

## **BOTTOM-UP OR TOP-DOWN POLICIES TO BOOST INVESTMENT IN MEXICO? THE CASES OF MEXICALI AND HERMOSILLO**

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*In recent years the implementation of bottom-up instead of top-down policies have been widely recommended by international organisms such as OECD and CEPAL to Latin American countries in order to increase their economic development and mitigate their regional disparities. The present work depicts the institutional changes and policies implemented in two Mexican cities: Mexicali and Hermosillo. Both cities have achieved economic growth above the national average as well as the development of high-technology industries. The research is based on interviews and analyses of statistical data and documents. It was found that mixed strategies have been followed, in the case of Mexicali most of them are in line with bottom-up approach, while mostly top-down policies were found in Hermosillo. Better planning, as well as the coordination and proactive policies from private and public sectors seemed to be the key for both case studies. Given that Hermosillo has been more successful in economic growth, this casts doubts on the validity of the recommendations.*

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### **INTRODUCTION**

In the last two decades, given the decentralisation process occurred in Mexico, municipalities and states have gained political and economic power to boost economic growth. Mexicali and Hermosillo are among the most successful cities in the country, yet, their path is divergent. Mexicali has shown high engagement from local actors, while Hermosillo exhibited the prevalence of the previous models in which state and federal governments take the leadership to promote investment highly based on monetary incentives. In view of this context, this paper seeks to depict insights of these processes that allowed them to exploit their geographic advantageous position near US border to increase their regional income based on FDI attraction.

Even when municipalities share some institutional framework along the country, the organisation of local institutions can vary a lot from one region to another. Finding the political organisation and specific policies followed, as well as the intervention of different government institutions, is simply impossible through the analysis of documental information alone. For this reason sixteen interviews were applied to local stakeholders; 7 in Mexicali and 9 in Hermosillo. The sample includes entrepreneurs representatives; local, state and federal officers of economic development; and academic researchers. The interviews were semi-structured, and they lasted about an hour on average.

It was found that in Mexicali the main strategy was to overcome the three year planning existing in most Mexican municipalities, which deters economic growth because of the lack of continuity of policies in the long-term. On the other hand, in Hermosillo the foremost strategy is based on keeping the Ford company local plant and convincing the company to increase the production scale rather than moving away, while increasing mid-term planning to a little extent. In both cases, the strategies followed were aimed to gain ground in the global production chain. Policies implemented in Mexicali are more in line with bottom-up approach, while policies in Hermosillo are more in line with top-down approaches, although a mixture can be identified.

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To some extent, my findings discredit the call for the rising of local governments' participation. In line with the bottom-up approach, since it was found that policies outcomes highly rely on federal and state resources. The interviewees asserted that fiscal and political decentralisation have provided opportunities for local authorities to design policies that have significantly improved the economic performance in their cities. Nonetheless, the participation and support from federal and state levels is crucial to succeed. And the economic growth can be more dynamic with their support, in line with the policies implemented in Hermosillo. In contrast, Mexicali has followed policies in line with Local Economic Development (LED) strategies, in line with the bottom-up approach, has assured long-term policies which has resulted on solid development growth and more diverse economic structure. This, on the other side provided evidence that the bottom-up approach is also valid and perhaps more adequate to be widespread in Mexico (Rodríguez-Pose and Palavicini-Corona, 2013).

The remaining sections of this paper are distributed as follows. Section two discusses the literature on LED policies and competitiveness literature. Section three brings some empirical evidence about the empowerment of local actors in Mexico. Section four depicts the motivation and design of the two case studies. Section five presents the economic growth, economic structure and social features of Mexicali and Hermosillo. Section six discusses the differences between the two cities in policy implementation, and local actors' organisation, according to the interviews and other documental resources. The final section makes some concluding remarks.

### **THE LOCAL ECONOMIC DEVELOPMENT (LED) APPROACH AND LOCAL COMPETITIVENESS**

This section is intended to depict the different elements that have been pointed out as essential to achieve economic development within the LED literature in order to use them as an analysis framework and identify whether the policies implemented in my case studies are in line with the approach-bottom-up, the top-down approach, or if there is a mixture of those. Also, some similarities with local competitiveness literature are emphasised given that local competitiveness is frequently part of the political speech in Latin American countries including Mexico.

The LED strategies were generated in North countries about 30 years ago to solve local development problems. After that, they have been strongly recommended to South countries (Rodríguez-Pose and Tijmstra, 2007). Not all the development strategies could be considered as LED, but those that have the territory as the target entity rather than specific industries. Numerous authors have provided definitions of LED, I present here one published by the World Bank at the top of the division's webpage: "The purpose of local economic development (LED) is to build up the economic capacity of a local area to improve its economic future and the quality of life for all. It is a process by which public, business and nongovernmental sector partners work collectively to create better conditions for economic growth and employment generation"<sup>1</sup>. The difference of LED with local competitiveness definition is mainly that LED entails the collective work of locals, while local competitiveness on its various definitions highlight that competitiveness refers basically to increments on the quality of life/wellbeing (Camagni, 2002, Storper, 1997, Porter, 1999) and/or productivity of firms (Porter, 1990, Krugman, 1994, Storper, 1997), without focusing on the source of the actions that lead towards those goals.

