

Diferencias territoriales en la economía del estado de Guerrero, México

Territorial Differences in the Economy of the State of Guerrero, Mexico

Diferenças territoriais na economia do estado de Guerrero, México

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Resumen

El estado de Guerrero ha sido estudiado desde la óptica de varias disciplinas de las ciencias sociales; destacan los trabajos históricos, etnográficos, antropológicos, económicos, políticos y geográficos. Pese a ello, la configuración económica-territorial de la entidad y las implicaciones sociales de esta demandan más obras que examinen los rasgos fundamentales de este estado de México. En este sentido, el análisis de la dinámica económica guerrerense desde el enfoque territorial es un aporte substancial a la elucidación de las disparidades socioeconómicas contemporáneas de dicho estado. Con tal propósito investigativo, en este artículo se utilizó la tipificación probabilística. Esta metodología se caracteriza por el contenido esencial del método de tipificación, la repetitividad territorial y la jerarquía, lo que facilita visualizar las disparidades que prevalecen en el conjunto de procesos u objetos analizados. En esta ocasión, se emplearon cuatro indicadores para evaluar el nivel de desarrollo socioeconómico que presentan los diferentes municipios guerrerenses. Con base en esto, fue posible identificar que las diferencias territoriales

en la economía de Guerrero son de tipo y magnitud distinta, lo cual advierte la intervención de actores políticos y económicos locales, regionales, nacionales y, recientemente, multinacionales, quienes han definido las áreas donde ocurre la introducción de diversas inversiones económicas.

Palabras clave: diferencias territoriales, nivel de desarrollo municipal, tipificación probabilística.

Abstract

The state of Guerrero has been studied from the perspective of several disciplines of the social sciences, highlighting the historical, ethnographic, anthropological, economic, political and geographical works. In spite of this, the economic-territorial configuration of the entity and its implications demand more works that examine the fundamental features of this state of Mexico. In this sense, the analysis of the economic dynamics of Guerrero from the territorial approach is a substantial contribution to the elucidation of contemporary socioeconomic disparities of that state. With this investigative purpose, in this article probabilistic typification was used. This methodology is characterized by the essential content of the typing method, territorial repetitiveness and hierarchy, which facilitates visualizing the disparities that prevail in the set of processes or objects analyzed. On this occasion, four socioeconomic indicators were used to assess the level of municipal development presented by the different Guerrero municipalities. Based on this, it was possible to identify that the territorial differences in the economy of the state of Guerrero are of a different type and magnitude; they reflect the intervention of political and economic actors: local, regional, national and, recently, multinationals, who have defined the areas where the introduction of various economic investments occurs.

Keywords: territorial differences, level of municipal development, probabilistic typification.

Resumo

O estado de Guerrero foi estudado a partir da perspectiva de várias disciplinas das ciências sociais; Destacam-se os trabalhos históricos, etnográficos, antropológicos, econômicos, políticos e geográficos. Apesar disso, a configuração econômico-territorial da entidade e suas implicações sociais exigem mais trabalhos que examinem as características fundamentais desse estado do México. Nesse sentido, a análise da dinâmica econômica de Guerrero a partir da abordagem

territorial é uma contribuição substancial para a elucidação das disparidades socioeconômicas contemporâneas desse estado. Para este objetivo de pesquisa, neste artigo foi utilizada a tipagem probabilística. Essa metodologia é caracterizada pelo conteúdo essencial do método de digitação, repetibilidade territorial e hierarquia, o que facilita a visualização das disparidades que prevalecem no conjunto de processos ou objetos analisados. Nesta ocasião, quatro indicadores foram utilizados para avaliar o nível de desenvolvimento socioeconômico apresentado pelos diferentes municípios de Guerrero. Com base nisso, foi possível identificar que as diferenças territoriais na economia de Guerrero são de um tipo e magnitude diferentes, o que alerta para a intervenção de atores políticos, econômicos, locais, regionais, nacionais e, recentemente, multinacionais, que definiram as áreas onde ocorre a introdução de vários investimentos econômicos.

Palavras-chave: diferenças territoriais, nível de desenvolvimento municipal, classificação probabilística.

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Introduction

The objective of this article was to reveal territorial differences in the economy of the state of Guerrero. And for that purpose the levels of socioeconomic development that exist in this entity of the Mexican Republic were evaluated. In that sense, a basic cognitive reference of this research is the work of Propin, Sánchez and Casado (2006), which explains the socioeconomic differences of the federative entities of the country. In this text, territorial divergences are conceived as a cognitive notion that allows us to propose general knowledge useful for land use planning. The contributions of the different disciplines to the works of territorial planning, and especially of geography with the use of geographic information systems, have allowed technical personnel or people with other disciplinary training to carry out activities related to this topic.

The research of Propin et al. (2006) showed: 1) the levels of socio-economic development, which are defined as the changing disproportion that exists between the evaluated territories, estimated by socioeconomic indicators selected for this purpose; 2) the socioeconomic potential, which is understood, meanwhile, as the measurable expression of the comparative advantages or factors of a territory, and 3) the territorial socioeconomic divergence, which encompasses the available qualities of a territory and the contrasts that exist between the changing development

achieved in this. The findings revealed for the 32 entities of the Mexican Republic show a marked socioeconomic divergence. However, the authors point out that public policies, through their government programs aimed at territorial planning in Mexico, have treated the 32 entities in the same way in the allocation of financial resources, which has generated a greater inequality gap between one entity and another, due to its particular socio-economic characteristics.

In the state of Guerrero, the territorial differences of the economy are of a different type and magnitude; they reflect the intervention of local, regional, national and, recently, multinational political and economic actors, who have defined the areas where the introduction of various economic investments occurs. To corroborate this premise, the entity's 81 municipalities were evaluated from the perspective of probabilistic classification and the following four socioeconomic indicators were used: 1) Population density (DP), 2) Degree of urbanization (GU), 3) Gross rate of economic activity (TBAE) and 4) Coefficient of economic dependence (CDE). It should be noted that this methodology has been used in different geographical-economic investigations due to its usefulness in assessing the territorial disproportions that usually occur within Mexican entities. In that order of ideas, the contributions made by researchers from the Department of Economic Geography of the National Autonomous University of Mexico [UNAM] stand out; in particular, the work of Propin and Sánchez (1998), which has established itself as an indispensable theoretical-methodological reference for those works whose central objective is to reveal economic-territorial differences.

