sub-sectors “transportation and communication” on the one hand, and “finance, insurance and real estate” on the other hand. Thus, it was mainly producer services to grow. The share of “finance, insurance and real estate” in the Federal District’s GDP rose to 19% in 1997 (up from 11% in 1988), and employment in advanced services (“real estate, financial and professional services”) grew by 60% between 1990 and 1997, amounting to 9% of the city’s total formal employment (INEGI 1998; INEGI, various years [a]; INEGI, various years [b]). The extent to which economic recovery in the Federal District was linked to the raise of specialized services is indicated also by a pronounced increase of headquarters. In 1998, 213 of the 500 biggest Mexican firms were located in the Federal District (up from 145 in 1989)(Expansión, various numbers).

During the process of recovery the socio-economic profile of the city changed. While until the 1970s trade and manufacturing were the most important sectors, by 1997 “municipal, social and personal services” dominated (31% of the capital’s GDP), followed by “trade, restaurants and hotels” (22%) and “manufacturing” and “finance, insurance and real estate” (19% each)(Garza/Rivera 1994, 106–111; INEGI, various years [a]). Second, recovery was reached at the expense of employment and social standards. On the one hand, economic improvement did not result in the creation a substantial number of new jobs in the formal economy. This was particularly true for manufacturing, which provided more than 50% of the ZMCM’s formal employment in 1980, but only 20% in 1999. On the other hand, the loss of real wages was even more pronounced in the Federal District than in the whole Mexico, and both the number *and* the share of people who work under precarious conditions increased notably. At the end of the 1990s, about 50% of the economically active population worked in the informal economy (Aguilar 1996, cuadro 8.1, 8.2; Cárdenas Solórzano 1999, 239–145; Boltvinik 1995, 37; Delgado Selley 2000; INEGI, various years [b]). Impoverishment was accompanied by social polarization. The share of the employed population in the ZMCM which obtained incomes below or up to the poverty line increased slightly (from 83.6 in 1987 to 85% in 1999)<sup>4</sup>, while the group with the highest earnings grew quickly, although it is still very small (amounting to 2.8% in 1993). However, data on the income distribution among households of Mexico City point to a somewhat declining inequality through the 1990s. While the share obtained by the richest tenth fell to 34.6% of all income in 1996 (compared to 39.5% in 1989), the poorest 30% expanded their share from 8.9 to 10.1%. Yet, taking the 1980s and the 1990s together, that is, comparing the present situation with the time before the collapse of import substitution and neoliberal restructuring, inequality still is higher today than 20 years ago (INEGI, various years [c]; INEGI, various years [b]; CONAPO 1999, 154). A growing polarization is also indicated by Aguilar (1996, cuadro 10), who identified a growing polarization between jobs at the top and at the bottom of the labor market hierarchy for the time between 1970 and 1990. This tendency seems to continue, although in an altered and less pronounced way. Between 1992 and 1998, petty traders and street vendors, a group that certainly corresponds to the bottom of the labor market hierarchy, expanded their share in the whole urban

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<sup>4</sup> Data on the income structure of the employed population in the ZMCM (INEGI, various years [b]) have to analyzed carefully, since the INEGI does not reflect on the loss of the real value of wages. Yet this is a decisive factor, since a person earning five minimum wages in 1999 in reality obtained only slightly more of real purchasing power than a person earning two minimum wages in 1987. If this sharp contraction of real wages is taken into account, the notable decrease of people earning less than two minimum wages between 1987 and 1999 (from 83.6 to 56.1%) does not mean that the actual share of people earning incomes below the poverty line really declined. On the contrary: Taking five minimum wages as the income necessary to purchase the basic basket of goods at the end of the 1990s, compared to two minimum wages in the mid 1980s (La Jornada, 27.12.1996; El Financiero, 21.1.2000), the share increased.

employment by 5%. The upper stratum (professionals, senior officials, senior management) grew also, though on a slower path, expanding its share in overall employment by 1.1%. The second fastest growing group was manufacturing workers (3.6%)(INEGI, various years [b]). It is not clear if blue collar workers should still be counted as lower middle class (as it was common until the 1980s). Yet, both the above quoted data on the growth of precarious work conditions and the general trend to dismantle social protection according to the maxim of deregulation suggest that the growth of the group of manufacturing workers would add to the layers at the lower end of the labor market hierarchy.

### **The making of a global city: Headquarters, FDI, and advanced services**

In the context of global city research, neither a rising GDP nor the location of headquarters in general are decisive factors. The task then is to link the new dynamic of Mexico City's economy to new functions, namely those which serve the globalization of Mexico and which connect the city to other global cities. Documentation that such ties do exist is still tentative due to severe data problems which in general challenge the global city research (Short et al. 1996, Taylor 1999a). Most data available are state-centric, and if data are on cities, they commonly are highly aggregated. Furthermore, the basic unit usually covered by city data is the city as an entity and not as an element in a "space of flows", which allows only for indirect conclusions about relations between cities and hence the global urban system. Finally, an analysis of Mexico City as part of a global, cross-border network of cities faces another problem. Since the 1980s, we can observe the formation of a very dense and complex regional division of labor in the center of Mexico, which connects Mexico City closely and functionally to six other federal states. Whether this regional system is called "megalopolis del valle de México" (megalopolis of the Mexican valley), "región centro" (central region) or "corona de ciudades" (crown of cities), the point is that one cannot separate Mexico City from its regional embeddedness. However, data on this broader spatial unit do barely exist. Despite all these data problems some evidence for the formation of a global city is provided in the following sections. In addition, I also will sketch out points for a research agenda.

#### *Location patterns of headquarter*

A first step to study the relationship between the new dynamic of Mexico City's economy and global functions is a closer analysis of the location patterns of the most important firms registered in Mexico. The results (see table 1) can be summarized as follows: the bigger the firm (in terms of sales) and the stronger the links to the global economy (in terms of exports and imports and of participation of foreign capital), the higher is the probability that a company has its headquarter in the Federal District. Regarding the sales, 70% of the "Top 10" Mexican companies were headquartered in the Federal District in 1998, compared to 42.6% of the "Top 500". The dominance of Mexico City becomes even clearer if one adds those communities of the State of Mexico which belong to the ZMCM. In that case, half of the biggest 500 companies have their main office in Mexico City. The only other Mexican state attracting a significant number of main offices is Nuevo León with its capital Monterrey.

Table 1: Location patterns of the main firms registered in Mexico, 1998 (in percentage)

	Federal District	Edo. de México	ZMCM <sup>a)</sup>	Edo. de México without ZMCM	Nuevo León	Jalisco	Other states
Top 500 according to sales	42.6%	9.4%	50.0%	2.0%	11.8%	8.0%	28.2%
Top 100 according to sales	59.0%	2.0%	61.0%	-	23.0%	4.0%	12.0%
Top 10 according to sales	70.0%	-	70.0%	-	20.0%	-	10.0%
Top 300 according to exports	43.0%	11.6%	51.3%	3.3%	12.3%	6.6%	26.3%
Top 100 according to exports	54.0%	2.0%	56.0%	-	24.0%	3.0%	17.0%
Top 10 according to exports	90.0%	-	90.0%	-	-	-	10.0%
Top 300 according to imports	44.3%	10.6%	51.6%	3.3%	14.6%	5.6%	24.6%
Top 100 according to imports	52.0%	1.0%	53.0%	-	24.0%	4.0%	19.0%
Top 10 according to imports	80.0%	-	80.0%	-	10.0%	-	10.0%
Firms with a majority of private national capital listed among the Top 500 (sales) (413 altogether)	39.4%	8.2%	46.7%	0.9%	13.5%	8.4%	30.0%
Firms with a majority of private national capital listed among the Top 100 (sales) (80 altogether)	53.7%	2.5%	56.2%	-	27.5%	2.5%	13.7%
Firms with a majority of private national capital listed among the Top 10 (sales) (4 altogether)	50.0%	-	50.0%	-	50.0%	-	-
Firms with a majority of foreign capital listed among the Top 500 (sales) (84 altogether)	58.3%	14.2%	66.6%	5.9%	3.5%	5.9%	17.8%
Firms with a majority of foreign capital listed among the Top 100 (sales) (19 altogether)	78.9%	-	78.9%	-	5.2%	10.5%	5.2%
Firms with a majority of foreign capital listed among the Top 10 (sales) (5 altogether)	80.0%	-	80.0%	-	-	-	20.0%

Sources: Own calculations, based on Expansión, 1999: Las empresas más importantes de México. Expansión S.A.

a) ZMCM (Zona Metropolitana de la Ciudad de México) defined as, according to the INEGI, the Federal District plus 30 “municipios” of the “Edo. de México” (see footnote 3).

The three state owned enterprises, which are listed among the 500 most important Mexican firms, are not included into table 1. Petróleos Mexicanos (Pemex), the biggest firm registered in Mexico, has its headquarter in the Federal District, while the other two, which are of minor importance, are located in Baja California Sur. The table does not include data on maquiladoras.