The LED approach attempts to find ways for increasing economic development in the territories without focusing in attracting new investment or human capital, nor developing enterprises that could compete in external markets (OECD, 2008). Yet it does not mean that external relationships cannot be exploited. In contrast, competitiveness literature emphasises more particularly investment attraction and the capacity of regions to compete in external markets. Lorens et al. (2002) claim that LED is not opposite to competitiveness, but it is the localised part of the competitiveness strategies implemented at the regional and country level, focusing more intensively on internal resources. Moreover, LED policy implementation is not a protectionist reaction to globalisation, but it is the way to take advantage of the opportunities presented. It is indeed a mean to take the most out of regional, national or supranational policies (Crescenzi and Rodriguez-Pose, 2011).

Both LED and local competitiveness policies seek goals beyond economic growth, which is emphasised in the main stream of economic literature, they focus on economic development or increments on wellbeing (Kresl and Gappert, 1995, Camagni, 2002, Boshma, 2004). Pointing out local specific characteristics namely, social, cultural, historical and institutional aspects which can be essential development triggers. However, are disregarded in the neoclassical model (Rodríguez-Pose, 2013). Particularly the LED literature highlights the engagement of local actors - public and private - which results in local led processes belonging to a region and not to a group of individuals, firms or policy-makers (OECD, 1995). Preventing that policies benefit a selective group of citizens, mainly entrepreneurs, as frequently happens in Mexico (Topal, 2012). More importantly, the interaction occurred in each place is considered a key factor to generate and *maintain local* development strategies and competitiveness improvement of regions/cities (Lorens et al., 2002, CAF, 2010).

Several case studies have been documented in which successful cities and localities have achieved higher economic development, while attaining considerable engagement from local actors, increasing in this way the possibilities to maintain the processes in the medium and long terms (Lorens et al., 2002, OECD, 2008, Palavicini Corona, 2012, Alliance, 2007). The case studies help to understand common features among regions, cities or localities doing well. After those authors the most significant features of successful processes could be summarised as follows:

- Strategic vision, based on the local productive vocations and the definitions of clear targets.
- Actions aimed to increase employment levels helping the enterprises to improve their competitiveness.
- Participation from public and private actors.
- Articulation within the local productive system.
- The institutionalisation of the process; in order to give certainty to the policy guidelines and ensure their continuity in the medium and long terms.
- Given that the policy approach is bottom-up, the major autonomy at local level; the major probability of the process to success.

To a great extent, these features are included within the *soft* – intangible - determinants of competitiveness pointed out by different authors when advising ways to increase regional

competitiveness (Malecki, 2004, Begg, 2002, Poot, 2000, Kresl and Balwant, 1999). In other words, these intangible determinants help to build up long-term competitiveness.

From the authors documenting LED processes, the foremost feature is the institutionalisation of the process, which does not only regard with the institutes, laws and offices created, this is the formal institutions; yet with informal institutions, or institutional arrangements. Namely, the channels of participation and interaction of local stakeholders beyond politicians and entrepreneurs representatives; this is, ONG's, trade unions, universities, etc. (Potter, 2009). Politicians last only few years in office, while citizens and entrepreneurs are there for a life time, consequently, their engagement guarantees a long-term success. Additionally, higher participation of locals in policymaking helps also to ease accountability, which has been confirmed in Mexico by Moreno (2013).

Nowadays it is widely spread idea that institutions are critical for policy results and they might explain economic growth and development differences across countries. According to Rodríguez-Pose (2013) the quality of institutions can be undermined by poor institutional arrangements and the lack of flexibility for the local actors to interact and react to the circumstances presented. From the empirical literature, Lorens et al. (2002) findings are in line with this assertion. They state that municipal governments need to be strengthened and be able to build up mixed institutions in order to face new responsibilities and give a wider scope for their actions. In a similar way, Rodríguez-Pose (2013) highlights that when decentralisation occurs, the support from well-founded institutions is extremely important.

### **EMPIRICAL EVIDENCE OF EMPOWERMENT OF LOCAL AND REGIONAL ACTORS AND LED POLICIES IN MEXICO**

There are several publications in which the transition from the prevalence of top-down policies to bottom-up approaches in Mexico are studied. The key actors in the process are diverse, for instance, leadership came from municipal/state public officers, leadership on behalf of entrepreneurs; and a wider participation of local stakeholders. Though, to be more precise, the leadership usually entailed a mixture of the above. There are municipalities in which, in spite of the participation from local actors, there could be a vast influence of upper government levels, especially through pecuniary resources. The participation from upper government levels entails not only the provision of funds but also the ready availability such funds, which could also determine the outcomes of the plans to a great extent.

Most research is presented in the form of case studies such as Topal (2013), Moreno (2013), Lorens et. al. (2002), Palaviccini-Corona (2012). These authors have highlighted the effectiveness of local policies when local and regional stakeholders have been proactively involved, including public, private and academic sectors.

