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Comparación de los determinantes del potencial de desarrollo económico de los municipios de Andalucía con rango poblacional 15.000-20.000 Habitantes entre los años 2007 y 2012

José María Pére Conde
Carlos Chavarría Ortiz
Juan Carlos Morán Álvarez
Universidad de Sevilla

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ABSTRACT

The general objective of the study is to design a general analytical framework of reference for the planning and execution of territorial development policies based on empirical research through the application of the Rasch model. On the other hand, the specific objective of the analysis is to determine and compare the hierarchical position of the 28 municipalities considered between 2007 and 2012, as well as the most relevant economic development potential factors in order to increase their capacity to grow and develop, being all this focused on the achievement of a more efficient planning of economic policy measures aimed at promoting and fostering the economic development of the municipalities considered.

When obtaining which items are the most incidents in the Economic Development process, depending on the period considered, expansion or economic recession, the municipalities can achieve greater progress adapting their strategic actions of budgetary, labor, business and internal dynamism policy to mobilize income and be able to create more income, wealth and employment. Among the options, some policies will have a higher impact and others lower, all depending on the municipality in question.

Through this analytical apparatus one could analyze the hierarchy and temporal evolution of any municipality in a chosen reference scenario, its possibilities of improvement in relation to those in the first positions, as well as the main measures or facilitating factors of this advance. Therefore, this approach can be a very interesting tool to improve the effectiveness and efficiency in the design of territorial economic development policies.

RESUMEN

El objetivo general del estudio es diseñar una estructura o marco analítico genérico de referencia para la planificación y ejecución de las políticas de desarrollo territorial a partir de una investigación empírica mediante la aplicación del modelo de Rasch. Por otro lado, el objetivo específico del análisis es determinar y comparar la posición jerárquica de los 28 municipios considerados entre los años 2007 y 2012, así como los factores de potencialidad de desarrollo económico más relevantes de cara a incrementar su capacidad para crecer y desarrollarse, todo ello enfocado hacia el logro de una planificación más eficiente de las medidas de política económica destinadas a propiciar y fomentar el desarrollo económico de los municipios considerados.

Al obtener qué ítems son los más incidentes en el proceso de Desarrollo Económico, según el periodo considerado, expansión o recesión económica, los municipios pueden lograr un mayor avance adecuando sus actuaciones estratégicas de política presupuestaria, laboral, empresarial y de dinamismo interno para movilizar renta y ser capaces así de crear más renta, riqueza y empleo. Entre las opciones, unas políticas tendrán un impacto más elevado y otras inferiores, todo ello dependiendo del municipio en cuestión.

Mediante este aparato analítico se podría analizar la jerarquización y evolución temporal de cualquier municipio en un escenario de referencia elegido, sus posibilidades de mejora en relación a los que ocupan las primeras posiciones, así como las principales medidas o factores facilitadores de dicho avance. Por tanto, dicho planteamiento puede ser una herramienta muy interesante para mejorar la eficacia y la eficiencia en el diseño de las políticas de desarrollo económico territoriales.

1. INTRODUCTION

This research paper will determine the factors that most affect the potential of economic development of a municipality, making a hierarchy of

them based on that concept. The first problem that arises is that of the delimitation of the selected latent variable and the method used to measure it.

There are different methods to measure the economic development potential of a municipality with variables such as income, the situation of households ... All of them contain positive aspects and, at the same time, show weaknesses. In order to solve these problems, the methods are adapted to the objectives of the proposed studies.

But more important than measuring the degree of economic development potential of a municipality and being able to make comparisons, is to find out what are the factors that most affect the results and to be able to determine in which line the progress and the improvement in the planning of the territorial development policies of the municipalities should be identified.

It is not an easy task because sometimes the statistical data do not exist, are unreliable, do not contain the required information, are received with long delay, lose their validity quickly or are not good enough for showing the multidimensional nature of the economic development potential as indexes may often miss important information.

This article will elaborate a classification of the municipalities according to their potential for economic development, as well as study which are the factors that most affect the degree of potential presented by each one of them.

The aim of the research is to determine how the selected items affect the potential levels of economic development, so that they reveal the keys to explain why a municipality occupies that position and how it could be improved.

To this end, the first part of this paper will review the literature on the attempts to improve the methodology in the design and planning of territorial development policies, which is the objective of this work. In the second part, the Rasch method will be applied to develop a comparative analysis of the economic development potential of these municipalities, determining their hierarchical position as well as the factors that most affect it and that will allow us to improve it with more or less intensity. Finally, the conclusions will be commented.

2. LITERATURE REVIEW

According to Xia, Liang, Zhang and Wu (2012), governments and business leaders have an increasing interest in identifying why certain territories

and companies are more successful than others. The intention in recent years has been to identify the reason for the failure of some economies or companies, and this leads to the need to identify key aspects of the economies that aim at the development of competitiveness.

García (2014) shows how the results of empirical studies can be used in order to provide valuable guidance to the design and management of public policies; these are the advantages derived from the cooperation between those who are in charge of the formulation of the policies, those who put them into practice and those who dedicate themselves to research, in order to maximize the impact and scope of public policies in general. All the agents involved in decision-making regarding public policies agree on the growing importance attributed to policies and programmes that are supported by results based on empirical evidence. In English, this term is called *evidence-based policy*. An approach and policy management based on evidence refers to a political process that helps planners make well-informed decisions about policies, programmes and projects, by providing the best and most accurate evidence, and making this the central point of the development and implementation of policies or the political process.

Pérez and Pérez (2014) illustrate the potential of the Difference in Differences Model (DiD) for the evaluation of various public policies applied at the territorial level and using aggregate data, obtaining a general overview of the alternatives for evaluating public policies, and reviewing the possibilities of application on a wide spectrum of policies developed in the autonomous community of the Basque Country. Through the basic methodology of the differences in differences models, two alternative applications are made: one of local scope, the Iztatu Programme, and another of regional scope, the Euskadi Programme of promotion of the information society in order to illustrate the potential and limitations of the proposed methodology. It is on their basis that a proposal is made for the correction of the main identified methodological problems linked to the fulfillment of the condition of parallel trend.

Sienkiewicz (2014) states that economic development depends not only on the activity of the business sector, but also on the economic development policy carried out at the central, regional and local levels. The modernization of public administration in Poland after 1989 grants a greater capacity to influence economic processes by public authorities. In addition, the process of globalization, as well as Poland's participation in the European Union, determined the importance of the public sector to create conditions

for economic development, including the development of entrepreneurship. At the same time, the role of local governments in stimulating development processes at the local level increased significantly. The increased decentralization of public administration meant that local authorities, particularly at the municipal level, received instruments to exert an impact on local development. Thus, it considers that the local development strategy is an essential tool for creating conditions for economic development, noting that municipalities still do not have enough awareness of the importance of this strategy as a management tool for local economic development, devoting very little space to formulate economic policies and for the development of goals in a detailed manner. The purpose of his work is to define the nature, basis and effects of the development policy of local governments in Poland. Local authorities are also analyzed in terms of their management of the economic development of the area. In addition, the purpose of this article is also to analyze instruments to support economic development, which can potentially be used by local governments in Poland.

