ECONOMIC GROWTH AND HUMAN DEVELOPMENT IN THE MAGIC TOWNS AND CHARMING TOWNS OF THE STATE OF MEXICO

Fermín Leonel Reyes
Full-time Research Professor of the ``Unidad Académica Profesional Cuautitlán Izcalli`` de ``Universidad Autónoma`` of the State of Mexico
https://orcid.org/0000-0001-8749-6691

Marco Antonio Piña Sandoval
Research professor of ``Unidad Académica Profesional Cuautitlán Izcalli`` de ``Universidad Autónoma`` from the State of Mexico, Candidate for SNI
https://orcid.org/0000-0001-6737-3774

Jorge Rogelio Zenteno Domínguez
Full-time Research Professor of: UAMex

Montserrat Piña Cárdenas
Head of the Quanti laboratory of the: Universidad Autónoma Metropolitana Unidad Azcapotzalco

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Abstract: The purpose of this document is to analyze the economic activity index of the municipalities where the Magic Towns and Charming Towns of the State of Mexico are located and its relationship with the categories and components of the Human Development Index, where the main economic activity It is in the tourism sector. For this, the activity index is considered as the dependent variable for the thirty two municipalities of the entity and the categories of the human development index as the independent variables. The statistical analysis reflects that there is a positive dependence on economic growth with the components of human development, which indicates that economic growth depends on people having education, health and a considerable level of income to cover their basic needs and boost the tourism sector.
Keywords: Economic growth, human development, magical towns, charming towns.

INTRODUCTION

For the Royal Spanish Academy, the word tourism comes from the English tourism and is conceptualized as an activity or fact of traveling for pleasure, or as the set of means leading to facilitating tourism trips. This well-planned activity by all the parties involved, undoubtedly allows generating economic growth for the communities in which their geography, natural resources and human resources are considered, which with a correct organization achieve an increase in local investments, which gives way to spaces conducive to generating jobs and promoting other activities that support tourism such as agriculture, fishing or the manufacture of handicrafts, for example. (Moreno and Coromoto, 2010, p. 136). The tourist activity is not only generating income, it is also a task that allows to consolidate the cultural identity of the inhabitants of the communities and towns, likewise, their traditions and customs are strengthened to give cohesion to their members.

In the country, tourism is classified into categories according to the type of activities that are carried out in each one of them, these categories are: sports tourism, leisure tourism, cultural tourism and business tourism. The four categories are encompassed, among others, in the classification of magical towns and charming towns. In accordance with the general guidelines for the incorporation and permanence of the magical towns program (2014), the following denomination is made:

That Magical Towns is a Program consistent with the axes of the National Tourism Policy, which comprehensively establish as a national priority, promoting Mexico as a world-class tourist destination, through the promotion of the patrimonial, tangible and intangible wealth of our country ; what has obviously been achieved with this Program that promotes inter-institutional coordination and coordination with states and municipalities; diversifies and improves the quality of tourist destinations, products and services; stimulates and encourages public and private investment to generate economic benefits and employment; in addition to promoting social and economic development for the benefit of the host community. (DOF 2014 p. 1)

The concept of "Magic Towns" is applied to a group of Mexican communities which have preserved over time their architecture, their customs and their history as part of their culture; This term has been raised as a label with which municipal governments can request economic resources that are destined for items to carry out public works mainly, which is why many entities of this type seek them by applying to obtain the denomination. For the Ministry of Tourism, a Magical Town is a town that "through time and in the face of modernity, has preserved its value and cultural historical heritage."

ECONOMIC GROWTH

Economic growth is associated with the municipal index of economic activity (IMAE), an indicator built by the Institute of Geographical, Statistical and Cadastral Information and Research of the State of Mexico (IGECEM), which considers the three sectors of economic activity and in accordance with the North American Industrial Classification (NAICS).

It seeks to estimate the municipal contribution to the aggregate of state economic activity. It provides, therefore, information on economic activity at the municipal level with a pertinent temporality and sectoral breakdown for the analysis of the economic development of municipalities (IMAE, 2021).

For the period 2010 - 2020, the 11 municipalities where the Magic Towns (PM) are located, the IMAE has had an average annual growth of 2.8%, with strong dynamism in the years 2012 and 2015 with growth close to 8%. In this sense, in the 21 municipalities where the Charming Towns (PCE) are located, it had an annual growth of 3.7%, almost one percentage point above the PM, with an increase close to 8.5% in the years 2012 and 2014.

In both PM and PCE, economic activity was affected for reasons of COVID-19. For 2019 and 2020, growth was -0.9% and -6.5% in PM, and -2.2% and -7.4% in PCE, respectively, with a moderate recovery for the following two years.