There is also the work by Rodríguez-Pose and Palaviccini-Corona (2013) which developed a methodology to find a quantitative measure of the results obtained by cities that have implemented LED policies. Namely, they quantified to which extent, increments in Human Development in 898 municipalities in Mexico are linked to LED policies. It was found that municipalities engaging more importantly with LED, such as those above listed, have improved their human development faster during 1990-2005.

However, the case studies showed that the institutional organisation is very diverse all around the country. Additionally the LED policies are at the same time linked to more resources from upper government levels, or even the empowerment of businessmen, as pointed out by Topal (2012, 2013). Hence case studies continue to be necessary for public policy analysis in a diverse country such as Mexico.

### MOTIVATION AND DESIGN OF THE CASE STUDY

Mexicali and Hermosillo are similar in population and economic structure. Both cities are important recipients of FDI, and produce a considerable share of total Mexican exports. Among the most important exporting industries are the electronics in Mexicali, and the automotive in Hermosillo. Also, in Mexicali the aerospace had been considerably growing in recent years. In sum, it can be said that both are among the most successful cities in the country.

Consequently, this study is motivated to find out whether their economic performance relied on local actions and to what extent the fiscal and political decentralisation have changed their position to pursue economic development. Given their advantageous geographic position, both cities are likely to attract foreign investment. However, specific incentives and policies cannot be always found in documental research, which created the need for fieldwork.

Fieldwork at those cities has been undertaken to get first-hand information on the institutional changes occurred. Sixteen semi-structured interviews were carried out, 7 in Mexicali and 9 in Hermosillo. The goal was to obtain information on the type of policies to enhance economic growth undertaken at the local level, and their implementation process. Getting to know the point of views of different groups such as public officers, private representatives, and academics.



### *Geographic location and population*

Mexicali and Hermosillo are situated in the US-bordering region of Mexico. Mexicali is one of the most important US-bordering cities. Hermosillo is about a three hour drive from the nearest bordering city, that is, Nogales in Sonora. Nonetheless, its geographic position can be considered

advantageous for firms willing to sell their products in the US. Both cities have a near harbour, which is also important in terms of transport means, especially for the Automotive and Aerospace industries, existing in both cities. The nearest harbour from Hermosillo is Guaymas, about one hour-and a half drive; the nearest one from Mexicali is Ensenada, situated about a three hour drive. Mexicali, is considered a metropolitan area, and in the 2015 census it had 984, 626 inhabitants, while Hermosillo had 751, 061 inhabitants. Both cities are the political capital in their State, Mexicali in Baja California and Hermosillo in Sonora. It is important to highlight that the capital generally concentrates major production and population, yet in Baja California, Tijuana has remained as the most important economic and population centre. Figure 1 shows the geographic location of the cities.

## **ECONOMIC PERFORMANCE AND SOCIAL CONDITIONS OF MEXICALI AND HERMOSILLO.**

### ***Economic Growth***

Given the context of economic transformations, many cities in the bordering region are in similar position to seek national and foreign investments. Therefore, some indicators are compared to other cities located in the US-bordering states, as well as to other cities in the OECD countries in order to provide a reference point. However, it is important to mention that the statistics at municipal level are difficult to find. Some information is not available for long-term periods, or it is not frequently updated. Therefore, although the interviews were undertaken during December 2012 and January 2013, the information presented here varies in dates.

In Mexico the data on economic product for municipalities is only available every five years when the Economic Censuses were carried on, that is in 1993, 1998, 2003 and 2008. From there a production indicator is taken. It is used as the Total Gross Production<sup>2</sup> –TGP- in the municipality<sup>3</sup>.

The ranking of the database on 310 metropolitan areas from the OECD is also discussed (OECD). The data does not match exactly with the data used from Economic Census because the OECD has implemented its own methodology and definition of metropolitan areas, and it estimates GDP. Yet, given that the same methodology is used for all countries, it is comparable and it has the advantage of yearly availability from 2003 to 2012 for Mexican cities.

To begin with, growth rates for total and per capita TGP are shown in table 1 **Error! Reference source not found.** For the data from the Economic Censuses the annual average growth rates are estimated per period. Meanwhile, for the OECD data, the rate is estimated for the whole period, that is 2003-2012.

According to the Economic Censuses, both cities achieved similar annual rates in total TGP for the whole period (column 4). Nevertheless, Hermosillo showed dramatic decreasing rates during 10 years from 1993 to 2003 (column 2 and 3). And after that, the recovering of the economy has been impressive. Mexicali also showed negative growth during 1998-2003, although it was less severe than in the case of Hermosillo. Mexicali recovered in the following period, yet with much lower rates than Hermosillo.

In the OECD data, the annual average growth rate of total GDP is much smaller for Mexicali (column 5). Indeed, after 2008 Mexicali showed negative growth of the total GDP, with a yearly average of -2.8 per cent in four years (2008-2012). Still, its period average was higher than

Tijuana, the biggest city in the state. Meanwhile, Hermosillo achieved high growth rates, even with negative rates at the beginning of the period. The annual average for 2003-2012 was above 4 per cent.