Study area

The state of Guerrero is located in the south of the Mexican Republic. This federative entity has a territorial extension of 63 794 km² (3.2 % from the surface of the country). The Guerrero political-administrative division is made up of 81 municipalities, which are grouped into the following regions: Acapulco, Centro, Costa Grande, Costa Chica, Montaña, Norte and Tierra Caliente (see table 1 and figure 1). According to the National Institute of Statistics and Geography [Inegi] (2019), Guerrero has 3 533 251 inhabitants (3.0% of the national total). The following demarcations stand out for the number of inhabitants: Acapulco de Juárez (810 669), Chilpancingo de los Bravo (273 106), Iguala de la Independencia (151 660), Chilapa de Álvarez (129 867), Zihuatanejo de Azueta (124 824) and Taxco de Alarcón (108 416). In Guerrero, 78% of the population resides in urban settlements and 22% in rural locations (Inegi, 2019).

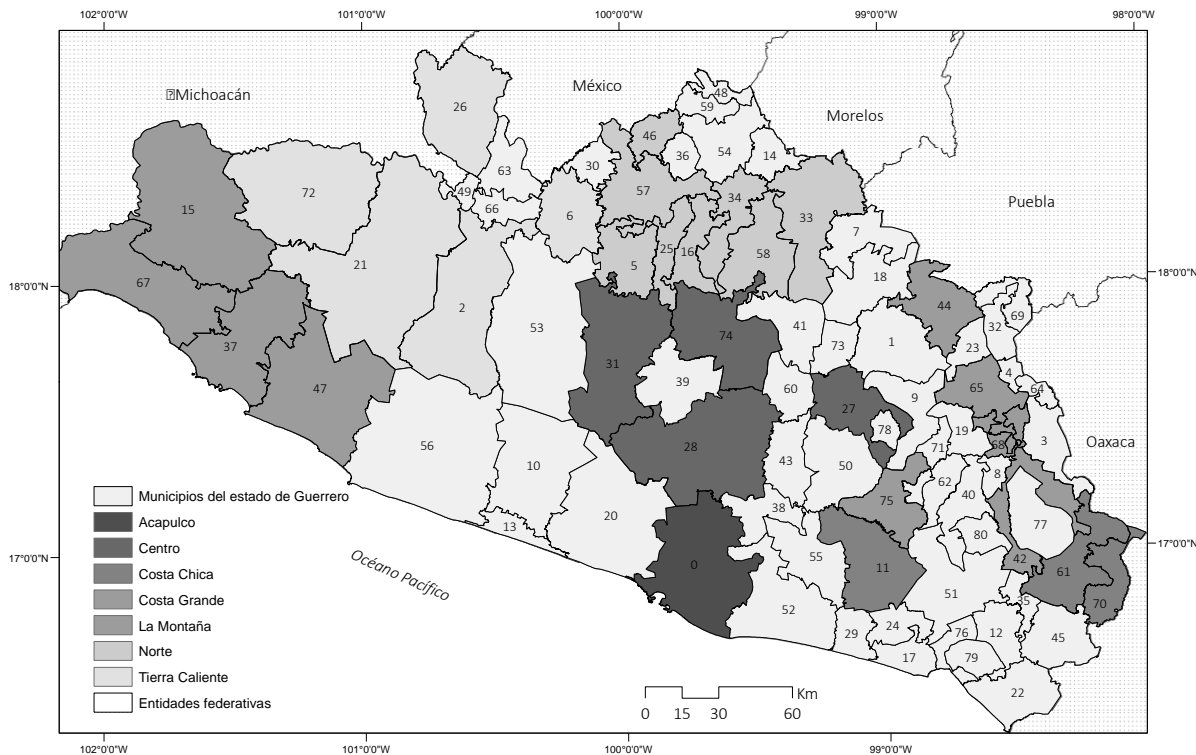
Tabla 1. Guerrero: división político-administrativa

Clave	Nombre	Clave	Nombre	Clave	Nombre
0	Acapulco de Juárez	28	Chilpancingo de los Bravo	56	Técpan de Galeana
1	Ahuacuotzingo	29	Florencio Villarreal	57	Teloloapan
2	Ajuchitlán del Progreso	30	General Canuto A. Neri	58	Tepecoacuilco de Trujano
3	Alcozauca de Guerrero	31	General Heliodoro Castillo	59	Tetipac
4	Alpoyeca	32	Huamuxtitlán	60	Tixtla de Guerrero
5	Apaxtla	33	Huitzuc de los Figueroa	61	Tlacoachistlahuaca
6	Arcelia	34	Iguala de la Independencia	62	Tlacoapa
7	Atenango del Río	35	Igualapa	63	Tlalchapa
8	Atlamajalcingo del Monte	36	Ixcateopan	64	Tlalixtaquilla de Maldonado
9	Atlixac	37	Zihuatanejo de Azueta	65	Tlapa de Comonfort
10	Atoyac de Álvarez	38	Juan R. Escudero	66	Tlapehuala
11	Ayutla de los Libres	39	Leonardo Bravo	67	La Unión de Isidoro Montes
12	Azoyú	40	Malinaltepec	68	Xalpatláhuac
13	Benito Juárez	41	Mártir de Cuilapan	69	Xochihuehuetlán
14	Buenavista de Cuéllar	42	Metlatónoc	70	Xochistlahuaca

