Territorial competition in Mexico, regional performance and the role of federal transfers

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Abstract

In an environment of growing globalisation the role of territories and its competitiveness is of increasing relevance. Regional and local governments in addition to other public and private actors concern about providing the conditions that make attractive their countries, regions or cities for productive activities and in so doing they get involved in a competition with other territories. Even though competition involves the actions and/or interest of various actors, by and large, local government and policy are regarded to play a central role. Local governments may use programs and apply funds, which are available as a result of national or regional policy, to attend to local interests. But local governments' actions depend to a large extent on their capability and financial means. This paper emphasises the role of local government action in territorial competition and presents a case to assess the impact of local financial capacity on the competitive results of Mexican regions. The federal government in Mexico provides most of the financial support to states and municipalities on an ongoing basis through transfers supporting specific policy areas or unconditional transfers. The methodology proposed will develop a series of performance indicators for Mexican regions and use a multivariate analysis to assess the influence of conditional and unconditional transfers, and own revenue, while controlling for federal public investment. The period of study is between 1996 and 2006 which includes most years when Mexico has been formally integrated to the North American region.

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Introduction

Territorial competition can be defined as a process in which territories, by means of diverse public and private actors, establish a variety of strategies and follow different actions in order to promote themselves in domestic and international markets, attract resources – in the form of public finance, private investment and human resources-, or increase their popularity and votes to a higher extent than their competitors, having the critical aim of improving their revealed economic competitiveness. The roots of this concept is frequently associated with a reversal of the orientation of spatial policies from nationally based top-down regional policies towards local bottom-up formulations which prioritised economic efficiency at the local level over spatial equity and cohesion at the national scale (Chien and Gordon, 2008; Chien, 2008). The idea of territories competing at the sub national scale expanded and gained relevance at the international level where territories of different countries compete due to the contextual changing environment where there is increasing economic, social and political interdependence. Under a pervasive competitive environment is commonplace that governments at various territorial levels, in addition to other public and private institutions, concern about providing the conditions that make attractive their territories. They want to attract resources of various kinds, production and consumption in order to foster economic growth and development. Such competition involves the actions of multiple actors but it is through local public administrations and policy makers that other actors will try to establish strategies and take action for the development of competitive attractiveness.

There is widespread conceptual and empirical literature on the different aspects of territorial competition being some representative contributions the works of Cheshire and Gordon (1998), Cheshire (1999), Budd (1998), Chien and Gordon (2008), Chien (2008) and the books of Cheshire and Gordon (1995) and Batey and Friederich (2000). Cheshire and Gordon (1998), Cheshire (1999), Budd (1998), Chien and Gordon (2008), Chien (2008) and Batey and Friederich (2000) offer a rich background on the debate about the conceptualisation of territorial competition. Batey and Friederich's (2000) book include a significant effort in the construction of a theory of territorial competition while Chien and Gordon (2008) also provide important elements in this regard. On the other hand, in varying degrees all the above contributions add aspects of empirical analysis or evidence.

Regarding the theoretical foundations of territorial competition Chien and Gordon (2007) raise the question of the actual existence of a satisfactory model of analysis and about the generalisability of such model in a setting different to the United States (US) and Western Europe for which initial analyses were undertaken. They consider that territorial competition can take many forms depending on different institutional factors and contexts. Therefore a framework for explanation can be generalised if it allows for variable kinds of actors, interests, objectives, means and strategies that are given by different contexts. The empirical product from such general scheme is different types of competition.

This paper is concerned with addressing a particular case of territorial competition and exploring the nature of the relationship of some specific aspects of the institutional context with the outcomes of competition. Specifically we propose to analyse the significance of local governments' financial capacity on the competitive results of regions in Mexico. We select this country because of the significant opening up of its economy in the last three decades, the strong regional disparities and the semi-developed nature of its economy. The particular contextual elements in this case are given by the characteristics of the federal system of transfers and the ways in which this determines the financial capacity of local governments for policy implementation and strategic action in a globalising scenario. The methodology consist of statistical analysis considering the 32 administrative regions for which performance results, in terms of productivity, foreign investments, population attraction and a competition index, will be associated with the different components of regional revenue. We propose to use discriminant analysis to see how the independent variables influence the grouping of regions according to their performance.

In next section we present briefly the literature on various approaches to territorial competition which stress de role of local governments and regional policy. In section II we include a review regarding the liberalisation process in Mexico, depict the functioning of territorial competition in that country and evaluate some performance indicators at the regional level. Then there is a description of the federal system in Mexico and the nature of regional revenues. In section IV we analyse the empirical significance of federal transfers on territorial competition of regional performance. We conclude with some final remarks.

I. Local government, governance and territorial competition

Local and regional governments have undergone significant increase of responsibility in the operation and administration of their territories. Efforts on their part have been required in an attempt to create better conditions to attract and retain residential actors, resources, financing, investment, and all the potential demanders for a territory. Mainly those who are elected by local people have to develop new structures and forms to manage their territories. This has derived greatly from the tendency to decentralisation by which regional strategies and policies can focus on regional/local efforts to foster socio-economic development (Constantin, 1999).