Table 1

Growth Rate per annum of Total Gross Production INEGI**					OECD*
City	(1) 1993-1998	(2) 1998-2003	(3) 2003-2008	(4) 1993-2008	(5) 2003-2012
National average	2.93%	2.47%	3.66%	3.02%	2.72%
Mexicali	2.43%	-2.71%	5.61%	1.72%	0.70%
Hermosillo	-2.63%	-5.76%	15.13%	1.85%	4.50%
Growth Rate per annum of Total Gross Production per cápita INEGI**					OECD*
City	(6) 1993-1998	(7) 1998-2003	(8) 2003-2008	(9) 1993-2008	(10) 2003-2012
National average	1.37%	1.19%	2.73%	1.76%	1.19%
Mexicali	0.09%	-3.96%	2.93%	-0.43%	-1.89%
Hermosillo	-4.45%	-6.69%	10.18%	-0.71%	2.20%

Source: Author's elaboration with data from INEGI: Economic Census and OECD: Regions, Cities and Metropolitan areas.  
 \*Gross Domestic Product  
 \*\*Total Gross Product

With regards to TGP per capita, both cities showed negative growth when accounting for the period 1993-2008 (column 9). This could be partially explained by high immigration rates to the bordering cities, which causes that even if the total production grows, the per capita average does not (Calderón and Martínez, 2005). Nevertheless, according to INEGI, the decrement was smaller in Mexicali (column 9). Once more, Hermosillo showed bad performance during 10 years and a big recovery after 2003. Within the same period most bordering cities showed positive total TGP growth during 1993-2008, yet very few increased their income per capita as well. It is worth noting that according to OECD data most Mexican cities showed negative GDP per capita growth after 2008, which is highly related to the US crisis that also affected Mexican economy.

According to the OECD data, Hermosillo is well above the national average for 2003-2012 (column 10). It is clearly related with the investment decisions taken by Ford Company, which has considerably increased its production, fostering growth for other industries and across the state.

To give an idea of the income per capita of the cities compared to the rest of world, the levels published by the OECD are discussed and compared to the rest of the MA in the data. In 2012 Hermosillo GDP per capita was \$19, 199 USD, and it occupied the 277<sup>th</sup> position out of 310. It was above the country average of \$15, 389 USD. Compared to other Mexican cities it was just below Monterrey, Centro, Mexico City and Saltillo.<sup>4</sup>

In 2012 the GDP per capita in Mexicali was \$15, 237 USD and it occupied the 289<sup>th</sup> position. Compared to 2003, Mexicali fell down 7 positions to other Mexican cities, but it was above other bordering cities such as Tijuana, Juarez and Chihuahua. Until 2010, Mexicali used to be above the national average, yet by 2012 Mexicali fell slightly below.

In sum, it is clear that Mexicali had a good economic performance for 1993-2008. It slowed its economic growth for the period 2003-2008. Showing positive, but moderate GDP growth in the OECD statistics. Meanwhile Hermosillo showed a consistent recovering after a deep crisis period, besides according to the OECD data, Hermosillo had been one of the most successful Mexican cities.

**Table 2**  
**Contribution of Different Economic Activities to Total Gross Production**

Activities	1993		2008	
	Mexicali	Hermosillo	Mexicali	Hermosillo
Food, beverages and tobacco	8.00	8.40	10.80	9.10
Textiles, clothing and leather industries	0.40	1.00	0.70	0.50
Industries of wood and wood products. Includes furniture	0.50	0.30	0.00	0.10
Paper and paper products, printing and publishing	2.60	0.90	5.10	0.30
Chemical substances, products derived from the oil and from the coal, from rubber and plastic	3.00	1.20	2.70	5.70
Non-metallic mineral products, excluding petroleum and coal products	4.10	3.90	4.50	4.00
Metallic basic industries	0.60	0.00	3.70	0.00
Metal products, machinery, and equipment. Includes surgical and precision instruments	<b>12.70</b>	<b>32.50</b>	<b>36.30</b>	<b>56.00</b>
Other manufacturing industries	0.00	0.00	3.60	0.20
Services of rent and administration of real State and Services of rent of personal property	1.10	0.50	1.50	1.10
Trade	55.70	43.50	15.40	12.90
Other services*	11.20	7.80	15.70	10.20

\*Includes: Letting and administration services of real estate and Letting services of personal property; Educational, research, medical, social assistance and partnership services; Restaurants and hotels; Recreational, cultural, recreational and sports services; Professional, technical, specialised, and personal services (includes loans to enterprises); Other services except Government activities.  
Source: Same as Table 1.

### *Economic Structure*

I consider essential to analyse the economic structure of both cities given the huge transformation occurred in Mexicali, and the increasing specialisation of Hermosillo. In the table 2 the contribution by economic activities to the TGP per city are shown. The industrial activities are disaggregated.

