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Assessing LED across Mexican municipalities**

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Does local economic development really work? Assessing LED across Mexican municipalities

Abstract: Local economic development (LED) strategies are increasingly being recommended as an alternative or a complement to traditional development strategies. However, beyond a limited number of areas where 'best practices' have been identified, there has been little systematic monitoring of whether LED really works. This paper uses a purpose-built database of 898 municipalities in Mexico in order to assess, using a quantitative approach, whether the implementation of seven different components of LED – development plan, sustainability, entrepreneurship, capacity building, participation mechanisms, development links, and autonomy – has delivered greater human development across Mexican local governments. The results of the analysis indicate that municipalities engaging in LED during the last two decades have witnessed significant improvements in human development, relative to those which have overlooked LED strategies. The increase in human development has been greatest for those local authorities which have pursued capacity building, the establishment of additional development links and which have drafted a development plan. Greater independence from federal or state initiative has, by contrast, been detrimental for changes in human development at the local level.

Keywords: local economic development (LED), human development, capacity building, participation, local authorities, local autonomy, Mexico.

JEL codes: F63, H76, O11

1. Introduction

Local economic development (LED) strategies – or, using other terms, local and regional development programmes – have now for more than two decades been increasingly recommended by scholars, practitioners, NGOs and some international organisations as a complement, if not as an outright alternative, to traditional top-down development strategies (Stöhr, 1990; Potter et al., 1999; Vázquez Barquero, 1999; Pike et al., 2006). The literature is awash with a multitude of successful local economic development cases showing that this type of bottom-up strategies provide viable development alternatives in a more integrated world. However, despite the numerous success cases documented by academics and practitioners, the impact of bottom-up LED strategies remains insufficiently assessed (Gordon and Low, 1998). A large percentage of the literature dealing with LED has tended to concentrate in a handful of cases. Places like the Silicon Valley in California, the Third Italy, Baden-Württemberg, or Jutland in Denmark have already attracted the attention of several generations of researchers. Other places, such as the Vale dos Sinos or Curitiba in Brazil, Bangalore in India, or Wenzhou in China have become LED stars in the emerging world. But the constant tendency in the literature to examine and evaluate successful cases has resulted in an overwhelming dominance of single-case inductive approaches to the study of LED strategies, which have not only derived in what Markusen and Schrock (2006: 1319) have designated an "often-mindless groping for 'best practice", but also in an impossibility to determine whether LED strategies, beyond the well-documented cases, really work (Crescenzi and Rodríguez-Pose, 2011). It may well be the case that the evaluation of local and regional development has been constrained to the lushest trees, disregarding the multitude of small and generally poorly documented attempts to try to implement LED strategies across the world and which make the bulk of the LED forest.

This need for systematic, multi-case evaluations of LED policies was already noted two decades ago by Hughes (1991) and Teitz (1994), who recognised the necessity to undertake better analysis and evaluations of the processes and outcomes of the diversity of LED strategies being implemented at that time. One decade later the OECD (2003, 2004) reiterated this demand to systematically evaluate whether LED strategies were actually making a difference and to what extent that was the case. However, almost ten

years down the line, the situation has not changed much. There is a significant dearth of analyses undertaking a systematic monitoring of a large number of LED strategies and those which have tended to wander into this uncharted territory have by-and-large remained firmly anchored in a case-study methodology (e.g. Potter et al., 1999; Pike et al., 2006). We are not aware of any study that has aimed to evaluate the impact of the LED strategies implemented by a large number of local authorities in a systematic way, using quantitative methods.

The aim of this paper is precisely to examine using a quantitative approach to what extent the implementation of bottom-up LED strategies by a large number of local authorities resulted in a significant improvement in development levels. In order to do this, we choose the case of Mexico, which is one of the countries in the world where the pursuit of LED strategies by regional and local authorities has been most prominent since the 1990s, as documented by numerous studies (Mazza and Parga, 1999; Rabellotti and Schmitz, 1999; Ruiz-Durán, 2000a and 2000b; Bair and Gereffi, 2001; Helmsing, 2001b; Albuquerque et al., 2002; Mitchell Group Inc., 2003; Pike et al., 2006; Vargas, 2006; Pérez-Sánchez 2010).

Our starting hypothesis is that the implementation of specific LED features and policy actions – development plans, sustainability, entrepreneurship, capacity building, participation, development linkages, and autonomy – by Mexican municipalities in their development strategies during the period between 1990 and 2005 is likely to have brought about better development outcomes, than in the case of local authorities which have not followed the LED path, once the specific socio-economic conditions of Mexican municipalities are taken into consideration.

In order to achieve this goal, the paper is divided into four further sections. Section 2 looks at the basic characteristics of local economic development, with a view to extracting the key elements to be measured in the section containing the model and the data (section 3). Section 4 presents the key findings of the analysis, while the conclusions and policy recommendations are included in section 5.

2. The key factors behind LED approaches

The popularity of LED approaches to development has risen significantly over the last two decades, fundamentally as a result of what has been perceived as a failure of top-down development strategies to deliver (Boisier, 1999; Puga, 2002; Crescenzi and Rodríguez-Pose, 2008). Numerous national approaches to development have failed to address market failures and, thus, to generate greater development and economic growth in a context of increasing globalisation (Potter et al., 1999). As a consequence, since the beginning of the 1990s, an increasing number of local and regional authorities across the world have been actively involved in the design and implementation of development strategies which increasingly adopt different specific features of LED approaches (Blakely and Bradshaw, 2002; Pike et al., 2007).

The process of globalisation has also contributed to the growing relevance of local approaches to development (Cooke, 1989; Stöhr, 1990). While central governments are increasingly viewed as too remote and too inefficient to effectively tackle the challenges and opportunities generated by globalisation, localities, cities and regions are perceived by some as the most adequate spaces to address global challenges (Scott, 2001; Scott and Storper, 2003), including those emerging from the Global Financial Crisis which started in 2008 (Vázquez-Barquero, 2009; Tomaney et al., 2010). Hence, little by little, some of the key elements associated with LED approaches have been gaining a greater role in development strategies. The parallel processes of globalisation, urbanisation, and decentralisation have not only granted localities greater autonomy to design and implement their own development strategies, but have also promoted capacity building and the empowerment of local actors, leading to a greater emphasis on the participation of local stakeholders and on the sustainability of development strategies all over the world. In addition, in the case of Latin America, democratisation has also favoured decentralisation efforts and contributed to the transfer of greater responsibilities and resources to subnational governments (Enriquez-Villacorta, 2006).

Most of the characteristics of LED approaches are ingrained in the different definitions of the concept. Potter et al. (1999) define local development as "a wide ranging concept that can be best seen as a process" through which local actors together design and implement a development strategy "using as best as possible the resources of the territory" (p. 21) (see also OECD, 1993). The aims of this process hinge around the improvement of the quality of life of the local people, by expanding their economic and social opportunities (Pike et al., 2006), with a view of making the process sustainable – from an economic, social, and environmental perspective – in the medium and long-term (Helmsing, 2001a; Vázquez-Barquero, 2009; Everard, 2010). This implies an approach to development that is both embedded in the territory and sustainable.