Also through globalisation local and regional governments have faced a series of challenges. In the global context territories exploit in different degrees their decentralised powers and resources in order to reach and advantageous position in the world economy (Chien, 2008). In so doing they have to apply increasing proportions of resources and competences in order to strive for local economic development. Competition with other territories has been a practicable strategy in their aim of improving performance and image (Mäding, 2006).

In theory, territorial competition is concerned with local efficiency and effectiveness through a bottom-up process. The action of a variety of local actors, the government having an essential part to play, is what set in motion this competitive behaviour. By and large, local government and regional development policy are regarded to play a central role in regional competition meaning that the competitive success of regions and cities cannot be achieved without the active action of local governments. Chien (2008) calls attention to "the emergence of local entrepreneurial governances" resulting from the "territorial restructuring" of local responses to the challenges and crises presented by the changing global environment. This is a broader perspective in which the involvement of other relevant local actors collectively with local governments is crucial. The term *strategic governance for territorial competition* is used to describe this set of local actors, their participation and their competitive actions.

Actors, motivations and means of competition

Local governance is characterised as formal or informal public and private coalitions that work together to formulate and implement policies and strategies. They involve a variety of internal actors: governmental officials, various arms of government, political parties, private firms, unions, labour organisations, non-governmental organisations, religious institutions, the media, universities, cultural and sport associations, self-employed professionals among others. In many instances, there are networks of public and private groups whose interests are highly involved in the local economy and politics. Together these self-interested actors can collectively influence the decision-making processes of planning while advance their personal political or material interests. Taken as a whole, their motivations and objectives are related to the creation of new and better spaces of production and consumption as well as the searching out of more and new funding for local development (Chien, 2008). From the viewpoint of the strategic governance concept of territorial competition only the participation of agents whose actions actually produce change at the local level must be considered.

Territorial intervention and action is mainly applied to plans and programmes at municipal, state or provincial level, not discarding that intervention from the national sphere affects localised competitiveness. Yet not all competitive actions on the part of governments take the form of formal policies; they can be more specific and short term actions to achieve the goal of a strategy. A range of techniques and instruments exist for intervention in a territory, although they might not be available in all the cases. The instruments for government action are subsidies to firms, local planning, administration of local externalities, inter and intra regional transportation, formation of clusters and the transfer of knowledge (Potter, 2009); taxation, organisation of public services, stimuli for immigration (Johansson, 2000). The use and combination of instruments will depend on the specific objectives or strategies.

Chien (2008) distinguishes two types of strategies which entail different instruments. Growth enhancing strategies seek innovations to reduce inefficiency and improve goods and services that they provide; they use initiatives such as labour training, support to firms start ups, provision of business advice, provision of internal and external networking, knowledge development, and construction of infrastructure. The provision of hard and soft infrastructures is a method of creating and promoting new spaces of production. Other strategies adopt a growth depleting position by giving all manner of incentives to corporations such as tax abatements, reduced prices for services and infrastructure, reduced environmental and regulatory standards. Poot (2000) adds to the latter type of instruments credits, financial incentives, and free or subsidized information and consultancy. Poot (2000) stresses that incentive-based territorial competition is likely to be particularly fierce in contexts where local authorities have a considerable discretionary power and that incentives can involve large amounts of public money.

Strategic territorial competition action which would be growth enhancing is difficult to reach in view of the heterogeneity of interest involved, often conflicting, on the part of local actors and even external agents. There is also a multiplicity of intervention alternatives and objectives. One also has to allow for the context in the implementation of strategies to consider the kind of territory because central, intermediate and peripheral territories need different platforms for competing. Local actions and responses are therefore very complex. Chien and Gordon (2008) stress that often competition focused very heavily on inward investment rather than promotion of competitive advantage for existing (local) firms.

Mädling (2006) also calls attention to the vertical competition between the tiers of administration (i.e. central, state and local) for power, money and optimum distribution of responsibilities. Territorial planning by means of government action responds not only to local interests and necessities but to interests from other territorial levels. There is also competition between political parties for power in a territory, between individuals as political actors for office, careers, and success, between groups or individuals due to sectorally organised interests and even between organisations representing the interest of economic activities, producers or consumers. All this adds complexity.

Outcomes from competition action

Outcomes from competition can be a variety of economic, social and political indicators that are brought about. Batey and Friederich (2000) suggest indicators related to technical and technological progress (knowledge and human capital formation, establishment of high tech firms, formation of clusters, research and development activities); productivity or efficiency (profits and budget surpluses); costs reductions (labour, strike, investment, tax burden, communication, promotion and political losses); fluctuations in competition (welfare change, migration, change in centrality, functional reforms or change in competitive positions); goals of economic policies like product and employment, policy makers goal achievement (income, production, global profits, tax revenues, employment created, firms attracted); state or municipal performance (social welfare, tax base, budget situation, votes, laws, competencies, quantity and quality of services and infrastructure); quality of the territory reflected in residential value, value of leisure, quality of location, quality of environment, political institutions reliability; or individual economic aims (profits, income, infrastructures and services). Other indicators of results can be shares in national product (Maneval, 2000), efficiency indicators (Reggiani, Nijkamp, y Sabella, 2000), summary indicators such as that proposed by Sobrino (2003) and immigration.