The production grouped in sub-sector 38 is highlighted, since it refers to the automotive, aerospace, and some electronics production. In Mexicali by 1993 the sub-sector 38 contributed with only 12.7 per cent of TGP, while trade was 55.7 per cent. By 2008 the sub-sector 38 contributed with 36.6 per cent of TGP while trade diminished to 15.5 per cent. Thus, sub-sector 38 had an increment of 24 per cent relative to other industries. In Hermosillo by 2008 more than 50 per cent of its production came from the sub-sector 38.

Beyond its relative contribution to the municipal TGP, the manufacturing production of Mexicali compared to the national manufacturing production has significantly increased. In 1993 Mexicali used to contribute with only 0.15 per cent of total manufacturing production in the country, while Hermosillo contributed with 1.35 per cent. In 2008 given the increments of the 38 sub-sector, Mexicali increased its share to 1.01 per cent, and Hermosillo to 1.58 per cent.

From the total manufacturing production of Mexicali during 1993 to 2008, 56 per cent per cent was produced by firms with foreign investment, while Hermosillo had a similar share, with 43 per cent per cent. It then shows that Mexicali has succeeded in attracting manufacturing firms with foreign investments, which allowed the city to change its economic structure and specialisation, incrementing as well its contribution to the national manufacturing production.

As said before, sub-sector 38 comprises several industries, in the case of Hermosillo, the other industries -except the automotive- contributed with about 8 per cent within the sub-sector 38. Therefore, it could be said that Ford plant and its related industries directly produced about 22 per cent of Hermosillo's TGP in 1993 and 40 per cent in 2008. Certainly, according to the local interviewees, Ford plant brought a completely different economic dynamism into the city. Nowadays, Ford plant in Hermosillo is one of the most efficient and technologically advanced among all Ford's plants worldwide.

Given such high dependence on the automotive industry, any shock to the industry and the company, considerably affects Hermosillo. According to the local authorities and entrepreneurs, around 1998 or even before, there were some rumours of Ford closing down. One explanation could be the reduction in market share by Ford Company, as well as efficiency losses (Contreras et al, 2010). In consequence, the expectative from investors were not any good. This considerably affected the new investments undertaken in those years. Nonetheless, by 2002 Ford announced the new investment from 2003 onwards. This is in fact the most determinant reason for the TGP contraction from 1993 to 2003, and impressive recovery after 2003, with an industrial production growth of more than 100 per cent in total from 2003 to 2008, which is also in line with the data revised in the previous section.

In addition, the presence of significant spillovers from Ford Company to local SME's firms have been documented. Contreras et. al. (2010) finds that there have been mainly three channels: 1. knowledge acquired by engineers that were former employees, and have become suppliers. 2. The socio-professional networks and market relations. The higher presence of local intensive suppliers and their professional interactions, allows other firms to get technological transfers. 3. Vertical backward spillovers. That is, the transfer process in which the transnational helps to their suppliers to improve their efficiency given the benefits obtained. Hence, this might have fostered a very competitive environment, with tacit knowledge, that is, specific to the region increasing its *stickiness* in words of Cheshire and Magrini (2009); which reduced Ford's costs and increased its global competitiveness (Contreras et. al 2010).

In Mexicali, the automotive production is less important; sub-sector 38 is mainly constituted by electronic devices as well as computers. Nevertheless, it is important to mention the increasing importance of the aerospace industry. In 1998, the aerospace contributed only with 2 per cent of the total manufacturing production in Mexicali. Yet, it was the 98 per cent of the total production in the country, whereas the other 2 per cent was localised in Tijuana. Nowadays the investment to

other cities on this industry has increased, yet Mexicali has continued to attract investments in this sector.

State and municipal governments around the country realised that the aerospace industry was a new opportunity to bring high technology industry to their cities, instead of textiles and electronics. Therefore, it seems to be a competition among some cities to attract more companies, but also to constitute an aerospace industry cluster. Local officials in Mexicali talked about this competition, because Mexicali is no longer the main producer in the country.

Stakeholders in Mexicali have strived to consolidate aerospace industry since it is more profitable than the automotive and the electronics, due to the high technology profile. Indeed, according to the office for investment attraction and marketing at the federal level, ProMexico, currently the aerospace industry in Mexicali and Tijuana are specialised to provide services with high value added called Knowledge Process Outsourcing (KPO) not only to the aerospace industry but also for defence.<sup>5</sup> Furthermore, according to the FEMIA (2012), the most developed cluster in the Mexican aerospace industry is the one existing among Tijuana and Mexicali.

Given that the aerospace industry is classified as a high technology industry, it has been defined as a national priority. Especial attention has been given from the federal government to develop this industry. The clusters are being developed to produce different parts of the aircrafts across the country and lot of opportunities have been identified within the global production chain in the industry (FEMIA, 2012).