One of the key elements in order to make LED sustainable is the participation in the process of as wide a range of stakeholders as possible. This implies not only the involvement of public agents, such as local, municipal or provincial authorities, but also that of other agents such as "employers, community and voluntary organisations, trade unions, co-operatives, development agencies, universities and so on" (Potter et al., 1999: 22), creating a widespread sense of local empowerment, control and ownership by local stakeholders (Helmsing, 2001b; Swinburn, 2006). As this may be difficult to generate out of the blue, the promotion of attitudes and aptitudes that favour participation, as well as the creation or support of institutions that facilitate it – in other words, capacity building – becomes an essential element of LED (Helmsing, 2001b).

From a strategic planning point of view, LED requires the design and implementation of a strategy based on a sound diagnosis of the local economic potential, the institutional environment and socioeconomic prospects (Greffe, 1989; OECD, 1993). It is in this combination between economic development strategy, on the one hand, and institutional capacity building, on the other, where the potential of reaching the goal of socioeconomic sustainable development lies (Hustedde et al., 2005; Swinburn, 2006; Cities Alliance, 2007; UN-Habitat, 2005; OECD, 2008).

Overall, LED is a comprehensive development strategy that goes well beyond identifying and taking into account local economic strengths, weaknesses, opportunities and threats in a globalised world, in order to set specific medium- and long-run goals. It represents a development process in itself which encompasses not only economic and physical features, but also the social, cultural and institutional characteristics of places (Boisier, 1999; Pike, et al., 2007), involving actions aiming at meeting both the present and future needs of any given territory. LED is also about developing local capabilities: the capabilities to properly diagnose the local environment, as well as the productive and socio-economic prospects of a territory; the capabilities to improve the quality of public services; the capabilities to organise adequate systems for voice and participation; and the capacity to identify and support successful businesses and economic actors. Therefore, empowerment, capacity building and leadership are at the core of LED strategies, alongside with the creation of mechanisms for public, social and private sector participation in the development process (Albuquerque, et al., 2002; Barreiro, 2000; Camejo and Gallicchio, 2004; CLAEH-ALOP, 2002; First Nation Forestry Program, 1998; OECD, 2003; UNIDO, 2001).

From this vision of LED we can extract the following key features and policy actions:

1. The LED process requires a ***development plan***. The plan should include a strategic vision of development, combining economic, social and environmental goals.
2. Combining economic, social and environmental aims in the medium- and long-run implies a certain degree of ***sustainability***, that is, the goal of increasing the quality of people's life, while simultaneously preserving local resources and the environment in good condition for future generations (UNIDO, 2009; United Nations, Agenda 21).[1]
3. Leadership and the presence of entrepreneurial attitudes and skills at the local level would greatly facilitate not only starting up the process, but also the achievement of the development goals. Hence, local ***leadership and entrepreneurship*** is another key element of LED.

[1] http://www.un.org/esa/dsd/agenda21/res_agenda21_28.shtml

4. LED is also participatory. It entails the cooperation among different types of local stakeholders – from the public and private sector, as well as from the social and cultural realms of the local society – who become the protagonists and owners of the development process. As a consequence, a successful LED strategy has to take a series of ***participation mechanisms*** into consideration.
5. As LED implies setting up broad coalitions, including governments, local stakeholders, and, in certain cases, external NGOs and international organisations linking the local environment to the outside world, the setting up of economic ***development links*** that favour local strategies is another constituent feature of the bottom-up approach.
6. Such a setting requires the establishment of adequate institutions, which, oftentimes, would involve elements of ***capacity building***.
7. Finally, LED, in contrast to traditional top-down approaches, is a fundamentally territorial approach to development. Development strategies are conceived for a specific area and are more likely to succeed provided there is a certain level of local autonomy. Hence, a certain degree of ***political autonomy*** at the local level will contribute to make LED strategies more viable.

Based on the previous discussion, we consider the presence of a development plan, an emphasis on sustainability, local leadership and entrepreneurship, the existence of participation mechanisms, development links, capacity building, as well as the degree of local political autonomy, as factors that would facilitate the success of LED strategies at the local level. We hypothesise that if, as believed by the literature on local and regional development, LED strategies are expected to have a positive impact on economic development, then the presence of any of these key constituents of LED in the strategies followed at the local level will result in better development outcomes.

3. Modelling local development in Mexico

In order to assess whether this is the case in Mexico and whether the effort by localities to try to implement the key features and policy actions linked to LED leads to better development outcomes or not, we develop the following general model:

$$\Delta MDI_{it\text{-}i0}=\alpha+\beta_1 LED_i+\gamma_1 X_i+\varepsilon_i \quad (1)$$

where $\Delta MDI_{it\text{-}i0}$ is our dependent variable, depicting the change in development levels – measured by the change in a development index for Mexican municipalities (*MDI*) – between time t (2005) and time 0 (1990) in municipality i. *LED* is our independent variable of interest, representing a vector of the key LED constituents which municipalities have implemented (i.e. the seven categories identified in the previous section). *X* is a vector of control variables, including a number of factors which may affect the development potential of Mexican municipalities, while ε is the error term.

In the following subsections, we look at the rationale for the inclusion of the dependent and independent variables in our model, as well as describe the LED database built to perform our estimations.

3.1. *Measuring human development at the local level in Mexico.*

One of the traditional ways of measuring development has been to resort to the evolution of GDP per capita. GDP per capita has been routinely used by much of the literature on economic growth as the key proxy for economic development. However, in recent years there have been significant criticisms of this measure and appeals for the elaboration of alternative indicators of development (e.g. Stiglitz et al., 2009).

The Human Development Index (HDI), calculated by the United Nations Development Programme (UNDP), has been little by little gaining ground as a viable alternative or complementary measure to GDP per head. As a consequence – and despite the fact that the HDI is not devoid of critics – it has been increasingly proposed by numerous authors as the proxy of choice for measuring development (Dasgupta and Weale, 1992; UNDP, 1993 and 2009; Streeten, 1994; Anand and Sen, 2000a and 2000b). In the case of

Mexican municipalities, in addition to the arguments presented above, the absence of data on GDP per capita at the local level for the period of analysis pushes us towards the elaboration of an HDI-like indicator as our development proxy of choice. We call this indicator the municipal development index (MDI).[2]

However not all the components included in the HDI are available at municipal level in Mexico. The MDI includes a number of indicators which cover the same dimensions considered in the elaboration of the HDI: health, education, and standard of living. The indicators included in each dimension are adapted to the availability of data for Mexican municipalities. In the health dimension, we substitute life expectancy by the percentage of children who survive their first year of life. The education variables basically reproduce those included in the HDI, with the exception of substituting the combined primary, secondary and tertiary gross enrolment ratio, by the average number of years of education of those 15 and older in any given municipality.

For the standard of living dimension, the HDI resorts to income per capita (UNDP, 1993). The HDI considers income per capita as the indicator for having access to the resources needed for a decent standard of living (UNDP, 1993). Anand and Sen (2000b) note that by including income per capita, the HDI takes "note of various capabilities that people value intensely and which are not reflected in figures of life expectancy and literacy" (p. 100). However, as comparable income per capita data are not available for Mexican municipalities for the years analysed, we calculate the municipal development index (MDI) using a series of quality of housing characteristics as an approximation for the standard of living in any given Mexican municipality. We depict the standard of living by the inclusion of the percentage of dwellings in a municipality with sewage, electricity and water inside the building and the percentage of dwellings with floor other than bare land. The advantage of resorting to quality of housing indicators is that it does not have the problem of diminishing returns associated with the inclusion of income in the HDI (Noorbakhsh, 1998; Sagar and Najam, 1998). It also avoids the heavily criticised selection of the minimum and maximum income values (Streeten, 1994;

[2] As the HDI has been extensively discussed since its inception, it was preferred to other alternatives put forward in the Mexican context (e.g. Martínez-Pellegrini et al., 2008). Martínez-Pellegrini et al. (2008) propose an index which is not too dissimilar from the HDI, but which may be, because of its less widespread use, more prone to criticism.