These results can be extended to any European country whose basic characteristics are administrative decentralization and the state of belonging to a supranational entity such as the European Union.

The work of De Haro, Marceleño, Irán and Nájera (2017) makes an assessment of both economic development and its potential at the municipal level. It specifically identifies inequalities between the municipalities of the state of Nayarit, Mexico, on the basis of an analysis of divergences by means of socio-economic development indices and of socio-economic development potential. The indicators that make up the level of socioeconomic development are the rate of marginalization, the degree of urbanization, the gross rate of economic activity, the coefficient of economic dependence and the density of paved roads. On the other hand, the indicators that make up the level of socio-economic development potential are the geographical situation of the municipalities, the population density, the degree of qualification of the population, the sectoral concentration of secondary and tertiary functions and the sufficiency coefficient of the road network.

On the basis of these indicators, it can be observed that the distribution of the levels of both development and development potential is regular, being the lower ranges concentrated in the mountain area of the state and the conditions of greatest advantage in the central zone, where the capital is located. The results show significant differences. The factors that push

towards greater socioeconomic inequality are: marginalization, scarce economic activity, poor road structure, low level of qualification of the population and low occupation in secondary and tertiary economic activities. Of the twenty municipalities analyzed, Del Nayar, La Yesca and Huajicori have the greatest disadvantage, while Tepic shows the best condition.

Granados, Giraldo and Acevedo (2016) try to identify the capabilities and potentialities of the Metropolitan Area of the Aburrá Valley for territorial development. The research process is made up of two methodological stages: the first is the identification of capabilities, restrictions and potentials that the territory has, and the second is an analysis of the perception of the experts or development agents that intervene in the economy of the territory, in order to identify possible strategies that promote competitiveness.

Nunes and Karnopp (2015) analyze the potential of endogenous development in the municipality of Julio de Castilhos, located in the Central Region of the State of Rio Grande do Sul, with less than 50 thousand inhabitants and with an economic base in the primary sector. The problem that is investigated is to delimit what the endogenous development potentials of Julio de Castilhos-RS are, by using a deductive approach in a methodological manner and defending a strategic positioning to take advantage of local and regional opportunities.

The article by Ruiz and Becerra (2015) proposes a system of indicators to generalize the analysis, evaluation and impact of local development projects. The model is applicable both to projects of the Municipal Initiative for Local Development (IMDL) and to those that receive financing through foreign collaboration. In addition, it allows evaluating the effectiveness, efficiency, relevance, economic, social and environmental impact, and sustainability. As a case study, the results of the TROPISUR project are shown in the Cienfuegos municipality. This research is carried out in a context of unavoidable need to create tools that contribute, in the first instance, to the success of projects aimed at local socioeconomic development, to achieve the aspiration to move towards a prosperous and sustainable society; without ignoring, of course, that this desire is expressed in a scenario where the scarcity of material and financial resources predominates. This requires the continuous improvement of the increasingly precise and effective management of the decision-makers and actors of local development in the territories. It is based, therefore, on an axiom referred by several authors that "what can not be measured can not be improved", and from there arises the proposal of a system of indicators

that allows to comprehensively evaluate these projects of development and that also includes its economic, social and environmental impact.

According to Caravaca, González, García, Fernández and Mendoza (2014), the insertion of companies and territories in a globalized world is conditioned, among other factors, by their capacity to incorporate knowledge and make innovations. It is not surprising, therefore, that these capacities become the point of confluence of different epistemological currents and scientific disciplines that reflect on whether they can form the basis of a new socioeconomic model. Along with the above, a new territorial culture emerges that devotes special attention to medium-sized cities, considering that they can induce multiplier effects on their surroundings and thus counteract the concentration processes caused by large cities. The aim of this article is to perform a comparative analysis of some medium-sized cities in a region of southern Spain, Andalusia, from several perspectives: their degree of insertion in the knowledge society, their innovative capacity and the local collaboration networks that can foster it, and the public strategies of local development that are being implemented in them.

According to Santinha (2014), the valorisation of the territorial dimension in the formulation of public policies have been visible in the orientations emanating from the most diverse world institutions, recently launching for the political and academic debate the Territorial Cohesion as a new paradigm of development . At a particularly important moment, when discussing the guidelines for the post-2013 period and the attribution of the structural funds, this issue assumes an additional interest in the Member States of the European Union. Despite the fact that, as a political objective, Territorial Cohesion has reached a high level of importance, the lack of a precise delimitation of the concept is still notorious, making it difficult to deal analytically and normatively with this principle. It is on this issue that the text is concentrated, identifying paths that can contribute as a reference for the formulation and territorialization of public policies, thereby improving decision-making processes based on this principle.

According to Varela (2015), the emergence of a new paradigm that determines differentiated roles and opposed to the classic schemes in force in local governments, particularly in metropolitan regions, developed as a result of global trends, is analyzed. Such changes, coming from the economy, the commodification of public goods and the liberalization and integration of markets, affect the traditional institutional designs, which give them limited

competences and subordinated to local governments within the framework of a sovereignty model centered on the Nation state. With globalization, this scheme has changed and today local governments.

According to Caravaca, González and Paloma (2014), the effects of the crisis in the cities have been very diverse, which is related to its size, its location in the regional space and the type of predominant economic specialization. However, they also undoubtedly depend on the presence or not of local actors capable of promoting innovative actions that allow them to make efficient use of their own resources.

According to Zurbano, Bidaurratzaga and Martínez (2014), globalization configures a rearrangement of the spatial structure. It is in this context where the local emerges as a potential space for the development of a community project. Faced with the conventional global-local articulation where interconnections and global flows subsume the local economies, the proposal of a Local Human Development (DHL) framework prioritizes the construction of globalization from social territories. This work defends that the DHL enables territorial empowerment and a globalization from the bottom up. On these premises it analyzes the adequacy of the different currents of the regional and local economy to the proposed framework.

3. DATA AND METHODOLOGY: THE RASCH MODEL

In the present research an inductive method has been used through an analytic-synthetic process, in such a way that the latent variable "*Potential of economic development of a municipality*" is studied. This study is based on the decomposition of the object of study in a series of items, which are studied individually and comparatively at two different time points (analysis), and then these parts are synthesized in a single measure to be studied in a holistic and integral way. All this process has been carried out applying the Rasch metric method.