15	Coahuayutla	43	Mochitlán	71	Zapotitlán Tablas
16	Cocula	44	Olinalá	72	Zirándaro
17	Copala	45	Ometepec	73	Zitlala
18	Copalillo	46	Pedro Ascencio Alquisiras	74	Eduardo Neri
19	Copanatoyac	47	Petatlán	75	Acatepec
20	Coyuca de Benítez	48	Pilcaya	76	Marquelia
21	Coyuca de Catalán	49	Pungarabato	77	Cochoapa el Grande
22	Cuajinicuilapa	50	Quechultenango	78	José Joaquín de Herrera
23	Cualác	51	San Luis Acatlán	79	Juchitán
24	Cuautepec	52	San Marcos	80	Iliatenco
25	Cuetzala del Progreso	53	San Miguel Totolapan		
26	Cutzamala de Pinzón	54	Taxco de Alarcón		
27	Chilapa de Álvarez	55	Tecoanapa		

Fuente: Inegi (2019)

Figura 1. Guerrero: división político-administrativa



Fuente: Inegi (2019)

Framework

To account for the economic-territorial differences of the state of Guerrero, the following is an exposition of some of the main theories that set the tone to explain the findings that will be revealed in the subsequent sections.

a) Center-periphery model. This presents the territorial organization, in which the center-periphery structure denotes uneven development. While the centers are endowed with capitalist techniques, the peripheries are lagging in technological and organizational terms (Rodríguez, 1977). The pioneers of this model are Myrdal (1957) and Hirschman (1973). The territory is organized based on the magnitude and distance between the center and the periphery; Multiple centers and peripheries can be presented on the same territorial scale.

This type of model is also defined as the representation of:

The spatial organization of human activities based on the unequal distribution of power in the economy and society. The center dominates (although it can be dominated from the outside) while the periphery is dependent. These dependencies are structured through exchange relations between the center and the periphery. The unequal exchange, the concentration of economic power, technical progress and economic activities in the center and its diffusion of productive innovations help to maintain the flow of values to the periphery (Johnston, Gregory, Haggett, Smith y Stoddart, 1981, citados en Propin, 2003, p. 53).

b) Theory of geographical space in underdeveloped states. It arises from the investigations carried out by Santos (1988) around the periphery; It focuses its interest on the society-nature relationship, and gives rise to the analysis of geographical space. Based on the recognition of existentialist categories and their critical positions, Santos (1988) proposed that one could contribute to a better world not only based on reason, but also on emotion. In that sense, the premise is the following: the need to apprehend the geographical space as a concrete expression of total social competence as opposed to the economic, abstract and selective space, prioritizing business interests and planning efforts. The interpretation of the world from the periphery has contributed to understanding the relationship between space processes and their articulation with centers; the materialist vision of space, the link with the category time and articulation with a society perspective (Zusman, 2001).

c) Agglomeration theory. This gravitates around the concentration of economic activities in cities (Manrique, 2006). It has allowed us to understand why industries or employment centers are concentrated in certain spaces, which serves as an attraction to carry out economic, political or social relations activities. In this regard, Propin (2003), citing Larkin and Peters (1986) and Johnston (1983), states the following:

Based on the premise that the expansion of manufacturing in a country is disproportionately attracted to major urban centers (...). Industry agglomeration results when costs for firms are reduced as a result of joint concentration (...). Weber (1909) was the pioneer of this theoretical perspective, also highlights the works of Haig and McCrea (1927), Lampart (1954), Perroux (1955), Boudeville (1966) and

Thompson (1968) (...). This theory continues to be an important element in economic development research and urban structure. (p. 51).

d) The theory of economic location as an explanatory framework of territorial disparities in the economy can be approached in two ways: 1) “the scientific study of the effects of geographical space on the location and distribution of economic activities” and 2) “ the scientific study of the spatial patterns of economic activities ”, which are based on “ the works of Von Thünen (1875), Weber (1909) and Lösch (1954) ”(Propin, 2003, p. 48). Thünen (1875, cited in Canton, García, León, Rico and Torcal, 1986), in its economic model called the isolated state, presents a single city in the center of a plain, in which the inhabitants exchanged goods manufactured for agricultural products, the automobile being the only means of transport, while agricultural products were grown around the city and the location of the crops was based on the cost of transportation (opportunity cost); the farthest lands would be occupied by forests, which could be used to break in case of an expansion of the economy.

At the beginning of the 19th century, Weber was looking for a theoretical model that explained the industrial location; During this period, urban development was observed due to the concentration of the German and English population near mineral deposits. Following Asuad (2014), who details Weber's thinking, the logic of a company to decide its location had two alternatives: the market and raw materials. This is based on physical distance and transportation costs (finished product-raw material), variables that should be taken into account to determine alternative location sites. Years later, Lösch (1955) developed a space economy model. In this, space meets a fundamental variable in conditions of imperfect competition. Through the delimitation of the market area, Lösch (1955) imagined the concept of an ideal economic region. This region would be the result of a spatial concentration according to which all the networks had a common production center. The spatial concentration of activities is the conclusion reached by this author, even though his assumption of departure was the homogeneous distribution of productive factors and population throughout the entire space.

This theoretical review was intended to lay some groundwork for understanding the territorial differences of the state of Guerrero. In sum, we can see the existence of different theories that allow us to understand the socioterritorial transformations of the space in question; just like the center-periphery, which shows the bipolarity between the centers endowed with capitalist practices and the lag of the peripheries. From this vision emerges, in turn, the theory of the

geographical space of underdeveloped states, generated from the periphery, where their spatial processes, the materialistic vision of space and the time category reveal another way of approaching the study of the territory. Likewise, the theory of economic location has allowed us to have a reference to explain the implementation of economic activities in space and the concentration of specialized industries in certain urban areas; which gives way to the generation of agglomeration theory, which gives guidelines to understand the concentration of economic activities in certain cities and unlike others.

Materials and method

Unlike other methods, in the probabilistic classification, care must be taken that the number of indicators does not exceed five or less than three. On this occasion, the methodological approach of Propin et al. (2006). However, when testing the indicators for the municipalities that make up Guerrero, a lack of feasibility of using them used in the aforementioned study was identified. Consequently, four indicators were defined that allowed measuring the level of socioeconomic development in this research (table 2). It should be clarified that "the level of socioeconomic development was defined as the relative disproportion that lies between the territories estimated from selected indicators" (Propin *et al.*, 2006, p. 163).