The municipalities with the highest economic participation in the MP group are Metepec with 53%, Tepotzotlán with 23% and Valle de Bravo with an average 14.2%. It must be noted that the first municipality belongs to the Toluca Valley Metropolitan Zone (ZMCT), the second to the Mexico City Metropolitan Zone (ZMCM) and the third is a tourist destination par excellence in the State of Mexico.

In the PCE municipalities as a whole, the percentage of participation is 47.5% for Lerma, 13.9% for Acolman and 13.2% for Zinacantepec. The first belongs to the ZMCT with an important industrial and commercial activity, the second municipality is in the ZMCM and limits to the West with Ecatepec de Morelos and the third, close to the City of Toluca with cultural and tourist tradition of the entity.

The municipalities with the lowest economic participation are: Tonatico with 0.4%, El Oro with 0.7% and Villa del Carbón with 0.8% for PM, however, they are demarcations with greater tourist attractions and natural resources that favor them. Regarding PCE, the municipalities with zero participation in economic activities are: Papalotla with 0.1% located in the Texcoco area, Ayapango with 0.2% next to the Iztaccíhuatl volcano, Nopaltepec with 0.4% bordering the State of Hidalgo to the north. and Sultepec with 0.4% belonging to the Tierra Caliente region.

HUMAN DEVELOPMENT

In the area of Human development, two periods 2010 and 2015 are analyzed in four main categories: average years of schooling, expected years of schooling, per capita income and infant mortality rate.

In the average years of schooling, there is a slight increase from 7.3 to 7.9 years completed in PM and from 6.9 to 7.6 years in PCE. This indicates that the average population has completed primary school and a year and a half of high school. In expected years of schooling there is a slight increase of 0.9% in the 32 municipalities for the same five-year period from 2010 - 2015, given the expectation that the population will conclude with upper secondary education.

In child deaths, for the same five years, the number of deaths in PM and 25 in PCE has remained at 24. Although there were

Concept	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	TMC
state IMAE	1,277,706.7	1,336,900.4	1,394,592.3	1,420,533.8	1,461,107.2	1,507,329.0	1,552,355.0	1,628,120.6	1,682,522.3	1,650,625.8	1,533,183.8	1.8
IMAE Magic towns (PM)	69,006.1	73,696.2	79,137.0	82,304.8	84,638.8	91,645.9	92,413.0	95,405.7	98,455.1	97,562.6	91,226.0	2.8
IMAE Charming Towns (PCE)	52,357.5	55,869.8	60,482.7	61,325.9	66,570.0	71,035.8	73,158.4	78,702.8	82,893.6	81,083.4	75,117.2	3.7

Table 1 - Municipal Index of Economic Activity in the municipalities where the Magic Towns and Charming Towns are located (millions of pesos of 2013)

Source: Prepared based on the Municipal Index of Economic Activity, Ministry of Finance IGECEM, GEM 2021.

Concept	Education Index 2010	Education Index 2015	Health Index 2010	Health Index 2015	Income rate 2010	Income rate 2015	Human Development Index 2010	Human Development Index 2015
State IIHR	0.624	0.619	0.8380	0.8420	0.776	0.793	0.74	0.745
IDH Magic Towns (PM)	0.5777	0.6198	0.8105	0.8110	0.7313	0.7281	0.6987	0.7147
IDH Charming Towns (PCE)	0.5563	0.6057	0.8013	0.8020	0.7174	0.7145	0.6831	0.7023

Table 2 - Municipal Human Development Report 2010-2015

Source: Prepared based on the Human Development Research Office (UNDP, Mexico)).

Variables	Correlation without Log	Intersection with Log	Slope with log	Variables	Correlation without Log	Intersection with Log	Slope with log
IMAE Ieduc 2010	0.5364	1.1778	3.2266	IMAE Ieduc 2015	0.5113	1.3152	2.9914
IMAE Isal 2010	0.3640	0.6614	2.9027	IMAE Isal 2015	0.3909	1.4997	2.0393
IMAE IIngr 2010	0.4601	-0.6761	5.0856	IMAE IIngr 2015	0.5074	-0.5261	5.1001
IMAE -IDH2010	0.4857	0.3180	3.8902	IMAE -IDH2015	0.4856	0.8266	3.2764

Table 3 - Statistical Analysis of the IAEM and the components of the HDI

Source: Prepared based on data from the IDH and the Municipal Index of Economic Activity.

no increases, the number of infant deaths is considerable and has to do with the health services offered by state and federal institutions, but little participation by municipal authorities.

One of the most important variables is income per person which, for the same period, increased by 0.4% with difficulty, going from 2,283.5 to 2,293.0 dollars in PM and on average represents 45,000 pesos per year. In the PCE, the PCE increased 1.5%, going from 2,065.5 to 2,099 dollars and represents about 42,000 pesos per year and per month the income is 3,500 pesos.