The statistical attribute that distinguishes the Rasch model is that the person and item parameters are algebraically separated and give rise to sufficient statistics (Andersen, 1973, Masters and Wright, 1984). Rasch considers that if the chosen items are the correct ones, few errors will arise, so it is reasonable to represent the distribution of the reading errors by means of a Poisson probability function (multiplicative). The choice of this

multiplicative Poisson model was due to the properties that qualify it as a measurement model (Lord, 1953). The study of the attributes that should verify the measurements, leads Rasch to the use of exponential additive models (measurement models): moving from the multiplicative Poisson model to the logistic model. Rasch developed his model within the theory of joint measurement, which starts from the consideration that fundamental (observable) measures have an additive structure. Perline *et al.* (1979) have proved that the models that are included in the family identified by Rasch are the only models compatible with the principles of the theory of joint measurement in the probabilistic case. This fact gives a crucial role to the Rasch measurement models in the methodology for measurement in the Social Sciences (Cliff, 1992; Michell, 1999). Thus, the Rasch models have been applied in psychology, pedagogy, applied economics, public health ..., for the manufacture of measurement instruments or identification of measurement continuums in a set of data already available.

In the field of Economics in which the present work is centred, the search for information from the comparative analysis of entities or subjects in terms of economic concepts is very frequent. However, as Everitt (1984) points out, some variables or ideas belonging to the branch of knowledge of the Social Sciences are not well defined and there is much controversy about their real meaning. These concepts are called latent variables since they can not be observed directly, although in spite of this we try to know some of their properties, traits, attributes or characteristics. The theoretical constructs can not be observed directly, but some of their manifestations can indeed. If the measurements of the observable manifestations of the constructs are compared, the problem of objective measurement arises, given the interest to adequately use the information coming from the comparison of the subjects before the economic concepts and, where appropriate, generalize the results obtained. From this point of view, it can be pointed out that every measure is the result of a comparison between economic subjects. To measure is to give numbers to observations according to a certain series of norms (Summers, 1976), in such a way that, following Leplège (2003), it can be empirically determined that every measure is conceived as the expression of a graduation: a scalar. The key attribute of any measurement when making comparisons is that the construct can be located on a line or linear continuum.

Following Alvarado and Santisteban (2006: 10), the measuring instrument proposed by Rasch assumes both the possibility of obtaining sufficient estimators of the parameters, with direct measurements, and making use of the properties of distributions and compound Poisson processes, as well as that of verifying the theoretically demanded requirements: stability, separability, sample independence, as well as the essential requirement of conjoint additivity. Hence it has become a tool for measuring latent variables, which also makes it possible to assess the adjustment of the responses to the items and the one that occurs between the response of a subject and the response patterns of the sample to which it belongs (Febles, 2008: 17).

This technique presents simple approaches, since the response to an item depends both on the preparation and competence of the subject and on the difficulty of the item (Febles, 2008: 17). Thus, according to Sánchez and Blanco (2012: 37-38), it offers the following advantages: it is capable of drawing reliable conclusions from particular data or small samples (statistical sufficiency); it identifies cases that present imbalances with respect to the data set, which differentiates it from other techniques where possible imbalances are eliminated from the analysis as they are considered to distort the sample (Rasch identifies them to try to find a justification for this anomaly, since it is usually very clarifying in the case of facts or economic phenomena); it studies the reliability of subjects and items individually; it calculates the reliability and overall validity of the measurements; it checks the one-dimensionality hypothesis; it analyzes the categories of the answers, rank-ordering the items according to their difficulty and the subjects according to their ability; it identifies different groups of subjects comparing the measurements with other differential variables such as size, rural or metropolitan identity, distance to the capital ... and identifies the strengths and weaknesses of each subject individually.

The Quantum Measurement Technique, based on the Probability of Rasch, is therefore a working tool that allows for obtaining the measurement of a latent variable, in this particular case "Potential of economic development of a municipality", which is a measure more adequate than others as it reduces complex data matrices to a unidimensional variable (Álvarez and Martínez, 2001: 196). The parameters that govern the Rasch probability have been found using the Winsteps Rasch Measurement software (Linacre, 2014).

Thus, in the present work this Probability has been applied to those municipalities of Andalusia within the population range of 15,000 - 20,000

inhabitants in the year 2012, obtaining for such a filter 28 municipalities, specifically and following the order of Table 2.1, four from Almería, three from Cádiz, one from Córdoba, six from Granada, two from Huelva, three from Jaén, one from Málaga and eight from Seville. For the intertemporal comparison, both the year 2007 (the last year of economic growth before the crisis) and the year 2012 (the last year of economic recession for which we have complete data) are chosen. This has all made it possible to quantify the items for the different municipalities and to know in detail their economic development potential, characterized by their membership in Andalusia and a certain range of population.

TABLE 1
**ANDALUSIAN MUNICIPALITIES WITH A POPULATION SIZE
 BETWEEN 15.000 AND 20.000 INHABITANTS**

	Provincia	Municipio		Provincia	Municipio
1	Granada	Albolote	15	Granada	Guadix
2	Sevilla	Algaba (La)	16	Almería	Huércal de Almería
3	Huelva	Aljaraque	17	Almería	Huércal-Overa
4	Sevilla	Arahal	18	Sevilla	Lora del Río
5	Granada	Atarfe	19	Sevilla	Marchena
6	Jaén	Baeza	20	Sevilla	Osuna
7	Jaén	Bailén	21	Córdoba	Pozoblanco
8	Almería	Berja	22	Granada	Santa Fe
9	Sevilla	Cabezas de San Juan (Las)	23	Cádiz	Tarifa
10	Jaén	Carolina (La)	24	Málaga	Torrox
11	Huelva	Cartaya	25	Cádiz	Ubrique
12	Sevilla	Castilleja de la Cuesta	26	Almería	Vera
13	Cádiz	Chipiona	27	Sevilla	Viso del Alcor (El)
14	Granada	Gabias (Las)	28	Granada	Zubia (La)

Categorization criteria: minimum * 1'20 = x, which is the upper limit of category 1; maximum * 0'80 = y, which is the lower limit of category 10; $(y-x) / 8 = z$ to be distributed among categories 2-9 in the following way: $x + z \Rightarrow$ category 2; $x + 2z \Rightarrow$ category 3 ... When category 10 corresponds to the interval containing the lowest values, as in the case of the items "Unemployment / Population 16-64 years" and "Sectoral concentration index", then: minimum = Highest value of the item * 0'80 = x, which is the lower limit of category 1; maximum = Lowest value * 1'20 = y, which is the upper limit of category 10; $(y-x) / 8 = z$ to be distributed among categories 2-9 in the following way: $x + z \Rightarrow$ category 2; $x + 2z \Rightarrow$ category 3...

Source: SIMA (Instituto de Estadística y Cartografía de Andalucía).

The parameters that govern the Rasch probability have been found by using the Winsteps software, specifically version 3.81.0. The final result is a measure of the economic development potential for each municipality and for each item, as well as the imbalances for them all.