Since the primary concern of this article is the global embeddedness of Mexico City, the most meaningful information that can be drawn from location patterns of headquarters is data that specify global links like the participation of foreign capital or export orientation. Companies which are dominated by international capital show a much stronger preference to locate in Mexico City than nationally owned (private) firms. Breaking up the list of the “Top 500” Mexican firms according to ownership, different location strategies between nationally owned (private) companies and those with a majority of foreign capital can be distinguished. While 39.4% of companies which are dominated by private Mexican capital have their main office in the Federal District, among the foreign dominated corporations listed in the ranking of the “Top 500”, 58.3% have their headquarter in the capital. Concentration even increases with the size of the firm and if one considers the whole metropolitan area (ZMCM). For example, 78.9% of companies that are among the biggest 100 firms and that are internationally dominated are headquartered in Mexico City. Regarding foreign trade (except the maquiladora industry<sup>5</sup>), the results show the same tendency: there is a very strong dominance of Mexico City as preferred location for headquarters, and the preference increases the more a company exports or imports. Nine out of the ten biggest export firms are located in the Federal District, compared to 43% of the 300 firms with most exports (ZMCM: 51.3%). A similar pattern is found in regard of imports. The dominance of Mexico City as location for main offices of export firms is shown also by the fact that 73.4% of the exports of the biggest 100 export companies (again without maquiladora industry) originate in the Federal District, a huge lead over Nuevo León (11.5%).

The country’s capital is also the preferred location for the biggest firms of the most productive industrial branches. In an analysis of the Mexican manufacturing sector (without maquiladoras), Dussel Peters (1997) identifies automobiles, petrochemicals, electrical equipment, beer and glass as the sub-sectors with the highest gains in productivity in the last years. A majority of the most important firms of these branches have their headquarters in Mexico City. In the Federal District are located 4 out of the 7 automobile firms recorded among the “Top 500” Mexican companies, 9 out of the 14 listed firms in the petrochemical industry (another one lies in a community of the State of Mexico belonging to the ZMCM), and 5 out of the 12 companies in electrical equipment (3 more are located in communities of the State of Mexico belonging to the ZMCM). Thus, two thirds of the headquarters in these three very productive branches are located in Mexico City<sup>6</sup>. This is a considerable higher share than among all Mexican firms, what allows for the postulate that productivity grows faster among firms based in Mexico City than in the Mexican mean (Expansión, 21.7.1999).

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<sup>5</sup> There seem to be no direct links between Mexico City and the maquiladora industry. Between 1993 and 1999, 77% of the production value of this industry corresponded to imports, and only 23% was value added in Mexico. Of this rather small segment, 51% corresponded to wages (in the vast majority blue collar workers), 13% to profits, 8% to packing and raw materials, and 27% to other factors (such as properties, energy, transportation etc.)(Bendesky 2000). The low value added in Mexico and its structure show that low skilled labor is in fact the only important Mexican contribution to the maquiladora industry. That allows for the hypothesis that specialized services (e.g. financial or legal services) that are needed are imported – presumably from the United States. However, it might be that there are “indirect” links between the maquiladora industry and the Federal District. It might, for political reasons, be necessary for companies running maquila-plants to have representatives in Mexico City – for example, to do lobbying.

<sup>6</sup> The exceptions are the beer industry, which shows a tendency to locate main offices in the Northern states, and the (comparatively small) glass industry.



To sum up; the Federal District is the preferred location for headquarters of the biggest Mexican companies. This preference increases with a) the number of sales of a company, b) a higher level of participation of foreign capital, c) a stronger orientation towards export-production, and d) higher levels of productivity. This specific character of main offices in the Federal District points to a close link of the city's economy to the global economy. Data suggest that companies which were able to adapt to the world market show a preference to locate in the Federal District. In other words; Mexico City is the place where the "global player" among Mexican companies and transnational companies settled in Mexico tend to have their headquarters. Consequently, the Federal District assumes world city functions in the sense that from there the Mexican economy (or at least parts of it) become globalized. If that is true, Mexico City's loss in manufacturing employment represents more than a simple "deindustrialization". Rather, "deindustrialization" might fit into a new regional and national division of labor, in which the ZMCM specializes primarily on functions commonly attributed to global cities, while other cities in the central region and in the Northern border region take on manufacturing. In this context it is important to note that the high concentration of headquarters in the Federal District is not translated into a similar concentration of production and employment. Rather, the big firms have spread their production to various cities in the whole country, keeping only a specific segment of production, namely control functions and services, in Mexico City. This points to the city's role as central node in the international and regional division of labor.

The Mexican branches of General Motors, Daimler-Chrysler, Volkswagen, Ford and Nissan are, for example, leading enterprises in terms of sales, exports and foreign investment. All of them have their headquarters in the Federal District, except Volkswagen, which is located in Puebla. Yet, production facilities are spread over the country. General Motors produces in Toluca (State of Mexico), Ramos Arizpe (Coahuila) and Silao (Guanajuato); Daimler-Chrysler in Saltillo (Coahuila), Toluca and in the Federal District; Ford in Hermosillo (Sonora), Chihuahua and in Cuautitlán, a community of the State of Mexico which belongs to the ZMCM; and Nissan in Aguascalientes, Cuernavaca, Zivac (both in Morelos), and Lerma (State of Mexico). In addition, Nissan has research and development centers in Manzanillo (Colima), Toluca and in Mexico City. Thus, though Mexico City is not totally negligible as manufacturing site, evidence show that most of the automobile *production* takes place either in states in the country's center (State of Mexico, Guanajuato, Aguascalientes and Morelos), or in Northern border states (Coahuila, Chihuahua). Future research should aim to analyze the links between these production sites, the (regional) headquarters in Mexico City and foreign cities, where the capital, specific services or semi-finished products might come from. That would allow for the conceptualization of the network or commodity chain in which main offices based in the Federal District articulate Mexican production into the world economy.

### *Regional distribution of foreign investment*

As already mentioned, an unprecedented inflow of capital is one of the most significant outcomes of the opening of Mexico's economy. Between 1989 and 1998, more than 80 billion dollars were invested in Mexico as Foreign Direct Investment (FDI), three fourth of it after 1994. Portfolio investment, which outnumbered FDI in the first half of the 1990s, fell behind in recent years (1994–1998: 18.7 billion dollars), mainly due to the "peso crisis" in 1994-95 (Dussel Peters 1999, cuadro 1, 2; Consulado General 2000). Both flows of capital are highly concentrated on the Federal District. Regarding FDI, 58.6% of all investment (that is, 27 billion dollars) effected between 1994 and 1998 was realized in the Federal District (see table 2). Although through the

last years a decrease in the share of the capital can be observed, the Federal District's participation is in fact the same than in previous years (1989–1993: 59%). It is noteworthy that the six Northern border states (Baja California, Sonora, Chihuahua, Coahuila, Nuevo León, Tamaulipas), which concentrate 86% of all maquiladora production (Bendesky 2000), attracted *together* less than half of FDI than the capital (28.4%)(own calculations, based on Dussel Peters 1999, cuadros 8, 9). The dominance of Mexico City becomes even more striking if one considers that most of the FDI realized in the State of Mexico might in fact have been directed to firms located in communities which belong to the ZMCM. Thus, the share of Mexico City would nearly reach two thirds of all Foreign Direct Investment. For portfolio investment data on regional distribution is lacking. However, it is likely that the concentration on the Federal District is even higher than in the case of FDI, given that the stock market is located there, and all major banks have their main office – and hence their accountancy – in the capital.

Table 2: Distribution of Foreign Direct Investment in Mexico, 1989 – 1998

	1989	1990	1991	1992	1993	1989–1993	1994	1995	1996	1997	1998	1994–1998
Distrito Federal	51.7%	58.7%	67.0%	56.4%	61.1%	59.0%	72.1%	54.3%	62.2%	54.3%	46.0%	58.6%
Nuevo León	3.8%	13.7%	0.6%	0.9%	7.2%	5.2%	8.7%	8.3%	4.3%	21.0%	5.1%	10.5%
Baja California	3.4%	1.0%	1.8%	2.7%	3.9%	2.6%	2.2%	6.6%	5.7%	5.9%	10.4%	5.8%
Chihuahua	3.1%	0.6%	0.5%	2.6%	0.6%	1.5%	2.9%	6.5%	7.0%	4.3%	8.5%	5.5%
Edo. de México	7.4%	5.7%	8.8%	8.7%	6.0%	7.3%	3.1%	7.5%	5.6%	2.3%	9.5%	5.0%
Tamaulipas	4.5%	1.2%	1.7%	1.0%	1.0%	1.9%	3.3%	4.8%	4.5%	2.5%	5.0%	3.8%
Jalisco	2.9%	2.9%	6.1%	4.6%	2.4%	3.8%	0.6%	1.4%	2.4%	1.5%	4.9%	1.9%
Other states	23.2%	16.2%	13.5%	23.1%	17.8%	18.7%	7.1%	10.6%	8.3%	8.2%	10.6%	8.9%

Source: 1989–1993: SECOFI. Dirección General de Inversión Extranjera; 1994–1998: Own calculations, based on Dussel Peters 1999, cuadros 8, 9. Data on FDI between 1994 and 1998 include new investment plus investment in maquiladoras. Due to a change in the methodology to measure FDI, the absolute numbers before and after 1994 are not comparable. However, since the purpose of this article is to show the regional distribution of FDI, a comparison can be made.

Yet, not all capital that enters the Federal District is necessarily invested there. It might be, for example, that a transnational corporation which effects a “greenfield investment” sets up the new plant anywhere in Mexico, while the regional headquarter of that company from where “local” production is controlled and serviced is located in Mexico City. This applies for the biggest single investments effected in 1998-99. Daimler-Chrysler and Ford, which are both headquartered in the Federal District, invested 1.5 billion dollars each. Yet, the resources were directed towards the expansion of an existing plant in Coahuila in the case of Daimler-Chrysler and to the construction of a new one in Chihuahua in the case of Ford. The same principle applies to mergers and acquisitions. The U.S. American company Anheuser-Busch invested 556 million dollars to buy 13% of the Mexican group “Grupo Modelo”. This worldwide known beer company (“Corona”) has its main office in the Federal District and its breweries in eight cities throughout the country (one of them in Mexico City)(Dussel Peters 1999, cuadro 11; CEPAL 2000, 77). In these cases foreign investment is entered in the Federal District – because accountancy is carried out there – and then eventually been re-distributed to distant production sites in Mexico. Alike in the case of the headquarters, it is necessary to trace back the flows of capital – from the global investor to the local use. That would allow for conceptualizing an urban network, in which different cities occupy different positions with different tasks and power. To identify the “command and control” linkages between headquarters and specific services based in the Federal District and production facilities elsewhere in the country remains a key subject for research to

sketch out the spatial and sectoral distribution of investment and the role which banks, financial institutions and other services located in Mexico City play in that division of labor.

