

## **Territorial competition in the Northwest region of Mexico, 1993-2003**

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### **ABSTRACT**

This paper deals with the issue of territorial competition within a system of cities in the Northwest region of Mexico. This region borders the US and has some of the highest growth rates in the country. Yet the unequal performance of states within the region is noteworthy. A process of territorial competition among cities in the region may have been shaping these disparities among states. Due to the strong competitive dynamic imposed by globalisation is of utmost importance to identify processes of competition within regions with some particular internal interactions, with cities in close geographic proximity, with some economic or political cohesion or similar productive specialisation patterns. We attempt to identify and depict a process of competition in the aforementioned region which belongs to a country that has carried out an intense trade liberalisation programme and whose development process has been characterised by a significant unbalanced performance of its regions. We aim to have a first diagnosis of the ways in which urban competition takes place and whether there is the possibility for cooperation to increase the competitiveness of the region as a whole. We describe the structure of regional competition in this case study and employ different indicators of territorial performance such as productivity, shares and growth to evaluate the results of this process. Given the available economic census data in Mexico the study period is 1993-2003.

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## **Introduction**

Two phenomena, globalisation on the one hand and urbanization on the other, have been transforming the economic, social and political structures in virtually all latitudes. Even though they have helped to achieve high rates of economic growth and rising per capita incomes at the national level in many cases, there are however several instances where they have had spatially polarizing effects. That is, the benefits of economic expansion concentrate in a handful of territories, cities in particular. Cities play a role as spaces where economic and social relationships take territorial form. The city subsists not only as the territorial scenery of such relationships but also as a focus and centre of decisions, and as the point of articulation of regional territories at a broader scale. Cities face new challenges and have increasing opportunities for action in the transforming national and international contexts.

Furthermore there is a double polarisation since gains tend to concentrate in urban settings while at the same time are just relatively few cities which enjoy sustained expansion. Although not necessarily, cities' progress is somewhat attributable to their success in adapting to the conditions of the global economy. Globalisation has led to increasing competition by means of international trade, Foreign Direct Investment and High-technology. Therefore in the prevailing economic system we observe countries, regions or cities that can be considered either winners or losers depending on their ability to attract and retain resources and investment which translates into sustained economic growth and improved quality of life.

In response to this state of affairs, cities do not negotiate their position in an increasingly competitive global economy. Instead of finding ways of cooperation in order to balance the results among cities, these are increasingly pushed into competition with each other seeking for investment and economic gains. This further promotes the polarization of the economy within the city systems. Even though popular wisdom indicates that all territories are likely to search for enhanced productivity and development, some regions are more successful or advance more quickly depending on the nature of the intra and interregional

interactions they engage in. Territorial competition is a process in which local governments or a variety of actors undertake actions to increase the attractiveness of their own territories in response to actions of the same character that are undertaken in other regions. It has become commonplace that local governments and other public and private institutions concern about providing the conditions that make their countries, regions or cities more attractive for productive activities. Territories compete to attract and retain investment and mobile productive resources as well as to dominate relevant markets. Importantly territorial competition involves a socioeconomic and a politics dynamic that has a competitiveness outcome. To be exact competition can also be understood as a race towards competitiveness. Regions and not only companies are in competition; cities are a natural setting for the development of competition because they concentrate most of population and economic activity.

This paper is concerned with constructing an integrated framework for analysing territorial competition in urban locations in Mexico. The approach employed examines the literature being adopted in dealing with the theorisation and empirical analysis of competition among territories. This revision is not exhaustive but rather selective. The key outcome expected out of this paper is an integrated explorative framework for urban competition and its implementation on the particular case study whereas some economic results of competition are assessed.

Specifically we deal with the issue of territorial competition within a system of cities in the Norwest of Mexico. It aims to identify the existence, nature and results of competition between the most important cities in that region in the period 1993-2003. As far as we are aware in the literature there are no explicit documented cases of existing regional competition and most of studies centre on competitiveness.

In the first section we delineate a conceptual framework for analysing regional competition processes. There is a presentation of the concept of urban competition, its main characteristics and its organisational basis followed by a

discussion on the role of public policy and local governments. The second section includes the representation of the urban competition taking place in Northwest Mexico. The structure and results of the process is depicted based on some economic and social indicators for the sample of cities in the period between 1993 and 2003. The final section concludes about the exploratory analysis carried out in the paper and provides further lines of future investigation.

## **1. CONCEPTUAL FRAMEWORK**

### **1.1 Territorial Competition**

There is now vast theoretical and empirical literature on regional competitiveness and the sources of competitiveness. Indeed territorial competitiveness involves variables with which territories compete for attracting companies, stimulating their creation and increasing their productivity. There has been intense and increasing discussion on the conceptualisation of regional/territorial/urban competitiveness and about the issue of the appropriateness of the term itself. This paper does not adopt any deterministic view on the latter debate but assumes the existence of competitiveness as a comprehensive phenomenon that captures one process of our interest, being this competition among territories. We deal with the analysis of this contest in which territories engaged in.

Territorial competition is a relatively less explored issue from the theoretical and conceptual point of view. According to Batey and Friederich (2000) theorising about territorial competition is problematic and the task has been largely avoided. They assert that so far we can speak of a conceptual body, from which a framework of analysis can be derived, more than of a proper theory of territorial competition. Even such conceptual development is not conclusive yet. A generic definition of territorial competition would be in these terms: a process in which regions compete for the attraction and retention of investments and resources, at the same time that their population improve the living standards (Poot, 2000; Cheshire y Carbonaro, 1996; Jensen-Butler, 1999; Budd, 1998;

Lever W. F., 1999). Poot (2000) indicates that this can be judge as a rather broad concept -does not restrict the kind of actors or actions- but has the advantage that it coincides with widespread notions of territorial competitiveness which often include the more substancial aspiration of sustainable improvings in the standards of living.

Other definitons are more specific in describing what the term *compete* denotes and the basis, mechanisms and motivations under which competition takes place. Cheshire and Gordon (1995) define territorial competition as concrete local actions aimed at increasing regional development, "...locally based **efforts** to promote the development of a locality in competition with other localities." Gordon (1999) actually describes it as a mere promotion strategy for regions more than as a process of creation of competitive capacities. Budd (1998) states that territorial competition can involve active local economic development **measures** of various kinds and self conscious **strategies** to guide local development with regard to the future economic role of a region and by taking into account the regions competitors.

Cheshire (1999) defines competition as a collective process of promotion by regional actors in order to reach economic goals, "... is meant a **process** through which groups, acting on behalf of a regional or sub regional economy (typically a city-region), seeks to promote it as a location for economic activity either implicitly or explicitly in competition with other areas." Vinageras (2006) also refers to a process, one of sequential transformations in the local environment that is the outcome of the concerted actions of major economic and institutional agents. These actions are intended to create or consolidate the competitive advantages of a region that is in rivalry with other territories. Maneval's (2000) definition is more focus on the economic aspects of territorial competition as a process. He considers that it can be regarded as a **market process** by which economic activities and factors of production are allocated among the regions of a nation; specifically, regional competition represents the process by which the Gross National Product (GNP) is distributed among

regions. However he admits that it also depends on the quality and intensity of governmental programs.

