

Article

# City Brand: What Are the Main Conditions for Territorial Performance?

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**Abstract:** Territories and respective political agents recognize now the importance of being attractive, not only because of tourism, but also because this is an important feature to attract investment and even new residents. Based on this evolution, the concept of territory branding has been developed, with rankings like the Portugal City Brand measuring it. With the objective of explaining the most important conditions for territories to attain higher city branding and based on a large dataset, a factor analysis was applied to identify possible components to be used. With those components and using a fuzzy-set qualitative comparative analysis, the main conditions for a better position in the ranking are identified. Results point to better identification of conditions to distinguish lower positioned municipalities, namely lack of economic conditions, of general conditions and low demographic indicators. Moreover, it is possible to conclude that the conditions of the different sub-rankings are different from the ones of the main ranking.

**Keywords:** conditions; factor analysis; municipalities; Portugal City Brand

## 1. Introduction

It is well known that customers are very connected to brands and many are known worldwide, most of them connected to physical products. However, recently the concept of brand was extended to other fields, and regional or city branding are examples of that. Normally, the case of tourism is recognized as an example, where destinations have become interested in managing their brands to allow greater differentiation from other destinations (see, for example, [1,2]), although branding could also be important for other purposes, for example, investment. In a context where the service sector is the most important economic activity, having economic conditions could be important to attract potential investors. Furthermore, showing a good city branding could also enhance the attraction of new residents or keep them in the territory.

City branding is a relatively new concept and involves the recognition of a given city at various levels as well as the way in which political actors work on those factors. In this paper, we don't want to discuss the concept of city branding and its different dimensions. Based on the Portugal City Brand, a well-known and established ranking, we have the objective of determining the most important conditions for Portuguese municipalities to reach a higher position in the ranking. The analysis is made based on a total of 35 indicators for municipalities.

Related to this issue is the concept of city branding personality, which has its origin in [3] and is defined by [4] as “the set of human characteristics associated with the city brand”, resulting from the “heritage, environmental and spatial aspects, inhabitants and activities of the city” (p. 1291). This personality is connected with the history of the brand (in this case, with the cities) and could mean

more attractive territories [5]. The existing literature does not agree about the number and typologies of city brand personality [4,6–8], with some studies being devoted to this issue [9,10].

The remainder of the paper is organized as follows: In Section 2, a brief literature review about city branding is presented. Section 3 explains the data and methodology used in this study. Section 4 presents the results and Section 5 concludes.

## 2. A Brief Literature Review on City Branding

As previously referred, the application of branding to territories is a relatively new topic, city branding being a particular case [11]. With its origins in the 1990s [12], it could be defined as the “study and management of brands representing cities and encompasses the study of several concepts linked to branding”, which can generate value for territories [13] (p. 28), with that added value being the main element of city branding [14,15].

In general, having a brand creates identification, which is used for differentiation purposes, whether of products or services, collectively or individually [16–18]. Having a strong brand is also related to the creation of a cultural impact, and it is an influence on people’s affections, beliefs, feelings and expectations [19,20].

These brand concepts could be extended to any theme, with city branding being one of them. Indeed, marketing experts devote some space to this concept (see, for example, [21]).

The concept of city branding is related to several features, like urbanism, buildings, monuments or public spaces, among others, meaning that places have unique characteristics [22]. These features help in the creation of an identity, which is closely related to the territory as a whole—its social, cultural and economic patterns [23].

Obviously, the drivers for constructing a city brand are different from those of products. Issues like territories’ history and heritage imply that the construction of a given brand takes several years [24,25]. Another important difference is the fact that in those territories, the local administration, which is responsible for decision-making, acts differently from private companies [25,26]. Finally, and unlike products and services, territories do not have few characteristics, but are composed of many factors like economic, cultural, historical or political, but also people or natural resources, among others [23,25]. These characteristics make city branding a very complex concept that is difficult to manage.