*Employment in the advanced producer service sector*

Both headquarters and FDI are related to certain economic activities. The Mexican branch of a transnational automobile company, a foreign investor buying assets from a former state owned enterprise, a Mexican beer company catering to the U.S. market or a broker speculating on currencies – they all need to be serviced by accountants, tax and financial advisers, lawyers, advertising agencies, political consultants etc. Thus, the work of globalizing parts of the Mexican economy requires specific services. Yet, global city researchers emphasize not only that advanced producer services are crucial to globalization, but also that much of these services (particularly those which are not routinized) concentrate necessarily in major cities, because it is there where both the creative milieu needed to develop them and the markets to trade them are to be found (see, for example, Sassen 1991). Accordingly, the advanced service sector in Mexico should have, on the one hand, grown and, on the other hand, strengthened the position of Mexico City.

Table 3: Employment in Real Estate, Financial and Professional Services, 1987–1997

	ZMCM	Share of employment in the ZMCM	Guadalajara	Share of employment in Guadalajara	Monterrey	Share of employment in Monterrey
1987	321,437	6.39%	40,764	4.34%	38,807	5.06%
1988	350,261	6.73%	48,663	4.87%	50,191	5.83%
1989	369,524	6.74%	50,099	4.93%	47,723	5.34%
1990	352,545	6.42%	52,622	5.16%	59,177	6.32%
1991	401,107	7.13%	61,017	5.55%	60,218	6.18%
1992	419,754	7.14%	62,208	5.17%	71,642	6.83%
1993	446,736	7.19%	62,815	4.91%	64,379	6.07%
1994	449,725	7.43%	75,666	5.54%	82,707	6.93%
1995	464,538	7.76%	72,946	5.70%	71,068	6.31%
1996	607,833	9.61%	96,604	6.68%	94,383	7.64%
1997	563,724	8.62%	109,718	6.82%	103,475	7.77%

Source: INEGI, various years (b).

Indeed, both happens. The share of advanced producer services in the Mexican GDP doubled between 1985 and 1993 to 16%, decreased notably in 1995 due to the “peso-crisis” and recovered since then (1997: 15.8%). National employment in “real estate, financial and professional services” grew by 45% between 1992 and 1997 (OECD 1995, 176; INEGI, various years [a]; INEGI, various years [b]). This growth was strongly concentrated on Mexico City (although concentration declined slightly in very recent years). With 563,724 people working in that sector in 1997, the ZMCM had 47.8% of all national employment in “real estate, financial and professional services”. Additionally, advanced services make a higher share of urban employment in the ZMCM than in any other Mexican city, exercising thus a stronger impact on the city’s economic and social development. In 1997, advanced services amounted to 8.6% of all formal employment in Mexico City, or to 44% of the city’s employment in manufacturing (INEGI, various years [b], see table 3). The slight decrease in the ZMCM’s share of overall employment in “real estate, financial and professional services” is contrasted by a – also slight – growing share of the Federal District in the nation’s GDP in “Financial Services, Insurance, and

Real Estate” (1993–1997). Taken together, both factors indicate a growing productivity of advanced services in Mexico City. In fact, Mexico City is the only Mexican city where productivity in advanced services is above national average in all sub-branches, while rival cities such as Monterrey or Guadalajara exceed the national average only in half of the cases or even less (INEGI, various years [a]; Garza/Rivera 1994, 67, 73f, 90f, 106–110). Besides, the ZMCM turned from a city specialized in manufacturing, as it was until the late 1970s, into a city specialized in advanced services, and that both in terms of GDP and employment. According to the “Coefficient of Local Specialization”, the Federal District was, in 1993, highly specialized in services related to finance and insurance, and, to a lesser degree, in professional services (Garza/Rivera 1994, 67, 73f, 90f, 106–110; Iracheta Carroll 1999, 118f).

To sum up; Evidence pointed out so far clearly suggests that a new form of centrality is emerging. Mexico City centralizes most activities that are related to economic globalization, though its share in the national GDP and employment has decreased since the 1970s. The analysis of location patterns of headquarters, of the regional distribution of Foreign Direct Investment, and of advanced producer services clearly indicates that the opening of the Mexican economy and the stronger orientation towards global markets enforced concentration of activities in the Federal District that are essential to the globalization of the Mexican economy. Thus, due to globalization, and as part of it, Mexico City turns from a national metropolis into a “hinge” between the Mexican and the global economy. By doing so, Mexico City contributes to the “production” of globalization. The articulation of export manufacturing (excluding maquiladora industry) with the world economy, for example, is mainly organized and controlled from Mexico City. In that sense we can speak of the making of a global city.

However, for a more detailed study of the role of Mexico City in the cross-border urban network one should be able to disaggregate data. “Real estate, financial and professional services” is a fairly wide field, including a broad range of professions. That does not allow for distinguish specific tasks fulfilled in Mexico City. Additionally, one should know more about the activities and spatial distribution of firms that are serviced by Mexico City’s advanced service sector. Finally, and taking up the question of re-centralization of decision making and high level economic management in the country’s capital, future research should aim to explain the marked difference in location strategies among companies with strong linkages to external markets and those which are more tied to national markets and national capital. In this regard, two hypothesis can be raised. First, the obviously greater preference of companies engaged stronger in the world market to settle in the country’s capital might result from their wish to be close to the center of national political power. For example, foreign dominated companies might feel a greater need than national firms to be in touch with high government officials or high representatives of the country’s main political party PRI in order to establish or expand business in Mexico. Second, location preference for the Federal District might also result from the need for highly specialized producer services which can be obtained only there. While a national firm might get by more easily on the services offered in a regional metropolis (e.g. Monterrey), a company catering to the world market might need, for example, expertise on U.S. law. This specific service, however, might be available only in the Federal District. Yet, the two presumptions are, of course, not mutually exclusive. Further research will probably show that it is a combination of political considerations and the need for highly specialized services which drives foreign companies to the country’s capital.

## **Impoverishment and social polarization**

The traditional factory worker, who lost his job during the crisis of the 1980s, is very unlikely to find employment in the advanced service sector. Rather, he might be forced to emigrate to the U.S. or to work in Mexico City's growing informal economy to make a living (de la Peña et al. 1990). Thus, the new role assumed by Mexico City affects not only its economic structure, but also social arrangements. A critical issue is the fact that economic recovery in the late 1980s and in the 1990s happened at the expense of most of the city's inhabitants. As pointed out above, the last two decades were a time of absolute impoverishment of large segments of the urban population, and they were also a time of growing polarization of earnings and labor market structure.

The arising question is whether impoverishment and polarization are linked to the deeper integration of Mexico into the world economy and to the growing importance of global city functions within the economy of Mexico City. Evidence presented so far suggests that that is in fact the case. First, it is obvious – and admitted by high representatives of the government – that substantial wage reductions were a crucial element in the country's course of neoliberal modernization and globalization, since to cheapen production allowed to become more competitive both at the world and the domestic market. Furthermore, wage reductions were an important cornerstone in the efforts to reduce inflation. Second, the recovery of the manufacturing sector was succeeded, at least partly, by reducing employment and/or by downgrading production to the informal sector. As shown above, industrial employment stagnated although output grew in the 1990s, and work in the informal economy expanded at the expense of formal capital-labor relations. Third, the growing importance of services contributed both to impoverishment and polarization. In the service sector, more people than in the national average gained wages under the poverty line<sup>7</sup> (72% compared to 70%), and more people were really well off, earning more than ten minimum wages (3% compared to 2.8%). In contrast, manufacturing, which also had an above average number of poorly paid workers, was underrepresented among the highly income groups. The majority of the well off people in services worked in the sub-sector of the advanced producer services, making this branch to the one with the highest number of people earning more than ten minimum wages (note that the manufacturing sector, which employed three times as many people as “real estate and financial and professional services”, had less high income workers). The polarizing structure of the labor market points into the same direction (INEGI, various years [b]). Yet, the point is not that globalization created the informal sector or income inequalities in Mexico City. Rather, by strengthening links to the world economy, Mexico City experiences the *worsening* of social problems it already had before. This is concurrent with the findings of world city researchers, who argue that a growing informalization of the relations between capital and labor and a deepening of social polarization are characteristic processes of world city formation.

## **Mexico City in the cross-border network of cities**

Although still tentative, evidence presented so far supports the argument raised by world city research that globalization produces a new geography of centrality in which major cities are nodal points. Alike, evidence suggests that a specific set of structural transformations going on in

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<sup>7</sup> Data are for 1993; the poverty line is defined by an earning of three minimum wages.

Mexico City is linked to globalization and to the particular role of Mexico City in this process. Thus, we can speak of the making of a global city.