In accordance with Chien and Gordon (2008) all competitive activity has uneven spatial, sectoral and individual effects and is likely to be redistributive within and across territories. From the spatial perspective subnational competition results can be pure waste for the country, diversionary with zero-sum national results, and positive-sum outcomes nationally. However as territorial competition is only concerned with local efficiency, and not with spatial equity evaluation of territorial competition would be strictly on a region by region basis and relative to others. Chien and Gordon (2008) distinguish between three categories of territorially competitive action depending on the results for the region: purely wasteful, involving expenditure without any gains; zero-sum balance of costs and gains accruing for different groups; and those producing positive net additions to growth and welfare. Cheshire and Gordon (1998) find that policies that help established firms to face contraction and expand are more effective, and their impact stronger than those policies aim at attracting new

firms or immigrating firms. Eventually the former policies are also effective for the purpose of firm attraction.
With respect to incentive-based competition when it has no constraints a race to the bottom is particularly likely. The symbolic policies pursued in the absence of collective action can also be pure-waste (Chien and Gordon, 2008). These authors also explain that the distinction between categories of results can be arbitrary and that always there are gains for some agents, even if just government officials or firms, although the costs of such benefits exceed nationwide benefits.

II. Territorial competition in Mexico

The opening up of the economy and the operation of territorial competition

Globalisation has been assumed to imply fundamental changes for subnational territories. For instance, due to advancements in transport and telecommunications territories tend to become more ubiquitous from the point of view of factors of territorial attraction. Traditional location factors have lost relevance and now every territory is a locational alternative for almost all economic activity as long as it provides what firms and industries require. Trade liberalisation is another channel for increased opportunities and challenges in order to position products and services in worldwide markets. As a result competitiveness is used as a powerful device to foster attractiveness and economic efficiency. Under the competitiveness initiative regions and localities must incorporate processes that generate or increase local advantages mainly through actions of regional policy (Delgadillo, 2008). According to Dunning, the opening up of economies has implied for regional policy makers the challenge of providing resources and capabilities inside their jurisdiction in order to be competitive and "successful". Such regional attributes have to be perceived by national and foreign owned firms at least as attractive complements to their own ownership-specific advantages as those offered by other regions.[1]
In the case of Mexico North American integration, formalised by means of the North American Free Trade Agreement (NAFTA) between Canada, United States and Mexico, is perhaps the most emblematic representation of globalisation. NAFTA seems to have promoted an intensified competition between subnational regions and states, for instance through actions and programmes aimed at influencing the competitive position and economic power of regions. Wong (1997) argues that under NAFTA's institutional framework states, municipalities and cities in Mexico compete for promoting economic development, expand

[1] Cited by Trejo (2007: 290).

exports and attract investment. In this context it can be argued that NAFTA was a major stimulus for active territorial competition not only domestic but international.

Subnational territorial competition in Mexico seems to have developed under a logic in which regions have mainly concentrated on the attraction of mobile investment, frequently FDI. The Mexican style competition is what Chien (2008) identify as incentive based territorial competition which can actually be growth depleting. The particular federalist system and the opening up of the economy probably determine to an important extent the functioning and the extent of competition among Mexican regions. In theory with NAFTA every region had the possibility to insert actively in the export oriented model. However the competition between regions and its intensification due to globalisation depicts a complexity of actors and motivations which leads to very asymmetric prospects. The dominance of Distrito Federal, which is known as DF and contains the capital city, during the closed-economy model of development performed by Mexico between the 1950s and 1970s is a well-known fact. DF together with Nuevo Leon and Jalisco represent the traditionally most industrialised and developed states. In the protectionist period the economic activity concentrated there and to a less extent in Estado de Mexico (DF's neighbour). Those were the most representative and dynamic regional economies. On the other hand, the in-bond industry or maquiladoras appeared in Mexico in the mid-1960s as part of the industrial promotion implemented in the north of the country. Federal subsidies encouraged the rapid growth of industrial parks in cities at the US border which underpinned the manufacturing base in the north. Later in the late 1970's states in the Bajio (a corridor between DF and the north) started to undergo substantial economic expansion. In contrast the south has historically remained marginal to industrialisation and development.