Taking into account the importance of geographic location there is also the suggestion that particular attributes and characteristics of an urban region are an important endowment of cities when seeking to attract or to develop enterprises and sectors. Budd says that..."To speak of territorial competition in this context is to speak of cities competing to **have the best locational endowments**, which generate external economies of scope and scale for firms and sectors. These are economies of agglomeration of two types: localization and urbanization economies. Funk (2000) stresses the role of cultural activities as a 'soft' factor of locational attractiveness and competitive position of an urban economy

These conceptualisations are not completely explicit in indentifying the relevant actors. Some are more clear-cut but still keep a degree of ambiguity. For instance, Poot (2000) says that competition refers to the actions of **economic agents** that are taken to enhance the standard of living of their own territories. Johansson (2000) conceives territorial competition as primarily happening through **firms** but **policy** supported. In Cheshire and Gordon (1998) explain that territorial competition involves fundamentally the **formation of policies** designed to promote local economic development, often explicitly, but certainly implicitly, in competition with other territories. It also entails the **formation of agencies** that co-ordinate efforts and actions developed in order to increase the territories competitive position compared to other areas.

Thus concepts of territorial competition go from those considering it as mere set of actions (measures, strategies and efforts) to those seeing it as a process. Some definitions stress the role of policy and the importance of agencies in terms of implementation and coordination. Definitions also vary depending on the goal of competition: attraction of investment and factors of production, retention of local businesses and resources, local development, market shares, production shares, etc. With respect to the motivations under which competition at the territorial scale operates Cheshire (1999) points out that territorial

competition can be viewed as the rational response to incentives. Overall the objective of competition among territories is thought in terms of attracting new investment -frequently of foreign origin. For Cheshire and Gordon (1998) the main goal not just refer to the attraction of mobile inward investment but often it is more directed to improve the conditions for existing firms that may eventually migrate to more attractive places. Johansson (2000) includes as objectives of competition average wage and income levels, the value of public services and the value of regions amenities. These goals can be attained by maintaining and renewing local specialisation to foster economic growth and reduce unemployment. Vinageras (2006) on his part considers that the essence of competition at this level is to built a supporting territorial system of assets in order to engender flexibility and adaptive capacity of the productive structure to new conditions whereas at the same time generates certainty to the operation of economic activities. Lever (1999), lists among the incentives of competition the attraction for mobile resources (capital, labour), new firm's creation, growth of output and value added, attraction of public funds and attraction of international events. Broader incentives for competition are economic and social development.

Regarding the mechanisms subjacent to competition according to Cheshire and Gordon (1995) the actions and efforts may take many forms (marketing, assisting local businesses, constructing infrastructure, information provision, networking, and so on). In addition it may use programs or apply funds which are available as a result of national or regional policy but always employed to attend to local interests. Furthermore it would be possible to distinguish different types of strategies in accordance with the particular historical, political and territorial characteristics of regions or cities. For instance, they may play a role as a capital, be localized in an area with intensive economic relationships with another country or near relevant markets, have a high degree of specialisation, and the like.

One point of convergence among definitions is the emphasis on the local nature of territorial competition. For Cheshire and Gordon (1995) and Cheshire and

Gordon (1998) it is intrinsically local due to the fact that it serves territorial-specific determined goals. Therefore unlike top-down regional policies it is not at all concerned with issues of inter-regional spatial equity but rather with local economic efficiency. That is competition among cities has potential benefits in terms of economic efficiency, yet under the risk of increasing spatial disparities. As it originates from local interests consequently it tends to be promoted most actively at the level of city-regions and in the search for economic efficiency. An additional point of coincidence is the understanding that whatever the means or the concrete goals of competition this aims and improving the relative competitive position of a region compared to other regions.

After having exploring the range of definitions on territorial competition one question arises, how can one arrive at a workable concept? According to Batey and Friederich (2000) a workable concept of territorial competition can be attained once one think of an analytical framework which takes into account three general parameters: the competition structure (organizational basis), the competitive behaviour and the results. Batey and Friederich themselves suggest a structure of this kind which in addition is flexible in the sense that a variety of indicators can be used to reflect the characteristics of competition. As a matter of fact Batey and Friederich's review on the term of regional competition represents a significant effort to construct a systematic framework for analysis. This document implements this approach which is discussed in more detail in next subsection.

Additionally they suggest three directions or fields of investigation towards which studies can be directed:

- Theoretically-oriented studies: place more emphasis on the definition and aspects of competition such as the kind of strategy that actors can choose to engage in regional competition or on specifying the kind of region that is object of study. They also may adopt different modelling approaches – negotiation/market models, growth/foreign trade models or agglomeration/location models.

- Method-oriented studies: contribute to the refinement and elaboration of methods which are used to describe or measure the process or the outcomes of competition.
- Policy-oriented studies: emphasise the analysis of policy formulation and implementation. They take into account the context or the purposes and objectives in which policies are developed; otherwise they attempt to assess the effectiveness of policies. Most of competition studies use this approach.

This paper is more in line with the first of these approaches and attempts to characterise competition in a case study. Other precision that has to be made is that we use interchangeably the terms territorial competition, regional competition and urban competition. Once the conceptual review is presented, following sub-section addresses specific aspects of territorial competition considering the analytical approach delineated by Batey and Friederich (2000) in which the variety of actors, contexts and results of territorial competition are described and specified. Such a framework smooths the task of analysing competition and presenting results.

## **1.2 Basic characteristics of Regional competition**

In investigating processes of territorial competition is helpful to have a basic systematising scheme. In order to characterise processes of economic competition among regions as mentioned above Batey and Friederich (2000) suggest a plot of this type. In this there are four basic categories or components of a process of competition: a) type of competition, b) type of competitors, c) type of competitive relationships, and d) results of competition. The first two are part of what can be labelled as the structure of competition, c) refers to the process of competition itself whereas d) is the evaluation of outcome from competition.

- a) Type of competition refer to the framework on which it is developed regarding the character of the circumstances such as the existence of externality effects, market-oriented motivations, non-money market-oriented motivations, a mix of the former. Since most processes of

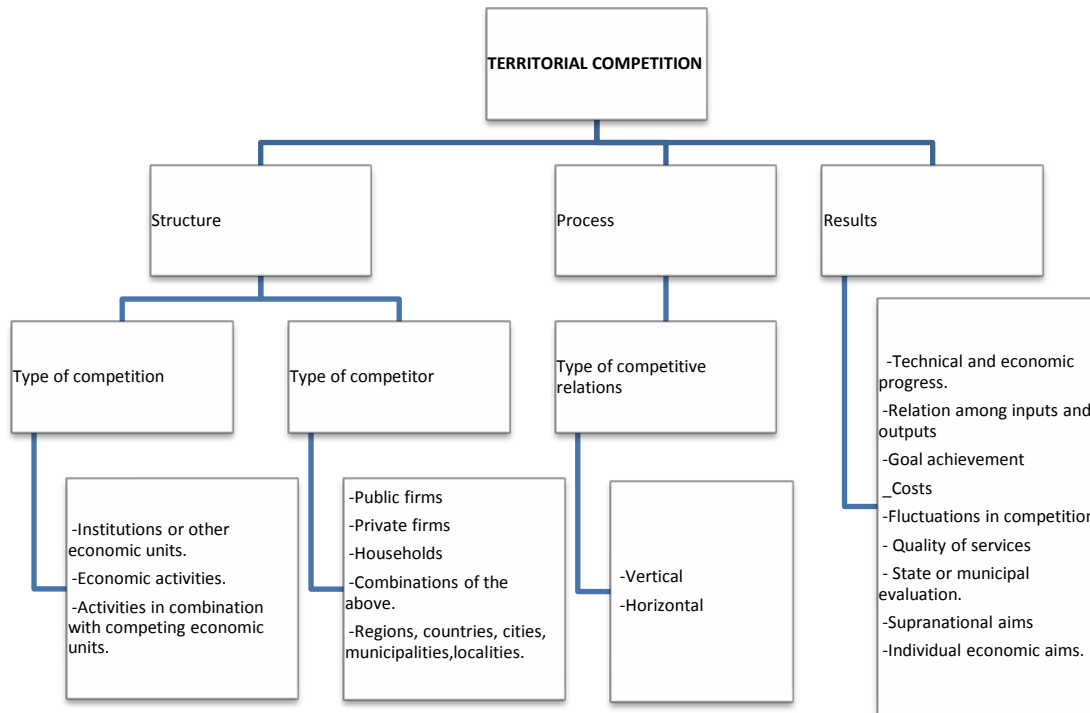
competition are money-market-oriented a different criteria to distinguish the type of competition is to identify whether competition is among economic activities, economic units or other economic institutions.