Tabla 2. Indicadores elegidos para medir los niveles de desarrollo socioeconómico

Indicador	Definición
Densidad de población (DP)	Es el resultado de dividir la cantidad de habitantes que viven en una unidad territorial entre la extensión de esta.
Grado de urbanización (GU)	Es el porcentaje que representa la población de un asentamiento urbana respecto a la población que vive en la unidad territorial que circunscribe a dicha ciudad.
Tasa bruta de actividad económica (TBAE)	Se calcula como el cociente resultante de dividir la población económicamente activa entre la población total de la demarcación en cuestión multiplicado por 100.
Coeficiente de dependencia económica (CDE)	Es el resultado de dividir la suma de la población menor de edad, más personas de la tercera edad y población desocupada, dividido entre la población económicamente activa ocupada, multiplicado por 100.

Fuente: Elaboración propia con base en Propin *et al.* (2006)

In relation to the selected indicators, it is important to make the following measurements:

- a) The distribution of the population, between one territory and another, is different; there are places where there is a greater population, such as cities, and others with a lower population concentration, as is the case in rural towns. The relationship between a given space and the number of people who inhabit it is called population density, which is obtained by dividing the number of people living in a specific place by the number of square kilometers measured by that territory (municipality).

- b) The percentage of population residing in urban areas with respect to the total population of the municipality is known as the degree of urbanization. Changes in population distribution are an indicator of the effects of migratory flows. The changes in the location of the population also provide information on the needs for basic services that the population requires (Economic Commission for Latin America and the Caribbean [ECLAC], 2018).
- c) It is called the gross economic activity rate because it relates the economically active population (PEA) employed and the total volume of the population, including people whose age incapacitates them to participate in the active population. In the case of Mexico, only those over 12 years of age can be part of the PEA. This is a strictly census criterion; in reality it is not claimed that there are no workers under 12 years old (García, 1975).
- d) The municipal population under 12 years of age, plus the unemployed economically active municipal population, plus the economically inactive municipal population, divided by the economically occupied municipal population, results in the coefficient of economic dependence; that is, the percentage of population by municipality that is economically dependent.

The elementary characteristics of the probabilistic typing method are presented below. This method, developed by Thürmer and described by Propin, Ayón and de la Cruz (1985), is characterized by the essential content of the method of typing, territorial repeatability and hierarchy, which facilitates visualizing the qualitative disparities that prevail in the set of processes or objects analyzed. Therefore, for geographical-economic research, the use of indicators that reflect the interaction between socioeconomic scope and the physical environment is suggested. This information is integrated into a matrix that shows its quantitative behavior in each of the constituencies of the territory addressed (see table 3). This database is the work platform to determine the levels of socioeconomic development. And for this purpose the stages described below will be crucial:

- 1) Qualitative classification of indicators. The values of each of the indicators will be sorted in ascending order to observe their variation. This will facilitate the formation of five ranges as qualitative generalization routes (Propin, 2003). The qualifiers to be used and their numerical coding are: very high (5), high (4), medium (3), low (2) and very low (1) (see table 4). Next, a matrix will be developed. In it, the values of the five socioeconomic

indicators will be replaced by combinations of classifying indices that correspond to each spatial reference unit, according to the range assigned to its value (table 5).

- 2) Conformation of typological clouds. A list of the combinations that were presented was prepared, as well as the frequency of each one. That allowed to know all the codes that the entity showed. The most recurrent were considered nuclei from which others were linked that indicate the existence of constituencies with similar socioeconomic behavior. Continuous line was used when the codes deviated from each other in the range of a single indicator. Segmented stripes connected those that did not meet the previous condition. In that case, it was essential to weigh the affinity between a given cloud and the code that is attached (figure 2). Subsequently, it was necessary to establish the level of municipal socio-economic development that refers to each group of codes formed. These were ranked based on the behavior of the correlation coefficients displayed among the four socioeconomic indicators. Those with high reciprocity were taken into account to decide which place a certain typological cloud would occupy (figure 3).
- 3) Revelation of the typology. Each cloud formed was coded by a nomenclature that took into account the number of occasions in which the range corresponding to each socioeconomic indicator was presented. Variations of this were expressed in the four ways exemplified below. (Propin, 2003).
 - 1: He pointed out the existence of very low values in more than 90% of the codes of a cloud.
 - 23: Indicated the predominance of an indicator with a low range (between 80% and 90% of the set of constituencies that make up the level). Secondary cases were presented as subscripts.
 - 2 (3): Revealed the relative predominance of low values (between 50% and less than 80% of the municipalities show that condition). Subscripts and parentheses were used to express other ranges held by the indicator in question.
 - 2,3: It meant that low and medium amounts appeared with the same frequency. This balanced situation was recorded through the use of numbers of equal size (ver tabla 6).

Tabla 3. Ejemplo del comportamiento cuantitativo de los indicadores seleccionados

Municipio	DP (km ²)	GU (%)	TBAE (%)	CDE (%)
Acapulco de Juárez	470	84.39	39.07	146.51
Ahuacuotzingo	31	0.00	18.93	402.32
Ajuchitlán del Progreso	19	0.00	23.46	306.01
Alcozauca de Guerrero	41	0.00	15.34	513.56
Alpoyeca	65	0.00	26.78	254.80
Apaxtla	18	0.00	24.14	293.58
Arcelia	40	59.79	28.23	239.39
Atenango del Río	15	0.00	19.41	391.50
Atlamajalcingo del Monte	39	0.00	7.89	1090.74
Atlixac	47	0.00	22.30	322.28
Atoyac de Álvarez	42	33.41	33.64	185.93
Ayutla de los Libres	67	25.53	26.29	257.61
Azoyú	38	0.00	30.29	216.61
Benito Juárez	65	0.00	36.36	164.30
Buenavista de Cuéllar	44	0.00	37.21	158.13
Coahuayutla	5	0.00	21.21	348.94
Cocula	30	0.00	29.35	226.08
Copala	48	0.00	27.52	247.28
Copalillo	20	0.00	16.88	459.16
Copanatoyac	66	0.00	18.93	396.73
Coyuca de Benítez	42	0.00	33.27	187.21
Coyuca de Catalán	11	0.00	20.45	360.63
Cuajinicuilapa	42	0.00	31.76	200.60
Cualác	32	0.00	17.01	459.11
Cuatepec	53	0.00	27.54	245.42
Cuetzala del Progreso	23	0.00	20.35	370.38
Cutzamala de Pinzón	15	0.00	21.79	338.72
Chilapa de Álvarez	173	25.66	28.95	228.56