Wong (1997) indicates that the combination of structural changes in the economy and society gave rise to some emerging regionalisms that stimulate very different objectives and motivations. There have been local actions and movements in the south of the country[2] whose objectives refer to social demands such as the improvement of wellbeing and quality of life, the elimination of an ethnic-politic domination between local stakeholders, local autonomy, democracy, and the local administration of resources. Trejo (2007) points out that although

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[2] In 1994 an indigenous movement in the southern state of Chiapas emerged whereas in 2006 a political upheaval took place in Oaxaca, another southern region.

ethnic and political in principle the detonation of such events keep some relation with the economic backwardness that prevails in the south. In contrast, the most dominant public and private actors in the north attempt to take advantage of integration and globalisation to maximise economic gains. However in general all states, guided by the interests of the more powerful political and economic local elites engaged in an intense competition for inward investment and export markets in order to reach economic benefits, which not spread to all economic and social groups.

Elites take action and establish strategies of promotion of their "territories" or products due to recognition of the consequence of international trade and FDI for economic growth in the presence of domestic restrictions for employment and capital creation. In accordance with Chien and Gordon (2008) where competition is not routinised, Mexico as an example, these biases in group interests are expected and competition offers an element of monopoly profits to a small group of stakeholders. Inaction of a number of groups or just symbolic action is also usual.

On the other hand, similar to many federalist systems, there is a principle of equalisation in the state and local government revenue sharing system. Mäding (2006) argues that there is no incentive for a territory to become a location for production if the burdens have to be borne locally but the revenue is spread evenly through compensatory allocations. However regions keep competing for investment if they expect a significant impact on jobs. Political logic also dictates that the attraction of investment tends to increase popularity and votes. Regions also compete having other motivations such as the attraction of residents because of the impact of population figures on the budget through the equalisation system (although it is also be possible that attracting residents is of no benefit for the local budget).

Trejo (2007) argues that unlike countries where there are prescribed and formal mechanisms at the local level to offer explicit incentives for attracting firms, the limits of federalism in Mexico has induced regional authorities to use informal or no systematised means to attract investments and promote their territories. Such methods are often subject to discretional powers of regional authorities. There might be resources announced for social welfare but in practice redirected to support private investment projects. Therefore there is not a systematic view on the legitimate instrument which can be used to implement competition strategies. Wong (1997) points out that the strategies and actions are highly diverse ranging from advertising campaigns, the creation of offices for economic promotion, regional plans and programmes for strategic action, infrastructure construction, provision of land, programmes of technical training for workers, credits, fiscal incentives, money for relocation, deregulation, programmes of administrative simplification, and so on.

To the extent that governments make use of public resources to attract investment to their respective territories, under this incentive based principle, competition can have negative result for spatial development, regional equity and even for efficiency if it is diversionary (by attracting investment that could take place in alternative locations), if the benefits for the hosting state are limited to the creation of indirect jobs but there are little technological spillovers, or if public funds are used at discretion to attract investment in detriment of local welfare because these forms rarely increase the region-specific assets (Trejo, 2007).

Hence, similar to the Chinese case, Mexican municipalities, states and cities seek to accrue the greatest amount of resources and bargain for the most favourable concession from the central government. Afterwards competition focuses heavily on incentive based attraction of inward investment rather than on the creation of competitiveness assets. In addition, territorial competition operates with minimal top-down regulation and with very few legal constraints. Furthermore the scarce local financial autonomy represents an important restriction for action.

Performance results of Mexican regions

We present the results of four indicators that might be reflecting the results of the type of competition performed by Mexican regions: Gross Domestic Product per capita (GDP pc), interstate net migration, Foreign Direct Investment inflows per capita (FDI pc) and a competition index.[3] These reveal to an extent the capacity to attract and retain people and investment, the productivity and the overall performance of the economy in each region. Data is obtained from the economic data bank of INEGI the agency which produces the official statistics in Mexico and CONAPO which is the National Council of Population.

If we reduce motivations of territorial competition to these economic goals -naturally followed by local governments, existing economic elites and other private and public actors but likely not by all existing stakeholders, evaluate the results and consider the outcomes on a comparative basis we observe that the results are mixed and heterogeneous as some states perform well according to one or more indicators but not in the four of them. Taking the average between 1996 and 2006 for each state we observe that Distrito Federal has the highest levels of FDI pc and GDP pc followed by Nuevo Leon. The difference in the FDI pc however is considerable between Distrito Federal and the other states. The average annual FDI pc across regions in this period is of approximately 80 US dollars, Distrito Federal registers more

[3] This index is taken from Sobrino (2003).

than 800 dollars, Nuevo Leon 340 dollars, and at the other end are Chiapas and Oaxaca with less than 1 dollar. In total there are only six states above the average and all of them, with the exception of Distrito Federal, are located in the north of the country (table 1).

Table 1. Performance indicators by state, average between 1996 and 2006.