UNDP, 1993). The indicators used to calculate our dependent variable are presented in Table 1.

Insert Table 1 around here

In order to calculate the MDI we use a similar procedure as for calculating the HDI (UNDP, 1993). The main difference is that, taking into account the criticisms of the HDI by Sagar and Najam (1998) and Decanq and Lugo (2009), we multiply the different components rather than add them. The MDI is calculated for every municipality included in the analysis for the years 1990 and 2005 and the change in levels of development is used as the dependent variable. The results for every municipality range from 0 to 1, with municipalities with a score lower than 0.250 considered the least developed. Municipalities scoring between 0.250 and 0.500 are considered to be in a medium level of development, while those with an MDI above 0.500 to be well-developed in the Mexican context.

Figure 1 shows the change in the MDI between 1990 and 2005 for Mexican municipalities. The figure highlights that changes in the MDI have been geographically uneven. Many municipalities in the North and, in particular, in the states bordering the US have witnessed clear improvements in their development index between 1990 and 2005. This is also the case in parts of the West of the country, along an axis including municipalities in the states of Durango, Aguascalientes, Jalisco, and Guanajuato. Dynamic, but relatively isolated poles can be found elsewhere in the country and especially in Quintana Roo. By contrast, municipalities in most of the South and large swathes of the Centre are considerably less dynamic in terms of development, as is also the case of some local authorities in the North along the border between Durango and Sinaloa, in Zacatecas, San Luis Potosí, and parts of Tamaulipas.

Insert Figure 1 around here

3.2. *The emergence of LED in Mexico*

Mexico has not been immune to the lure of the LED approach, particularly since the demise of the top-down development strategies which had been dominant until the 1980s. Between 1954 and the 1970s, the years of the so-called 'stabilising development' (*desarrollo estabilizador*), Mexico experienced relatively stable rates of growth of around 3% per annum, as well as stable inflation and exchange rates. Centre-led top-down industrialisation strategies were deemed to be extremely successful in promoting harmonious development across the country. As a consequence, bottom-up LED strategies did not feature and were almost unheard of. The discovery of large oil reserves in the 1970s contributed to the intensification of import-substitution, centre-led development strategies funded by oil revenues and by internal and external debt.

However, Mexico became too dependent on oil revenues and debt, and the collapse of oil prices in the early 1980s brought about severe consequences for the Mexican economy (Sánchez-Reaza and Rodríguez-Pose, 2002). By 1982 Mexico was in the midst of a debt crisis, with a public deficit of 17% of GDP, inflation rates of 100%, and an increase in external debt from a mere 4 billion US dollars in 1970 to 88 billion in 1982 (Aspe, 1993; Urquidi, 1996). The top-down economic development model which had guided Mexico for almost 50 years had collapsed, with important effects at the local level. The regional convergence of the import-substitution period swiftly gave way to divergence (Sánchez-Reaza and Rodríguez-Pose, 2002) and many areas which had benefited from import-substitution policies in terms of federal subsidies for manufacturing started prolonged declines (Gwynne, 1987; Morris, 1987; Rodríguez-Oreggia and Rodríguez-Pose, 2004).

The policy measures adopted by the Mexican government as a reaction to the crisis were the usual neoliberal measures (i.e. privatisation, public deficit reduction, tight monetary policy, and trade liberalisation (Katz, 1998), but also encompassed a number of far-reaching political reforms. One of the most important political reforms was the decentralisation process which helped sow the seeds for a new territorial development

model (Rodríguez, 1999; Giugale et al., 2000). Greater state and local autonomy from the late 1980s onwards created the conditions for the adoption of previously unremarked local development initiatives, implemented initially in those states governed by opposition parties, but which gradually became common throughout the country. By the mid-1990s – on top of the local initiatives – the federal government was also promoting policies with a more local focus, such as the creation in 1996 of the Municipal Social Development Fund, the 2002 Micro-regions programme, and the so-called Agenda from the Local in 2003 (Corro and Palavicini 2008; Micro-regions and Agenda from the Local websites).[3]

3.3. *Measuring LED strategies in Mexico*

While LED strategies have certainly become popular in Mexico, measuring how popular they have become is much more difficult. There is a dearth of information about LED strategies in Mexico – our key independent variable of interest. This has become the main barrier preventing the systematic analysis and evaluation of the impact of LED strategies in the past. In Mexico there is no database about whether municipalities are implementing development policies, let alone about the characteristics and specific features of these policies. Hence we decided to build a new database from scratch in order to gather information about the extent to which Mexican municipalities have engaged in development strategies during the period of analysis, as well as about the distinctive elements of their policies.

The data were gathered by means of a structured elite questionnaire about the level of engagement in LED of all Mexican municipalities between 1990 and 2005. The questionnaire was aimed at experts in economic and social development based in academia. The reasons for targeting scholars were twofold. First, regional (state) universities are well established across the whole of Mexico with relatively easy electronic access to information about their faculties and their work. Second and more

[3] Strategies' name in Spanish: Microregiones, website: http://www.microrregiones.gob.mx/; Agenda desde lo Local, website: http://www.desdelolocal.gob.mx/ (Websites accessed in May 2012).

importantly, it was feared that other actors, such as politicians or civil servants in charge of implementing the policies either now or in the past, may have had vested interests in defending their past acts and interventions and those of their parties, political mentors, or protégés. The experts targeted were asked to notify if for some reason they could not continue and to inform for which municipalities in their respective states they would not be able to answer the questions. In some cases, this gave us the opportunity to look for other scholars to answer the questionnaire for the missing jurisdictions.

Of the 280 independent experts originally invited to participate in the elaboration of the LED database, we received information from 40 academics (14% response rate) on a total of 898 municipalities in 21 different Mexican states. This represents 40% of all Mexican local governments in 1990. Mexico City's local governments, called delegations, were excluded from the analysis because of the strong concentration of powers in the *Distrito Federal*.

Figure 2 gives information by state about the number of local governments for which information was gathered. Although, at first sight, it would seem that the North of the country is under-represented in our dataset, it has to be noted that, despite their large territories, Northern states had only 453 municipalities in total in 1990, while Central and Southern states had 975 and 944, respectively.[4] Furthermore, the share of the municipalities' population by region in our sample is similar to the same share for all Mexican municipalities at the start of our period of analysis.[5] In addition, our sample includes the whole range of municipalities according to their MDI. In 1990 94.3% of the Mexican municipalities had a low MDI, 5.2% a medium level of development, and only 0.5% a high level. The shares in our sample are 92.5, 6.9, and 0.6% respectively.

Insert Figure 2 around here

[4] The share of municipalities in 1990 in the North of Mexico was 19.1% of the total, roughly the same proportion as in our sample (18%). In the Centre and South the shares were 41.1% and 39.8%, respectively, while in the sample the Centre of the country has 49.6% of all municipalities considered and 32.4% in the South.