Chilpancingo de los Bravo	125	76.68	39.96	139.84
Florencio Villarreal	72	0.00	31.12	206.72
General Canuto A. Neri	23	0.00	14.93	538.82
General Heliodoro Castillo	22	0.00	20.70	356.78
Huamuxtitlán	53	0.00	26.88	256.17

Fuente: Elaboración propia con base en Inegi (2019) y Consejo Nacional de Población [Conapo] (2015)

Tabla 4. Ponderación cualitativa y rangos cuantitativos de los indicadores

Códigos	Ponderación cualitativa	DP (KM ²)	GU (%)	TBAE (%)	CDE (%)
I	Muy bajo	< 30	< 25	< 15	< 350
II	Bajo	30-60	25-40	15-20	350-500
III	Medio	60-90	40-50	20-30	500-600
IV	Alto	90-120	50-60	30-35	600-750
V	Muy alto	> 120	> 60	> 35	> 750

Fuente: Elaboración propia

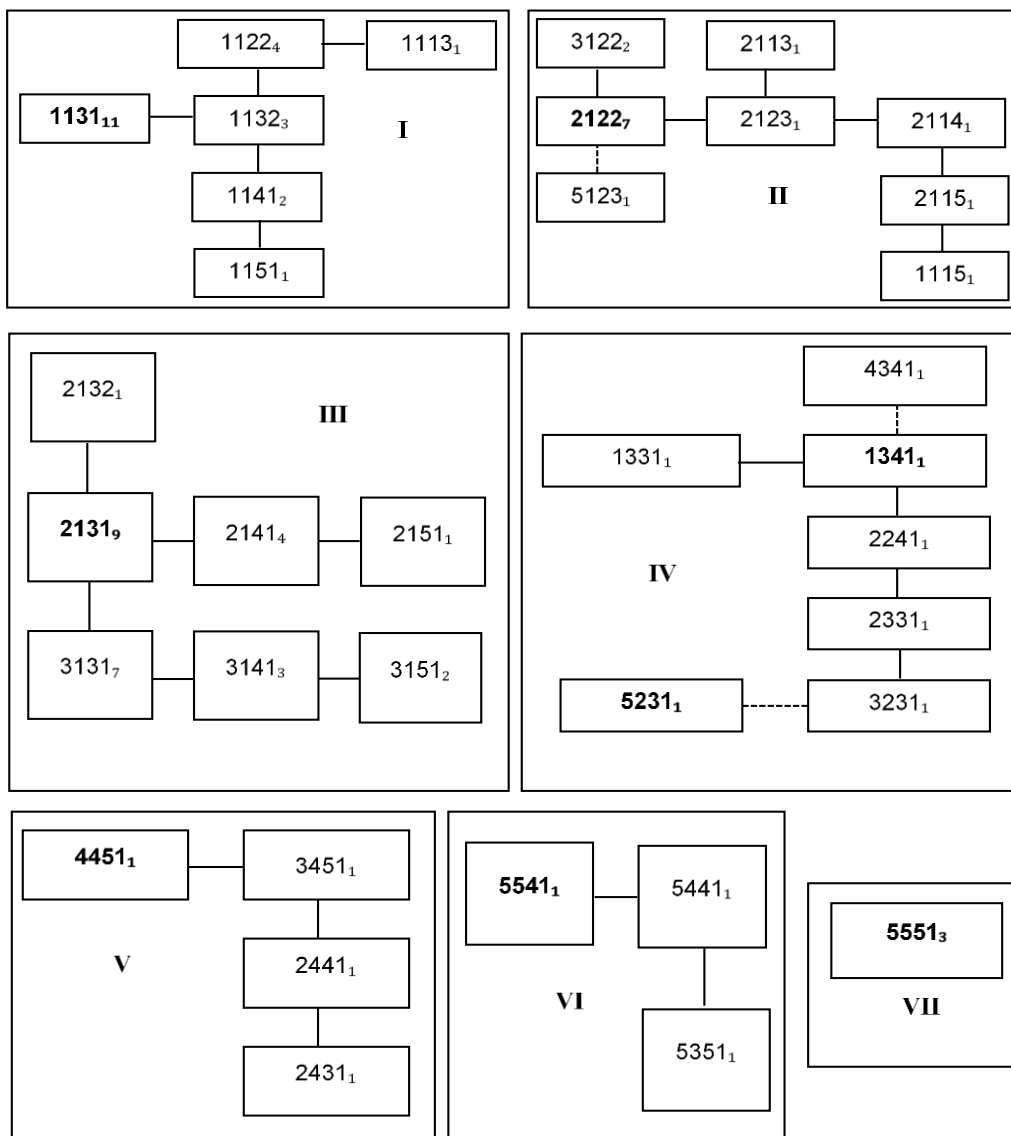
Tabla 5. Ejemplo de la ponderación cualitativa de los indicadores seleccionados

Municipio	DP	GU	TBAE	CDE
Acapulco de Juárez	5	5	5	1
Ahuacuotzingo	2	1	2	2
Ajuchitlán del Progreso	1	1	3	1
Alcozauca de Guerrero	2	1	2	3
Alpoyeca	3	1	3	1
Apaxtla	1	1	3	1
Arcelia	2	4	3	1
Atenango del Río	1	1	2	2
Atlamajalcingo del Monte	2	1	1	5
Atlixac	2	1	3	1
Atoyac de Álvarez	2	2	4	1
Ayutla de los Libres	3	2	3	1
Azoyú	2	1	4	1
Benito Juárez	3	1	5	1
Buenavista de Cuéllar	2	1	5	1
Coahuayutla	1	1	3	1
Cocula	2	1	3	1
Copala	2	1	3	1
Copalillo	1	1	2	2
Copanatoyac	3	1	2	2
Coyuca de Benítez	2	1	4	1
Coyuca de Catalán	1	1	3	2
Cuajinicuilapa	2	1	4	1
Cualác	2	1	2	2
Cuautepec	2	1	3	1
Cuetzala del Progreso	1	1	3	2
Cutzamala de Pinzón	1	1	3	1
Chilapa de Álvarez	5	2	3	1