FDI pc*		**GDP pc***		**Net immigration rate****		**Competition Index*****	
Distrito Federal (C)	0.83	Distrito Federal (C)	3.00	Quintana Roo (S)	1.87	Chihuahua (N)	1
Nuevo León (N)	0.34	Nuevo León (N)	2.14	Baja California Sur (N)	1.57	Coahuila (N)	2
Baja California (N)	0.25	Campeche (S)	1.92	Baja California (N)	1.18	Nuevo León (N)	3
Baja California Sur (N)	0.24	Quintana Roo (S)	1.81	Querétaro (C)	0.68	Querétaro (C)	4
Chihuahua (N)	0.18	Chihuahua (N)	1.71	Colima (C)	0.54	Tamaulipas (N)	5
Tamaulipas (N)	0.09	Coahuila (N)	1.70	Zacatecas (C)	0.52	Sonora (N)	6
Quintana Roo	0.07	Baja California (N)	1.58	Tamaulipas (N)	0.52	Aguascalientes (C)	7
Sonora	0.07	Baja California Sur (N)	1.53	Aguascalientes (C)	0.50	México (C)	8
Querétaro	0.06	Sonora (N)	1.48	Morelos (C)	0.41	Baja California (N)	9
Aguascalientes	0.06	Aguascalientes (C)	1.47	Estado de México (C)	0.34	Guanajuato (C)	10
Jalisco	0.06	Querétaro (C)	1.42	Nuevo León (N)	0.29	Puebla	11
Coahuila	0.06	Tamaulipas (N)	1.30	Tlaxcala (C)	0.27	San Luis Potosí	12
Estado de México	0.06	Colima (C)	1.25	Chihuahua (N)	0.27	Durango	13
Puebla	0.05	Jalisco (C)	1.19	Hidalgo (C)	0.25	Yucatán	14
Morelos	0.04	Morelos	1.10	Nayarit (C)	0.23	Baja California Sur	15
Nayarit	0.04	Durango	1.06	Campeche (S)	0.23	Tlaxcala	16
San Luis Potosí	0.03	Sinaloa	0.98	Sonora	0.11	Michoacán	17
Durango	0.03	México	0.97	Yucatán	0.06	Jalisco	18
Tlaxcala	0.02	Yucatán	0.96	Guanajuato	0.05	Quintana Roo	19
Guanajuato	0.02	Guanajuato	0.93	Coahuila	0.02	Colima	20
Tabasco	0.02	San Luis Potosí	0.91	Jalisco	0.02	Morelos	21
Yucatán	0.02	Puebla	0.82	Puebla	0.00	Distrito Federal	22
Colima	0.01	Hidalgo	0.74	San Luis Potosí	-0.08	Veracruz	23
Campeche	0.01	Tabasco	0.74	Michoacán	-0.08	Zacatecas	24
Sinaloa	0.01	Nayarit	0.73	Durango	-0.20	Guerrero	25
Veracruz	0.01	Veracruz	0.72	Oaxaca	-0.25	Sinaloa	26
Guerrero	0.00	Zacatecas	0.71	Sinaloa	-0.31	Hidalgo	27
Zacatecas	0.00	Michoacán	0.71	Chiapas	-0.34	Tabasco	28
Hidalgo	0.00	Tlaxcala	0.65	Tabasco	-0.39	Oaxaca	29
Michoacán	0.00	Guerrero	0.64	Veracruz	-0.40	Chiapas	30
Oaxaca	0.00	Chiapas	0.52	Guerrero	-0.44	Campeche	31
Chiapas	0.00	Oaxaca	0.51	Distrito Federal	-0.96	Nayarit	32
Average	0.08		1.18		0.20		
Coeficient of variation	1.89		0.46		2.82		

Source: Own calculations with information from CONAPO and INEGI.
*Thousands US dollars.
**Percentage
*** Ranking

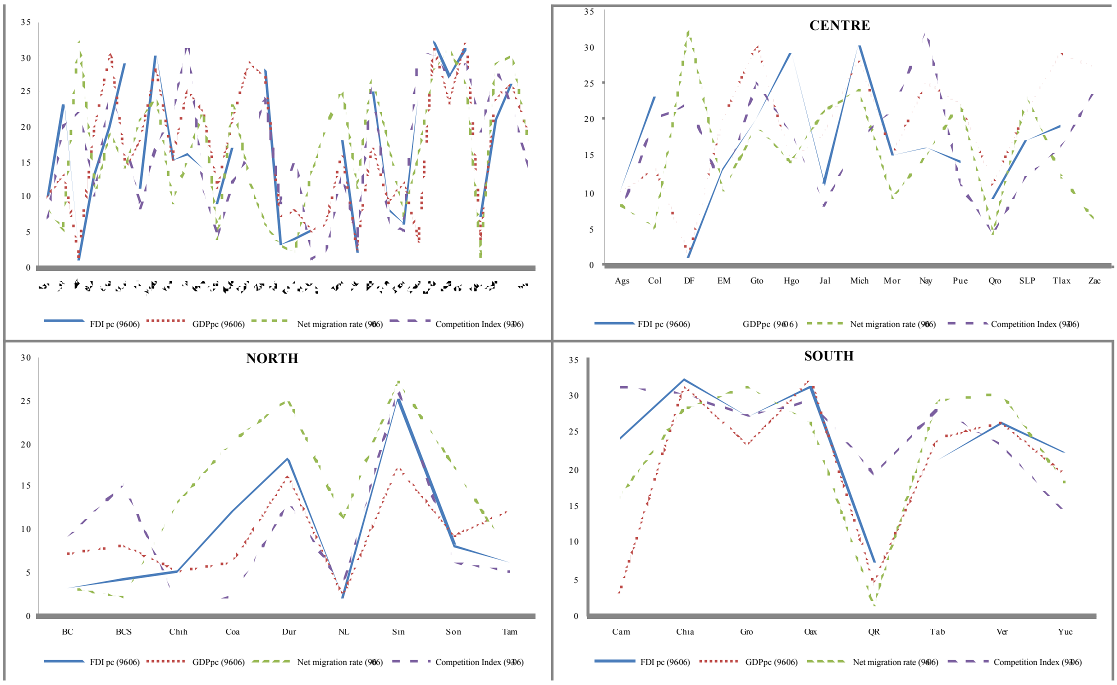
There are also striking differences in GDP pc but to a lesser extent than in FDI pc as shown by a lower value on the coefficient of variation. In addition to Distrito Federal and Nuevo Leon there are other states above the average. Among them there is a majority of states located in the north and the centre excepting Campeche, whose result is biased due to its oil production reflected in its GDP but whose rents go to the federation, and Quintana Roo. In this latest case the state´s dynamism is guided by the existence of a foremost touristic destination Cancun.