Given the latent variable “x”, measured for 28 municipalities for the years 2007 and 2012, and defined by a set of 6 uncorrelated items, this measurement technique places them along a line for their measurement according to their situation of potential for economic development (Álvarez and Martínez, 2001: 120), evaluating them according to the scale of values from 1 (lower value) to 10 (higher value). The attributes that have been used to analyze this construct are reflected in 6 items whose numbering also coincides with the registration or entry number in the computer programme that has been used to perform the measurements (Winsteps):

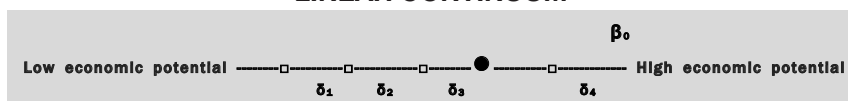
- Item No. 1: Number of declarations / Working age population (aged 16 to 64 years).
- Item No. 2: Net working income / Working age population (aged 16 to 64 years).
- Item No. 3: Budgetary income per capita.
- Item No. 4: Registered contracts / Working age population (aged 16 to 64 years).
- Item No. 5: Registered unemployment / Working age population (aged 16 to 64 years), which requires a treatment on its inverse impact.
- Item No. 6: Index of sectoral concentration of the productive structure (A low value of this index would indicate a high sectoral diversification of the productive structure, hence its reverse treatment).

The item *Sectorial concentration index* has been calculated from the Herfindahl Index, which is the sum of the squares of the relative sizes of the companies of the industry considered. In its application to this specific case, it has been considered by analogy as the sum of the squares of the relative sizes of the sectors of the municipality considered, that is, this index is based on the total number of sectors and the distribution of the sizes of the productive sectors of a municipality. The Herfindahl Index can be calculated on a base 1, where a $HHI = 1$ indicates that in the productive structure of the municipality there is only one sector, on a base of 1,000 or 10,000.

Therefore, if “x” is the latent variable defined by a set of items, then these items are the characteristics considered most relevant to explain the potential for municipal economic development, taking into account the availability of information and that they do not show degrees of significant correlation.

Like any other latent variable, the economic development potential can be visualized as a line along which the items and municipalities are located. Greater competitiveness corresponds to a point further away on the line. This means that it is necessary to find a way to establish the appropriate location of the items along the line to measure the same. The following figure illustrates the way in which the municipality β_0 and the items δ_1 , δ_2 , δ_3 y δ_4 can be placed along the line of **municipal economic development potential**:

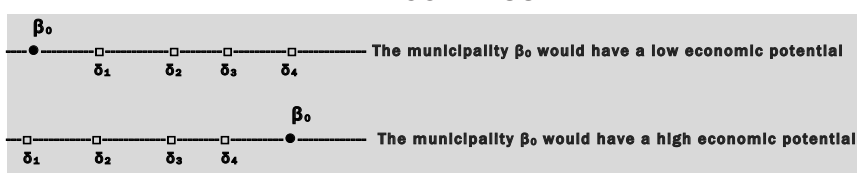
FIGURE 2
LINEAR CONTINUUM



Source: Own elaboration based on Oreja (2015: 53).

In this case, the items δ_1 , δ_2 y δ_3 are closer to the left edge than the municipality β_0 and the item δ_4 .

FIGURE 3
LINEAR CONTINUUM

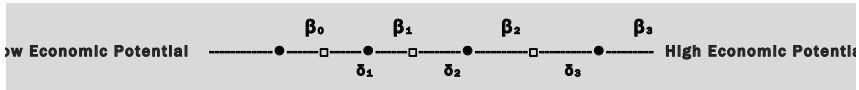


Source: Own elaboration based on Oreja (2015: 53).

The differences in economic development potential between two municipalities are given by their relative position in the number of items, so that the latent variable is conceived as a continuum along which the parameters δ_i , for the items; and the β_n , for the subjects or municipalities are located. This means that there may be subjects that do not exceed the agreed value

(parameter) on any item, and will be among those with weaknesses, and conversely, when they exceed the values of all the excellent items.

FIGURE 4
LINEAR CONTINUUM



Source: Own elaboration based on Oreja (2015: 53).

This representation shows that the municipality β_0 does not surpass any item so it will be among the municipalities with the greatest weaknesses. Municipality β_1 exceeds only item δ_1 , municipality β_2 exceeds items δ_1 and δ_2 , while municipality β_3 exceeds the three items and will be the one with the greatest potential for economic development. Item δ_1 is the one with the lowest value, which represents an easier-to-reach strength and, as a consequence, a more usually achieved level of economic development potential. It is achieved by the municipalities β_1 , β_2 y β_3 ; while item δ_3 is the one with the highest value (the one that is farthest to the right) and represents a more rare level of economic development potential, being only reached by the municipality β_3 .

If X_{ni} is regarded as the potential dichotomous variable of municipal economic development that describes the fact that a municipality “n” endorses the item “i”, if $X_{ni} = 1$; then, the municipality “n” is said to be powerful. On the contrary, if $X_{ni} = 0$, it is said that the municipality “n” is not powerful.

With the appropriate calculations the variable is obtained from the formula presented below, showing in the present case the probability of the municipality “n” referring to item “i” being powerful, given the parameters β_n and δ_i . This is the formula that George Rasch obtained in his treatise about latent variables (Álvarez and Martínez, 2001: 198).

$$P[X_{ni} = 1] \beta_n, \delta_i = \frac{e^{(\beta_n - \delta_i)}}{1 + e^{(\beta_n - \delta_i)}}$$

A measurement tool configured with these items makes it possible to measure the potential for economic development of a municipality, and also allows positioning each municipality studied within the chosen study scope.

The present study will focus on the analysis of the economic development potential of the municipalities considered, on the basis of criteria of income, employment and productive diversification.

Assuming that what we want to analyze is the level of economic development potential of the elected municipalities, the **fundamental objective of this work** can be divided into two:

- To position each municipality within the chosen group for comparison.
- To determine what factors condition such positioning.

It should be noted that the Rasch model is polytomous (Rasch, 1980, Andrich, 1978, 1988a and 1988b), in such a way that, in the case that is being considered, the assigned score is represented by the scale of categories {1, 2, 3, 4, 5, 6, 7, 8, 9, 10} in terms of the parameter subject (municipalities) and item (potential factors of economic development of a municipality).

Therefore and inasmuch as in the present work the original data of the municipalities do not appear categorized and take values according to different scales and percentages, it is necessary to categorize all the items of the designed measuring instrument together at the same scale according to the Rasch model of ordered categories of Andrich-Rasch (Andrich, 1978).

The objective of this categorization is to transform several measures that represent concepts of different nature or type in a global measure that simplifies and allows a joint interpretation (Álvarez, 2008).

In this way, once the data of the Multiterritorial Information System of Andalusia (SIMA) were obtained, the next step was to find the maximum and minimum values of each potential factor or item, and establish a valuation criterion that converted the extracted data into data collected in a range of 1 to 10, with the objective of standardizing them in order to treat them through the Rasch model (Rasch, 1980), with the Winsteps programme (Linacre, 2014).

Thus, to carry out the categorization of the indicators or items, 10 categories are used, calculating 10 intervals or sections for each item, assigning to each of them the values 1, 2, 3... 10. In order to limit the impact of the extreme values, the categorization method, included in box 2.5, has been applied. In this regard, it should also be noted that two of the items used, namely *Unemployment figure/Working age population* and *Sectoral Concentration Index*, show an inverted polarity, that is, a higher value of the indicator shows a worse level of potential for economic development.