- b) The type of competitors refers to the specific economic units participating in the process of competition. These are economic units which are related or located in a competing region. It can be one competitor in each region who competes otherwise several actors may even represent a region. This aspect is important because the objectives and the way in which outcomes are measured depend of the actors competing. Firms compete directly for markets, public institution for the attraction of private or public investment and financing from federal funds, whereas households can compete in the real estate market.
- c) Type of competitive relations depends on the level at which competitors act on behalf of a region relate with each other. They are horizontal relationships if take place among units at the same level (cities vs. cities, firms vs. firms, governments vs. governments, etc.). Vertical competition happens among actors at different levels (i.e. firms vs. governments, households vs. governments). Alternatively competitive relations can be defined in terms of the type of conflicts that emerge: conflicts associated with the dominance of sales and purchases markets, in intergovernmental fiscal relations, for location, for the use of resources, in management of externalities, in governmental co-ordination tasks, for competencies in decision making, and so forth. The type of relations may be also determined by the goals of actors. All this determines a substantial part of competition referring to the degree of rivalry, co-operation, incentives, strategies of conflict resolution, parameters of action and behaviour and reactions of competitors.
- d) Results of competition are dependent on the goals of actors expressed in a variety of economic, social and political indicators.

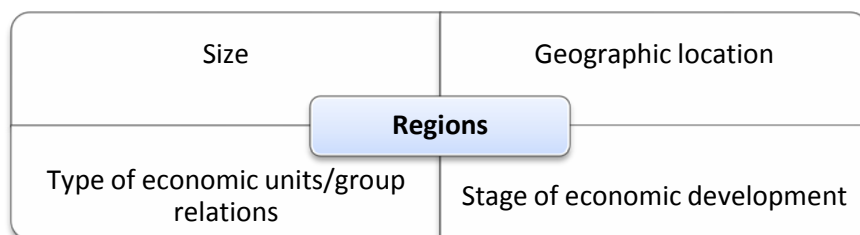
Figure 1 shows the variables which can be used as proxies to measure each of the characteristics of territorial competition. Furthermore different type of regions generates different type of competition, actors, relations and results.

The characteristics of regions can be their size, geographic position, the type of economic units, stage of economic development, etc. (figure 2).

**Figure 1. Analytical framework for regional competition.**

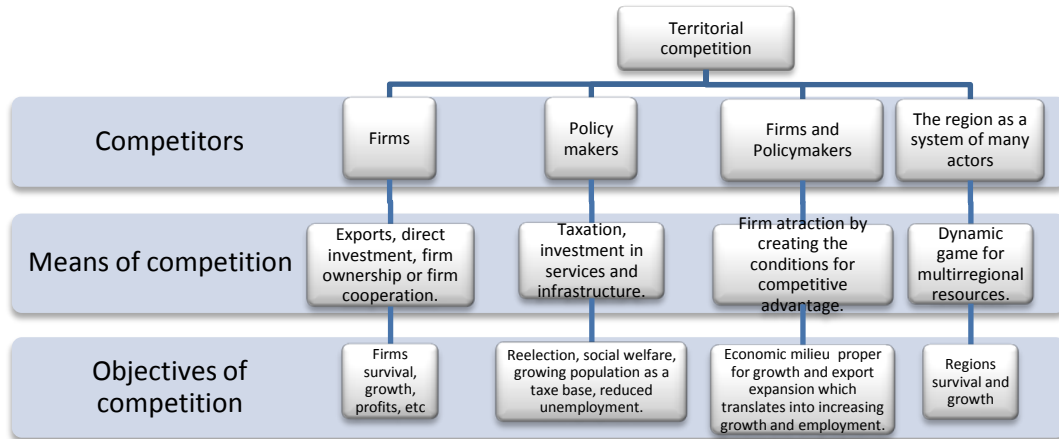


**Figure 2. Characteristics of regions**



Johansson (2000) offers an alternative but fairly similar structure of analysis. The main categories in the examination of territorial competition are the competitors, the means of competition and the objectives of competition (Figure 3).

**Figure 3. Simplified structure for regional competition analysis**



### 1.3 Policies of regional competition

By and large, local government and regional development policy are regarded to play a central function in regional competition. As mentioned above Cheshire and Gordon (1998) state that territorial competition involves fundamentally the formation of public policies. We have also referred to the fact that most studies of regional competition actually address this aspect and try to evaluate the outcomes in terms of policy goals and achievements. The more the local governments are aware of the existence and importance of competition a more significant role they tend to play. To the extent to which governments are more conscious about the actual territorial competitive environment they will try to formulate more policies for the development of competitive capabilities. Reiterating what we have said before often authors emphasise the role of policy formulation and implementation. They allow for the context and/or the purposes and objectives in which policies are developed, yet largely the way to address policy is through the assessment of its effectiveness and the kind of effects it brings.

Potter (2009) makes a distinction among direct and indirect policies of competition. The former have an impact on human capital, innovation and

entrepreneurships whereas the latter have to be with the creation and transfer of localised knowledge. For Cheshire and Gordon (1998) regional competition policies fall into one of three categories depending on overall outcomes in attracting investment and new firm creation:

- Those that are pure waste since they have no impact either in diverting activity to the city/region in question or in generating new activity even though they imply costs. They are not effective in terms of attracting mobile investment, still less in terms of improving the competitive success of local businesses.
- Other policies may have a positive impact in economic welfare terms, viewed from the perspective of the city/region, but be zero sum from a wider perspective according to the extent to which a given policy is diversionary, that is it influences the location of a particular activity rather than the overall productivity of resources.
- There may also be policies, however, which increase economic welfare, both locally and from a wider perspective. (Cheshire and Gordon, 1998).

For a number of authors the competitive success of regions and cities cannot be achieved without the active action of local governments. Kresl (1992) indicates that in the case of cities these must formulate an integral and strategic plan in which the local specific characteristics and needs are addressed. Further, cities that are to prosper must *compete* under the basis of coordinated co-operation, yet this is complicated to negotiate. In the context of an increasing globalised system an integral plan of this kind should attend market niches, have as a goal cities' specialisation, promote information and intensive knowledge activities, innovation; consequently policies of territorial competition should address these aspects.

Camagni (2005) proposes new local governance approaches in which strategic plans are a key element for cities' long run sustained competitiveness. Such plans involve the actions of multiple actors but they are articulated by policy makers. Competition policies may then take the form of a 'Plan of the city' more than a 'Plan for the city' where a diversity of social actors take part and the city

is visualized as a social network of collective actors. If the strategies of a Plan of the city fail, then capital, other factors of production and population emigrate. Therefore local governments can establish policies to improve the relative competitive position of regions; results will depend on the kind of policies but above all on the efficiency in policy implementation.

Despite the significance of policies of competition from local governments in explaining the logic of territorial competition, the empirical analysis that follows does not address this aspect, at least explicitly.

## **2. The context: the northwest region of Mexico**

Due to geographical proximity Northwest Mexico has intensive commercial, investment and migratory flows with the United States. It received more than 7% of total FDI inflows in Mexico which make the region to rank in third place as FDI receiver. This external interaction and the internal structure of the region make it an important unit of analysis of territorial competition. For the purpose of this exploratory study we include the states of Baja California, Baja California Sur, Sonora and Sinaloa within the Northwest region of Mexico (figure 4). In 2005 this region accounted for approximately 8.1% of national population and between 1990 and 2005 had a population growth rate above the national average (2.2% against 1.6% Average Annual Growth Rate AAGR).