One of the most valuable factors of city branding is related to the functionalities of those cities—territories have to deal with several functions, like job creation, residence capacity, supplying of public goods (transport, education, health or recreation, among others) or being a destination [25]. It implies that territories offer social and economic conditions as well as cultural resources to their locals but also for visitors. These factors are the basis of the choice of data in this paper. Other important features that could be important for city branding are related to sustainable cities, involving issues such as the environment, mobility and having conditions for being a friendly city, for example, for older people (see, for example, [27]). According to [25], a successful territory could have several sources of added value: Word of mouth (speaking about experiences), perceptions and a city’s physical appearance. Again, it draws attention to the importance of a broad management of territorial resources.

Independently of the definition, the real objectives of city branding pass by the identification of a unique and attractive image of territories, mainly for people outside: Tourists, investors and potential residents, although it is also relevant for actual residents, since it helps lift their morale and spirit through the creation of a common image [24,25].

This is the basis of the analysis of our work. Based on the Portuguese case, an analysis is proposed to determine the main conditions to reach a higher position in the Portugal City Brand ranking. A qualitative comparative analysis is used, which allow us to identify several conditions influencing a given outcome.

The position of each municipality in the previously identified ranking is the outcome that we want to explain. That ranking is a function of five essential dimensions [28]: 1. Investment Attraction; 2. Tourism Attraction; 3. Talent Attraction; 4. Increased Prominence; 5. Increased Exports. Based on

these five conditions, and due to the availability of data, [28] the analysis is limited to three dimensions: Investment, Tourism and Talent, which are used to get three different sub-indices, respectively identified as Business, Visiting, and Living. Finally, these three sub-indices generate the general index.

The factors influencing each of those three dimensions may also be different. For example, attracting investment should be more related to economic factors while attracting tourists is probably more related to cultural factors or the availability of physical spaces. In the case of the living sub-index, it should be more influenced by municipalities' conditions.

The basis of the calculation of the ranking proposed by Bloom Consulting is an own algorithm, using three different variables: Statistical data from economic, tourism and social characteristics; a search variable provided by the own Digital Demand—D2 tool; an online performance variable using information from the websites and social networks of the territories.

The statistical indicators are divided into three categories:

1. Economic data (companies, business growth and percentage of new companies);
2. Tourism data (overnight stays, growth of overnight stays, hotel occupancy rates);
3. Social data (population, population growth rate, unemployment rate, purchasing power, crime rate, inhabitants per health center and higher education establishments).

Regarding Digital Demand—D2, it is a tool for the calculation of the attractiveness of a municipality, measuring the volume of online searches for each territory. The ranking is calculated considering a total of 38 search terms associated with the brand (brandtags) ranging from elements relating to accommodation, cultural or historical heritage, to jobs or volunteering (see [28] to consult all 38 brandtags). The whole 38 brandtags are then divided into a total of 171 microbrandtags.

The last variable is related to online communication performance of each municipality and is calculated using website analytical tools (number of hits, average time spent on the site, number of views, and so on). It also analyzes the presence and performance of municipalities on social networks, like Facebook and Twitter (for example, number of likes and followers).

So, the construction of the ranking is well-configured, according to the review of city branding.

### 3. Data and Methodology

As presented in the literature review, the concern of political authorities about how their regions are viewed by third parties is increasing, and it is possible to find some rankings measuring that visibility. In this study, we intend to analyze the conditions for a better city brand ranking in the specific case of Portugal.

Considering the objectives proposed in this paper, the use of a qualitative methodology is ideal, and we have chosen the fuzzy-set qualitative comparative analysis (fsQCA) in order to pursue our objectives. fsQCA is a qualitative methodology that uses the concept of fuzzy sets to identify the most important conditions affecting a particular outcome.