### *A global network of producer services*

Support for this argument comes from various studies of the “Globalization and World Cities Study Group and Network” (GaWC)(see Beaverstock et al. 1999a, 1999b, 1999c; Taylor/Walker 1999; Taylor 2000; Taylor et al. 2000). They analyzed the location patterns of 69 firms in four key service sectors (accountancy, advertising, banking/finance, and law) among 263 cities in 1997-98. 122 cities served as the location for at least two firms in at least one of the named sectors, of which 55 cities are global service centers at least in two sectors. Those 55 cities are identified as world cities. In this hierarchy, Mexico City<sup>8</sup> ranks in the 15<sup>th</sup> place, classified as a “Beta World City”. It shares this position with Brussels, Madrid and São Paulo, only narrowly behind San Francisco, Sydney, Toronto and Zurich, but ahead of Washington, Miami, Berlin or Shanghai. In an improved measurement, Mexico City is listed in the 20<sup>th</sup> place – the highest ranked Latin American city. According to the GaWC, Mexico City has 12% of world city formation (measured in terms of the level of service provision of the mentioned sectors relative to the top scoring city), ahead of São Paulo (with 11% of world city formation), Buenos Aires (6%), Caracas (6%) and Santiago (5%). Mexico City can be compared to cities like Zurich (11%), Johannesburg, Milan (13% each) and even Los Angeles (14%). This is an surprisingly high classification, given skeptical judgments such as; “Mexico City’s future as a world city is far from clear” (Friedmann 1995, 38).

The high ranking of Mexico City is based on the strong presence of “global players” among service firms. Mexico City qualifies as a “major” global service center for all four sectors (accountancy, advertising, banking and legal services), while São Paulo is a “major” global service center in three sectors (advertising, banking and legal services) and Buenos Aires only in one (banking). The fact that Mexico City houses many of the global service firms suggests that it is well embedded into the cross-border network of cities. Indeed, the studies of the GaWC also show that firms in the advanced producer service sector that are located in London but operate on a global scale tend to have a high presence in Mexico City. In finance and banking, for example, there is a 93% probability that a global firm located in London has a direct link to another of the firm’s branch in Mexico City. Considering that only two cities show a higher probability of direct organizational links to London (New York and Tokyo) and taking into account that London based finance firms are as present as in Mexico City only in three cities (Buenos Aires, Hong Kong, Singapore), Mexico City can in fact be considered as a strategic location for globalization processes. In advertising the organizational links to London are slightly weaker – the likelihood that a London located global firm has a direct connection to another of the firm’s branch in Mexico City amounts to 82% – while in law the ties are still very weak (the probability for a London located law firm to have direct link to Mexico City is only 5%).

Addressing the question of connections of cities to London by averaging across the four producer services (accountancy, advertising, banking/finance, and law), Mexico City comes in 15<sup>th</sup> place among 54 cities. Of course, the “Alpha World Cities” New York, Paris, and Tokyo (in that order) have stronger links to London, as do major European cities (such as Brussels, Frankfurt, Milan or Madrid) and the Asian world cities Hong Kong and Singapore. Mexico City’s

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<sup>8</sup> The GaWC does not distinguish between Mexico City and the Federal District.

connectivity to London is the same as São Paulo's and notably stronger than that of Buenos Aires. It compares to the linkages of Chicago, San Francisco, Washington D.C., Dusseldorf or Amsterdam. This is, again, a surprising result, underlining Mexico City's importance as a strategic site in globalization. The significance of having strong linkages to London even gains weight when one considers that Mexico City a) has no historical ties to London (as Hong Kong or Sydney), and b) forms part of another regional bloc in the world economy (and hence is supposed to be more closely connected to U.S. cities). Alike, analyzing geographical strategies of U.S. law firms in 1997, the GaWC identifies Mexico City as a strategic place in the cross-border network of cities. Eight of the 368 foreign offices of U.S. law firms are located there, which represents 2.2% of all. Though this number is small in absolute terms, Mexico City still classifies high in location strategies of U.S. law firms. First, one has to take into account that the number of U.S. law firms in Latin America is unexpected low – 23 altogether, suggesting that this region cannot be considered as a major globalization arena. Second, out of these 23 offices, Mexico City houses eight, being the only Latin American city with a significant presence of U.S. law firms. Third, Mexico City is throughout the world the most important location for U.S. law firms *outside* the three areas identified as globalization arenas (Western Europe, Pacific Asia, Eastern Europe). Consequently, despite having only 2.2% of all foreign offices of U.S. law firms, Mexico City still ranks 11<sup>th</sup> in their location strategies.

#### *A global network of telecommunications*

Connections between cities need to be built up. Inter-urban telecommunications networks are a key infrastructure to link distant financial markets, firms producing advanced services and off-shore sites for manufacturing. Faxes, telephones and internet connections are necessary to integrate and mediate the globally stretched net of financial and other business activities. The emerging global telecommunications system creates, similarly to the net of global service firms, an uneven geography, because neither technical facilities nor users are evenly distributed. On the global scale telecommunications networks contain “hubs” and “spokes”, and on the city scale infrastructure and users are highly concentrated, too. Centralization of the advanced telecommunications infrastructure is promoted by the fact that the economic activities which rely strongest on them (such as finance) are precisely the ones which have the greatest need for social connectivity and face to face interactions (Graham 1999; Sassen 2000).

The availability of ever more sophisticated, diverse, capable and cheap telecommunications technologies has become a key asset in the competition between cities to attract financial and corporate operations. Concurrent with the above quoted findings of the “Globalization and World Cities Study Group and Network”, a recent survey which classifies the competitiveness of telecommunications provision in 25 major cities reveals that Mexico City is well integrated into the inter-urban telecommunications networks. Mexico City ranks 16<sup>th</sup> – better than any other “Third World” city<sup>9</sup> and better even than Zurich or Singapore (Finnie 1998, cited in Graham 1999, 938). The relative high ranking of Mexico City results from efforts undertaken in the last decade to build up an adequate infrastructure to compete in the world market. Privatization of the state-owned telephone company (“Teléfonos de México”) in 1990 was a first key step in this direction. The Mexican “Grupo Carso” and two major “global players” among telecommunications companies – “Southwestern Bell” and “France Telecom” took control over Telmex. The latter two were crucial to expand and, in particular, to modernize

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<sup>9</sup> Not counting Hong Kong as a „Third World” City.

telecommunications in Mexico inasmuch as they provided latest technologies. In the words of the Federal Commission of Telecommunication, the “ integration of these companies into Telmex guarantees the development of the most modern telecommunications network, promoting economic progress in Mexico. Alike, it opens the door to a technological revolution” (COFETEL 1998a, my translation).

In fact, since the Mexican telephone company was “efficiently colonized by foreign owned telecoms operators” (Graham 1999, 939), facilities needed for secure, fast and voluminous data transmission and hence for cross-border communication expanded and improved rapidly. The number of telephone lines doubled to more than ten million between 1990 and 1999, and the quality of lines – an equal or even more important factor for efficient data transmission – improved substantially. In 1999, more than 97% of all lines were digitalized – up from 29% in 1990. In 1994, an electronic backbone consisting of two 2 megabits fiber optic lines and several 64 kilobit lines was set up (and expanded since then), connecting the main Mexican cities to the United States. This infrastructure allowed conventional telecommunications like faxes or telephone calls to expand (international calls, for example, grew by 436% between 1990 and 1998 up to 737 million), and they allowed Mexico to join the Internet. Since the first Internet connection in Mexico was put into place in 1989, both infrastructure for the use and internet communication itself expanded rapidly. In July 1999, the number of Mexican hosts<sup>10</sup> totaled 224,239 – up from 13,787 in January 1996. Mexico ranks second among Latin American countries in terms of both growth rates and the absolute number of hosts – surpassed only by Brazil –, and it ranks 20<sup>th</sup> worldwide. Alike, the number of Internet users increased from 94,000 in 1995 to more than 1.3 million in 1998. The development of the infrastructure was driven mainly by business interests. While the first Internet users were universities, by now business related users represent the majority – and their dominance grows (56% in 1998, up from 51% in 1995)(COFETEL 1998b, 1998c, 1999a, 1999b, 1999c; Fernández 1995; Gutiérrez/Daltabuit 1999, 23; ISC 1999).

These data suggest a fast growing integration of Mexico into cross-border information flows. However, it is not the whole Mexico which is part of the global telecommunications network. The upgrading of the Mexican telephone system and the new facilities for telecommunications reinforced an uneven geography of information flows. For example, more than 38% of all Mexican telephone lines are concentrated in Mexico City, which is twice as much as the city’s share in the country’s total population, and nearly a third of all international telephone calls are made or received from Mexico City. More significant is, however, that the Federal District is the central node of the national electronic backbone, which by the end of 1999 consisted of various 2 megabits fiber optic lines linking 18 cities. Five lines meet in the Federal District: the South-East connection to Mérida, crossing Puebla, Veracruz, Villahermosa and Campeche; the North-East connection to Monterrey and Matamoros; a single connection to Querétaro in the central region; the North connection to Ciudad Juárez crossing Celaya, León, Aguascalientes, Torreón and Chihuahua; and finally the North-West connection that runs through Guadalajara and Hermosillo to Mexicali. To transfer information between Guadalajara and Monterrey, for example, or between Monterrey and Mexicali, the Federal District must get involved, since there are no direct lines between those cities (COFETEL 1998b; 1999d; Iracheta Carroll 1999, 134; Red Tecnológica Nacional 2000).

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<sup>10</sup> Defined as computers permanently connected to the Internet.