BOX 5 CATEGORIZATION CRITERIA

- 1.- Minimum * 1'20 = x, which is the upper limit of category 1.
- 2.- Maximum * 0'80 = y, which is the lower limit of category 10.
- 3.- $(y-x) / 8 = z$ to be distributed among categories 2-9 in the following way: $x+z \Rightarrow$ category 2; $x+2z \Rightarrow$ category 3; $x+3z \Rightarrow$ category 4 ...

When category 10 corresponds to the interval containing the lowest values, as in the case of the items "Unemployment / Population 16-64 years" and "Sectoral concentration index", then:

- 1.- Minimum = Highest value of the item * 0'80 = x, which is the lower limit of category 1.
- 2.- Maximum = Lowest value * 1'20 = y, which is the upper limit of category 10.
- 3.- $(y-x) / 8 = z$ to be distributed among categories 2-9 in the following way: $x+z \Rightarrow$ category 2; $x+2z \Rightarrow$ category 3; $x+3z \Rightarrow$ category 4 ...

Source: Own elaboration.

The purpose of this model is simply to locate both the selected municipalities and the potential factors of municipal economic development in a one-dimensional linear scale representative of the theoretical construct that makes it possible to compare results between the municipalities analyzed and the relevance of the items. Thus, thanks to the model, a detailed study of the municipalities and of the chosen variables can be carried out since they are located in the same linear continuum simultaneously. Hence, the municipalities and the selected municipal economic development potential factors appear jointly in said line, determining a single direction in which it is considered that the upper and lower end of the line represent "high" and "low" of the variable in question respectively. Thus, a hierarchy is achieved that will lead to the relationship derived from the municipalities and their level of economic development potential, as well as to the relevance of its determining factors.

In the Rasch method, the starting point is a specific model that has specific properties to which the data obtained are adjusted or not. From the assessment of the imbalances, the precise information is collected to determine the calibrations of items and the measures of the municipalities (Linacre, 2014). Oreja (2015: 51), relying on both Linacre (1994, 2005) and Fisher (1997, 2005), refers to the advantage of the Rasch model with respect to the use of samples since its measurements are stable, even when these are limited.

The possible imbalances that may arise in the measurement are analyzed by two statistics, as Oreja points out (2005: 40): the INFIT is a value sensitive to unexpected behavior that affects items whose difficulty is close to the ability level of the subject, and would correspond to an internal adjustment (Tristán, 2001); OUTFIT is a value sensitive to unexpected behavior that affects items whose difficulty is far from the ability level of the subject, and would correspond to an external adjustment (Tristán, 2001). Both can be shown in two different ways, as a quadratic mean (MNSQ) or as a hypothesis test (ZSTD).

3. EMPIRICAL RESULTS

The positioning of the municipalities in relation to their level of economic development potential can be seen in a descriptive way through the linear continuum or Wright map (Linacre, 2014) represented for each year in table 3.1, which includes the measures of the municipalities and the factors with potential for economic development. This linear continuum in this case varies between +1 and -1, and it can be seen that it is segmented around the mean (M), the standard deviation (S) and twice the standard deviation (T).

Based on this map, it can be seen that in 2007 the municipalities with the greatest potential for economic development are Albolote and Aljaraque, while for that same year the municipality with the lowest potential is Ubrique. In contrast, for 2012 the municipalities with the greatest potential for economic development are Aljaraque and Baeza, while for that same year the municipality with the lowest potential is Las Cabezas de San Juan.

Table 3.1 also shows how the most relevant economic development potential factors of a municipality are "*Registered unemployment / Population aged 16-64*" (2007) and "*Number of declarations / Population aged 16-64*" (2012); and those that make the least influence or contribution to

the economic development potential of a municipality are “*Sectoral concentration index*” (2007) and “*Budgetary income per inhabitant*” (2012). This is certainly unexpected, especially in the case of the first, since it is a factor that is considered fundamental in determining the economic development potential of any area or region. On the other hand, table 3.2 shows in more detail the positioning of each municipality in relation to the 28 municipalities of Andalusia selected under the criterion of fulfilling the population range of 15,000-20,000 inhabitants. It should be noted that the leaders in economic development potential within the 28 municipalities of the sample are Albolote and Aljaraque for 2007, which are approximately 9 km from Granada and Huelva, respectively; while for 2012 the leaders are Aljaraque and Baeza. Finally, the municipalities worst positioned in 2007 are Viso del Alcor (El) and Ubrique, while in 2012 they are La Algaba and Las Cabezas de San Juan.

With respect to validity statistics, it has to be said that by analyzing the INFIT / OUTFIT statistics, municipalities with imbalances can be seen. In this sense, it can be observed that, in general, the OUTFIT and INFIT levels are adequate and that the PTMEASURE correlation of the municipalities is positive, which means that the order of economic development potential of the municipalities is considered normal with respect to the total. In spite of this generality, there are municipalities where there are imbalances, so that those in which the MNSQ of Infit and/or Outfit exceeds 2 logit units can cause imbalances that generate distortions for the measurement system. In the case considered, there are 4 municipalities in 2007: Chipiona, Tarifa, Torrox, and La Zubia, while in 2012 they are: Chipiona, Lora del Río, Cabezas de S. Juan and Cartaya. On the other hand, in the ZSTD of Infit and / or Outfit, the values outside the range -1.9 and +1.9, and greater than 2, are out of adjustment, such is the case in 2007 of Torrox for the Infit. In 2012, Chipiona, Lora del Río and Cartaya cause imbalance both in the Infit and in the Outfit. Finally, the value of PTMEA CORR refers to the bisect point correlation that measures the relationship between the scores of the items of each subject and the measurements obtained, and must be positive, which does not occur in Torrox, Tarifa and Chipiona in 2007, as well as in Chipiona, Cartaya, Tarifa, Berja, Las Cabezas de San Juan, La Algaba and Lora del Río in 2012.

In any case, table 3.3 will be used in order to analyze the municipalities with the most significant imbalances in a more detailed manner. In situations of comparative analysis between subjects, it reflects an imbalance that

needs to be explained if considered appropriate or relevant for the purpose of the study.

The imbalances of the municipalities are determined by the scores they would get according to the model, based on the data set by comparing each pair of them to the one they finally obtained. Thus, the previous analysis of the measures and adjustment of the subjects is complemented by a detailed study of the origin of the mismatch between the real value and the value of the model through the aforementioned tables, which allows seeing in which item such mismatch is generated. Thus, positive residual values indicate that they have scored the item above the value expected by the model, while negative residual values indicate that they have been scored lower than what the model expected. This allows proposing and implementing the necessary actions to correct the causes of the imbalance, in the event that it is considered appropriate.