Net migration rates show that Distrito Federal is not attracting population but is the state with the lowest net immigration. This shows the existence of some congestion effect given that DF is the most densely populated region and belongs to one of the biggest metropolitan cores in the world, Mexico City Metropolitan area which has over 20 million inhabitants. Quintana Roo, Baja California Sur and Baja California have the highest net immigration rates. The first two have based its attractiveness on the development of worldwide class touristic complexes, Cancun and Los Cabos respectively. Distrito Federal ranks 22 in the competition index, in contrast with its leading position in the levels of GDP pc and FDI pc, whereas Chihuahua, Coahuila, Nuevo Leon, Queretaro and Tamaulipas are at the top of the ranking.

As globalisation brings about a new significance of access to international markets and investment then the location of regions can be strategic for promoting and “marketing” regions. Due to North American integration the US is the main export market and the main origin of FDI for Mexico. Therefore it has been argued that states closer to that country, those in the North, have a further advantage over states further down. Figure 1 shows at the upper left side how all the states behave in the ranking of the four indicators we calculated and we see differences among the four rankings. In order to have a better idea of the differences in the four rankings for each state and to observe any pattern of good or bad performance according to their location we use a crude classification of states locating in the north, centre and south.

The Centre includes 15 states which show clear heterogeneity. In most cases they tend to rank between the intermediate and low places, with the exception of Distrito Federal in GDP and FDI pc. Queretaro shows acceptable performance in all four indicators situated fourth in immigration rates and competition index, ninth in FDI pc and eleventh in GDP pc. In the North there are 9 states and is less heterogeneous. In general states situate from middle to top of the ranking excluding Sinaloa and Durango. In contrast with the other states these two are not at the border with the US. Nuevo Leon performs well in GDP, FDI and competition indicators, and has a positive net immigration. The South clearly is the less diverse group although showing the lowest performance. Quintana Roo is the exception because has the highest immigration rate, and a good position in GDP and FDI. In contrast, Chiapas and Oaxaca are in the lowest positions. Therefore geographic location in the north or the south produces some influence on performance but conclusions in this regard is not obvious for states in the Centre. Obviously location does not determine completely winners and losers but multiple factors impinge on performance.

Figure 1. Rank position of Mexican States according to performance indicators and location



Source: Own calculations with information from CONAPO and INEGI.

III. The nature of the federal system in México and regional revenues

In this section we describe briefly the federal system in Mexico as well as the different sources of income and grants that states and municipalities have in order to perform their functions. This revenue provides them with the financial capability to conduct different actions. The Mexican federation includes 31 states plus a Federal District and over 2,400 local governments. There is an intergovernmental transfer arrangement that was first established in 1980 with the creation of the National System of Fiscal Coordination. Under this programme states restrained their own taxing authority in return of unconditional transfers (Courchene and Díaz-Cayeros, 2000).

Until 1997 the most important element in the transfer system was the unconditional revenue sharing (Item 28). The overall amount of resources to states and municipalities represented a percentage of the assignable or shared taxes (income and value-added taxes in addition to ordinary fees from oil). Nowadays the most important funds are the general fund (allocated on an equalisation basis and using a formula), the fund for supporting municipalities and specific federal taxes (vehicle use tax and the new vehicles tax) that are fully transferred to the states on a case-by-case basis. These funds are complemented by other special taxes and other revenue sharing (Courchene and Díaz-Cayeros, 2000; Moreno, 2003).