Chilpancingo de los Bravo	5	5	5	1
Florencio Villarreal	3	1	4	1
General Canuto A. Neri	1	1	1	3
General Heliodoro Castillo	1	1	3	2
Huamuxtitlán	2	1	3	1

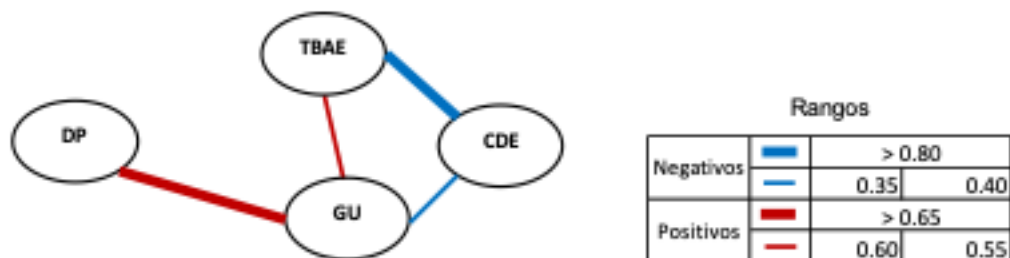
Fuente: Elaboración propia

Figura 2. Agrupación de los códigos en nubes tipológicas



Fuente: Elaboración propia

Figura 3. Esquema de correlación de los indicadores seleccionados



Fuente: Elaboración propia

Tabla 6. Clasificación de los municipios según ponderación cuantitativa

Niveles	Indicadores				Cantidad de municipios
	DP	GU	TBAE	CDE	
I	1	1	(1)(2)3(4)(5)	1(2)(3)	22
II	1,2,3,5	1	1,2	2,3,4,5	15
III	2,3	1	3,4,5	1,2	27
IV	1,2,3,4,5	2,3	3,4	1	7
V	2,3,4	4	3,4,5	1	4
VI	5	3,4,5	4,5	1	3
VII	5	5	5	1	3

Fuente: Elaboración propia

Municipal structure based on its level of socioeconomic development

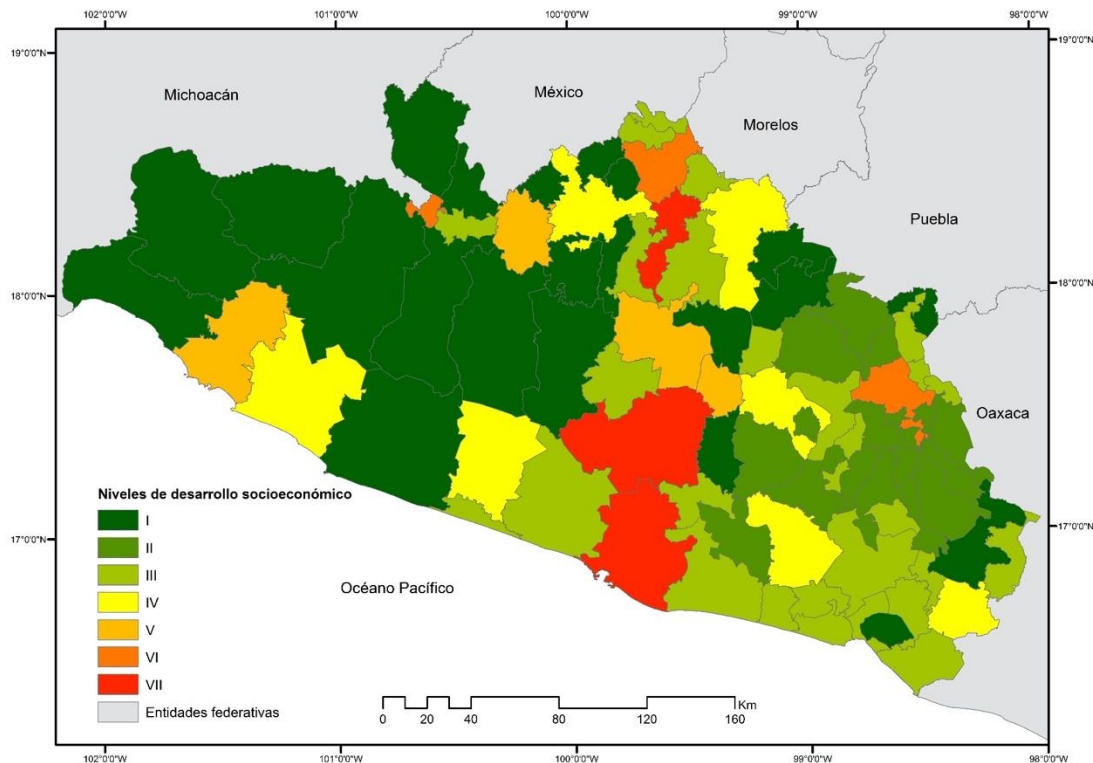
Once the methodological sequence related to the probabilistic typification was developed, the result obtained was the classification of the 81 Guerrero municipalities in seven levels of socioeconomic development. Each level is made up of values with a specific qualitative designation (very low, low, medium, high and very high) (see figure 4). Each of the levels obtained is described below.

- Level I. It is one of the levels where the largest number of municipalities is concentrated (27% of the constituencies that make up the entity). Very low values were presented in: population density (less than 30 inhabitants / km²); the degree of urbanization (amounts less than 25%), the coefficient of economic dependence (values less than 350%); and there

was a slight variation in the gross economic activity rate, since it presented very low, low, medium and high amounts, except in Tépán de Galeana, whose TBAE was very high (greater than 35%). On this level there are six municipalities that belong to the Tierra Caliente region, seven to the North region, three to the Costa Grande, three to the Centro region, two to the Costa Chica and one to La Montaña. The territorial units are located in six regions. As it was shown in the typological cloud, they are jurisdictions that concentrate, above all, very low and low amounts.