Centralizing infrastructure, Mexico City dominates the use of telecommunications. Though available data on the distribution of hosts within Mexico are not very detailed, they do show huge differences in scale among Mexican cities. In January 1999, Mexico City was the only Mexican city qualifying for the category “100,000 to 1,000,000 hosts”, making it to one of the three telecommunications “hubs” in Latin America (the other two are São Paulo and Buenos Aires)(MIDS 1999). Thus, Mexico City accounted for at least 50% of all hosts in Mexico, given that by that time there were slightly more than 200,000 hosts in the whole country. In terms of Internet Service Providers (ISPs) and Points of Presence (PoPs)<sup>11</sup>, Mexico City’s dominance is not that striking, although still remarkable. The Federal District houses 93 of the country’s ISPs, while the federal states of Jalisco, Nuevo León and the State of Mexico have 45, each<sup>12</sup>. Likewise, nearly one third of the 395 Mexican PoPs are located in the Federal District (COFETEL 1998d and information provided by Oscar A. Robles). The geographical unevenness of the telecommunications system is revealed also by the fact that 60% of all Mexican municipalities did not even have *one single computer* in 1995. Thus, in federal states like Oaxaca, Yucatán, San Luis Potosí, Chiapas or Guerrero between 93% and 71% of the municipalities lacked the very basic infrastructure to participate in the cross-border flows of information (Gutiérrez/Daltabuit 1999, 22).

Telecommunications are unevenly distributed within the city, too. Basically, both the 2 megabits fiber optic line and the 128 and 64 kilobit lines are centralized in only five of the 16 “delegaciones” (districts) of the Federal District – Álvaro Obregón, Miguel Hidalgo, Benito Juárez, Cuauhtémoc and Coyoacán (Red Tecnológica Nacional 2000). That comes with no surprise given that in these districts the main banks and companies, the research centers and universities, and many governmental institutions are located. 72% of the Federal Districts GDP in services originates in those five “delegaciones”, 49% of the GDP in trade, and 21% in manufacturing (Iracheta Carroll 1999, cuadro 3). That shows that the integration in global data flows is highly concentrated both spatially and in terms of economic sectors. Thus, if ones says that Mexico is integrated into global data flows it is meant that the Federal District, and even more precisely, a few areas of the Federal District, are connected to the cross-border telecommunications system. To trace links between these areas and cities elsewhere in the world in order to map global telecommunications flows remains a task for future research.

### *A global network of air travel*

Connections between cities are also established by air travel. Though perhaps not as fundamental to the world economy as financial and commodity flows or telecommunications, air travel is significant because it reflects the ways in which cities are linked by the movement of people. Analyzing air travel between 22 world cities between 1985 and 1997, Smith et al. (2000; Smith/Timberlake 1995) found that Mexico City belongs to the third of four tiers of world cities. Both in 1985 and 1997, it ranked 16<sup>th</sup> in terms of the number of mutual relations with other cities in the network and in terms of the strength of the connections. Mexico City is more central than Miami, Montreal or Houston, but behind San Francisco, Chicago, Madrid or Zurich. However, the margin to the second tier cities is narrow. Though its position in the network formed by air travel remained unchanged between 1985 and 1997, Mexico City increased its share in the global

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<sup>11</sup> A PoP is the place where an ISP connects to its customers.

<sup>12</sup> Since Mexico City stretches to the State of Mexico, it is highly probable that at least some of the ISPs in the State of Mexico are in fact located in the ZMCM.

airline traffic, which points to a growing integration in the global economy. The increase happened mainly in the second half of the 1980s – the time after Mexico joined the GATT (WTO). NAFTA seems to have had no impacts neither in terms of ranking nor in terms of power score of Mexico City. Nevertheless, in very recent years international air travel to the airport of Mexico City increased by nearly 10% annually, pointing to an again growing integration of the city into the global airline network (Secretaría de Turismo 1998).

Regarding the spatial patterns of Mexico City's integration in the international air travel network, it is remarkable to which extent U.S. cities dominate. In 1997, more than two thirds of all international passengers came from or flew to U.S. cities (67.8 and 67.2%, respectively). About 12% of the passengers came from or flew to Europe, and about 11% connected to Latin American cities. How uneven the integration of Mexico City into the international air travel network is can be illustrated by the fact that more air passengers traveled between Mexico City and Los Angeles (13% of all passengers) than between Mexico City and *all* Latin American cities *together* (or between Mexico City and all European cities together). Next after Los Angeles come Houston, Dallas, Miami, New York, and Chicago. Madrid ranks 7<sup>th</sup>, San José as top ranked Latin American city does not figure among the Top 10 (although connections to Latin America grew in very recent years, while the dominance of the links to the U.S. cities decreased slightly). In terms of air cargo, the dominance of U.S. cities is not that impressive, although still strong. 55% of all freight originating in Mexico City went to U.S. cities, being again Los Angeles (17%) the most important destination, followed by Miami and New York. European cities amount together to a share of 22% (Paris is the most important one, followed by Frankfurt), while Latin American cities remain relatively unimportant as destinations for cargo from Mexico City (13%) – an amount that corresponds to only 75% of the cargo flown to Los Angeles. In terms of cargo flights to Mexico City, 42% of all freight came from U.S. cities, compared to 36% of European and 16% of Latin American cities. Miami is the most important city of origin (13%), followed by Paris, Amsterdam and Los Angeles (Iracheta Carroll 1999, cuadros 4–7).

The finding that Mexico City is a rather central place in the network of cities formed by air travel corresponds to the above cited studies on networks formed by advanced producer services and on telecommunications connections. However, though airline data provide good estimates of links between cities established by the movement of people, they fail to grasp the qualitative difference of connections established by different types of passengers (such as business men, tourists, or migrants). In the Mexican case a good part of the huge volume of flights to and from U.S. cities may in fact arise from migrants moving between the two countries and not from representatives of corporations or of national Chambers of Industry and Commerce. Indeed, the new airline Taesa basically came into existence to serve the migrant market, and Mexicana and AeroMexico have added flights in response. In this context it is interesting to note that Los Angeles is not only by far the most important city in terms of air passenger travel, but also houses more than a fourth of recent Mexican immigrants to the United States. Nearly half of all recent immigrants headed to five cities – Los Angeles, Chicago, New York, Houston and Phoenix (Durand et al. forthcoming [a], table 4) – the share of which in the air passenger travel amounts to more than a third. Although most of the “migrant flights” do not originate in the Federal District, but in cities of the west of the country (León, Guadalajara, Zacatecas, San Luis Potosí)(personal information by Douglas Massey), Mexico City became more important as a sending area for migrants to the U.S. in recent years (Durand et al. forthcoming [b]). Thus, both the amount and the spatial pattern of passenger air travel between U.S. cities and Mexico City might be influenced by migration.

If that were true, one would have to deal with a different quality of connections than in the case of, for example, air travel between London and New York. Yet, this does not mean that data on air travel of migrants are irrelevant, pointless to the question of connections between cities. In fact, the export of labor is one of the most important mechanisms of the integration of Mexico into the global economy, and Mexican emigrants have created firm links between the two countries. These connections might even surpass trade or foreign investment in economic significance (Secretaría de Relaciones Exteriores 1997, 31; Hinojosa Ojeda et al. 1998, 3). Thus, even if data on air travel do not refer to people who, in the words of Smith and Timberlake (1995, 296), are “greasing the wheels of production, finance or commerce through *face-to-face contact*” (emphasis added) but rather to Mexican men and women who grease the wheels of production, finance or commerce by *really* greasing machines, digging ditches for the cables for advanced telecommunications networks or cleaning bathrooms, air travel data support the argument that Mexico City is highly connected to U.S. cities.

### **Which place in the global urban network?**

Given the evidence that clearly shows a) that Mexico City is indeed becoming a world city; b) that it is, as such, well integrated into the cross-border urban network; and c) that a set of specific urban transformations results from the city’s new role in the world economy, it is obvious that “mega-city” is by no means a satisfactory term to grasp the particularity of Mexico City. There is much more to Mexico City than just a huge “Third World” urban agglomeration – without downplaying chronic problems (lack of satisfactory housing, pollution) or the more recent problem of crime, and without underestimating the significance of phenomena which have nothing to do with globalization, such as the demographic transition. For future research three questions arise: First: Do the functions, which Mexico City carries out in and for the world economy, exceed the national territory and economy? Differently put, is Mexico City a regional center for Central America? Second: To which other world cities is Mexico City linked, and what is, in terms of power relations, the nature of these connections? Third: Which part(s) of Mexico City can be called a global city? Where is the new center located?

The “Globalization and World Cities Study Group and Network” identified five Latin American cities as world cities: Mexico City, São Paulo, Buenos Aires, Caracas and Santiago. Thus, a majority of Latin American countries do not possess world cities. Their access to the specialized knowledges of advanced producer services has to be cross-border. Could it be, in the case of Central American and (Spanish spoken) Caribbean countries, that Mexico City were the place where these services are bought by, for example, someone who wants to do business with Guatemala or Cuba? Evidence available suggests that that will not be the case. According to Taylor (2000), “where the region is the Americas, New York is the centre but where Latin America is a designated region then Miami is the centre”. This argument is based on the fact that six out of eleven major producer services firms have their regional office in Miami, what makes that city to the clear regional center although *not* being a particularly important world city in its own right. Nijman (1996) reaches to the same conclusion. Although Miami does not play an important role neither on the national scene in the United States nor in trade relations with most of the world’s regions, it is the dominant city regarding U.S. – Latin American connections. In the early 1990s, the city handled more than one third of all U.S. trade with Latin America, and the tendency was growing. For Central America and the Caribbean the share was even higher (47 and 43%, respectively). Yet, it is crucial to note that these data *exclude* Mexico. Regarding U.S. – Mexican trade, Miami virtually plays no role – it handles less than 1%. Thus, one can raise the

hypothesis that the reach of Mexico City as a global city does not exceed the national economy and territory, given that Miami seems to be the central node for the rest of Latin America. On the other hand, regarding the articulation of “Mexico” into the world economy, Miami is not involved. Consequently, in that case the main node is Mexico City.