The economic activities developed in the region are diverse; it has major touristic resorts in Sinaloa and Baja California Sur, important manufacturing centres in Sonora and Baja California, as well as agricultural activities mainly for the production of grains and vegetables in Sonora and Sinaloa. The main destination for some of these products, apart from the domestic market, is the US. The most significant contribution of the region to sectoral national GDP is made to primary activities. In 2006 the Northwest region represented about the 16% of total GDP in the primary sector, being Sinaloa the main producer in the region and second in the country. Overall other regions tend to converge towards the average participations in the primary activities except the Northwest that has bigger shares in total primary production. In the secondary sector the region, primarily Sonora and Baja California, explained 7% of national GDP in

that activity while in the tertiary sector the region, accounted for around 9% of GDP due to the dynamism of Baja California y Baja California Sur.

**Figure 4. Northwest Mexico**



The most widely used indicator of the level and dynamism of economic activity or of the performance of a region is the Gross Domestic Product and its growth rate. High productivity triggers economic growth and eventually leads to improved life standards.

In Northwest Mexico there is a clear unequal performance among the states within the region. Sinaloa has had low growth rates in the last 20 years whereas its neighbours Sonora and Baja California enjoy higher rates and have better relative positions referring the national economy.

States shares in some variable of economic activity are another indicator of the intraregional disparities. Baja California and Sonora have been states with higher participations on national Gross Domestic Product (GDP) between 1993 and 2006 with around 2.5 and 3.5%. Sonora had been the leading state in the region regarding participations in GDP yet since 1990 Baja California is the state which account for the majority of regional value added. Sinaloa has had decreasing shares in national and regional GDP (around 2%) in the same period; Baja California Sur in contrast had slight increases yet its participation in national GDP is so far negligible -about 0.50% (table 1). As a whole the

Northwest has increased its contribution to national GDP thank to increases in all states excepting Sinaloa.

**Table 1. States and northwest participation in national GDP, 1993 and 2006 (%)**

State	1993	2003
Baja California	2.8	3.4
Baja California Sur	0.53	0.6
Sinaloa	2.3	2.0
Sonora	2.6	2.9
<b>TOTAL</b>	<b>8.2</b>	<b>8.9</b>

Source: INEGI. National Accounts.

The Average Annual Growth Rate (AAGR) in national GDP was of approximately 3% between 1993 and 2006. Sinaloa ranks 28 among the 32 states in the country with an AAGR of 2% in contrast all other states in the region have AAGR above the national average which makes the differences between Sinaloa and its neighbours noteworthy. Moreover this state shows an important lag in its economic growth in the long run with respect to the region since its accumulated growth is a halve of that in the other three states (table 2).

**Table 2. Accumulated growth and AAGR of GDP 1993-2006 (%)**

	Accumulated Growth	AAGR	Rank in AAGR
<b>National</b>	<b>46.4</b>	<b>3.0</b>	—
Regional	58.7	2.3	—
Baja California	79.8	4.6	3
Baja California Sur	69.5	4.1	8
Sinaloa	29.0	2.0	28
Sonora	64.4	3.9	10

Source: INEGI. National Accounts.

Except for Sinaloa, GDP per capita in the other three states is higher than the national average. But contrasting with the tendency in GDP growth rates, all states in the Northwest have worsened their position relative to other states in the country. The best performance in this regard is again showed by Baja California and Sonora (table 3).

**Table 3. GDP per capita and ranking, 1993 and 2006**

	<b>GDPpc 1993*</b>	<b>GDPpc 2006**</b>	<b>Rank 1993</b>	<b>Rank 2006</b>
National	13,205	16,214	-----	-----
Baja California	16,416	19,932	7	9
Baja California Sur	17,300	19,923	5	10
Sinaloa	11,443	13,187	16	17
Sonora	15,131	20,517	9	8

1/ Constant prices, pesos of 1993

\*Source: Centro de Estudios de las Finanzas Públicas H. Cámara de Diputados.

\*\*Source: Own calculations based on data from Centro de Estudios de las Finanzas Públicas. H. Cámara de Diputados; INEGI, National Accounts.

The low performance of Sinaloa is also reflected in remuneration levels and work conditions. According to data from the Ministry of Labour, in 2007 the average wage in Sinaloa was \$154.05, in Sonora \$170.41, Baja California \$211.48 and Baja California Sur \$197. Only Baja California was above the national average whereas Sinaloa ranked 29 among 32.

The amount of income received from abroad in the form of remittances gives an idea of the excessive dependence of Mexican households and the whole economy to these resources which come predominantly from the US. The monetary value of these remittances by state is related to some extent to the number of workers that regions expulse. Sinaloa is the state that shows more reliance on remittances as it is the main receiver; then it can be identified as a sender of population.

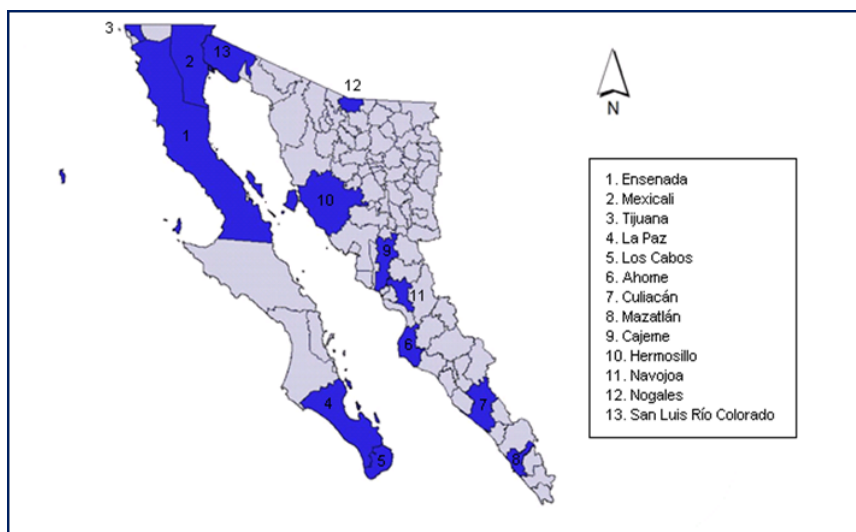
The data just presented illustrate at the level of states the disparities within the region. Losers and winners of a likely process of competition can be identified. Economic performance at the state level may be driven by the performance of the most relevant cities within each state. Due to a relatively strong relation with the US and the internal interactions among states a process of territorial competition among cities is likely to happen. The higher the integration within the region the higher the tendency towards competition is expected. In the case of the Mexican Northwest possible cases of direct competition are expected between some pairs of cities.

### 3. Regional competition in a system of cities in Northwest Mexico

#### 3.1 Competitors

Competitors are specific economic units related or located in a region and have a leading role in the process of competition. It can be one competitor in each region or several actors who may represent a region. In the present case study the competitors are the chosen territories or sub-regions which are seen as a system of participants –governments, firms, households and industries primarily, in addition to other economic agents. In principle competitors are the most prominent cities in the Northwest which make up the regional system of cities. However as there is scarce data at the city level in this study we take municipal data as representative of urban demarcations considering that between 65 and 90% of total population is essentially urban. Moreover as most of data refers to measures of economic activity this choice is also valid to the extent that most of production within a municipality takes place in urban settings. The internal system of cities of the Northwest regions consists of 13 cities whose population is bigger than 100 thousand inhabitants. They are: Ensenada, Mexicali and Tijuana in Baja California; La Paz and Los Cabos in Baja California Sur; Ahome, Culiacán and Mazatlán in Sinaloa; and Cajeme (Cd. Obregón), Navojoa, Hermosillo, Nogales and San Luis Río Colorado in Sonora (figure 5).