- Level II. There are 15 municipalities at this level. Low values predominate in three of the four weighted indicators, the population density ranged between 30 and 60 inhabitants / km², the gross economic activity rate was between 15% and 20% and the economic dependence coefficient recorded values ranging from 350% up to 500%. As in level I, level II has a very low degree of urbanization. In addition, economic dependence showed amounts with varying qualitative designations, from low to very high values. This level was presented in the municipalities of Ahuacutzingo, Cualác, Malinaltepec, Olimalá, Quechultenango, Tlacoapa, Acatepec, Copanatoyac, Tecoanapa, José Joaquín de Herrera, Alcozauca de Guerrero, Xalpatláhuac, Metlatónoc, Atlamajalcingo del Monte and Cochoapa el Grande. It should be noted that 11 of the 15 municipalities belong to La Montaña, three correspond to the Centro region and one to the Costa Chica.

Figura 4. Guerrero: niveles de desarrollo socioeconómico



Fuente: Elaboración propia con base en Inegi (2019)

- Level III. The largest number of municipalities in the state of Guerrero is concentrated here, in total 27. They are demarcations with similarities reflected in the following indicators: population density (low and medium values) and the gross economic activity rate (average, high and very high values high). As in level I and II, at this level all municipalities show very low values in the degree of urbanization. In the coefficient of economic dependence there is a homogeneous behavior: the municipalities usually have a very low value except for the municipality of San Luis Acatlán, which registered a low value. Most jurisdictions belong to the Costa Chica, in total nine; six municipalities correspond to La Montaña; five, to the North region; three constituencies, to the Centro region; two, to the Hot Land; and finally, two municipalities to the Costa Grande. On the Costa Chica, as can be seen in the values obtained, most of the municipalities have a certain similarity in the NDS indicators, unlike the municipalities in the other six regions.

- Level IV. It is one of the most diversified levels in terms of the amounts presented by the socioeconomic indicators evaluated. At this level seven municipalities were identified. And average values were obtained in more than half of the demarcations. These indicators were: the GU and the TBAE; the amounts of the GU ranged between 40% and 50% and the TBAE, between 20% and 30%. The only very high value related to the PD was presented in the municipality of Chilapa (more than 120 inhabitants / km²); The rest of the municipalities obtained values, high, medium, low and very low. The indicator in which the seven municipalities coincided, with a very low value (less than 350%), was the CDE. As for the geographical distribution of the municipalities, two of them are located on the Costa Grande, two on the Costa Chica, two in the North region and one in the Central region. From this level, the number of municipalities begins to be smaller; In addition, medium and high values are presented more frequently, which indicates a marked difference with respect to the three levels described above, which concentrate a greater number of jurisdictions and the values are predominantly lower than the middle range. Finally, the seven municipalities have settlements whose population is 15,000 or more, in which commercial and service activity is outstanding.
- Level V. The municipality of Tixtla de Guerrero and Eduardo Neri, located in the Centro region; Zihuatanejo de Azueta, on the Costa Grande, and Arcelia, on Tierra Caliente, make up this level. All four have high values in the degree of urbanization (between 50% and 60%) and very low amounts related to the CDE (less than 350%). In the case of the TBAE, there was a more heterogeneous behavior, with very high, high and average values. The PD presented high values (between 90 and 120 inhabitants / km²), average (between 60 and 90 inhabitants / km²) and low (between 30 and 60 inhabitants / km²). As noted above, the number of spaces is becoming smaller and the values exceed the average range; for example, the municipality of Zihuatanejo de Azueta, one of the municipalities that has benefited from the economic policies implemented in the mid-1970s by the federal government and international organizations, has such behavior due to the tourist activity that takes place in Ixtapa -Zihuatanejo.
- Level VI. Pungarabato, Tlapa de Comonfort and Taxco de Alarcón, belonging to the Tierra Caliente, La Montaña and Norte regions, obtained very high values in the DP (more than 120 inhabitants / km²); in contrast, the CDE had very low values (less than 350%). On the

other hand, both the GU and the TBAE presented very high, high and average values. In this group, the case of Tlapa de Comonfort is striking as the only municipality in La Montaña with very low values in the economic dependence coefficient, as well as very high and high in the other indicators, which denotes a considerable polarization with the rest of the demarcations of the region. Tlapa de Comonfort also indicates that there is a very marked economic-territorial gap; This is characteristic of the models in which some territories are favored (winning spaces) and the rest remains in the lag.

- Level VII. This last level is made up of the municipalities of Acapulco de Juárez, Chilpancingo de los Bravo and Iguala de la Independencia, belonging to the Acapulco, Centro and Norte region, respectively. In these municipalities the values were very high in the following indicators: DP, GU and TBAE; that is: more than 120 inhabitants / km² for the first indicator; more than 60% in the second, and over 35% in the third. In contrast, in the three municipalities a very low value was obtained in the CDE (less than 350%). It should be noted that Acapulco, Chilpancingo de los Bravo and Iguala have historically been privileged spaces for federal and state political-economic decisions, such as the Iguala-Chilpancingo highway in 1910, and the Chilpancingo-Acapulco highway section that was completed in 1927, and with which was able to connect the port of Acapulco with the Central and North region, as well as with the state of Morelos and Mexico City. The economic dynamism in the North region due to the interest generated by the extraction of minerals from ancient times through the Acapulco Bay, and subsequently the climatic and landscape conditions, gave that site a privileged position. Meanwhile, the state capital has maintained the centralization of the various institutions, both federal and state government; All this has contributed to the concentration of the population and growth of these cities.