[5] The population shares in 1990 for the North, Centre, and South of the country were 28.9, 50.9 and 20.2% respectively, while in our sample the proportions are 20.6%, 59.7% and 19.7%, respectively.

The questionnaire contained a series of 11 questions targeted at identifying for each municipality whether the main characteristics of LED strategies identified in the theoretical section where present. Table 2 presents the variables included in the questionnaire and their expected connection to economic development, in general, and to the MDI, in particular.

Insert Table 2 around here

As many of the LED related variables would complement each other, in order to capture these complementarities we combine specific LED variables into one variable. As most of the LED variables are dichotomous, and in order to add emphasis on the effects of the different bottom-up criteria considered together, the combinations are built by summing up the variables (Agresti and Finlay, 2009). The basic combinations included in the analysis are the following:

- Int_{1+4}: This combination suggests that capacity building and empowerment policies may have a greater impact when a proper diagnosis of the local social economic and environmental conditions has been conducted and a structured development plan has been implemented.
- Int_{1+3}: This combination indicates that policies aimed at promoting entrepreneurship could have a higher effect if inserted within the framework of a development plan and not implemented in isolation.
- Int_{4+5}: This combination tests whether the existence of mechanisms for local agents' participation could have a greater effect in the development of places where capacity building and empowerment policies are implemented than in the ones where this is not the case.
- Int_{3+4}: This combination posits that the implementation of measures aimed at improving capacity building and generating empowerment are likely to have a positive impact on interventions to promote entrepreneurship.
- Int_{1+6}: This combination suggests that the presence of well-developed development links, both within the locality and to the outside world, is likely to enhance the possible impact of development plans.

3.4. *The geography of LED in Mexico*

Figure 3 maps the results of the survey. The LED database confirms that during the period of analysis LED had become common across local jurisdictions in Mexico. More than one in two of the municipalities considered in the analysis had incorporated specific LED criteria in order to promote development. However, LED was not evenly distributed across Mexico. Geographical differences in the diffusion of LED criteria are evident in Figure 3. Overall, LED has tended to be more prevalent in local authorities in northern states than in the Centre and in the South. Thirty six percent of northern municipalities implemented four or more of the six LED criteria considered, while only 9.3% of local authorities in the region contemplated less than two. In the South, by contrast, only 25.1% of local authorities put more than four LED criteria into practice, while 61.9% implemented one or none of the criteria considered. Stronger contrasts were observed in the Centre of the country. Thirty eight percent of the local authorities in Central states considered in the analysis executed four or more LED criteria – a marginally higher percentage than in the Northern states – while 32.1% only performed one or none – almost 3.5 times more than in the North.

Insert Figure 3 around here

The popularity of the LED constituents considered varied significantly. As can be seen from Table 3, the most common LED criterion was the creation of links or networks of cooperation and coordination within and outside the municipality. Virtually two thirds (63.9%) of all municipalities considered had implemented, at some time or another, measures to boost cooperation and coordination both locally and with external agents. More than 40% had either designed a LED plan (46.8%), promoted capacity building or empowerment (48.9%), encouraged participation mechanisms (46.8%), or implemented policies aimed at fostering entrepreneurship (42.3%). Sustainable development and environmental considerations were by far the least popular LED components incorporated by Mexican local authorities.

Insert Table 3 around here

In terms of the LED actions undertaken, central and southern municipalities showed a strong preference for improving the interaction of local actors amongst themselves and/or with external agents, followed by the incorporation of capacity building and empowerment tools in the government strategy and the design of strategic development plans. Environmental protection and sustainability, by contrast, was the least used LED criterion. Northern local authorities, as in the rest of the country, showed a strong preference for fostering the interaction of local actors within the municipality, while the promotion of entrepreneurship was the least popular criterion.

This uneven geographical distribution of the prevalence of LED features across the country highlights the importance of geo-economic factors in determining why certain local authorities engage in LED, while others do not. Population size is one of these factors. Larger cities and, in particular, the municipalities holding the state capital, did, by and large, engage much more in LED than intermediate cities. These, in turn, resorted to LED more often than in rural municipalities. In addition to size, the wealth of the municipality has been an additional determinant factor. Localities in the Centre and, particularly, in the North of the country tend to be richer and frequently have a greater capacity to design and implement development plans. It is therefore no surprise that the involvement in LED activities wanes as we advance towards the South and that there is a connection between local GDP and the number of LED criteria applied at the local level.

Finally, it has to be borne in mind that, during the period of analysis local administrations changed every three years. This implies that, more often than not, the continuity of LED intervention at the local level was not guaranteed. Changes in local governments and in policies resulted in a certain discontinuity in LED intervention and it is a fact that certain strategies and development plans were not always implemented.

3.5. *Control variables*

The model is wrapped up by the introduction of a vector of control variables indicating the local socio-economic conditions at the beginning of the period of analysis. These variables are introduced in order to account for other factors which may have had an influence on the evolution of the levels of development across Mexican municipalities. These variables include the level of wealth of the municipality (proxied by income per capita in 1990), the percentage of children in the population who survive their first year of life, the average level of education of the population measured by years of schooling, the literacy rate in the municipality, the level of employment in agriculture, industry and services, the percentage of dwellings with basic utilities and floor material, the percentage of the indigenous households, and the proportion of immigrants living in the municipality. In addition, we controlled for urban or rural municipalities and for the presence of a port or an airport, facilitating access. The source of most of these variables was the municipal database collected by the Mexican Statistical Institute (INEGI). All these variables, their definitions, and expected results are briefly described in Table 4.

Insert Table 4 around here

4. Results of the analysis

Given the nature of the data, the estimation of the model is done by means of heteroskedasticity-consistent ordinary least square (OLS) regression analysis. Whenever possible, all independent variables are lagged to the beginning of the period of analysis, in order to minimise any potential endogeneity problems. Preliminary correlations and variance inflation factor (VIF) tests were conducted on all independent variables. As multicollinearity problems were detected among some of the independent variables, indicators such as the overall level of education of the population or the percentage of the population employed in services were dropped from the final analysis. In the interest

of parsimony, non-significant independent variables, such as the presence of a port or an airport or the percentage of children, are not reported.

Three types of regressions are run. In the first set of regressions we assess whether a greater engagement with different LED elements makes a difference for economic development. We therefore consider the number of LED criteria taken into account during the period of analysis by each municipality. The second set of regressions looks at the specific effect of particular LED policies and characteristics. The third and final group of regressions looks at the potential combinations among the different LED criteria for development. These different groups of regressions are now presented in turn.

4.1. *Regressions considering the number of LED criteria*

The results of the analysis considering only the number of LED criteria pursued by different Mexican municipalities are presented in Table 5. The results highlight that there seems to be a positive and significant association between engaging in LED at the local level and improvements in the level of development across Mexican municipalities, once other factors which may affect development are controlled for. The simple fact of pursuing any type of LED actions makes a difference for future development. Mexican municipalities which during the period of analysis did not get involved with or implemented a single of the LED criteria identified (LED0) tend to have significantly lower levels of improvement of their municipal development index (Table 5, Regressions 1 and 2). This means that not designing a strategic development plan, not implementing empowerment and capacity-building policies, or not building internal and external links or networks, among the factors considered, has undermined the development potential of Mexican localities. These results are robust to the inclusion of state dummies in order to control for state-specific factors which may not be captured by the independent variables used (Table 5, Regression 2).