The components of the Human Development Index (HDI) are the education, health and income indices. For the five years 2010 - 2015, the first index is very low in the municipalities of Aculco and Villa del Carbón for PM, this data is between 0.4985 and 0.4808. For the same index, the municipalities of Donato Guerra and Zacualpan that make up the PCE reflect between 0.4345 and 0.4808.

The health index, represented by the infant mortality rate, the lowest indicator for the PM is El Oro, again Aculco and Villa del Carbón. In this sense, in the PCE the representatives are Sultepec, Temascaltepec and again Donato Guerra. We must keep in mind that health services are different in the municipalities of the Mexican state.

The lowest income levels, reflected in the income index, are in the municipalities of El Oro, Villa del carbon and Malinalco for PM, and in PCE are Donato Guerrea and Sultepec, demarcations far from metropolitan areas.

Consequently, and it is reflected in the HDI, the lowest indices are found in the Municipalities of Aculco, Villa del Carbón, El Oro for PM and Donato Guerra, Sultepec, Zacualpan and Temascaltepec for PCE.

In the opposite direction, the best HDI is in the municipality of Metepec and is reflected in its three components, education, health and income, one of the best positioned at the state level in this indicator and is part of the PM. Teotihuacán follows in this vein with a slight decrease in the income component, San Martin de las Pirámides and Tepotzotlán with a decrease in health. In the PCE, the most representative municipalities are Papalotla and Tlalmanalco, because in the three components they are the most outstanding demarcations. They are followed by Acolman, Amecameca and Ayapango.

As part of the statistical analysis, only the correlation coefficient and the simple regression model are calculated to determine the degree of association between variables, the intersection with the ordinate axis, and the slope of the function, where the dependent variable is the municipal index of economic activity IMAE and the independent variables are the education indexes (Iedu), health index (Isal), income index (IIng) and the human development index IDH.

We can see that there is a direct relationship between the activity index and the Iedu, that is, if the population is prepared, it can contribute to economic growth, regardless of the level of activity. In this sense, if the population is healthy, it will have the energy to carry out any activity. Likewise, if the IMAE is related to the IIng and has a positive correlation, the consequence is that there is a dependency of the economic activity with the income levels of the families. Therefore, the positive correlation of the municipal economic activity with the HDI implies that people with education, good health and a considerable level of income will boost the economic activity of the entity, the PM and the PCE.

FINAL COMMENTS

In this document we can observe the importance of the components of the Human Development Index, education, health and income in promoting the economic activity

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of the PM and PCE, and not only in these municipalities but also in all the demarcations of the country.

It is also observed that the best human development indices associated with economic growth in magical towns are found in municipalities conurbated to the metropolitan areas of Mexico City and the City of Toluca. In the case of charming towns, the best human development indices are found in municipalities far from the metropolis, however, economic growth is not so considerable, nor does it contribute to regional or state production.

Being PM and PCE, they do not necessarily contribute to the economic growth of the entity, despite the fact that tourist activity is predominant. This is due to the limited public investment in these municipalities that will undoubtedly detonate tourist activity, the best urban image and the dissemination of culture of those towns with a tourist vocation.

Human Development is not the best in municipalities far from the metropolis either, there is still an educational gap, lack of health services and low income levels, which is necessary for the professionalization of tourist services so that they are better paid and promote this activity and be a trigger for regional development.

REFERENCES

DOF (2014). Acuerdo por el establecimiento de los lineamientos generales para la incorporación y permanencia del programa Pueblos Mágicos, SEGOB, México.

IGECEM (2021). índice municipal de actividad económica, Gobierno del Estado de México.

López-Calva, Luis F. y Szkély, Miguel (2006). Medición del Desarrollo Humano en México, Fondo de Cultura Económica, México.

Morillo Moreno, Marysela Coromoto (2011). Turismo y producto turístico. Evolución, conceptos, componentes y clasificación, Redalyc.

OMT enero 2020. García, R. Aprende de turismo.org, Recuperado de: https://www.aprendedeturismo.org/evolucion-del-turismo-mundial-segun-la-organizacion-mundial-del-turismo/

PNUD (2010). Informe sobre Desarrollo Humano 2010. México.

PNUD (2010). Informe sobre el desarrollo Humano 2010. Mundi – Prensa, México.

PNUD (2014). Índice de desarrollo humano municipal en México: nueva metodología, México.

https://www.clasificacionde.org/clasificacion-de-turismo/

http://www.dof.gob.mx/nota_detalle.php?codigo=5361690&fecha=26/09/2014