Although the objective of this study is not to challenge the identified ranking, it is possible to identify some limitations. On the one hand, the set of indicators used is relatively small compared to the total of available indicators. On the other hand, the indicators regarding online communication can overestimate the component for municipalities that have more social network users when compared with the ones with fewer users (either due to access difficulties, lack of economic power or even illiteracy). The aim of this work is to collect more detailed information from statistical sources and try to corroborate the data presented in the ranking. At the same time, we try to understand the most important conditions for municipalities to present a higher position.

Therefore, and based on the availability of Pordata indicators (availability for the municipalities and for a relevant time period), data were collected for the maximum number of possible variables, 35, as presented in Table 1 (Pordata is a database organized and developed by the Francisco Manuel dos Santos Foundation, based on Portugal, and involving more than 60 official entities, with special collaboration of Statistics Portugal).

**Table 1.** Variables used in this study, and year of analysis. Source: Pordata (<https://www.pordata.pt/>).

#	Variable and Unit	Year
1	Divorce rate	2013
2	Marriage rate	2015
3	% of population residing in places with 10,000 or more inhabitants	2011
4	Population's natural increase (% of resident population)	2015
5	Migration increase rate (% of resident population)	2015
6	Synthetic fecundity index	2015
7	Mortality rate	2015
8	Fertility rate	2015
9	Infant mortality rate	2015
10	Birth rate	2015
11	Population density	2015
12	Aging index (number of people aged 65 and over per 100 people under the age of 15)	2015
13	Longevity index (number of people aged 75 and over per 100 people aged 65 and over)	2015
14	Students enrolled (% of resident population)	2015
15	Deaths per 100 road accidents with victims	2015
16	Inhabitants per doctor, dentist and pharmacist	2015
17	Personnel employed in health centers	2012
18	Number of health centers	2012
19	Medical consultations in health centers per inhabitant	2012
20	Number of collective lodgings	2011
21	Number of rooms	2011
22	Purchasing power (% of national average)	2013
23	Crimes recorded by police per thousand inhabitants	2015
24	Unemployment rate	2015
25	Average monthly basic salary of employees	2013
26	Non-financial firms	2014
27	Gross value added of non-financial corporations	2014
28	Turnover of non-financial corporations	2014
29	Computers with Internet connection as a % of total computers in primary and secondary education	2015
30	Inhabitants per ATM	2015
31	Water quality for human consumption	2015
32	Per capita expenditure on environment by municipalities	2015
33	Cinema: Spectators per thousand inhabitants	2015
34	Current expenditure by municipalities	2015
35	Balance of current account of municipalities	2015

We used the Bloom Consulting's ranking of 2016 because that ranking is calculated from the data of previous years, and we have available data from 2015 for most of the variables. However, for three of the variables, data were only available for 2011, which is the reason for using those variables.

The ranking is applied to all 308 Portuguese municipalities, both for mainland and islands. However, there are some missing values for the variables in the cases of Azores and Madeira. By this motive, these municipalities were excluded from our analysis, which is restricted to the 278 mainland municipalities.

The use of 35 variables in fuzzy models would make the analysis impracticable, so it was necessary to reduce this information. We chose to make this reduction applying factor analysis.

Factor analysis is an exploratory technique with the objective of reducing the number of variables, simplifying statistical analysis. Starting from a large set of variables, and based on the correlations between the variables, factor analysis estimates the common elements among those variables in order to construct factors that are not directly observable. According to [29], factor analysis has some requirements in terms of the number of observations to observe its main assumptions for the results to be considered robust. These assumptions require the sample to be symmetric and without outliers. Besides this, we used the KMO (Kaiser-Meyer-Olkin) index and the Bartlett sphericity test to evaluate the quality of the solutions obtained [30].

Firstly, the data quality was evaluated through the KMO measure, considered a measure of homogeneity of the original variables and suitable for both small and large variables. Simultaneously, the significance of the correlations was analyzed with Bartlett's test, whose null is the absence of

correlations. Factor analysis was completed extracting the factors and constructing the communalities (that is, identifying common elements for the different factors), as well as factor rotation (in this case, to facilitate reading of the results). The principal components method was used for factor extraction and construction of communalities, while Varimax was used for rotation.