The effects of including more LED criteria on subsequent economic development are not as straightforward. All the coefficients in regressions 3 and 4 are positive –

reinforcing the idea that engaging in LED makes a difference for development – but they are not always significant. This indicates that pursuing more LED criteria has not necessarily led to better outcomes in development terms. When no state controls are introduced, the coefficients are positive and significant for the variables depicting the municipalities applying two, three, four and six different LED criteria (LED2, LED3, LED4 and LED6) (Table 5, Regression 3). When state dummies are introduced in the analysis (Table 5, Regression 4), the coefficients are significant for the municipalities applying two, three, four and five LED elements (LED2, LED3, LED4 and LED5). Hence, applying more LED criteria has been no guarantee of greater future development outcomes. The highest returns are evident for those local authorities which applied two and four LED criteria, with little evidence that the identification of all the LED elements considered in the analysis has resulted in better development outcomes.

Insert Table 5 around here

4.2. *Regressions considering the LED criteria*

Table 6 considers the individual LED variables. Regressions 1 through 7 look at the interaction between each individual LED component and economic development in turn, while controlling for other factors which may affect municipal development in Mexico. Regressions 8 and 9 introduce all LED criteria together, also including State-level controls in Regression 9.

The results for the individual LED variables highlight the strong association between factors such as whether a local authority engaged in designing a strategic development plan (Regression 1), implemented empowerment and capacity-building measures (Regression 4), or local agents tried to build internal and external links or networks (Regression 6), on the one hand, and changes in the municipal development index, on the other. Incorporating sustainable development in the form of environmental considerations in LED policies, fostering entrepreneurship, creating mechanisms in order to involve the general public or the private sector in development processes or the degree of independence of any strategies from state or federal initiatives, by contrast, are not significantly associated with changes in the municipal development index.

The introduction of all LED variables together in the estimation reinforces these results. Again, designing a strategic development plan, implementing empowerment and capacity-building policies, and building internal and external links or networks stand out as the factors which have had the greatest influence on positive changes in development, regardless of whether state controls are inserted in the analysis (Regression 9) or not (Regression 8). In these regressions some of the other LED components become significant with a negative sign. In Regression 8 introducing entrepreneurship measures into LED strategies is connected negatively with economic development. Similarly, the introduction of sustainability actions is negatively associated with development, when state dummies are introduced (Regression 9). However, the fact that these variables are only significant in one regression and not in the other points to a lack of robustness in this association.

Insert Table 6 around here

A more interesting result is that of the indicator assessing the degree of autonomy of local LED strategies from state or federal initiatives. In both regressions the coefficient is negative and significant. This may imply that in a country where the bulk of local funding still comes via federal and state budgets and initiatives, seeking greater autonomy in terms of development may have had implications for the budgets of the local authorities following that route, therefore undermining their potential to effectively implement the development policies they wanted to pursue. In a country like Mexico, where decentralization to the states has made significant inroads but local government autonomy still remains limited, our autonomy variable captures whether local development intervention has only veered slightly away from national and state level policies, signalling towards more endogenous and independent development strategies.[6] For the whole dataset, however, the level of local autonomy remains limited, as in a range where 1 indicates total dependence and 5 total independence from state

[6] Even today in Mexico, local government autonomy is rather limited. Federal government policies remain substantial and state government interventions in many municipalities are still the norm (Courchene and Díaz-Cayeros, 2000; Giugale et al., 2000; Martínez-Uriarte 2003). Federal and state interventions touch most public policy areas. For example, since 1992 the states have been in charge of the provision of basic education within a federal regulatory framework (Merino, 2003). Health and education systems are mainly a federal and state level responsibility, but this does not exclude the possibility of municipal interventions (Calderón and Segura, 2007; Guillén et al., 2006; Pardo and Ordaz, 2007; Rodríguez-Castillo, 2007). In addition, the federal government still holds the key for the majority of resources

and federal policies, the average for the 898 municipalities considered is 2 with only 2.7% of local authorities experiencing a high degree of autonomy in development strategies.

4.3. *Combinations between LED criteria*

The third group of regressions considers different combinations of LED criteria. The rationale behind including combinations between the LED components reflects the potential that the impact of development strategies may not be related to either the overall number of criteria used by municipality or to specific individual interventions, but to the interaction between different types of LED interventions. Therefore, in Table 7 we include a number of combinations which, a priori, could be considered to have an influence on development. These interactions are fundamentally concerned with either the presence of a development plan or of a capacity building element in a development strategy. The results of the analysis are presented in Table 7 and highlight that the combination of a development plan with the presence of capacity building or empowerment actions at the local level (Regression 2) and that of a development plan with fostering specific links among local agents and with agents outside the local community (Regression 5) have been positively and significantly associated with changes in the Mexican municipal development index. These results are robust to the introduction of state controls (Regressions 7 and 10). The introduction of state controls also renders significant the combination of capacity building elements with measures aimed at promoting entrepreneurship and with the establishment of greater participation mechanisms.

Insert Table 7 around here

4.4. *Control variables*

In all regressions, almost all the control variables have the expected sign, underlining the robustness of how other independent variables influence local development in Mexico. Two factors have a particularly strong negative association with improvements

in the MDI during the period of analysis. The higher proportion of indigenous households and the percentage of people employed in the primary sector are always or almost always (in the case of the proportion of indigenous households in the locality) negatively and significantly connected to changes in local development. A strong specialisation in agriculture has a stronger negative connection with development than the presence of large pockets of indigenous populations. Urban areas in Mexico, once other factors are controlled for, did worse than rural areas in terms of improvements in levels of development.

Among the factors which are associated with improvements in the MDI, the quality of local housing stands out. Localities with dwellings with better access to utilities and housing conditions, such as floor material, managed to improve their development indicator more than areas where these conditions were absent. Literacy rates and migration also played, as expected, a positive role in subsequent development. The impact of literacy rates tends to be, however, not significant in certain regressions. Finally, the coefficients for the natural logarithm of income per capita are generally positive, pointing towards certain level of economic divergence during the period of analysis, but the coefficients are not significant.

5. Concluding remarks

The popularity of LED strategies has pushed many governments (at the national, regional, or local level) to pursue local and regional approaches to development as a panacea in order to solve their development problems. The shining examples of the LED 'best practices' provided a mirror into which every town, every city and every locality could look in order to become a new 'Silicon Valley', a new 'Baden-Württemberg', a new 'Third Italy', or a new 'Bangalore'. But the reality has been much more muted. Despite the multitude of LED initiatives across the developed and the emerging world, there is still precious little hard evidence showing whether LED strategies really make a difference for economic development. The number of analyses monitoring the success of LED outside the 'best practice' cases remains rather limited

and systematic quantitative analyses of how local authorities implementing LED have fared are virtually inexistent.

In this paper we have tackled the question of whether LED strategies really work in a systematic way, using a quantitative analysis for the case of Mexico, one of the countries in the world where LED has been more widespread. In order to address this issue, we have constructed, with the help of local experts, a database of the development efforts conducted by 898 Mexican local governments (40% of the total) in order to improve the living and development conditions of their respective territories. The LED efforts of Mexican municipalities were measured across seven different key LED criteria during the period between 1990 and 2005. The LED criteria included whether the local authority had contributed to the design of a development plan; whether the municipality had incorporated environmental sustainability as a policy matter; whether it had implemented policy actions aimed at fostering entrepreneurship; whether it had encouraged the development of local capacity; whether participation and voice mechanisms were in place; whether links among local agents and with agents outside the locality had been set up; and, finally, whether development activities had been pursued in a more or less autonomous way from state and federal government initiatives. A large number of variables for each municipality were used in order to control for other variables which may have affected changes in human development at the local level.