Therefore, an analysis of undervaluation and overvaluation of items by municipalities for each year is carried out below. Thus, in 2007 there are 10:

- Tarifa and Chipiona: In these 2 municipalities, the item ranked third in the previous table, *budgetary income per capita*, presents an overestimated measure, that is, the model expected this item to be lower, given the rather lower values observed in the rest of items. This may be due to the fact that taxes in coastal municipalities are, as a rule, higher than in the interior municipalities due to the influx of tourism, in many cases foreign and with high purchasing power.
- Torrox, La Zúbia and Vera: The item with entry number 6, *sectoral concentration index*, presents an overestimated measure, reaching a category 10 that indicates that there is a high productive diversification. The model, based on the answers in the rest of the items, considers that this item should have a lower value. Thus, three of the four municipalities that present this category 10 in terms of reflecting a high productive diversification are rejected as such by the model, leaving only Aljaraque at this level, since with a Herfindahl Index of 1,187, the lowest of all and that, therefore, indicates a greater sectorial diversification, it marks coherence with the rest of the items that it presents. This is a link that corresponds to the one of the data matrix, which does not happen in the cases of Torrox, La Zúbia or Vera.

TABLE 3.3.
**DISADVANTAGES FOR THE ANDALUSIAN MUNICIPALITIES WITH
 A POPULATION SIZE BETWEEN 15.000 AND 20.000 INHABITANTS**

2007						2012					
NUMBER	NAME	MEASURE	INFIT	(MNSQ)	OUTFIT	NUMBER	NAME	MEASURE	INFIT	(MNSQ)	OUTFIT
23	Tarifa	-.23	2.3	A	2.8	13	Chipiona	-.36	3.7	A	6.6
	OBSERVED: 1:	2	3	10	3	4	1	10	4	1	1
	Z-RESIDUAL:	3					Z-RESIDUAL:	5			
13	Chipiona	-.30	2.1	B	2.6	18	Lora del Rio	-.08	2.8	B	3.0
	OBSERVED: 1:	1	1	8	6	4	1	2	2	10	10
	Z-RESIDUAL:	3					Z-RESIDUAL:	3			
24	Torrox	.13	2.5	C	2.4	9	Cabezas de San	-.85	2.0	C	2.7
	OBSERVED: 1:	3	2	10	3	9	10	1	1	2	5
	Z-RESIDUAL:	2					Z-RESIDUAL:	3			
28	Zubia (La)	.18	2.1	D	1.9	11	Cartaya	.13	2.2	D	2.4
	OBSERVED: 1:	9	8	1	1	10	10	1	3	5	10
	Z-RESIDUAL:	2					Z-RESIDUAL:	-2			
3	Aljaraque	.31	2.0	E	1.6						
	OBSERVED: 1:	10	10	3	2	9	10				
	Z-RESIDUAL:	-2									
25	Utrique	-.56	1.9	F	1.4						
	OBSERVED: 1:	7	3	1	2	1	1				
	Z-RESIDUAL:	2									
11	Cartaya	.18	1.8	G	1.7						
	OBSERVED: 1:	2	4	10	10	10	3				
	Z-RESIDUAL:	-2									
18	Lora del Rio	-.14	1.8	H	1.7						
	OBSERVED: 1:	2	2	1	10	10	1				
	Z-RESIDUAL:	2									
26	Vera	.21	1.3	I	1.2						
	OBSERVED: 1:	5	6	2	7	10	10				
	Z-RESIDUAL:	2									
9	Cabezas de San	-.23	1.2	J	1.2						
	OBSERVED: 1:	2	1	2	8	9	1				
	Z-RESIDUAL:	2									

Source: Prepared by the authors based on Winsteps 3.81.0

- Aljaraque: In this case, the item positioned in fourth place, *Contracts registered / Working age population*, presents an underestimated measure; that is, the model expected that this item would be greater than the category 2 that it presents. Now, this has a clear justification: Aljaraque is a dormitory city that has been attracting a large population from Huelva's capital, especially in the town of Corrales. Normally, these are people who present a relatively stable job and, therefore, imply a non-registration of new contracts in these cases. The number of new contracts registered with respect to the working-age population remains low compared to other municipalities that are part of the group. This phenomenon is reflected more clearly when dealing with a municipality that presents a high valuation in the rest of the items.

- Ubrique: The item ranked first, *Number of declarations / Working age population*, presents an overvalued measure; that is, it was expected that this item in this municipality would be lower, given that category 7 is not consistent, based on the answers given by the rest of the subjects, with categories 1, 2 and 3 in the rest of the items, although once the data has been checked, the data does not seem wrong.
- Cartaya: The item ranked first, *Number of declarations / Working age population*, presents an underestimated measure; that is, it was expected that this item would be higher in this municipality, so that the category 2 that the 16.589 statements give is not in the line with three items with category 10 and the others with 3 and 4. It would be interesting to delve into the evolution of these data, but it is not strange given its productive structure and territorial positioning.
- Lora del Río and Las Cabezas de San Juan present an overvalued measure in the item ranked fourth, *Registered Contracts / Working-age population*, with a category 10 in the first one and an 8 in the second, when they should have lower categories. In any case, its eminently agrarian contractual activity justifies that such a high categorization occurs in terms of registered contracts.

In contrast, there are 4 municipalities that mismatch in the measurement of Rasch in 2012:

- Chipiona: In this municipality, the item with entry number 3, *Budgetary income per capita*, again offers an overvalued measure; moreover, if in 2007 it reached category 8 and the model estimated that it should be lower, in 2012 the category granted by the available information is 10, and the model again estimates that it should be lower. But the reality is that it has a budget income much higher than what seems to be normal in similar municipalities. For the whole of the 28 municipalities, the average budget revenue per inhabitant is 1,104.27 euros, more than two and a half times lower than its 2,844.69 euros per inhabitant, which places Chipiona as the highest income budget per inhabitant of 2012 in the set of municipalities studied. As already indicated above, its status as a coastal municipality may generate budgetary revenue that is much higher than the rest, which in any case requires a more detailed study.

- Lora del Río once again presents an overvalued measure in the item *Registered contracts / Working age population*, as in 2007. And if in both years the category indicated by the data is 10, the whole of the data leads to the model to present a greater mismatch in 2012, with a residual of 3; that is, the model expected that this item, as in 2007, would be lower. We return to argue its eminently rural character and the high level of temporality of its recruitment, although it would be interesting to deepen in it.
- Las Cabezas de San Juan: The item in fourth place, *Registered Contracts / Working-age population*, which was already marked in 2007 with an excessively high category, in 2012 falls to a level close to that claimed for 2007, but even so, after all these years of economic recession, the model continues to estimate that this item should have a category below 5.
- Cartaya presents two items with important mismatches. The item *Number of declarations / Working age population* presents an underestimated measure, given that the model expected it to present a higher category; but, in addition, the item positioned in fourth place, *Registered Contracts / Working-age population*, has an overestimated measure as the model expected that this item would present a lower category.