**Figure 5. A system of cities in Northwest Mexico**



-Size and number of sub-regions

Excepting Tijuana, with 1 and a half million inhabitants, all these cities are considered intermediate since their population is in the interval between 100 thousand and 1 million inhabitants (table 4) as well as due to their function as connecting nodes between rural and urban contexts. The cities within the system do not share a common geographic border although the states to where they belong are geographically contiguous and have a strong relation with each other in terms of trade flows and migration.

**Table 4. Total population and population density by city, 2005.**

State	City	Size
Baja California	Ensenada	413, 481 inhabitants; Population density 7.3 (ih/Km <sup>2</sup> ). Low density due to big extension. Ensenada city represents more than 65% of municipal population.
	Mexicali	855, 962 inhabitants; Population density 53.63 (ih/Km <sup>2</sup> ). The city concentrates about 80% of municipal population.
	Tijuana	1,410,687 inhabitants; Population density 1046.85 (ih/Km <sup>2</sup> ). The biggest city in terms of total population and density. State capital.
Baja California Sur	La Paz	219, 596 inhabitants; Population density 14.31 (ih/Km <sup>2</sup> ). Low population and density due to geographic conditions. State Capital.
	Los Cabos	164, 162 inhabitants; Population density 42.71 (ih/ Km <sup>2</sup> ).
Sinaloa	Ahome	388, 244 inhabitants; Population density 108.81 (ih/ Km <sup>2</sup> ).
	Culiacan	793, 730 inhabitants; Population density 126.22 (ih/ Km <sup>2</sup> ). State capital.
	Mazatlan	403, 888 inhabitants; Population density 155.39 (ih/ Km <sup>2</sup> ).
Sonora	Cajeme	375, 800 inhabitants; Population density 77.83 (ih/Km <sup>2</sup> ).
	Navojoa	144, 598 inhabitants; Population density 52.65 (ih/ Km <sup>2</sup> ).
	Hermosillo	701, 838 inhabitants; Population density 44.74 (ih/ Km <sup>2</sup> ). State capital.
	Nogales	193, 517 inhabitants; Population density 110 (ih/ Km <sup>2</sup> ). 98% of total population is urban.
	San Luis Rio Colorado	157, 076 inhabitants; Population density 18.67 (ih/ Km <sup>2</sup> ).

Source: Own construction with INEGI's information. Prontuario of municipal geographic information.

-Type of local economic activities and productive structures.

Productive structures give a description of the mix of economic activities in a region. It indicates the weight of each sector or branch in total production in that region. Specialisation, on the other hand, reflects the productive structure of a region in comparison to other regions. It tells us whether a region's share in the production in a specific branch of activity is relatively large compared to the share of other regions in the production in the same branch. The economic structure of Baja California in 2003 was predominantly industrial (more than 50%) followed in importance by services (44%). The same predominance of the secondary sector is manifest in the cities of Tijuana (52%) and Mexicali (63%), whereas the service sector has the highest participation in the productive structure of Ensenada (51%). Cities in Sonora have productive profiles oriented towards secondary and tertiary activities as well, yet the structure among those two sectors is more balanced. Cajeme, Nogales and San Luis Rio Colorado are more industrial oriented while in Hermosillo and Navojoa services is the leading sector. This is partly as a result of the liberalisation and export promotion policies carried out by federal government which have an antecedent in the Maquiladora Programme in the 1960's, then expanded in the early 1980's and enhanced in 1994 with the entry into force of the North American Free Trade Agreement (NAFTA). Such programmes increased significantly Foreign Direct Investment (FDI) flows into the cities bordering the US. FDI as well as trade favoured industrial development and growth, and the expansion of services activities necessary for manufacturing. In contrast, the allocation of production among sectors in the cities of Sinaloa and Baja California Sur is oriented towards services. In Ahome, Culiacan and Mazatlan the service sector accounts for between 60 and 70 % approximately; in La Paz services represent 64% and in Los Cabos they are 86% of total value added.

Reviewing data at a more disaggregated level this reveals that most of the urban economies considered in the sample are heavily reliant on Retail commerce, especially Ensenada, La Paz, Ahome, Culiacan, Mazatlan, Cajeme and San Luis Rio Colorado. Metallic products, machinery and equipment manufacturing, is an industry of high importance in this system of cities

specifically in Mexicali, Tijuana, Hermosillo, Nogales and San Luis Rio Colorado. Therefore we confirm the orientation of cities in Sinaloa and Baja California Sur towards services whereas cities in Baja California and Sonora are more industrial dependent. On the other hand, Restaurants and hotels services are the most important division in Los Cabos, while Fishing and Food manufacturing have high participation in Ensenada and Mazatlan respectively (table 5). Thus some primary activities<sup>1</sup> are important in Ensenada and Mazatlan from where many of these products are exported to the US. Ensenada is characterised by its production of tuna and sardine. Even though a solid value chain in the food industry has not been developed Mazatlan is an important centre of production in this activity.

**Table 5. Top 5 activities with highest participation in cities value added, 2003.**

City	Top 5 Economic activities
Ensenada	Retail trade(20%), Fishing (19%), Metal products, machinery and equipment (12%), Wholesale trade(10%) and Non-metallic mineral products(7%).
Mexicali	Non-metallic mineral products(23%), Generation, transmission and supply of electricity(19%), Retail trade(16%), Wholesale trade(10%) and Food, beverages and tobacco(7%).
Tijuana	Non-metallic mineral products(22%), Retail trade(15%), wholesale trade(10%), Communications(7%) and Transportation(5%).
La Paz	Retail trade(28%), Generation, transmission and supply of electricity(27%), Wholesale trade(14%), Transportation(7%) and Food, beverages and tobacco(5%).
Los Cabos	Restaurants and Hotels (34%), Retail trade (22%), Wholesale trade (8%), Transportation (7%) and Professional, technical specialized and personal services (6%).
Ahome	Retail trade (28%), Wholesale trade(21%), Food, beverages and tobacco(14%), Other services except Government activities(6%) and Fishing(5%).
Culiacan	Retail trade (26%), Generation, transmission end supply of electricity(21%), Wholesale trade(20%), Food, beverages and tobacco(8%) and Other services except Government activities(5%).
Mazatlan	Retail trade(23%), Food, beverages and tobacco (20%), Fishing (16%), Restaurants and Hotels (11%) and Wholesale trade (10%).
Cajeme	Food, beverages and tobacco(26%), Retail trade (21%), Wholesale trade (19%), Non-metallic mineral products (6%) and Professional, technical specialized and personal services (5%)
Hermosillo	Non-metallic mineral products(22%), Retail trade(17%), Wholesale trade(13%), Generation, transmission end supply of electricity (10%) and Food, beverages and tobacco (8%).
Navojoa	Food, beverages and tobacco (39%), Retail trade (19%), Wholesale trade (11%), Transportation (7%) and Paper and Paper products, printing and publishing (6%).
Nogales	Non-metallic mineral products (34%), Retail trade (17%), Professional, technical specialized and personal services (10%), Other manufacturing industries (7%) and Transportation (6%).
SLRC	Non-metallic mineral products (25%), Retail trade (25%), Wholesale trade (12%), Textiles, clothing and leather industries (11%) and Food, beverages and tobacco (4%).

Source: Own calculation with data from INEGI, Economic census 2003.

<sup>1</sup> Unfortunately the economic census does not include data on agriculture and farming. For the primary sector it only has information on fishing, aquaculture and mining.