The results of the analysis show that pursuing or even thinking about LED strategies has paid off for local authorities in Mexico in the last two decades. Municipalities which have contemplated even only one of the LED criteria considered have witnessed a greater growth in their human development index than those that have disregarded LED altogether. Pursuing the whole raft of LED criteria analysed has, as a general rule, led to even greater improvements in human development, although implementing more LED criteria has not always been a guarantee of greater development success. The main difference remains between thinking and/or implementing one basic element of a LED strategy or doing nothing. And the municipalities that did nothing where, as a result, worse off in development terms.

Among the criteria considered, the design of a development plan, the implementation of capacity building measures, and the creation of new development links, both within the municipality and outside it, seem to have had the greatest impact on development. In a country where resources are still transferred top-down, greater levels of autonomy from state and federal development initiatives have, by contrast, proven detrimental for changes in human development. This may be a consequence of the lower amount of resources at the disposal of local authorities in order to implement their own autonomous development strategies. When looking at the interaction between different LED components, it seems that the combination of development plans with capacity building measures and of development plans with the fostering of links with local and outside agents have provided the most successful LED combinations for Mexican local authorities.

The results of this analysis provide what might be considered as the first clear proof that implementing – or even simply thinking about – development strategies at the local level in an emerging country may deliver greater human development. In a country like Mexico, the mere fact of considering implementing actions, no matter how modest, aimed at promoting development at the local level, pays off. When local communities think about their potential and capacities, engage in creating links and capacity building, and consider the sustainability of any sort of intervention – even if the implementation if often below par – this is likely to lead to a better and more efficient use of local potential. Hence, by designing and implementing local development strategies a city or a town may not become a new Silicon Valley, but, as our research has shown, doing nothing may not be a viable option for localities aiming to improve the living conditions of its citizens.

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Figure 1. Variations in the MDI index between 1990 and 2005 by municipality