Discussion of results

Although the 81 demarcations classified in each of the seven levels of socioeconomic development obtained in the typological cloud yield valuable information, it is difficult to identify the particularities of each territorial unit based on the number of units analyzed. Therefore, the conceptual definition of Damonte territory (2009) was resumed. This says that there is a first territory in which power is exercised by the Nation State to legitimize itself as sovereign of the national territory, and develops a territorial narrative through public policies through two principles: verticality and grouping. In the first, the State imposes spaces from above to society; in

the second, it integrates the various localities into a territorial whole. The conception described above is reflected in the typological cloud obtained. From the first human settlements established in spaces that allowed to satisfy material or symbolic needs; and even today, these spaces, with a political-administrative division, continue to be the centers of greater population concentration, with greater economic dynamism, better communication channels, among others, of the entity.

Level VII is made up of central territories located only in three demarcations of the state of Guerrero; These socio-economic spaces are nuclei that act centripetally, in terms of the concept of space developed by Perroux (Hiernaux and Lindon, 1993). The other levels that represent territorial units, where the socioeconomic gap with these centers is smaller, are levels IV, V, and VI; compared to levels III, II and I, where socioeconomic differences are very marked and accounted for 79% of the total territories of the state of Guerrero. According to the article “The regional-economic differences of the state of Guerrero, Mexico”, by Vázquez and Propin (2001), the preferential places where the population was concentrated, and where a greater economic weight was obtained in the state of Guerrero, They were: Acapulco, the central and northern portion of the entity, as well as in the Costa Grande (it is clear that the scale of analysis of this research was regional). In another investigation carried out in the entity, the findings revealed by Propin and Sánchez (1998) were that the state has abrupt socioeconomic contrasts between their territories, having obtained twelve levels of economic assimilation due to the presence of centers of first importance such as: Acapulco, Chilpancingo, Iguala, Taxco and Ixtapa-Zihuatanejo. In general, the state offers an image represented by low, intermediate and high economic assimilation centers, with steep declines, to low and extremely low level territories, except where the peripheral contact phenomenon between localities such as Ciudad Altamirano-Tlapehuala is distinguished, Chilpancingo-Chilapa, Taxco-Iguala, Tecpan-Atoyac, Ixtapa-Zihuatanejo-Petatlán and Acapulco-Coyuca de Benítez. This territorial structure, at a much lower level of assimilation, is detected in Ometepec-Xochistlahuaca and Tlapa-Huamuxtlán. Almost two decades have elapsed since the last mentioned investigation and territorial socioeconomic differences continue to manifest themselves in the same territorial units. Acapulco, Chilpancingo and Iguala have been territories favored by public and private investments. The foregoing may give rise to an immediate opinion and argue that these assertions are known; However, the importance of these findings lies in the identification of units where the most unfavorable indicators are concentrated and how economic-

territorial policies can influence these territories, and articulate them with territories of greater and lesser economic dynamism..

In conclusion

The territorial differences in the economy of the state of Guerrero are of a different type and magnitude; they reflect the intervention of local, regional, national and, recently, multinational political and economic actors, who have defined the areas where the introduction of various economic investments occurs. In the state of Guerrero, from the perspective of the territorial center-periphery model, it is the municipalities of Acapulco de Juárez, Chilpancingo de los Bravo and Iguala de la Independencia that serve as the main centers with significant regional reach. In that order of ideas, the 18 territorial units that have a human settlement of 15,000 or more inhabitants also function as secondary centers with a smaller territorial reach to the most populated cities of Guerrero (Acapulco, Iguala and Chilpancingo). The socioeconomic features of the peripheral territorial units allow us to glimpse how the human groups that have settled there have lived and transformed their landscape (territory) throughout history, although a structure that subordinates them with the implementation of economic-territorial policies that increase the socioeconomic gap between central and peripheral territories; The above is reflected in level I and level II. This is of the utmost importance since a company seeks to establish itself in places that facilitate access to raw materials, or near the market, which contributes to lower the production costs of its products and obtain greater profits.

Political-administrative units without urban settlements, with low population density and a traditional economy are presented in six of the seven regions of the entity; However, there is a greater presence of these in the region of La Montaña. It should be noted that municipalities with the most unfavorable socioeconomic indicators are concentrated in level I and level II, that is, 46% of the total territorial units analyzed. Level III, with 37% of the municipalities, is the block where there is a greater presence of tertiary and primary economic activities. The almost zero industrial activity of the entity was reflected, in a greater concentration of population, in those places with more economic dynamism and oriented to tertiary activities: commerce, restaurants and hotels, transport, communications, financial and insurance services, etc.

The socioeconomic development gap begins to be more noticeable from level IV. In this there is a smaller number of territorial units with urban population and in the regional plot the appearance of spaces that usually concentrate economic investments of public and private sectors and integrate them into a development process where the economic space has greater weight than the geographical space. These territories appear in some segments of the Costa Chica, Costa Grande and the Centro region. In productive terms, tertiary activities prevail at this level. In addition, it is from this fourth level that the postulates of the theory of economic location become evident; they are those most populated (urban) spaces where companies begin to be located (near the market) to offer finished products, for example, self-service and banking companies; This gives rise to privileged centers in the regional structure and there is a noticeable lag in technology and organization with non-urban areas (peripheries), and this pattern is reproduced on a smaller scale (municipal headwaters and towns). For the above, it is urgent to apprehend the geographical space as a concrete expression of total social competence and not only as an economic space.

From level V, with 5% of the analyzed territories, the socioeconomic indicators begin to reflect better socioeconomic conditions; They are spaces with some form of specialization in the tertiary sector. The economic relevance of these territories begins to make more noticeable the magnitude and distance they keep with levels I, II, III and IV; which triggers the polarization between the centers and peripheries. In level VI, tertiary and secondary activities are important. These are the territories with the highest population density and urban population. Municipalities have favorable indicators in their socioeconomic development. Level VII represented 4% of the total territorial demarcations that make up the Guerrero territory. Tertiary and secondary activities were predominant. In addition, at this level the most favorable socioeconomic indicators were obtained with respect to the rest of the units analyzed. In this level, 35% of the total population of the registered entity was concentrated in 2015. The factors that have had weight for these municipalities to be considered as urban are associated to certain spaces where the employment centers that have served as sites of attraction for the population of the rest of the jurisdictions. Finally, throughout history and even today, they have been favored by both public and private investments destined for the construction of communication roads such as roads, urban planning projects, to cite an example in Acapulco Bay.

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