From that questions for future research can be derived: which cities have the most important links to the Federal District, and what is the nature of the links? Breaking down these rather general agenda, future investigations should focus on the following topics. First: Financial flows are, without any doubt, one of the most important mechanisms to tie Mexico and Mexico City to the global economy. In this regard, the city to which the Federal District is connected to is easy to identify. Financial markets in Mexico are intimately linked to – and dependent from – the New York stock exchange. Any “adjustment” of the Dow Jones would have serious effects on the Mexican financial system and the on the current account, on investments and on monetary policy, on interest rates and on the budget (El Financiero, 17.1.2000). Yet, the link to New York might not be the only one. Are there, for example, other stock markets which list Mexican companies? Second: The Federal District specializes, as shown above, on organizing, controlling and servicing foreign trade. Yet, we should know more about other cities involved in commodity chains that connect Mexico to the world market. Where else than in the Federal District is U.S. – Mexican trade serviced? Where to are commodities delivered? It is highly probable that the majority of these links are with U.S. cities, since 80% of Mexican’s foreign trade is realized with the United States (CEPAL 2000, 105). Third: Although oil exports represent a shrinking part of all Mexican exports (about 6% in 1998 [BANCOMEXT 1999]), they still matter, particularly in regard of the federal budget. The headquarter of the national oil company Pemex is located in the Federal District, with connections to the oil producing states (like Campeche in the South-East of the country). Again, it is a subject for further research to identify other cities involved in the commodity chain – from trade partners to places where the oil prices are fixed. Fourth: Given the high dependence of Mexico on trade with and investment from the United States, the general performance of the U.S. economy is crucial for the destiny of the Mexican economy. For example, a slowing down of economic growth in the U.S. by one percentage point would result in a decrease of the GDP growth in Mexico by 0.7% (El Financiero, 17.1.2000). Alike, a sharp raising of interest rates in the U.S. would limit the possibilities for the Mexican state and Mexican companies to get external credits, and it would possibly make internal credits more expensive, too. All these factors would have impacts on financial flows to Mexico, on Mexican exports, and on domestic production. They are therefore likely to bring about an alteration in the role of Mexico City as a global city. Thus, it is important to know which cities are decisive for the fate of the U.S. economy, although there might be no direct links to the Federal District.

Regarding the nature of the integration of Mexico City into the cross-border urban system, links that connect cities can be distinguished by form and function, and also by power-related characteristics such as frequency, strength, importance or dominance/subdominance (Smith/Timberlake 1995, 290). Because links between cities are not even, power relations between cities – and nation-states – are crucial. Indeed, global city research stresses not only the function of and the connections among cities. There is also a strong notion of influence and hegemony. For Sassen (1991, 3) global cities are „highly concentrated command points in the organization of the world economy”, and Knox (1995, 7) summarizes that they are „powerful centres of economic and cultural authority within the contemporary world-system“. While global functions and power might be rather similar in cities like New York, London or Tokyo, in regard to “Third World” cities there is a marked inconsistency between function and power. Although

Mexico City carries out important tasks in globalization processes, it is obvious that it can by no means compare to the power exercised in New York.

Although a study of power-related characteristics of cross-border links between Mexico City and other world cities lack, some general indications can be given. The Mexican stock market, for example, attracted in the mid 1990s only 0.005 % of the capital invested worldwide in stocks and bonds, and its turnover was only 1.6 % of that realized at Wall Street – a stock market to which the Mexican financial market is pegged (La Jornada, 15.4.1997, 24.8.1997; El Financiero, 14.4.1997). This quantitative dimension reflects, to a certain extent, a qualitative order – namely one of subordination. The Federal District as a financial center and Mexico as an economy and as a state are highly dependent on and vulnerable vis-a-vis the floating “global” capital. Both dependency and vulnerability are present in everyday life as shown by the financial crash in 1994-95, various devaluations, the contraction of wages, the sustained economic crisis, etc. (Dabat 1995; García 1995; Dussel Peters 1997). The uneven distribution of power in inter-city relations can be illustrated further by the fact that half of the biggest firms (in terms of sales and of exports) located in the Federal District are not *Mexican* companies in the very sense of the term, but rather local headquarters of transnational corporations. In order to refine our knowledge of power-related characteristics of the cross-border links between Mexico City and other world cities, we should know to which extent decisions concerning the Mexican branch of these companies are met (or at least influenced) by the local offices. Alike, we should know which kind of services these corporations bring with them (and hence obtain them in other cities) and which ones are acquired locally. There is only one big “global player” that is listed by the journal “Fortune” among the world’s “Top 500” firms that has its “real” headquarter in Mexico City – the (still) state-owned oil-company Pemex. Among firms headquartered in the Federal District and dominated by private national capital, only a limited number operate on the world market (for example, Telmex, Carso, Bimbo, Cintra, Desc, Modelo)(Expansión, 21.7.1999; Chudnovsky et al. 1999, 174–179).

Consequently, Mexico City is not just another world city, neither. The fact that the terms “First” and “Third World” are not appropriate anymore to ascribe the geography and social hierarchy of the world – if they ever were – does not imply that “center” and “periphery” have become a pointless terminology. On the contrary; as socio-economic categories that shape the world system’s hierarchy, “center” and “periphery” do still exist. Yet, they have undergone significant changes. In the era of globalization, “center” and “periphery” are produced and reproduced *both* on a global and a local scale. That makes it complicated to indicate a place for Mexico City in the global hierarchy. On the one hand, evidence presented clearly suggests that the Federal District is no “center” in global terms. On the other hand, Mexico City does have core-areas (and people and activities), which form part of the cross-border network of cities. Thus, one probably might call Mexico City a “relay” global city – oriented to and dominated by one, probably two powerful pole(s) and linked to other “relay cities” (compare Braudel 1986, 22–33). “Relay cities” like Mexico City (or São Paulo or Buenos Aires, etc.) are, as a group and as a category, indispensable for the whole system to exist. As shown for Mexico City, they do not only transmit global flows, but rather generate globalization on their own. However, as single, individual cities, “relay cities” might be nonessential – different to the “Alpha World Cities” identified by the “Globalization and World Cities Study Group and Network”.

The question of center and periphery leads to the third point for further research mentioned above. Which part(s) of Mexico City can be called a global city? Basically, the making of a

global city happens *in some parts of the city* – which do not correspond to the historical center as such. Rather, the new center emerges around Paseo de Reforma, Avenida Juárez, Santa Fe, Polanco, Insurgentes Sur, and Periférico Sur. Thus, the transformation of Mexico City towards a global city implies not only the evolution of new forms of centrality, but also the creation of new spaces of centrality within the city (Terrazas 2000). These new spaces of centrality are located essentially in five “delegaciones” of the Federal District: Miguel Hidalgo, Cuauhtémoc, Álvaro Obregón, Benito Juárez and Coyoacán. It is in these districts where nearly two thirds of the capital’s GDP are produced (and three fourth of GDP in services), where the vast majority of companies that are headquartered in the Federal District can be found, where the conversion of the use of urban space towards services is most pronounced, where infrastructure for global telecommunication is centralized, where most of private investment is directed to, where many of the urban mega-projects (like shopping malls or modern office complexes) are (going to be) realized, and where prices for land and real estate are the highest. Interesting to note that the districts of Cuauhtémoc and Miguel Hidalgo are also the ones with the highest number of street vendors in Mexico City, and Benito Juárez is among the districts with the sharpest increase in informal trade. Thus, “center” and “periphery” in terms of economic activities and capital–labor relations are produced and reproduced on a very small spatial scale. The “new center” needs and involves the urban peripheries (in economic, social and spatial terms) since they are functionally linked to the core. An indigenous woman, living in a poor neighborhood like Valle de Chalco and working as a “muchacha” (domestic servant) in a banker’s household in Las Lomas is attached to the “global” as well as a street vendor who sells branded articles. Both contribute in a specific niche to the reproduction of global capitalism. Though rich studies on the links between the informal and the formal economy exist (see for example Benería/Roldán 1992), it remains a subject for further research whether the transformations Mexico City is undergoing create a section of society which is, in the words of Castells (1991, 213), functionally irrelevant to the system.

## **Conclusion**

Five main conclusions can be drawn from this paper. First, the specific way in which the city – and the country – are integrated into the international division of labor matters. Socio-economic transformations in the 1990s can only be understood by taking into account the impacts resulting from and the role of Mexico City in processes of globalization. Thus, a purely urban or national approach is inadequate to grasp the peculiarity of Mexico City. Second, Mexico City is a crucial part of the cross-border network of cities. The Federal District is well integrated into global flows of capital, services, information and people, fulfilling global city functions and working more and more as a “hinge” between the “national” and the “global” economy. Consequently, one indeed observes the making of a global city. Third, this specific role of Mexico City in the global economy affects the urban economy, society and space. Though not all changes can be attributed to the making of a world city, a specific set of recent transformations is closely linked to globalization processes. Fourth, although evidence presented here supports the argument that Mexico City is (becoming) a global city, the challenge is still to prove it. Most, if not all, of the issues touched upon need to be investigated further in order to verify, modify or falsify the main hypothesis of this paper. Consequently, this article includes not only the evidence available, but also sketches out an agenda for future research. Fifth, and concluding, since there is much more to Mexico City than a huge urban agglomeration, one should reconsider the concept of “mega-cities”. On the one hand, this term is highly problematic because of alluding so strongly to population size which leads, vice versa, to a neglect of qualitative new urban dynamics. On the

other hand, global city research provides, as shown in this article, very useful tools which could help us to deepen our knowledge of the major cities of the “Third World”.