In 1998 there was an important reform in the transfer programme and a new item was created in the federal budget. The Item 33 are conditional funds transferred to states and municipalities to finance expenditure programmes that were decentralised to states -education and health, or to municipalities -basic local infrastructure (Moreno, 2003). There are several specific funds the largest amount corresponding to basic education; most of all funds are allocated under the equalisation criterion excepting the Municipal social infrastructure transfer and the State social infrastructure transfer which are compensatory funds.

Courchene and Díaz-Cayeros (2000) find that overall richer states in Mexico receive larger per capita revenue sharing than poorer states whereas poorer states tend to obtain larger conditional transfers. They argue that the allocation formula for basic education transfers discriminates against states that use their own revenues to finance this aspect.

A different important part of federal grants is federal public investment which is aim at specific projects considered important by federal government and as such is subject to high degree of discretion. On the other hand, state and local public revenue is supplemented by own-source revenues. These two funds are however not part of the transfer system (Courchene and Díaz-Cayeros, 2000). States and municipalities own revenue base is pretty weak. Therefore sub national governments are heavily dependent on federal aid and less reliant on local tax to get more own resources. According to Moreno (2003) the expected benefits from decentralization do not emerge if the transfer system creates wrong incentives, and discourage local governments from raising own-source revenues. In the long run this prevents the development of an adequate local governmental capacity and has negative implications for local governance. Therefore subnational governments in Mexico might not be building an adequate institutional capacity.

Furthermore even if the federal system seems to encourage the implementation of local autonomy principles, the reality still show an important gap between theory and practice. There have been intergovernmental conflicts on a variety of bases including areas of shared responsibility; e.g. although municipalities have legal full-fledged status states continue to enforce their participation in some local affairs. In addition the federal structure operates in a way that programs and financing (conditional grants and unconditional revenue sharing) intended for the municipalities are channelled through the states.

IV. Discriminant analysis of federal transfers and competition outcomes in Mexico

Local governments need financial resources in addition to managerial capacities for the formulation of competition strategies of diverse nature. Therefore local public funds and the way they are exploited is an important instrument of local government action. According to the literature review in section I, generally winning regions are those with local governments that are financially and managerially capable of exploiting the available resources. This section addresses the relationship between financial capabilities and competition results of Mexican states. Particularly we analyse the relationship between public local revenue - transfers and own revenue- on the performance of Mexican states while considering also federal public investment in order to contribute to the empirical literature on territorial competition on a specific institutional context. We use discriminant analysis as a statistical method, similar to regression analysis, which can be used to understand the relationship between a dependent variable and one or more independent variables.

In discriminant analysis the dependent variable is a categorical variable whose value indicates a group to which a subject (a state in this case) belongs. We classify Mexican states in three categories according to their rank position in the indicator of performance results. States from place 1 to 10 are high performers (H) and belong to group 1; from position 11 to 20 are intermediate performers (I) and belong to group 2; and from position 21 to 32 are low performers (L) and belong to group 3. The independent variables are: (1) Unconditional transfers per capita (UT or ítem 28); (2) Conditional transfers per capita (CT or ítem 33); (3) Own revenue per capita (OR); and (4) Federal Public Investment per capita (FPI). We must emphasise that in reality states have more autonomy on unconditional transfers and are totally autonomous for managing their own revenue and in consequence their financial capacity for competition action has more to do with these two variables. However, the assets created by means of federal investment and conditional transfers can impinge on performance outcomes.

In our case discriminant analysis allows us two things, firstly to assess how well the independent variables (discriminating variables) separate the categories H, I and L; secondly, to know which independent variables contribute more to explain the division[4].

[4] The discriminant methodology includes further steps in which reclassification and predictions about the correct classification of additional observation are possible. However we do not implement those.

Therefore we have four alternative models each one corresponding to one of the four performance indicators' groups as dependent variable: Model 1 Competition Index (CI); Model 2 FDI pc, Model 3 GDP pc; and Model 4 Immigration ratio (IR). Once we have the groups in each model we implement discriminant analysis and table 2 presents the main results.

Table 2. Main results of discriminant analysis

	Model 1-IC		Model 2-FDI pc		Model 3-GDP pc		Model 4-IR	
	Standardised canonical coefficients							
	Function 1	Function 2	Function 1	Function 2	Function 1	Function 2	Function 1	Function 2
UT	0.410	0.276	0.220	1.022	0.107	0.493	-0.289	0.744
CT	-0.510	0.249	-0.078	-0.792	0.122	-0.939	-0.650	-0.121
OR	-0.441	-0.901	0.935	-0.612	0.917	0.054	-0.486	-0.995
PFI	-0.892	0.128	-0.438	-0.602	0.293	-0.501	0.957	-0.205
Correlation	0.339	0.183	0.455	0.264	0.54	0.17	0.267	0.098
Discriminant capacity	11.49%	3.35%	20.70%	6.97%	29.16%	2.89%	7.13%	0.96%
Pr	0.0000	0.0079	0.0000	0.0000	0.0000	0.0175	0.0003	0.3409
Missclasified	185 (52.4%)		196 (55.5%)		191 (54.1%)		189 (53.5%)	