Nowadays in Hermosillo the aerospace industry is incipient, according to FEMIA (2012), the importance of its cluster is intensifying. The state government is working to gather more enterprises within this industry to ensure the consolidation of the cluster, in order to be able to make a whole turbine in Guaymas, and stop importing the components. Some firms have been encouraged to settle in Hermosillo given that Guaymas is a small city with just 113,000 inhabitants in 2010, thus its capacity to grow is limited. Nonetheless, the most important industry in Hermosillo is still the automotive, especially because Ford has continued increasing the investment in the city. For instance, on March 2012 it announced a new investment for 1,370 USD millions, which might be as a result of the significant incentives received. For instance, for the period 2011-2013 Ford Motor Company in Hermosillo and Chihuahua has received about 10 per cent of the total incentives granted by ProMexico.

### ***Social Conditions and Wellbeing***

In this subsection, given the availability of information, some data is presented at state level, since no other reference data is available. First, it is important to remark that bordering states have low poverty levels. According to the National Council for the Evaluation of Social Development Policies (Consejo Nacional de Evaluacion de la Politica de Desarrollo Social; CONEVAL), although after the 2008 crisis, the percentage of poor people increased in most states, in Baja California and Sonora the people in extreme poverty diminished. By 2012 in both states, people living in extreme poverty were about 5 per cent, while the country average was 11 per cent. Furthermore, it is worth noting that 65 per cent of Sonora inhabitants have access to social security, 45 per cent in Baja California, while 39 per cent is the country average. This is a hint of the wider presence of formal firms providing social security to their employees, which indicates higher wellbeing for employees.

Baja California has major coverage of basic housing services, 95 per cent vs. 88 per cent in Sonora, and 79 per cent in Mexico. One reason for lower percentages in Sonora is the big land extension, and lot of small rural communities, which makes difficult to provide basic services.

Concerning with the education level of the population, in 2010 Hermosillo had 10.4 average years of schooling for population over 15 years old, while Mexicali had 9.6. The national average was 8.6. In other words, the Mexican average individual does not even complete secondary education. While in these municipalities, have at least one more year of education. There are other municipalities with higher average, such as Benito Juarez delegation in Mexico City with 13.5, and San Pedro Garza, Nuevo Leon with 12.1. The lower averages were in rural areas in Oaxaca with just 2 years.

Some municipal data is presented in the table 3, for comparisons over the time. It is presented as another indicator for education; it is the share of matriculated students in medium-high and professional education from the total working population. According to Cheshire and Magrini (2009), high shares would indicate higher education levels of those entering to the labour market. Also, it could indicate that the city have high enough salaries to sustain lot of economic inactive population. It can be observed that although both municipalities increased the average years of schooling, the indicator proposed by Cheshire and Magrini has diminished over the time, while the country average increased. One possible reason would be immigration of working population to these municipalities, from which a high proportion holds a degree, decreasing the ratio of students/working population.

From the Economic Censuses, the average remuneration to working population has been calculated. It includes all expenses paid to employees and the social security. Both municipal averages are higher than the national. Yet, averages have diminished considerably, about 26 per cent in Mexicali and 22 per cent in Hermosillo, while the national average increased. Mexicali showed higher wages.

**Table 3**  
**Wellbeing Indicators**

Variable	Mexicali		Hermosillo		National average	
	1993	2008	1993	2008	1993	2008
Share of matriculated students in medium-high and professional education over working population	0.34	0.31	0.50	0.37	0.10	0.13
Average wage (MXN)*	\$72.61	\$53.51	\$58.44	\$45.61	\$38.92	\$53.37
Infant mortality rate	17.7	13.06	18.5	12.29	30.40	15.2
Infrastructure**	35.36	28.90	31.73	26.41	-	-

\*Total remunerations over total working population Economic Census (MXN thousands per worker in a year). Corresponds to 1998. Primary activities and mining is not accounted.

\*\* This an index built for urban municipalities includes: per inhabitant number of sewage, water feeds and electrical power supply. In addition, number of flight passengers and km of roads by area. Given that it has been used to compare 64 MA and cities, no average at the country level is presented

Source: Own calculations with various INEGI databases.

For infrastructure indicator, we have built a variable comprising several endowments per capita, listed in the table notes. In this indicator Mexicali is above Hermosillo, which is due to the higher number of Km of roads per municipality area in Km<sup>2</sup>, which according to IMCO is the best competitive advantage of Mexicali.

The infant mortality rate shows better conditions than the national average. This might be also related to larger access to social security, basic housing services and low deprivation levels. The deprivation index in 2010 published by the National Council for Population (Consejo Nacional de Poblacion; CONAPO), placed Mexicali in position 2405 out of 2456 municipalities, where the cities are ranked by from higher to lower deprivation levels. Hermosillo had an index slightly lower, staying in position 2410, only 5 places lower than Mexicali. Both positions are considered very low according to CONAPO.

In sum, the health conditions as well as the schooling years for population over 15 years old are higher than the national average. Nevertheless, the wages showed a decreasing trend. Contrary to what should be expected given the higher technology profile of jobs in some industries. In some indicators Mexicali seems to be better than Hermosillo, and vice versa. It cannot be said that one showed considerably better living conditions than the other. Even in deprivation indexes, they showed similar positions, and they are among the best in the country.