Specialisation coefficients indicate that on the whole cities are not highly specialised (table 6). The most specialised cities, with coefficients of 0.39, are Nogales and Navojoa, the former relatively specialised in Professional services, and Textiles and garments whilst the later in Food manufacturing and Paper products. Los Cabos is also more specialised compared to other cities due to the relatively high participation of Restaurant and Hotels. San Luis Rio Colorado is relatively specialised in Textiles and garment. Cities with similar relative specialisation are Ensenada and Mazatlan in Fishing. Conversely, the most diversified cities are Culiacan, Ahome and Tijuana. Accordingly the sample shows diversified rather than specialised economies and that some cities specialised in the same activities.

**Table 6. Average Specialisation, 1993-2003.**

City	Tij.	Herm.	Mexicali	Cul.	Cajeme	Mazatlan	Ensenada	Ahome	Nogales	LP	Navojoa	LC	SLRC
Specialisation index	0.1	0.19	0.14	0.13	0.29	0.21	0.24	0.11	0.39	0.2	0.39	0.31	0.3

Source: Own calculation with data from INEGI, Economic censuses, 1993, 1998 and 2003.

### **3.2 Type of competition and competitive relations**

In Northwest Mexico territorial economic competition among cities can be associated with a combination of the effects mentioned by Batey and Friedrich (2000) i.e. externality effects, non-money market oriented effects and money market oriented effects in whose framework competition happens. Competition in this case study exists horizontally because cities, which are constituted internally by a variety of actors, act at the same level. Even though this competition can take place among representative institutions in each city, the existence of particular economic activities delineate the character of the process. That is, there is competition among economic units which are related to special economic activities. Within this structure of competition chains of interdependence exist and produce fields of conflict and sources for potential negotiation. A number of such fields of conflict are identified: Conflicts

associated with dominate sales and purchase markets, conflicts for location and the use of resources and conflicts for access to federal fiscal resources.

- Conflicts for location and the use of resources and associated with dominate sales and purchase markets

If regional competition for business settlement is considered then cities compete for location and the use of resources. Cities with similar specialisation profiles are in conflict for attracting more firms in the relevant economic activity. In terms of dominance of markets for products also there is a more direct clash among cities with the same productive specialisation. Much of the governmental assistance to economic activities comes from federal allocation to states and municipalities and the distribution of resources can be differentiated to a great extent. Historically, municipalities in Sinaloa had received a variety of funds for irrigation infrastructure; Sonora had been favoured with this support to a lesser extent. However, after trade liberalisation the orientation of federal policy changed. In Sonora emphasis has been on developing infrastructure for the location of industrial activity and some health and professional services. On the other hand, Baja California has received federal financing but as with Sonora this has been predominantly for industrial infrastructure in the form of industrial parks and communication and transport system to the US. Therefore the Mexicali Valley where agricultural activities in Baja California are carried out suffers from the scarce mechanisation of its irrigation system.

Sonora and Sinaloa are among the main producers of primary goods in the country and they compete for selling similar products not only in the domestic national market but also in the export markets. Both states develop agriculture with some degree of automation mainly in the production of grains and some vegetables. San Luis Rio Colorado, Cajeme, Hermosillo and Navojoa in Sonora, and Ahome and Culiacan in Sinaloa compete for the export of such grains, vegetables in addition to meat as well as agro products associated with these commodities. With this respect, Ahome and Culiacan are in disadvantage in terms of distance to the relevant market, the US. Given the differences in productivity and the availability of resources and access to markets of input and

products, the viability of these branches of economic activity requires the support from public instances and from private investment. For that reason it is considered that governmental support, public and private investment constitute a field of regional competition.

On the other hand, fishing is an important activity in Mazatlan and Ensenada and they are the major producers in this activity followed by Hermosillo, Ahome and Cajeme. Sardine and tuna are the important products and despite the US embargo on imports of tuna from Mexico this commodity has been habitually export-oriented. Therefore this is another example of a potential area of competition for the internal and export markets among cities in the system. Shrimp is another major product due to the high demand from external markets and its growing and fishing can generate direct competition among cities where the activity develops. Hermosillo, Cajeme and Ahome are the main centres for the raising and growing of shrimp in the region and account for around 60% of gross value added in the activity. Mazatlan, Culiacan and Ensenada's share is approximately 6%. Mazatlan is the main fishing centre of this crustaceous followed by Ahome with 31 and 11% of total gross value added respectively.

Touristic services are another potential area of economic competition between cities in Northwest Mexico, particularly Mazatlan and Los Cabos. The former has been by tradition a destination for national and international tourists (from the US mainly). However from the 1990's, Los Cabos has had a remarkable expansion as a coastal resort. The development of Los Cabos as a tourist destination has been part of a Mexican government's plan to stimulate tourism in several resort areas by boosting public and private investment. In the particular case of Los Cabos this resort was meant to become a provider of tourist and residential services for foreigners. Mazatlan started developing a similar model and has built residential areas for that purpose. In consequence both cities now compete to attract tourist and residents and offer the best services. For tourism the availability of running water, sewerage, electricity, telephone, and internet is extremely important and cities have to improve those services. As transportation is also vital, airport infrastructure has been a focus

for investment. International flights to Los Cabos airport have been multiplied and it is actually among the top five with most international arrivals, above Mazatlan (Santamaría, 2003). There is a similar dispute between Mazatlan and Ensenada for the arrivals of cruises.

Local and state governments are interested in attracting investment in manufacturing and industrial activities as well. Due to the productive orientation of a number of cities towards particular manufacturing activities other cases of possible conflict can be identified. In the industrial division of Food and beverages, related to a great extent to primary production and the food value chain, competition arise among Navojoa, Cajeme, Hermosillo, Mazatlan, Culiacan and Ahome in the Animal Food Manufacturing Industry. Navojoa and San Luis Rio Colorado are specialised in the Textiles and garment industry. Hermosillo, Nogales, Cajeme, Tijuana, Mexicali and Ensenada seem to have advantages in accessing the US market due to their location at the border or their proximity to it.

Therefore one can observe that there is a diversity of final markets for which conflicts among cities can arise. Cities will compete directly among each other for dominating such market. At the end of the day dominance in final markets can be associated with the creation or development of competitive capabilities of cities and the exploitation of geographic proximity to relevant markets such as the US.

Competition also arises for access to inputs and productive resources, particularly for mobile rather than localised resources. Due to the demanding new economic environment cities tend to compete for qualified and skilled human resources; there can be competition even for attracting less qualified labour but with specific abilities. In Northwest Mexico, for instance qualified labour force in Sinaloa has increasingly moved to other states in the region. Education centres in this state concentrate in Ahome, Culiacan and Mazatlan and there are outflows of skilled human resources related to tourism activities from these cities towards Los Cabos predominantly. In 2005 20% of immigrants in Los Cabos came from Sinaloa. Those cities which are able to create more and better employments and provide better services will have an advantage in

gaining access to a mobile specialised labour market, generating flows of labour depending on the need of their productive processes. The lack of existing automatic mechanisms, which exist for countries but that do not apply for regions such as price flexibility, low wages and devaluation of the currency, causes that adjustment between them happens through mobile factors: capital and labour (Camagni, 2005). Consequently, the more is the mobility of productive factors the greater will be the competition level. This can easily be reflected in the amount of migrant population that cities with better performance received from other cities in the system, which also is an indicator of the competition results.