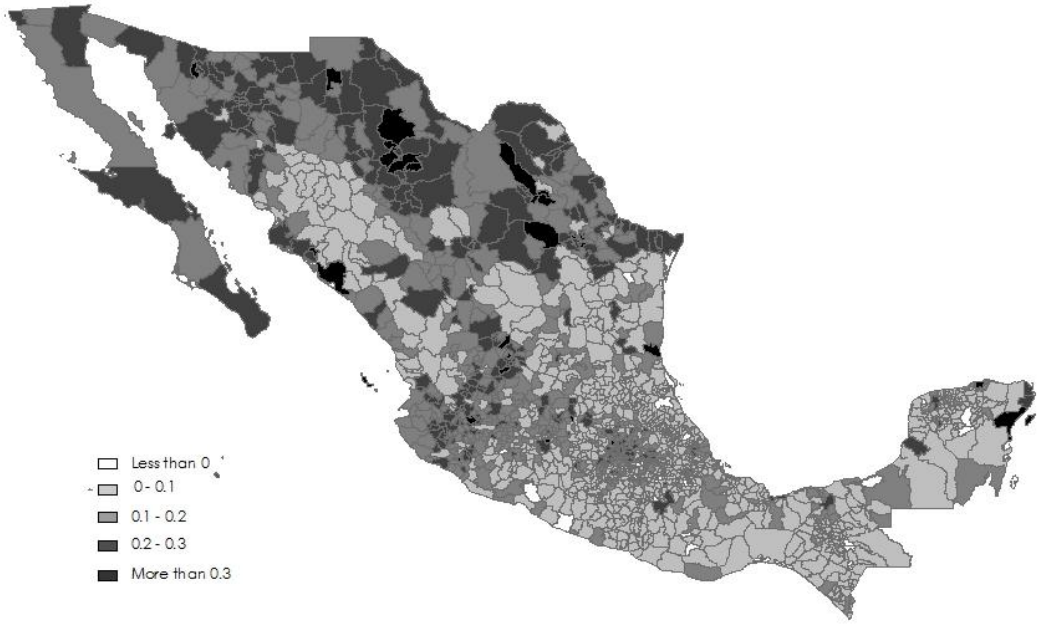

Figure 2. Municipalities in the sample by State

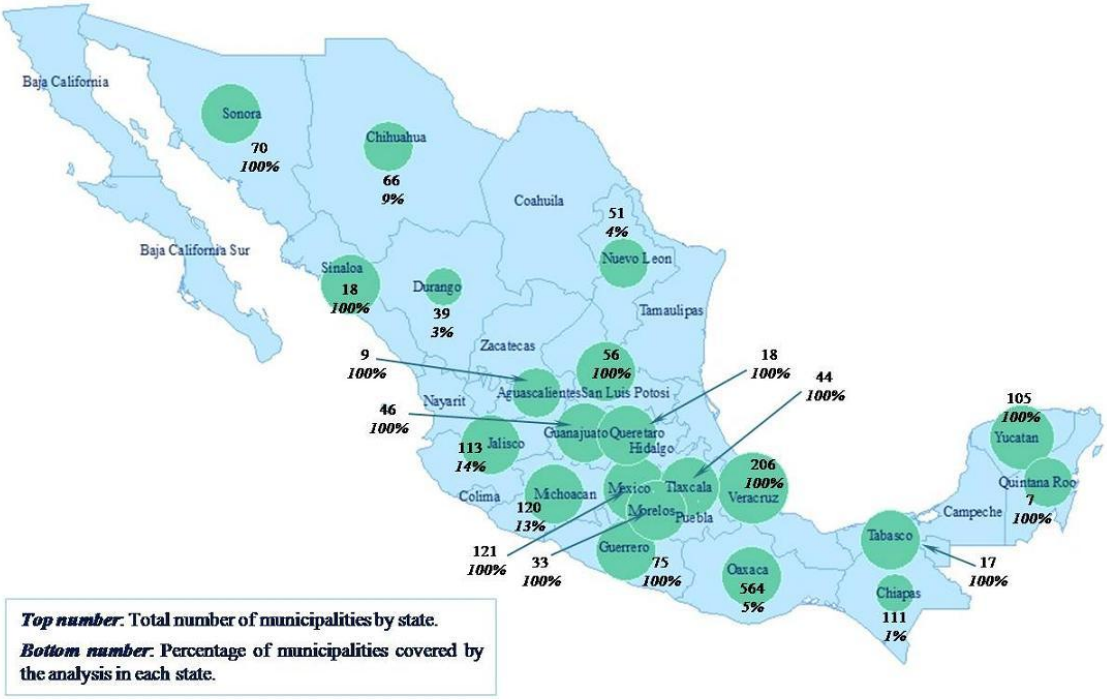

Figure 3. Number of LED criteria by municipality in the LED database

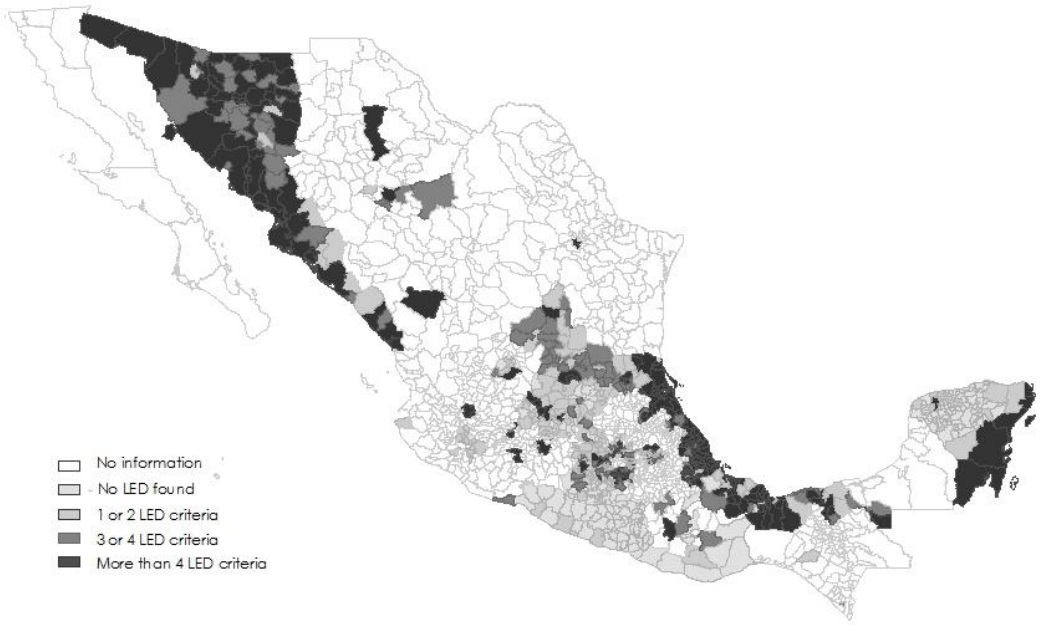

Table 1. Components of the Mexican municipality development index (MDI).

Health	Education	Standard of living
1. % of children who survive their first year of life out of every 100 born alive.	*2.* Adult literacy rate *3.* Average number of approved (passed) years of education for people older than 14.	*4.* % of dwellings with sewage, electricity and water inside the building. *5.* % of dwellings with floor other than bare land (cement, wood, tile, etc.)

Table 2. LED related independent variables

Variable	*Expected effect on changes in the MDI*
1. **Development plan:** Dummy variable indicating whether a Mexican municipality has designed and implemented a LED plan with a medium- to long-term perspective, based on a diagnosis of the local economy (1), or not (0).	Positive, municipalities having made the effort to diagnose the local economy and make a development plan are expected to raise the level of development to a greater extent than those without a development plan or relying on ad hoc solutions.
2. **Sustainability:** Dummy variable taking a value of 1 for those municipalities which have incorporated environmental sustainability in their development strategies, and 0 otherwise.	Positive, municipalities incorporating the principle of sustainability are expected to have better development outcomes.
3. **Entrepreneurship:** Dummy variable taking the value of 1 for those municipalities having adopted policy actions aimed at fostering entrepreneurship, and 0 otherwise.	Positive, municipalities fostering entrepreneurship will, in all likelihood, experience greater levels of development than those not adopting similar measures.
4. **Capacity building:** Dummy variable taking the value of 1 for those municipalities having introduced measures towards the development of local capacity and the empowerment of local agents, and 0 otherwise.	Positive, municipalities involved in capacity building and empowerment will, under a LED framework, achieve higher levels of development.
5. **Participation mechanisms:** Dummy taking the value of 1 for those municipalities having encouraged the development of participatory mechanisms, and 0 otherwise.	Positive, municipalities encouraging participation are likely to do better than those that do not.
6. **Development links:** Semi-categorical variable referring to municipalities that either introduced specific economic development links among local agents and with agents outside the locality or where those links already existed.	Positive, municipalities with functioning development links should do better than those without.
7. **Autonomy:** Semi-categorical variable indicating the degree of independence of LED strategies at the local level from state or federal initiatives.	Positive, under a LED framework, municipalities with a higher autonomy to implement their own policies should do better in terms of development than those without it.

Table 3. Number of municipalities incorporating each LED criterion 1990-2005

1. LED plan with a long term perspective based on a diagnosis of the local economy.	**421** *(46.8% of the total)*
2. Sustainable development and environmental considerations.	**245** *(27.3%)*
3. Policies or development actions to foster entrepreneurship.	**380** *(42.3%)*
4. Capacity building or empowerment policy actions.	**439** *(48.9%)*
5. Existence or creation of participation mechanisms for private, public, social sectors and the general public.	**421** *(46.8%)*
6. Links or networks of cooperation and coordination within and/or outside the municipality.	**574** *(63.9%)*

Table 4. Control variables

Variable	*Expected impact on the MDI difference*
Income per capita **(Ln Income per capita)**	Positive, indicating that those municipalities with a higher income per capita in 1990 were likely to achieve a higher improvement in the MDI between 1990 and 2005.
Percentage of surviving children out of every 100 that were born alive **(% Children)**	Positive, meaning that the higher the proportion of surviving children (as an approximation of the health of the population), the higher the improvement in the MDI.
Literacy rate **(% Literacy rate)**	Positive, meaning that municipalities with a higher proportion of literates would do better than others.
Average number of approved years of education for people older than 14 **(Average education)**	Positive, meaning that the higher the average years of schooling, the higher the improvement in the MDI.
% of households with sewage, electricity and drinkable water inside the building **(% Services)**	Positive, indicating that the higher the share of households with all these services in 1990, the higher the improvement in the MDI.
% of dwellings with floor other than bare land **(% Floor material)**	Positive, indicating that the higher the share of dwellings with floor other than bare land in a municipality, the higher the improvement in its MDI.
% Indigenous households	Negative, meaning that the higher the percentage of municipal households where the head of them spoke an indigenous tongue in 1990, the lower the improvement in the MDI. This is because indigenous groups in Mexico have historically been excluded from mainstream social and economic trends.
Share of people employed in services in the municipality **(Tertiary sector)**	Positive, the higher the share of employment in the tertiary sector, the higher the improvement in the MDI. This is because tertiary economic activities have increased their share of GDP and total employment in both developed and developing countries.
Share of people working in primary economic activities **(Primary sector)**	Negative, the higher the share of employment in the primary sector, the lower the improvement in the MDI. This is because a strong dependence in the primary sector is associated with low economic performance in developing countries.
% of immigrants in the total municipal population **(Migrants)**	Positive, the higher the share of immigrants of the total municipal population, the higher the improvement in the MDI.
Categorical variable indicating if the municipality was urban or not **(Urban)**	Positive, indicating that urban municipalities are likely to have performed it better than rural ones. This is because urban-rural economic differences have been growing in favour of urban areas.
Dummy indicating the existence of a port or airport **(Port or airport)**	Positive, municipalities with an airport or port are expected to improve more than those without any of them, as communications infrastructure facilitates the development economic activity.