In addition, according to some national competitiveness indexes, both cities are qualified as very competitive with good social conditions (Sobrino, 2006). In the last publication of the competitiveness index by IMCO in 2012, for the total index Mexicali was in position 10<sup>th</sup> and Hermosillo 12<sup>th</sup> out of 77 cities<sup>6</sup>. The best feature for Hermosillo was the social conditions, in which it was in 3<sup>rd</sup> position out of 100 cities. For Mexicali, the best indicators were related to public infrastructure, in line with the results showed by the index on table 3.

## **DISCUSSION: COMPETITION STRATEGIES AND THE PARTICIPATION OF LOCAL ACTORS**

To facilitate the reading of the problems found, the actions undertaken and the likely results of the policies followed by both cities these are enlisted in the annex in box 1.

Both cities have found their way towards specialisation by targeting firms within few economic activities with high value added. As pointed out by various authors within the competitiveness literature, specialisation might be the best competition strategy to gain ground in the production chain in the globalised economy (Johansson, 2000, Capello and Camagni, 2005, Kresl and Gappert, 1995). Still, when the city is highly dependent on one industry, especially in one firm, such as the case of Hermosillo, there is great risk of falling into an economic depression whether such firm is in crisis.

Competing for foreign investors has been the main strategy in both cities. Nevertheless, according to the information published by ProMexico until 2013, more incentives have been granted to Ford Motor Company Hermosillo, than to other companies located in Mexicali, at least in the period published. Till 2013, companies in Hermosillo had received up to 20 per cent of the total ProMexico incentives, while Mexicali only about 4 per cent.

In both cities stakeholders have increased their participation to pursue better economic performance. Mexicali has taken advantage and designed its own growth plans. With a great extent of independency even from the state government, increasing flexibility and accountability,

highlighted before as advantages of LED policies. In consequence, perhaps the lower growth rates in Mexicali can be partially explained by the fewer support from federal and state governments. Meanwhile the income per capita in Hermosillo is vastly greater, with high economic growth rates and benefits from state support and federal incentives to Ford, which constitutes its economic basis.

In Mexicali various entrepreneurs' organisations and municipal public departments showed high engagement with planning activities, and ideas about better paths. Which in fact is not harmful for planning, quite the opposite, it has been very beneficial. Creating an environment in which local stakeholders intensively participate and give opinions, fostering consented decisions, rather than deterministic plans produced by few people. In 1993 in Mexicali, a planning institute was created called, CDEM, this is, Council for the Economic Development of Mexicali (Consejo de Desarrollo Económico de Mexicali), which is not public but it has participation from public and private stakeholders including entrepreneurs organisations.

CDEM's strategy was to make a plan based on the weaknesses identified in 1997, this plan became a law later. It took about 4 years for its formulation and acceptance. The plan was called Mexicali 2020, containing what Mexicali wanted to become in the near future, linking problems, actions and objectives. Private and public sectors, as well as citizens were involved in the plan. More importantly municipal presidents do not intervene with new plans every three years, as it happens in the whole country. The agreement is to follow the planning institute leadership, in which the public officers are also involved.

The local networking in Mexicali between entrepreneurs, public officers and entrepreneurs' representatives was very clear while undertaking the fieldwork, which is one of the keys in Mexicali's success. Nevertheless, the policies are importantly focused to foreign firms, which prevent enhancing local entrepreneurship which might assure better economic development in the long term. As said by Dr. Noe Fuentes, academic researcher, the businessmen are inexperienced, thus Mexicali stakeholders have endeavoured to increase labour force skills but no entrepreneurship.

Differently, in Hermosillo the most determinant actions have been undertaken to keep the automotive and provide incentives to it. The incentives are much targeted and there are no wider efforts to increase labour force skills, but only those specific to firms, failing to a traditional sectorial development approach. Despite the fact that Hermosillo's population has higher schooling level, due to its well-developed industry, Hermosillo attracts more skilled labour force. By 2010, 29 per cent of immigrants in Hermosillo had superior education, vs. 20 per cent in Mexicali. Perhaps this could explain the less importance given to this topic in the former city.

Furthermore, Hermosillo provides more support to SME's. Namely, the local Bureau for Economic Development in Hermosillo showed themselves very committed with the *Doing Business* project, and even got an award in 2010.<sup>7</sup> These actions are in line with the LED strategies, this is, to strengthen local entrepreneurship, increase local employment and create an institutional framework that can take advantage of the decentralisation. In this case, those institutes providing bureaucratic and financial support for firms are taking advantage of the national decentralisation policies.