- Conflicts in intercity governmental fiscal relations

Competition can take place not only between cities of the same productive profile and specialisation; it also happens between cities of different specialisation when for example they are geographically proximate. According to Kresl (1992), cities can in addition compete aggressively against each other for federal public resources in order to become main nodes in the regional, national or international urban system by improving or expanding infrastructures, transport and communication systems, education services, and the like. This can be one of the most important conflicts in regional competition because the direction of economic policy allows the creation or increase of productive capacities for specific economic activities within cities and regions. Economic development can be shaped by vigorous fiscal competition in the form of public expenditure and public investment competition among city governments when there are variations in their fiscal capacity to provide public goods and services or when this capacity is particularly limited. Hence conflicts happen between cities for receiving public financing from the federation that allow them to improve their capacities for competing.

Potential for fiscal competition exists in Mexico where the tax capacity of regions is very limited and where public expenditure has been an important tool not only for providing infrastructure, but also for enhancing local capacities in general but it has also been frequently used in a discretionary form leading to a distorted allocation of public funds in favour of the most developed regions.

Regarding this in Mexico the state capitals tend to be the most favoured by public investment.

State and municipal governments have limited tax capacity from the 1980's because of the signing of the Agreement of Adhesion to the Federal Fiscal System in which 458 state taxes were countermanded (Chávez, 2007). In addition in 1990 states renounced to further tax competences when the administration of revenues from the tax to the Value Added was delegated to the federal government in interchange for an increase in the federal fund from which states and municipalities receive contributions from the federation.

The proportion of own income in total incomes as a way to measure the taxation capacity of cities and regions would indicate that a lower share represents a relatively poorer fiscal capacity and that this fiscal disadvantage enters into a necessity for federal transfers, therefore triggering incentives for competition. As we observe in table 7, a limited tax capacity for all cities is evident since tax revenues represent the lowest share of total incomes (between 10 and 30%).

**Table 7 Own taxes, Federal Contributions and Participation to municipalities as percentage of total income by city.**

City	Own taxes (1993-2003)	Federal general contributions	Participation to municipalities
Navojoa	11%	11%	60%
Nogales	13%	6%	59%
SLRC	13%	10%	55%
Cajeme	15%	9%	48%
La Paz	12%	7%	46%
Tijuana	20%	9%	44%
Hermosillo	23%	8%	44%
Ahome	21%	16%	42%
Mazatlan	22%	12%	37%
Culiacan	23%	14%	37%
Ensenada	15%	13%	36%
Mexicali	16%	8%	34%
LosCabos	34%	5%	29%

Source: Own construction with INEGI's data. Municipal public finance.

Los Cabos is the city which most relies on its own revenues whereas Navojoa has the lowest share of own revenues in its total. Overall cities in Sonora have

the lowest shares whereas cities in Sinaloa tend to depend more on own taxes. One can also see that the state capitals Culiacan, Hermosillo and Tijuana show high tax capacity. However is debatable whether the small participation of own taxes is a sign of lower tax capacity or whether this share is the result of the city higher ability to attract federal transfers. Cities in Sonora seem to be more reliant on federal transfers as indicated by their share of this concept in total income and by the federal transfers per capita.

Thus the strong dependence on federal transfers in all cities leads to conflicts for attracting funds of this type as it is the primary source of income. Tijuana and Mexicali are the cities where a higher amount of these funds, in absolute terms, are attracted.

### **3.3 The results of competition**

In this section we survey the results of a potential competition process in the system of cities in Northwest considering some indicators suggested in the literature in order to find some patterns and to evaluate the appropriateness of such measures to assess revealed competitiveness. In particular, we look at results of competition in terms of the relation among inputs and outputs (productivity measured as value added per worker in a city), of goal achievement (Growth rates, shift and share analysis, and participations) and of fluctuations in competition (migratory flows and change in competitive positions).

*Productivity.*- With regard to average productivity between 1993 and 2003 small cities such as Nogales, Navojoa, Los Cabos, and San Luis Rio Colorado have higher rates whereas big cities –Hermosillo, Mexicali, Culiacan and Tijuana- are the least productive (table 8). The most specialised cities show higher productivity therefore they seem to be winners in a process of competition in this sense. If we look at them they are generally cities in Sonora, excepting Hermosillo. The state capitals La Paz, Culiacan, Tijuana and Hermosillo plus Ahome and Mexicali are diversified cities and the least productive. From this one concludes that there is a correspondence between specialisation and

productivity and that specialisation rather than diversification trigger productive efficiency.

*Shares in regional value added.*- Cities shares in regional value added also shows a possible result from competition. The biggest cities in Baja California Tijuana and Mexicali have the greatest shares in the generation of value added between 1993 and 2003; they account for around 35% of total value added. The capital of Sonora and Sinaloa, Hermosillo and Culiacan respectively, contribute with almost 23%. Smallest cities have low shares. This measure of competitive results, however, does not account for the city size effect.

*Growth rates.*- However concerning Annual Average Growth Rates (AAGR) Culiacan, La Paz and Mexicali are among the cities with the highest rates. Hermosillo on the other hand, is among the four least dynamic. These are contradictory findings and one cannot establish a pattern suggesting that the most specialised and productive cities are the most dynamic in the generation of value added. Further, one would expect that cities in Sinaloa, which is supposed to be the least dynamic state in the Northwest region, had lower growth rates.

**Table 8 Competition Results 1993-2003.**

City	Specialization index	Productivity	AAGR of Value Added	Average participation in the anual Value Added
Tijuana	0.1	27	7%	22%
Hermosillo	0.19	33	6%	14%
Mexicali	0.14	32	9%	13%
Culiacan	0.13	28	9%	9%
Cajeme	0.29	34	6%	5%
Mazatlan	0.21	34	5%	5%
Ensenada	0.24	34	4%	4%
Ahome	0.11	28	6%	4%
Nogales	0.39	50	9%	3%
La Paz	0.2	33	9%	3%
Navojoa	0.39	44	3%	2%
Los Cabos	0.31	41	8%	2%
San Luis Rio Colorado	0.3	34	10%	2%

Source: Own construction with INEGI's data. Economic census.

*Shift and Share analysis.*- Shift and share analysis is used for decomposing growth in the value added in the set of urban areas we are analysing in order to examine its sources. It decomposes growth into three components: (1) a regional growth effect, which is that part of growth attributed to the rate of growth in the region as a whole, (2) an industry mix effect, which is the amount of growth the city would have experienced if its industries had grown at their regional rates, less the regional growth effect, and (3) a competitive effect, which is the difference between the actual growth and the growth to be expected if each economic activity grew at the regional rate. This component reveals the effects of city specific factors on local growth. The sum of these three effects equals the actual growth rate in the period.

Most of the average growth of economic activities in the cities of Northwest Mexico is attributable to the regional component. That is, economic activities in each city tend to grow at the same pace than the overall economic activity in the region. San Luis Rio Colorado, La Paz, Ensenada and Navojoa have the biggest shares of the regional component of growth (table 9). On the other hand, the industrial mix shows in all cases, except La Paz, a negative impact on the city growth. The competitive effect is considered the most important component of the shift and share analysis given that is one way to account for a city's competitiveness. Ahome is the city with the biggest share in the competitive component, followed by Mexicali, Los Cabos y Cajeme which means that they rely more on their own competitive capacities. Nogales and Navojoa have positive competitiveness effect and to a lesser extent Hermosillo and Tijuana. On the contrary, Culiacan, Mazatlan, Ensenada, La Paz and San Luis Rio Colorado have a negative value on their competitive component. From this one cannot state that the cities with a big competitive component are more competitive but simply that their growth depend more on those competitive capacities related to city specific factors.