In this section we will also try to answer another of the objectives of this paper: to know what are the conditions that facilitate the economic development potential of a more and less important municipality. Table 3.4 shows the facilitating conditions of the economic development potential of a municipality chosen for the study, ordered according to their presence in the selected environment, according to the perception or response of the municipalities in terms of economic strength. According to the data in these tables, the results are obvious.

According to the response of the municipalities, in 2007, the item with the highest measure and, therefore, the most difficult to overcome or achieve was the 16. *Index of sectoral concentration*, while the item with a lower measure and, therefore, easier to overcome or achieve was the ratio 15. *Registered unemployment / Population aged 16-64*.

Accordingly, in 2007, the factor that has the greatest degree of influence at the time of generating a positive differential in terms of the potential for

TABLE 3.4.
MEASURES AND ADJUSTMENTS OF THE ITEMS FOR THE MEASUREMENT OF THE ANDALUSIAN MUNICIPALITIES WITH A POPULATION SIZE BETWEEN 15.000 AND 20.000 INHABITANTS (2007-2012)

TOTAL SCORE	MEASURE	MODEL S.E.	INFIT		OUTFIT		PTMEASURE-A		EXACT OBS%	MATCH EXP%	ÍTEM-2007
			MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.			
86	.32	.09	1.40	1.3	1.13	.5	.66	.45	7.1	17.1	I6. Sectoral concentration index
107	.17	.08	1.62	2.2	1.70	2.0	.34	.52	7.1	14.3	I3. Budgetary income per capita
126	.06	.08	1.31	1.3	1.24	.9	.27	.56	21.4	13.4	I4. Registered contracts/Pop.16-64
128	.05	.08	.60	-1.9	.60	-1.6	.64	.56	14.3	13.4	I2. Net working income/Pop.16-64
156	-.11	.07	.94	-2	1.02	.2	.59	.59	14.3	11.4	I1. No. of declarations/Pop. 16-64
219	-.48	.08	.54	-1.9	.41	-1.9	.70	.51	35.7	14.9	I5. Registered unemployment/Pop. 16-64
137.0	.00	.08	1.07	.1	1.02	.0	9.8	16.7	14.1	14.1	MEAN
42.4	.25	.01	.41	1.6	.42	1.4					S.D.
ÍTEM-2012											
86	.28	.09	1.11	.4	1.76	1.8	.08	.37	21.4	18.7	I3. Budgetary income per capita
98	.19	.08	1.22	.8	1.53	1.5	.06	.41	21.4	17.1	I4. Registered contracts/Pop.16-64
128	.00	.07	.55	-2.3	.61	-1.6	.60	.49	17.9	13.2	I2. Net working income/Pop.16-64
148	-.11	.07	.88	-5	.85	-5	.68	.53	7.1	12.8	I5. paro registrado/Pop. 16-64 años
150	-.12	.07	.80	-9	.77	-9	.59	.53	14.3	12.7	I6. Sectoral concentration index
174	-.25	.07	1.24	1.1	1.21	.9	.67	.56	7.1	12.7	I1. No. of declarations/Pop. 16-64
130.7	.00	.08	.96	-2	1.12	.2	6.0	14.9	14.5	14.5	MEAN
30.6	.18	.01	.25	1.2	.41	1.3					S.D.

Source: Prepared by the authors based on Winsteps 3.81.0

economic development in the municipalities that reach a higher category is *I6. Sectoral concentration index*, with a measure of 0.32 logit units, followed by *I3. Budgetary income per capita*, with 0.17 logit units and by *I4. Contracts registered / Working age population (aged 16 to 64 years)* with 0.06 logit units. Especially the first of them, since it only adds a total score of 86 out of the 280 possible. It is an item in which it is difficult to achieve a high category, marking differences between municipalities. The next one in importance in marking a differential in economic development potential among municipalities is *I3. Budgetary income per capita*, which also has a fairly low score, which means that there are marked differences between the different municipalities and that few are able to reach an important categorical level.

Among the items capable of marking smaller differences between municipalities because most of the municipalities reached a high category in 2007, *I5. Registered unemployment / Population aged 16-64 years* stands out, with a measure of -0.48 logit units and a total score of 219 out of 280 possible. This means that just in that year of economic boom in both the Andalusian and Spanish economies, this indicator reached a high positive category in most of the municipalities.

On the other hand, the year 2012 is an exercise in the midst of economic recession, which marks a negative evolution of indicators in most cases. In this way, the item with a higher measure and, therefore, more difficult to overcome or achieve was *I3. Budgetary income per capita*, with 0.28 logit units, in such a way that in that year it is the factor that has the greatest degree of influence on the potential differential of economic development of the municipalities; while the item with a lower measure and, therefore, easier to overcome or achieve was the ratio *I1. Number of declarations / Population aged 16 to 64 years*.

The second most important item to achieve greater economic strength in 2012 is *I4. Registered contracts in relation to the population aged 16 to 64 years*, which reaches a Rasch measure of 0.19 logit units and a total score of 98 out of 280 possible points. The third with the greatest impact when defining the potential for economic development in 2012 is *I2. Net income / Working age population aged 16 to 64 years* with a Rasch measure of 0.00 logit units.

The fourth and fifth items by importance in their influence to generate a differential of economic development potential are *Registered unemployment*

/ Working age population aged 16 to 64 years and Sectoral Concentration Index with respective measures of -0.11 and -0.12 logit units.

From table 3.4 two imbalances in the ZSTD hypothesis test can indeed be observed, one in 2007 and another in 2012, although the average presents an adequate value, and in the MNSQ for each item, both in the Infit and the Outfit, the values are adequate. Specifically, in 2007, *I3. Budgetary income per capita*, has an imbalance of 2.2 in the Infit that could create tensions in the results exposed by the programme. However, the MNSQ, having a value greater than 1.5 and less than 2 indicates that it is not very productive for the measurement, but yet usable, indicating a greater variability in the data predicted by the Rasch model. In 2012, *Net income from work / Population aged 16-64 years*, presents a mismatch in the ZITD of Infit to show this a value of -2.3 units, which could also create tensions in the results, but its MNSQ of 0.55 is indicative that its contribution in the measurement is acceptable, although it introduces a certain margin of uncertainty.

However, it should be noted that the PTMEASURE CORR is positive for all the items in both years, which would indicate that the order of the items is considered normal according to their incidence in the economic strength and, therefore, the aforementioned imbalances would be irrelevant for the central objective of the study: to order which items are more and less important when generating a differential in the potential of municipal economic development, although there is no doubt that it would be of interest to address the origin of said imbalances in a subsequent investigation.

It should be remembered that in table 3.5 the positive residual values indicate that they have scored the item above the value expected by the model, while the negative residual values indicate that they have, in reality, been scored lower than the model expected.

Table 3.8 shows how there is no item with an important mismatch to highlight in the quadratic mean MNSQ, but, instead, shows how for three items there are some municipalities that do have a remarkable residual that highlights the differences between what is expected by the model and what was really observed:

I3. Budgetary income per capita. In the municipalities located at positions 13 (Chipiona) and 23 (Tarifa), said item offers an observed value with a residual 3 that indicates that it has a category above that expected by the model; that is, it is overvalued in both cases.