In Mexicali, the National Chamber of Transformation Industry (Camara Nacional de la Industria de la Transformacion; CANACINTRA), the Business Coordinating Committee (Consejo Coordinador Empresarial; CCE) and the Industrial Development Commission (Comision de Desarrollo Industrial; CDI) representatives, discussed about the incentives and support given to SME's. It seemed less continuous, and systematised than in Hermosillo, however. In fact most efforts are being carried out by the regional office of the Secretariat of Economy from the federal level, while little attention is given by state or municipal institutions. The lack of support to SME's can be a loss to the city. Perhaps larger spillovers such as those documented in Hermosillo are just matter of time, if small firms receive enough support. For instance, enterprises founded by former employees in foreign firms were highlighted by the AMMAC representative in Mexicali, but those are still limited. This is what is called by Contreras et. al., (2010) market-professional spillovers, which might increase later when there are more employees acquiring expertise in order to open their own firm, as documented in Hermosillo. These are in fact the most important spillovers occurred from foreign to domestic firms specially in developing countries, namely, vertical spillovers (Smarzynska Javorcik, 2004, Aitken and Harrison, 1999).

With regards to expenditures on economic policies, there are significant differences. In spite of scarce resources available at municipal administrations, the more they spend, the more they might be able to get from state and federal administrations. Especially regarding to infrastructure construction, which is a shared responsibility. In 1993, their expenditures per capita used to be similar, in that year Hermosillo spent about 25 per cent more than Mexicali. Nonetheless, the differences started to grow after 2008, and by 2012 Hermosillo spent about the double amount per capita than Mexicali, which might have also influenced its better economic performance in recent years.

In sum, within the context of fiscal and political decentralisation, it is clear that in both cities significant efforts have been undertaken to attend local problems. Even whether they seek for the support from upper government levels, the initiatives to call the attention to their particular problems have played a significant role. Furthermore, the greater engagement from local/state stakeholders seems to be contemporaneous with those decentralisation policies depicted in the second section, especially after 2000.

Nevertheless, the representative from CCE in Mexicali remarked that more political decentralisation is needed. Since decision making is still highly centralised and there is no a constant channel to communicate the legal framework and policies needed locally. Particularly, deputies do not visit the state very often; hence they cannot recognize local problems and their priorities differ. For instance, the Especial Economic Zone project, which might enhance trade relations with San Diego, California, has been frozen for more than 3 years now, because federal deputies have other themes as priority.

## **CONCLUSIONS**

This paper reports on economic performance and institutional framework in two cities located in the northwest region of Mexico. In the case of Hermosillo, more than a development strategy with long-term visioning, most of the policies followed are quite traditional as they have been focused to maintain one industry. Its success is greatly based on targeted incentives and financial support from the federal government. Yet the support to domestic firms provided by the local and state

offices is in line with the LED strategies, which should be recommended to other cities in the country.

In Mexicali a long-term plan was formulated based on a thoughtful assessment of the city and clear objectives were defined for 2020. That allowed evaluating the outcome per committee and following up in the long term, which is not usual in Mexico.

Despite the better geographic position of Mexicali, its economic growth has become less dynamic, especially after 2008. Meanwhile, the local actions combined with state and federal support allowed Hermosillo to remain as one of the biggest economies in the border, and the third highest GDP per capita in the country, according to the OECD.

From the two cases documented, the results cast doubts over the development model to be enhanced. The model of Mexicali has led to a positive but limited economic growth. Nonetheless, given that Mexicali's initial conditions were more similar to most Mexican cities its model of long-term planning, continuity of policies and systematic evaluation could be highly advised. Diminishing the cost of political cycles, which is one of the most important problems in Mexican cities. Still it should be taken into account that foreign investment, a key trigger development in Mexicali, is not likely to flow intensively to cities far from the border.

In addition, it should be highlighted that economic growth will be faster if there is enough support from upper government levels. It does not mean that they should provide huge amounts of money, but definitively municipalities benefit from their backing. That is absolutely a daily basis relationship and engagement, in words of the different local officer and businessmen representatives, which conclusively increase the potential outcomes of local policies. Furthermore, exploitation of external investors cannot be guaranteed for all cities. Thus not all cities might achieve fast economic growth, yet local economic and social conditions would be definitively improved with maintenance of bottom-up policies.

In sum, three main conclusions are drawn from this research article. First, even when local grounded policies have been advised to municipalities, state and federal governments may act as more effective leaders for economic growth. Second, Mexican municipalities must find their ways to overcome the political cycle and engage in long-term planning to assure certainty for domestic and foreign investors, which will also increase effectiveness in expenditures. Third, local governments can play a significant role in easing business and fostering investments by diminishing bureaucracy and boosting state and federal investments, rather than by providing incentives to firms.

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### **Notes**

1 Available at <http://www.worldbank.org/urban/local/toolkit/pages/defining-led.htm>

2 In Spanish: Producción Bruta Total, this is not comparable with GDP from the National Accounts, owing to the methodology. Source: Economic Census, various years.

3 Without production in the primary sector, if there was any.

4 Centro GDP per capita is well above the average of other Mexican cities, given the oil production.

5 Source: [http://promexico.gob.mx/en\\_mx/promexico/Aeroespacial](http://promexico.gob.mx/en_mx/promexico/Aeroespacial).

6 Consulted in June 2014, available at: <http://porciudad.comparadondevives.org/ciudades/3>

7 This is a project by the World Bank that fosters the improvement of conditions for making business around the world.

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