**Table 9 Shift and share components by city, 1993-2003.**

City	Regional	Mix	Competitive
Cajeme	8.2	-0.4	3.8
SLRC	11.7	0.8	-1.5
Mexicali	8.1	-3.5	5.5
Nogales	7.8	-1.0	2.4
Hermosillo	8.4	-1.3	1.3
Los Cabos	7.3	-4.0	4.9
Navojoa	9.0	-4.7	2.7
Tijuana	8.4	-2.2	0.9
Culiacan	8.4	-1.7	-0.1
La Paz	10.0	-2.3	-1.9
Ahome	1.1	-6.9	11.2
Mazatlan	8.2	-1.2	-3.3
Ensenada	9.5	-2.9	-4.9

Source: Own construction with INEGI's data. Economic census.

*Fluctuation in competitive position.*- Looking at fluctuations in the competitive position is a way to consider the dynamics over time and among places of competition results. Changes in the ranking of cities shares in value added between 1993 and 2003 indicate that Hermosillo, Cajeme and Navojoa in Sonora lost participation as well as Ensenada, Mazatlan and Ahome (table 10). Yet only Navojoa, Hermosillo, Ensenada in addition to Los Cabos changed their ranking losing one place each in 2003. Meanwhile Mexicali and Mazatlan have important increases (around 3 and 2 % correspondingly). These two cities La Paz and San Luis Rio Colorado won a place in the ranking.

Labour mobility is a way of looking at the relative degree of attractiveness among territories. In the Northwest of Mexico the migratory dynamics is peculiar given the geographic position of the region which is adjacent to the US border. As regards to this it is well known the historic tendency of international migration Data on migratory flows shows that Tijuana and Mexicali are the cities with the biggest inflows of migrants coming from other cities within the system (table 11).

**Table 10 Contribution to the regional Value Added, 1993-2003**

State/City	1993	Ranking	2003	Ranking	Change
Baja California	39.0%	1	40.7%	1	1.7%
Sonora	34.3%	2	32.0%	2	-2.4%
Sinaloa	21.2%	3	21.5%	3	0.2%
Baja California Sur	5.4%	4	5.9%	4	0.4%
Tijuana	20.7%	1	21.2%	1	0.5%
Hermosillo	13.6%	2	12.5%	3	-1.1%
Mexicali	11.3%	3	14.1%	2	2.8%
Culiacan	8.1%	4	9.9%	4	1.8%
Cajeme	5.5%	5	5.4%	5	-0.2%
Ensenada	5.0%	6	3.8%	7	-1.1%
Mazatlan	4.9%	7	4.5%	6	-0.5%
Ahome	3.8%	8	3.7%	8	-0.2%
Nogales	2.5%	9	3.1%	9	0.5%
Navojoa	2.4%	10	1.8%	11	-0.6%
La Paz	2.4%	11	2.9%	10	0.5%
Los Cabos	1.4%	12	1.7%	13	0.3%
SLRC	1.3%	13	1.8%	12	0.5%

Source: Own construction with INEGI's data. Economic census.

**Table 11 Intraregional immigrants, 2005.**

City	Regional immigrants	Porcentaje
Tijuana	28862	26%
Mexicali	17241	15%
Ensenada	9266	8%
Los Cabos	6590	6%
Nogales	5916	5%
Hermosillo	5285	5%
Culiacan	4193	4%
La Paz	3940	4%
SLRC	3778	3%
Ahome	3373	3%
Cajeme	2683	2%
Mazatlan	2632	2%
Navojoa	472	0.4%

Source: Own construction with data from the National Council of Population (CONAPO). Population census, 2005.

Tijuana has the advantage for attracting migrants because its location at the border with the US and its condition as an important point of crossing to that country. In principle migrants might be interested in migrating to the US, however they stayed in border cities for various reasons, for instance because the city itself offer better conditions than their cities of origin. San Luis Rio Colorado, Cajeme and Navojoa in Sonora, and Mazatlan and Ahome in Sinaloa attract the smallest proportion of the intercity migrants. Under this criterion the latest states are considered losers in attracting human resources from other cities of the system whereas Tijuana and Mexicali are winners. Although generally an important part of migrants are low skilled non-specialised labour comparatively cities in Baja California, Sonora and Baja California Sur are recipients of labour with higher qualification than Sinaloa. Therefore one should be cautious when interpreting such results because the characteristics of labour attracted also depend on the productive profile of each city. The capitals cities Hermosillo, La Paz and Culiacan do not attract a high fraction of intraregional migrants either. In addition, the proportions of immigration moving from other parts of the country to cities in the systems shows are very similar.

#### **4. Concluding comments**

Northwest Mexico is a relatively dynamic region that can be considered a winner from the integration of Mexico to foreign markets. The polarised economic gains in the country concentrate to an extent in this region which benefits from geographic proximity to the US market. However polarisation reproduces itself intra regionally first because urban settings tend to attract economic benefits while at the same time only a handful of cities are successful. In the Northwest four territories subsist which are delimited by administrative criteria. They are the states of Baja California, Baja California Sur, Sinaloa and Sonora, territories that do not behave homogenously making the region plausible scenery of economic dispute. Cities are natural territorial nucleuses of economic action and as such the nodes through which competition among states take place. Competition is seen as part of an integrated process of territorial competitiveness that has as an ultimate goal economic, social and

political development; it is a game whose logic is complex and multidimensional. Players act, have strategies, have objectives, have a variety of instruments. The ultimate purpose is to win, to have economic gains.

It has been the purpose of this paper to characterise a system of cities in Northwest Mexico and to explore all the possibilities for intercity economic competition. The main contribution is the formulation of an analytical framework for addressing the existence of economic competition processes among territorial units in the case study we are suggesting. Some fields of conflict have been identified based on the productive orientation of cities, on their location, on their final market orientation, on the factors of production market, or on their position within the federalist system of funding.

For instance Fishing is an important activity in Mazatlan and Ensenada. Hermosillo, Cajeme and Ahome are the main centres for the raising and growing of shrimp in the region. Mazatlan, Culiacan and Ensenada are the main fishing centres of shrimp. Touristic services are another potential area of economic competition between cities in Northwest Mexico, particularly Mazatlan and Los Cabos, and to a lesser extent Ensenada. In the industrial division of Food and beverages conflict arises among Navojoa, Cajeme, Hermosillo, Mazatlan, Culiacan and Ahome. Navojoa and San Luis Rio Colorado are specialised in the Textiles and garment industry. Cities will compete directly among each other for dominating their respective markets which in several cases is the US market. Alternatively, cities expect to attract skilled mobile human resources and other factors of production. Ahome, Culiacan and Mazatlan have outflows of skilled human resources related to tourism activities towards Los Cabos. However further analysis is necessary to explain specific cases of actual competition.

One important field of discussion is the correctness in the use of some of the indicators proposed in the literature to evaluate the results of competitions and identify winners and loser in the process. If one relies on the proposed measures cities like Nogales, Los Cabos and San Luis Rio Colorado, that show high growth, productivity, specialization and federal transfer per capita, attract

immigrants and have high population growth are identified as winners in the process of competition. Yet in other cases the patterns are not congruent. From some viewpoints specialisation is a competition strategy that turn into high productivity a characteristic of a winner city. In the Aforementioned cities this seems to be correct but by looking at most cases this is not the rule. Similar conclusions are derived when we look at further indicators such as cities share in regional value added, immigration, and the attraction of federal transfers. Such contradictory findings challenge one to search for better or alternative techniques to identify the results from competition, the competitive relations, as well as the winners and losers.

One interesting finding is that within each state there is at least one winner and this leads us to explore the possibility of competition within a state rather than competition among cities of different states. If there is one city that is a winner but the state lags behind other states in the region intrastate competition can be considered pure waste or negative sum. Another potential issue that deserve further examination is the possibilities of coordination cooperation among cities within a state to increase state competitiveness or even cooperation among cities from different states to increase the competitive capacities of Norwest Mexico.

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