## References:

- Aguilar, Adrián Guillermo. 1996. Reestructuración económica y costo social en la Ciudad de México. Una metrópoli periférica en la escena global. Ponencia presentada en el Seminario “Economía y Urbanización: Problemas y Retos del Nuevo Siglo”, organizado por el Instituto de Investigaciones Económicas, UNAM, en la Unidad de Seminarios “Dr. Ignacio Chávez”, 20–22 de mayo 1996.
- Aguilar, Adrián Guillermo, Boris Graizbord, Álvaro Sánchez Crispín. 1996. Las ciudades intermedias y el desarrollo regional en México. Consejo Nacional para la Cultura y las Artes: México D.F.
- Bancomext: 1999 Comercio Exterior de México, [http://www.bancomext.gob.mx/espacom\\_ext/index\\_est.html](http://www.bancomext.gob.mx/espacom_ext/index_est.html)
- Bancomext 2000: Índice de Precios; [http://www.bancomext.gob.mx/espacom\\_ext/index\\_est.html](http://www.bancomext.gob.mx/espacom_ext/index_est.html),
- Bataillon, Claude. 1992. Servicios y empleo en la economía de la ZMCM. In: Consejo Nacional de Población: La Zona Metropolitana de la Ciudad de México. Problemática actual y perspectivas demográficas y urbanas. CONAPO: México D.F., 79–83.
- Beaverstock, J.V., R.G. Smith and P.J. Taylor: 1999a Geographies of Globalization: US Law Firms in World Cities. In: GaWC Research Bulletin 4, <http://www.lboro.ac.uk/departments/gy/research/gawc.html4>.
- Beaverstock, J. V./R. G. Smith/P. J. Taylor: 1999b A roster of world cities. In: Cities, 1999, 16 (6), 445-458
- Beaverstock, J. V./R. G. Smith/P. J. Taylor: 1999c The global capacity of a world city: a relational study of London. In: GaWC Research Bulletin 7, <http://www.lboro.ac.uk/departments/gy/research/gawc.html7>, edited and posted on the Web on 28<sup>th</sup> July 1999.
- Bendesky, León: 2000 La industria maquiladora. In: La Jornada, 25.1.2000, 17.
- Benería, Lourdes, Martha I. Roldán. 1992. Las encrucijadas de clase y género. Trabajo a domicilio, subcontratación y dinámica de la unidad doméstica en la ciudad de México. El Colegio de México, Fondo de Cultura Económica: México D.F.
- Boltvinik, Julio. 1995. La Satisfacción de las Necesidades Esenciales en México en los Setenta y Ochenta. In: Garza, Luis Alberto de la, Enrique Nieto (eds): Distribución del Ingreso y Políticas Sociales. Tomo I. Seminario Nacional Sobre Alternativas Para la Economía Mexicana. Juan Pablos Editor: México D.F., 17–77.
- Braudel, Fernand: 1986 Sozialgeschichte des 15.-18. Jahrhunderts. Aufbruch zur Weltwirtschaft. Kindler. München.
- Camposortega Cruz, Sergio. 1992. Evolución y tendencias demográficas de la Zona Metropolitana de la Ciudad de México. In: Consejo Nacional de Población: La Zona Metropolitana de la Ciudad de México. Problemática actual y perspectivas demográficas y urbanas. CONAPO: México D.F., 3–15.
- Cárdenas Solórzano, Cuauhtémoc: 1999, Segundo informe de gobierno. Anexo Estadístico. Gobierno del Distrito Federal. Cd. de México.
- Castells, Manuel: 1991 Die zweigeteilte Stadt - Arm und Reich in den Städten Lateinamerikas, der USA und Europas. In: Tilo Schabert (ed): Die Welt der Stadt. München/Zürich 1991, S 199-216.
- Chudnovsky, Daniel/Bernardo Kosacoff/Andrés López: 1999 Las multinacionales latinoamericanas: sus estrategias en un mundo globalizado. Fondo de Cultura Económica. México D.F.
- Comisión Económica para América Latina y el Caribe (CEPAL): 2000 La inversión extranjera en América Latina y el Caribe. CEPAL. Santiago de Chile.
- Comisión Federal de Telecomunicaciones (COFETEL) 1998a Cronología de la telefonía en México. [http://www.cft.gob.mx/html/la\\_era/info\\_tel2/hist8.html](http://www.cft.gob.mx/html/la_era/info_tel2/hist8.html)
- Comisión Federal de Telecomunicaciones (COFETEL) 1998b Estadísticas de Interés sobre Telecomunicaciones: RTN: Backbone + Nodos regionales. [http://www.cft.gob.mx/html/5\\_est/graficas/img038.gif](http://www.cft.gob.mx/html/5_est/graficas/img038.gif)
- Comisión Federal de Telecomunicaciones (COFETEL) 1998c Estadísticas de Interés sobre Telecomunicaciones: Conferencias de larga distancia. [http://www.cft.gob.mx/html/5\\_est/graficas/Graf4\\_pag6.html](http://www.cft.gob.mx/html/5_est/graficas/Graf4_pag6.html)
- Comisión Federal de Telecomunicaciones (COFETEL) 1998d Estadísticas de Interés sobre Telecomunicaciones: Estados que cuentan con más de 30 proveedores ISP's. [http://www.cft.gob.mx/html/5\\_est/Graf\\_internet/proveedores\\_isps.htm](http://www.cft.gob.mx/html/5_est/Graf_internet/proveedores_isps.htm)
- Comisión Federal de Telecomunicaciones (COFETEL) 1999a Estadísticas de Interés sobre Telecomunicaciones: Líneas Telefonía en Servicio y Densidad Telefónica. [http://www.cft.gob.mx/html/5\\_est/celulares/usumincel.html](http://www.cft.gob.mx/html/5_est/celulares/usumincel.html)
- Comisión Federal de Telecomunicaciones (COFETEL) 1999b Estadísticas de Interés sobre Telecomunicaciones: Porcentaje de Digitalización de la Planta Telefónica. [http://www.cft.gob.mx/html/5\\_est/graficas/Graf3\\_pag5.html](http://www.cft.gob.mx/html/5_est/graficas/Graf3_pag5.html)

- Comisión Federal de Telecomunicaciones (COFETEL) 1999c Estadísticas de Interés sobre Telecomunicaciones: Usuarios estimados de Internet en México  
[http://www.cft.gob.mx/html/5\\_est/Graf\\_internet/estiminternet\\_01.html](http://www.cft.gob.mx/html/5_est/Graf_internet/estiminternet_01.html)
- Comisión Federal de Telecomunicaciones (COFETEL) 1999d Estadísticas de Interés sobre Telecomunicaciones: Líneas Residenciales, Comerciales y Totales. [http://www.cft.gob.mx/html/5\\_est/graficas/lcomres.html](http://www.cft.gob.mx/html/5_est/graficas/lcomres.html)
- Connolly, Priscilla. 1993. La reestructuración económica y la ciudad de México. In: Coulomb Bosc, René, Emilio Duhau (eds): *Dinámica urbana y procesos socio-políticos. Lecturas de actualización sobre la Ciudad de México*. UAM-Azcapotzalco: México D.F., 45–70.
- Connolly, Priscilla. 1997. Cuál megalópolis? Ponencia presentada en el Congreso Internacional Ciudad de México, Sobre Política y Estudios Metropolitanos, organizado por el Consejo Mexicano de Ciencia Sociales, A.C., 10 al 14 Marzo.
- Consejo Nacional de Población (CONAPO): 1999a Proyecciones de la población de las entidades federativas y sus municipios, 1995-2030. CONAPO. México D.F.
- Consejo Nacional de Población (CONAPO): 1999b La situación demográfica de México. CONAPO. México D.F.
- Consulado General de México en Nueva York/ SHCP-BANXICO-INEGI: 2000 Comercio Exterior de México  
<http://www.quicklink.com/mexico/>
- Dabat, Alejandro. 1995. La crisis mexicana y el nuevo entorno internacional. In: *Comercio Exterior*, núm 11, 866–874.
- Davis, Diane E.. 1993. Crisis fiscal urbana y los cambios políticos en la ciudad de México: desde los orígenes globales a los efectos locales. In: *Estudios Demográficos y Urbanos* 22, vol. 8, núm. 1, 67–102.
- de la Peña, Guillermo, J.M. Duran, Agustín Escobar, J. García de Alba (eds): 1990 Crisis, conflicto y sobrevivencia. *Estudios sobre la sociedad urbana en México*. Guadalajara. Editorial Universidad de Guadalajara.
- de Mateo, Fernando. 1998. NAFTA; Foreign Direct Investment and Economic Integration: The Case of Mexico. Paper prepared for the Seminar on Migration, Free Trade and Regional Integration in North America, organised by the OECD and the Mexican Authorities with the Support of Canada and the United States. Mexico City, 15–16 January 1998.
- Delgado Selley, Orlando: 2000 Resultados macroeconómicos y nivel de vida. In: *La Jornada*, 28.1.2000
- Durand, Jorge/ Douglas S. Massey/ Fernando Charvet: forthcoming (a). The Changing Geography of Mexican Immigration to the United States: 1910-1996. In: *Social Science Quarterly*
- Durand, Jorge/Douglas S. Massey/René M. Zenteno: forthcoming (b). Mexican Immigration to the United States: Continuities and Changes. In *Latin American Research Review*
- Dussel Peters, Enrique. 1997. La Economía de la Polarización. Teoría y Evolución del Cambio estructural de las Manufacturas Mexicanas (1988–1996). UNAM: México D.F.
- Dussel Peters, Enrique: 1999 La inversión extranjera en México. Informe 1999. Documento elaborado para la Comisión Económica para América Latina y el Caribe (CEPAL).
- Fernández, Jeffrey S.: 1995 Development of WWW services in Mexico, toward a National Information Infrastructure. <http://www.isoc.org/HMP/PAPER/035/html/paper.html>
- Friedmann, John: 1986 The World City Hypothesis. In: *Development and Change*, 17, 69–83.
- Friedmann, John. 1995. Where we stand: a decade of world city research. In: Knox, PaulL., Peter J. Taylor (eds): *World cities in a world system*. Cambridge: Cambridge University Press, 21–47.
- García, Samuel: 1995 Corrientes de capital y lecciones de la crisis financiera mexicana. In: *Comercio Exterior*, núm 12, 932-935.
- Garza, Gustavo: 1985 El Proceso de Industrialización en la Ciudad de México (1821–1970). El Colegio de México: México D.F.
- Garza, Gustavo, Salvador Rivera: 1994 *Dinámica Macroeconómica de las Ciudades en México*. Instituto Nacional de Estadísticas, Geografía y Informática: Aguascalientes.
- Gutierrez, Fernando, Enrique Daltabuit: 1999 Mexican cities in cyberspace. In: *Cities*, 1999, Vol 16, Iss 1, 19-31.
- Hinojosa Ojeda, Raul/Robert McCleery/Fernando de Paolis: 1998 Economic effects on NAFTA: Employment and Migration Modelling Results. Paper prepared for the Seminar on Migration, Free Trade and Regional Integration in North America, organised by the OECD and the Mexican Authorities with the Support of Canada and the United States. Mexico City, 15-16 January 1998.
- Instituto Nacional de Estadísticas, Geografía y Informática: 1994 *Estadísticas Históricas de México*. Tomo I. INEGI: Aguascalientes.
- Instituto Nacional de Estadísticas, Geografía y Informática: 1995 *Migración Reciente en México, 1985-1990*. INEGI, Aguascalientes.