16. Sectoral concentration index. In the municipalities with entry number 24 (Torrox), 26 (Vera) and 28 (La Zúbia), said item is overvalued, that is, they present an observed value above that expected by the model.

14. Registered contracts / Population aged 16-64 years. In the municipality with registration number 3 (Aljaraque), it presents an observed value below that expected by the model; On the other hand, in the municipalities 9 (Las Cabezas de San Juan) and 18 (Lora del Río), this item shows observed values above those expected by the model.

Table 3.5 shows that in this case, neither is there any item with an important mismatch to highlight in the quadratic mean MNSQ, although it highlights three items with important residuals for some municipalities, which highlights the differences between what is expected by the model and what was really observed:

13. Ingresos presupuestarios por habitante. En el municipio con número de entrada 13 (Chipiona), dicho ítem se encuentra sobrevalorado, lo cual ya se comentó anteriormente.

13. Budgetary income per capita. In the municipality with entry number 13 (Chipiona), said item is overvalued, which has already been commented above.

14. Registered contracts / Population aged 16-64 years. In the municipalities with registration numbers 9 (Las Cabezas de San Juan), 11 (Cartaya) and 18 (Lora del Río), said item offers an observed value above that expected by the model, that is, they are overvalued, which has already been justified above by the agrarian character of these municipalities and the frequency of temporary, above that of other municipalities, also rural, which should be subject to revision.

11. Number of declarations / Population aged 16-64 years. This item is undervalued in the municipality with entry number 11 (Cartaya), that is, it has an observed value below that expected by the model, worthy of study as in the previous cases in order to propose concrete political actions.

TABLE 3.5.
DISADVANTAGES OF THE ITEMS FOR THE ANDALUSIAN MUNICIPALITIES WITH A POPULATION SIZE BETWEEN 15.000 AND 20.000 INHABITANTS

NUMBER - NAME		MEASURE	INFIT	(MNSQ)	OUTFIT	2007														
3	Budgetary income	.17	1.6	A	1.7															
OBSERVED:	1:	4	1	3	4	10	5	1	2	2	1	10	1	8	7	4				
Z-RESIDUAL:														3						
OBSERVED:	16:	1	1	1	4	6	3	3	10	10	1	2	1	1						
Z-RESIDUAL:									3											
6	Concentration index	.32	1.4	B	1.1															
OBSERVED:	1:	5	1	10	1	2	5	1	1	1	1	3	5	1	4	1				
Z-RESIDUAL:																				
OBSERVED:	16:	1	5	1	1	1	1	1	1	10	1	10	1	10						
Z-RESIDUAL:										2		2		2						
4	Registered contracts/Population	.06	1.3	C	1.2															
OBSERVED:	1:	6	2	2	7	4	8	6	1	8	2	10	1	6	2	2				
Z-RESIDUAL:				-2						2										
OBSERVED:	16:	4	4	10	6	8	4	4	3	3	2	7	3	1						
Z-RESIDUAL:				2																
NUMBER - NAME		MEASURE	INFIT	(MNSQ)	OUTFIT	2012														
3	Budgetary income	.28	1.1	A	1.8															
OBSERVED:	1:	3	2	2	2	6	4	2	4	2	3	5	1	10	1	4				
Z-RESIDUAL:														5						
OBSERVED:	16:	1	2	2	2	6	2	1	5	4	2	5	2	1						
Z-RESIDUAL:																				
4	Regist. contracts/Population	.19	1.2	B	1.5															
OBSERVED:	1:	3	1	1	6	2	5	3	2	5	2	10	3	4	2	2				
Z-RESIDUAL:										3		2								
OBSERVED:	16:	2	2	10	5	6	4	3	3	2	3	3	3	1						
Z-RESIDUAL:				3																
1	N° of declarations/Population	-.25	1.2	C	1.2															
OBSERVED:	1:	10	1	10	4	10	10	7	1	1	7	1	6	1	10	10				
Z-RESIDUAL:																				
OBSERVED:	16:	10	10	2	8	10	10	4	2	1	10	3	5	10						
Z-RESIDUAL:																				

Source: Prepared by the authors based on Winsteps 3.81.0

4.- CONCLUSIONS

In spite of accepting that the process of economic development of a territory contains or is endowed with an enormous difficulty, since it implies the interaction of numerous factors of various kinds (economic, social, cultural, institutional...), it is considered that this process is perfectly understandable, and that as a consequence of this, economic policy measures can be designed to exercise influence on this process, by generating it, or stimulating and strengthening the existing one.

The present investigation, based on the measurement of the Economic Development Potential obtained through the application of the Rasch model, tries to prioritize the position of the municipalities based on this latent variable, as well as highlighting the relevance or differential incidence of the factors of potentiality of said process and, in short, the existence of asymmetries between the municipalities, which explain the ordering of the subjects based on the chosen construct. All this can help, without a doubt, to the most effective and efficient design of economic policies aimed at both strengthening and stimulating the growth and economic development of the municipal units, each municipality knows its starting situation and which items allow simpler advances, but less impactful and more complex, but also more decisive.

The analysis is carried out in scenarios constituted by subjects that present very heterogeneous data, resulting from the divergence both in the characteristics of each territory (economic, social, cultural, institutional...) and level of development. In this context, the present research work is presented as an instrument of functional, operational, practical, flexible, appropriate and efficient analysis for the economic study of the territories at the municipal level since it allows hierarchizing the selected subjects according to their economic development potential, even allowing the execution of intertemporal comparisons, as well as ordering the potential factors chosen according to their capacity or relevance to generate a differential incidence in the aforementioned process. The latter is very useful and valuable for the recommendation of economic policy strategies for the stimulation of the development taking into account the own characteristics as well as the differences in the economic development potential of the different territorial units.

When obtaining which items are the ones that most affect the Economic Development process, depending on the period considered, expansion or economic recession, the municipalities can achieve greater progress adapting

their strategic actions of budgetary, labour, business and internal dynamism policy to mobilize income and be able to create more income, wealth and employment. Among the options some will have a higher impact and others lower, all depending on the municipality in question.

This analysis allows us to identify the strong and weak items in which each municipality stands out, which, faced with the weighting experienced by each one of them in the global measurement, helps us identify what the specific strategy of each of them should be if you want to improve your economic potential.

Likewise, the imbalances raise the possibility of initiating a detailed study of certain municipalities that go out of the normal tonic. Thus, there are municipalities that have an excessive level of recruitment despite its rural nature, which could be derived from specific interventions that cause such circumstance: local habits, specific subsidies ... That is why the model allows finding answers to certain developments that require, logically, of an analysis of such scenarios in a broader and more detailed way.

On the basis of the results obtained, it can be highlighted that the objectives initially proposed have been achieved: a generic analytical proposal that supports the planning of the development policies of a municipality, as well as the confirmation of the effectiveness of both said proposal and the instruments used for the municipalities analyzed.

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