Source: Own elaboration

The first step in discriminant analysis is the estimation of coefficients to be applied to the independent variables and then the coefficients are used to construct the discriminant function. Our analysis gives two discriminant functions for each model and the F-tests associated with each function indicate that all of them, except the second function on the IR, are statistically significant at the 97 % level. We observe the maximum canonic correlations in function 1 of models 2 and 3 (raw 5) and which corresponds with highest discriminant capacity (raw 6). This means that the independent variables explain better the differences in performance regarding FDI and GDP per head (20.7% and 29.16% respectively). On the other hand, model 4 (IR) shows the lowest correlation and discriminant capacity of independent variables. However, we see that largely correlations in the four models are not very high. This indicates that even though local financial capacity might be significant to explain regional differences in competition results, it is not the only and most important factor.

The first function of discriminant analysis always provides the highest discriminatory capacity and so we concentrate on function 1 in all models. Regarding model 1 the standardised canonical coefficients indicate that the grouping by the CI is positively weighted by unconditional transfers and negative on conditional transfers, own resources and federal investment; the biggest coefficient on public investment says that this variable best explains the variability among groups. The second model is dominated by the own resources variable (0.93). Own resources and unconditional transfers relate positively with the FDI categories whereas federal investment and conditional transfers have negative impact. The effect of conditional transfers is very small (-0.078). In model 3 all discriminating variables have a positive impact on GDP categories but the strongest effect comes from the own resources (0.91) followed by federal investment (0.29). Finally estimations for model 4 show that only the public federal investment variable has a positive sign and a strong effect on the discriminant function (0.95).

These results are interpreted to indicate that the differences among group categories according to the competition index are mainly explained by federal investment, but the sign shows that the best performance corresponds to those states with lowest levels of investment which sounds odd. The differences between FDI and GDP groups are best explained by own resources which are totally managed by local authorities and can be used, even discretionally, for locally based purposes. In the last model estimations reveal that differences in net immigration rates are explained by the levels of public federal investment. Therefore estimations reflect a polarised association among the different dimensions of local public resources and public federal investment, and performance groups depending on the indicator of performance we use.

Lastly, the last raw in table 2 indicates that a big proportion of observation are misclassified when considering only the four discriminating variables we are using. This shows the restricted power of the dimension of local financing and the federal investment to discriminate among bad and good performers according to whichever performance indicator.

V. Concluding remarks

The competitive paradigm put territories as local as well as global players. As such territories have strategies, objectives and a variety of instruments to reach some determined goals, and individually they have to evaluate their results always relative to other regions. From the perspective of this paper territorial competition is an integrated process whose logic is complex and multidimensional but has as an ultimate goal some economic, social or political gains within or among territories. At the subnational level regions, cities or localities might compete between them for different sources of consumption and production. The kind of competition they engaged in depends on their very specific contextual frame with regard to their position within the country and within the global system. The domestic context rests significantly on the characteristics of the political system and the kind of actions governments at various levels can and are willing to perform. This contextual aspect is critical because of the influence of government to harmonise the various actors' interests and actions. The global context is essential as well if territories seek to insert in international markets or attract foreign production or consumers.

It has been the purpose of this paper to look at the specific case of territorial competition in Mexico and evaluate the regional performance effects that are likely to emerge. Based on the analytical framework we use performance outcomes among competing regions depend significantly on the financial and managerial capabilities of local governments, not mentioning the effect that regional policy at the national level can have. We employed discriminant analysis to look at the effect of various dimensions of states' financial sources on various measures of economic results controlling for regionally based federal investment.

On the whole, as a consequence of increasing integration to the global economy states in Mexico, guided by the interests of the most powerful political and economic local elites, engaged in an intense competition for inward investment and export markets in order to reach economic benefits. Likely the Mexican style competition is incentive based and low-regulated. In terms of the results winners (best performers) and losers (worst performers) differ among different indicators and thus the interpretation about outcomes depends on the particular objective anticipated in each region. Overall the south of the country suffers from low performance. The centre but mainly the north is said to benefit from geographical proximity to the US market and firms.

The federal system in Mexico usually favour the backward regions with more conditional transfers whereas other regions get more unconditional transfers or have more financial autonomy by means of more own revenue. On the other hand, public federal investment depends strongly on the view of the federal government about critical necessities in different territories.

Through very basic discriminant analysis we find that although financial capabilities are statistically significant in explaining which states succeed in the competition process, their explanatory power is incomplete and its effect differs conditional on the measures of performance we employ and the kind of revenue (conditional, unconditional, own) we consider. As we have mentioned an additional and very important aspect has to be with the managerial abilities of local public actors. In this regard we may argue the influence of financial resources employed by local governments for increasing competitiveness is limited by the nature of the spending and in this case we would confirm a case of incentive based competition that can be pure waste for some territories or nationally. Further research is needed in order to incorporate other dimensions of governments' capabilities into the analysis

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