- Instituto Nacional de Estadísticas, Geografía y Informática. 1996. Estados Unidos Mexicanos. Censo de Población y Vivienda 1995. Resultados Definitivos. Tabulados Básicos. INEGI: Aguascalientes.
- Instituto Nacional de Estadísticas, Geografía y Informática: 1998 Anuario estadístico del Estado de México. INEGI, Aguascalientes.
- Instituto Nacional de Estadísticas, Geografía y Informática: 1999 Estadísticas Económicas. Indicadores de empleo y desempleo. INEGI. Aguascalientes.
- Instituto Nacional de Estadísticas, Geografía y Informática. 2000a. Banco de Información Económica, Producto interno bruto trimestral. <http://www.inegi.gob.mx/>
- Instituto Nacional de Estadísticas, Geografía y Informática. 2000b. Banco de Información Económica, Sector Externo, Balanza de Pagos de México, Cuenta Corriente, <http://www.inegi.gob.mx/>
- Instituto Nacional de Estadísticas, Geografía y Informática. Various years (a). Sistema de cuentas nacionales en México. Producto Interno Bruto por entidad federativa 1993. INEGI, Aguascalientes.
- Instituto Nacional de Estadísticas, Geografía y Informática. Various years (b). Encuesta Nacional de Empleo Urbano. INEGI: Aguascalientes.
- Instituto Nacional de Estadísticas, Geografía y Informática. Various years (c). Encuesta de Ingresos y Gastos de los Hogares del Área Metropolitana de la Ciudad de México. INEGI, Aguascalientes.
- Internet Software Consortium (ISC) 1999. Domain Survey. Distribution by Top-Level Domain Name by Host Count. <http://www.isc.org/ds/WWW-9907/dist-bynum.html>
- Iracheta Carroll, Jimena del Carmen: 1999 Las grandes ciudades en el contexto de la globalización: El caso de la Zona Metropolitana del Valle de México. Tesis para sustentar el título de Licenciado en planeación territorial. Universidad Autónoma del Estado de México. Toluca.
- Knox, Paul L.. 1995. World cities in a world system. In: Knox, Paul L., Peter J. Taylor (eds): World cities in a world system. Cambridge: Cambridge University Press, 3–20.
- Knox, Paul L./Peter J. Taylor (eds): 1995. World cities in a world system. Cambridge University Press. Cambridge.
- Livas Elizondo, Raúl A.: 1994 Desarrollo regional y apertura comercial. In: *Examen de la Situación Económica de México*, 2, núm. 819, 85–91.
- Lo, Fu-Chen/Yue-Man Yeung (eds): 1998 Globalization and the world of large cities. UNU Press. Tokyo.
- Matrix Information and Directory Services (MIDS) 1999 The Internet in Mexico, January 1999, <http://www.mids.org/mmq/602/mid/intbmx.html>
- Nijman, J.: 1996 Breaking the rules. Miami in the urban hierarchy. *Urban Geography*, 17, 1, 5-22.
- OECD. 1995. OECD Economic Surveys 1994–1995. Mexico. OECD. Paris.
- OECD 1999 Economic Surveys. Mexico. OECD. Paris.
- Parnreiter, Christof: 1998 La Ciudad de México: ¿Una Ciudad Global? In: Anuario de Espacios Urbanos, 5, Universidad Autónoma Metropolitana-Azcapotzalco, México, 19-52.
- Parnreiter, Christof: 2000 Mexico City: The Making of a Global City? In: Saskia Sassen (ed): Cities and Their Cross-Border Networks. UNU-Press.
- Pradilla Cobos, Emilio. 1993. Territorios en crisis. México 1970–1992. Red Nacional de Investigación Urbana y Universidad Autónoma Metropolitana: México D.F.
- Pradilla Cobos, Emilio. 1997. La Megalópolis Neoliberal: Gigantismo, Fragmentación y Exclusión. Ponencia presentada en el Congreso Internacional Ciudad de México, Sobre Política y Estudios Metropolitanos, organizado por el Consejo Mexicano de Ciencias Sociales, A.C., 10 al 14 Marzo.
- Red Tecnológica Nacional: 2000 Nodos. [rtn.net.mx/infotec/RTN.html](http://rtn.net.mx/infotec/RTN.html)
- Rivera, Salvador. 1997. Cambios en el desarrollo urbano: ¿Es la globalización una era de desconcentración urbana? In: *Demos. Carta demográfica de México*, Núm. 10, 27–29.
- Sassen, Saskia. 1991. The Global City. New York, London, Tokyo. Princeton University Press. Princeton.
- Sassen, Saskia: 2000 The Impact of the New Technologies and Globalization on Cities. In: Saskia Sassen (ed): Cities and Their Cross-Border Networks. UNU-Press.
- Secretaría de Relaciones Exteriores/Commission on Immigration Reform: 1997 Estudio Binacional México-Estados Unidos sobre Migración/Binational Study on Migration Between Mexico and the United States. México D.F. y Washington.
- Secretaría de Comercio y Fomento Industrial (SECOFI). Dirección General de Inversión Extranjera. México D.F.
- Secretaría de Turismo: 1998 Estadísticas básicas de la actividad turística. México D.F.
- Short, J.R./Y. Kim/M. Kuus/H. Wells: 1996 The Dirty Little Secret of World Cities Research: Data Problems in Comparative Analysis. In: *International Journal of Urban and Regional Research*, vol. 20, number 20, 697-717.
- Smith, David A./Michael Timberlake: 1995 Conceptualising and Mapping the Structure of the World System's City System. In: *Urban Studies*, vol. 32, no. 2, 287-302.

- Smith, David/Michael Timberlake/Meredith Leaman: 2000 Hierarchies of Dominance among World Cities. A Network Approach. In: Saskia Sassen (ed): Cities and Their Cross-Border Networks. UNU-Press.
- Taylor, Peter J.: 1999a So-called "World Cities": The Evidential Structure within a Literature. In: Environment and Planning A, 1999, 31 (11), 1901-1904.
- Taylor, Peter J.: 1999b Worlds of Large Cities: Pondering Castells' Space of Flows. Globalization and World Cities Study Group and Network, Research Bulletin 14, <http://www.lboro.ac.uk/departments/gy/research/gawc/rb/rb1.html>, October 1999
- Taylor, Peter J.: 2000 World Cities and Territorial States under Conditions of Contemporary Globalization. In: Political Geography, 19, 1, 5-32.
- Taylor, P.J./D.R.F. Walker: 1999 World Cities: A First Multivariate Analysis of their Service Complexes. In: GaWC Research Bulletin 13, <http://www.lboro.ac.uk/departments/gy/research/gawc.html> 13, edited and posted on the Web on 25<sup>th</sup> October 1999.
- Taylor, P.J./D.R.F. Walker/J.V. Beaverstock: 2000 Introducing GaWC: Researching World City Network Formation. In: Saskia Sassen (ed): Cities and Their Cross-Border Networks. UNU-Press.
- Terrazas, Oscar: 2000 La red de la centralidad metropolitana en la globalización. Borrador de trabajo. México D.F.
- Timberlake, Michael (ed.): 1985 Urbanization in the World-Economy. Academic Press, Orlando.
- Ward, Peter M.: 1998 Mexico City. Revised Second Edition. Wiley. Chichester.

El Financiero, various numbers  
 El Universal, various numbers  
 Expansión, various numbers  
 Fortune, 4.8.1997  
 La Jornada, various numbers