Table 5. Regressions by number of LED criteria

Dependent variable: *MMDI difference 2005-1990*$^{\Delta}$	**(1)**	**(2)**	**(3)**	**(4)**
LED0	**-1.161****	**-0.920***		
	(.476)	(.544)		
LED1			0.718	-0.201
			(.663)	(.674)
LED2			**1.889*****	**1.397****
			(.652)	(.675)
LED3			**1.433***	1.119
			(.753)	(.756)
LED4			**1.810*****	**1.659****
			(.660)	(.731)
LED5			0.594	**1.334***
			(.549)	(.724)
LED6			**1.375***	1.113
			(.821)	(.895)
Ln Income per capita	0.163	0.120	0.302	0.115
	(.518)	(.512)	(.526)	(.512)
% Literacy rate	0.058**	0.026	0.050*	0.021
	(.028)	(.027)	(.028)	(.027)
% Services	0.175***	0.146***	0.174***	0.142***
	(.014)	(.014)	(.014)	(.014)
% Floor material	0.087***	0.080***	0.089***	0.083***
	(.014)	(.013)	(.014)	(.013)
% Indigenous households	-0.012*	-0.008	-0.013**	-0.010
	(.006)	(.006)	(.007)	(.006)
Primary sector	-0.039***	-0.059***	-0.037***	-0.061***
	(.012)	(.012)	(.012)	(.012)
Migrants	0.068***	0.063***	0.065***	0.056**
	(.021)	(.022)	(.021)	(.022)
Urban	-2.188***	-1.666**	-2.081***	-1.619**
	(.679)	(.682)	(.682)	(.682)
State controls	No	Yes	No	Yes
n = 898	R^2=.674, *df=888*	R^2=.717, *df=877*	R^2=.677, *df=883*	R^2=.720, *df=872*

Notes: $^{\Delta}$Difference multiplied by 100. *** Significant at 1 percent level; ** at 5 percent level; and * at 10 percent level.
Results after correcting for multicollinearity and leaving out non-significant controls.
df stands for degrees of freedom.

Table 6. Model with the LED variables

Dependent variable: MMDI difference 2005-1990[Δ]	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Ln Income per capita	0.198	0.425	0,458	0,196	0,424	0,268	0,487	0,293	0,035
	(.520)	(.511)	(.517)	(.519)	(.522)	(.516)	(.517)	(.525)	(.512)
Development plan	**0.726***							**0.793***	**1.186****
	(.377)							(.485)	(.537)
Sustainability		-0.402						-0.420	**-0.950****
		(.403)						(.423)	(.483)
Entrepreneurship			-0.251					**-0.763***	0.098
			(.368)					(.460)	(.494)
Capacity building				**0.740***				**1.113****	**1.150****
				(.364)				(.498)	(.489)
Participation mechanisms					-0.079			-0.719	-0.615
					(.376)			(.524)	(.602)
Development links						**0.453***		**0.639***	**1.131*****
						(.281)		(.348)	(.368)
Autonomy							-0.312	**-0.753****	**-1.244*****
							(.303)	(.351)	(.376)
% Literacy rate	0.061**	0.068**	0.062**	0.065**	0.064**	0.058**	0.066**	0.064**	0.039
	(.028)	(.028)	(.028)	(.028)	(.028)	(.028)	(.028)	(.028)	(.027)
% Services	0.173***	0.179***	0.180***	0.178***	0.179***	0.176***	0.180***	0.181***	0.138***
	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)	(.015)
% Floor material	0.085***	0.078***	0.079***	0.083***	0.080***	0.085***	0.080***	0.085***	0.088***
	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)
% Indigenous households	- 0.016**	- 0.016**	- 0.016***	- 0.015**	- 0.016***	- 0.015**	- 0.015**	- 0.011*	-0.003
	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.007)
Primary sector	-0.042***	-0.037***	-0.037***	-0.040***	-0.037***	-0.038***	-0.038***	-0.038***	-0.061***
	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)
Migrants	0.067***	0.074***	0.073***	0.065***	0.072***	0.069***	0.075***	0.071***	0.056**
	(.021)	(.021)	(.021)	(.021)	(.021)	(.021)	(.021)	(.021)	(.022)
Urban	-2.064***	-2.263***	-2.169***	-2.239***	-2.235***	-2.265***	-2.196***	-2.118***	-1.792***
	(.685)	(.683)	(.685)	(.680)	(.686)	(.681)	(.682)	(.699)	(.682)
State controls	No	No	No	No	No	No	No	No	Yes
n= 898, df (1 to 7)= 888	R^2=.673	R^2=.672	R^2=.672	R^2=.673	R^2=.672	R^2=.673	R^2=.672	R^2=.679	R^2=.723

Notes: [Δ]Difference multiplied by 100. *** Significant at 1 percent level; ** at 5 percent level; and * at 10 percent level.

Results after correcting for multicollinearity and leaving out non-significant controls. ***df*** stands for degrees of freedom.

Table 7. Model with different variable combinations

Dependent variable: *MMDI difference 2005-1990*[Δ]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Development plan & entrepreneurship	0.165					0.474				
	(.224)					(.304)				
Development plan & capacity building		**0.502****					**0.790*****			
		(.216)					(.284)			
Capacity building & entrepreneurship			0.168					**0.577****		
			(.211)					(.270)		
Capacity building & participation mechanisms				0.230					**0.546***	
				(.213)					(.282)	
Development plan & development links					**0.429****					**0.743*****
					(.199)					(.231)
Ln Income per capita	0.308	0.112	0.307	0.261	0.146	0.158	0.090	0.104	0.159	0.048
	(.523)	(.523)	(.522)	(.525)	(.522)	(.510)	(.509)	(.510)	(.509)	(.509)
% Literacy rate	0.064**	0.063**	0.065**	0.064**	0.057**	0.029	0.025	0.032	0.028	0.019
	(.028)	(.028)	(.028)	(.028)	(.028)	(0.27)	(.027)	(.027)	(.027)	(.027)
% Services	0.177***	0.175***	0.178***	0.178***	0.173***	0.141***	0.141***	0.144***	0.145***	0.136***
	(.014)	(.014)	(.014)	(.014)	(.014)	(.015)	(.014)	(.014)	(.014)	(.014)
% Floor material	0.082***	0.085***	0.081***	0.082***	0.087***	0.080***	0.082***	0.078***	0.079***	0.085***
	(.014)	(.014)	(.014)	(.014)	(.014)	(.013)	(.013)	(.013)	(.013)	(.013)
% Indigenous households	-0.016**	-0.015**	-0.016**	-0.015**	-0.015**	-0.010*	-0.011*	-0.011*	-0.010	-0.010
	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)	(.006)
Primary sector	-0.039***	-0.042***	-0.039***	-0.040***	-0.041***	-0.061***	-0.061***	-0.061***	-0.061***	-0.060***
	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)	(.012)
Migrants	0.070***	0.064***	0.070***	0.068***	0.067***	0.061***	0.053**	0.058***	0.055**	0.057***
	(.021)	(.021)	(.021)	(.021)	(.021)	(.022)	(.022)	(.022)	(.023)	(.022)
Urban	-2.211***	-2.118***	-2.252***	-2.174***	-2.164***	-1.700**	-1.674***	-1.795***	-1.698**	-1.718**
	(.682)	(.681)	(.683)	(.682)	(.680)	(.681)	(.679)	(.682)	(.681)	(.678)
State controls	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
n = 898, df(1-5)= 888	R2=.671	R2=.673	R2=.671	R2=.672	R2=.673	R2=.717	R2=.719	R2=.718	R2=.718	R2=.720

Notes: [Δ]Difference multiplied by 100. *** Significant at 1 percent level; ** at 5 percent level; and * at 10 percent level.

Results after correcting for multicollinearity and leaving out non-significant controls. ***df*** stands for degrees of freedom.