The conditions used for the fsQCA were built from the components of factor analysis.

Besides the general ranking, other three sub-rankings were used and the same analysis was also made for each of these three alternatives. The previous relationship was also applied in order to identify whether the conditions that affect each of the rankings differ, depending on the type of variable it measures.

Regarding the results, it was expected that the economic, health and comfort and living conditions dimensions will have a positive impact in ranking's position, while for the demographic dimensions, we expected that greater demographic dynamism should be related to higher attractiveness of municipalities.

To attain the objective of verifying which conditions are most important to be considered necessary and/or sufficient to achieve a given ranking, we chose to apply fsQCA, since this methodology identifies the conditions to achieve a given outcome. In our study, and regarding the outcomes, the general ranking and the sub-rankings of Portugal City Brand are used successively in different models. Regarding the conditions, they are the ones calculated by the applied factor analysis.

In the case of outcome variables, we ordered the municipalities considering their position on the rankings. Because we wanted to verify if there is a relation between the conditions and a better position in the respective ranking, the municipalities were ordered in descending order. Thus, the best-positioned municipality was given the value of 308, and the worst municipality the value of 1.

The fsQCA is a qualitative methodology that is used to reveal the minimum combinations needed for a given specific result [31]. In fact, fsQCA is just one of the alternatives that allow comparative qualitative analysis, being also possible to use this type of analysis with binary variables (crisp-set QCA) or with multivalued variables (multi-value QCA) [32].

Introduced in the literature by [33], QCA has been developed ever since (see, for example, [32] or [34]). Used originally in social sciences like sociology, recently it has also been used in areas related to economics and management, with applications on countries' economic performance [35], export performance [36], economic growth [37], innovation [38] or entrepreneurship [39,40]. Despite this general use of fsQCA, no other studies were found to identify the conditions to evaluate city branding. However, there was an application of qualitative comparative analysis in a related area—[41] applies the fsQCA to a sample of 72 Spanish cities and concludes that city reputation has effects on some of cities' performance indicators, namely on economic activities, employment or migration.

Since our aim is to study the conditions for better performance in a given ranking and not to make estimates of this ranking, fsQCA is an appropriate approach when compared with other methodologies like regression analysis. In fact, fsQCA does not capture a pure cause-and-effect analysis but rather analyzes different combinations of conditions of a given problem [31]. Moreover, this methodology is suitable for use with any type of sample size [31].

The proposed methodology is able to capture the existence of necessary and sufficient conditions. In the case of necessary conditions, they are measured by the "consistency", a measure of the degree to which each case corresponds to a theoretical set of a given solution. In other words, it identifies the proportion of cases that is consistent with a particular result. In this paper, it is used the consistency measure introduced by [42], which attributes severe penalties to inconsistencies in results.

In the case of sufficient conditions, the truth table algorithm is used (see, for example, [32]), an algorithm that groups central and peripheral causal conditions and provides three different solutions: Parsimonious, intermediate and complex. While the complex solution does not use simplifying hypotheses in the model, a situation that usually hinders interpretation of the results, the parsimonious solution behaves contrarily, since it reduces the causal conditions to the smallest possible number. In the middle, in the case of the intermediate solution, certain assumptions are included and selected

by the researcher, namely the type of relationship that is expected between the conditions and the outcome [42]. In this paper, as in other studies, a combination between the intermediate and the parsimonious solution is used.

Contrarily to the regression analysis, which normally uses data directly from the source, the fsQCA implies some codification in codifying data in a process called calibration. This calibration process implies to code the variable in a range of values from 0 (fully out point) to 1 (fully in point) and passing from the “neither in nor out” point (for which corresponds a value of 0.5). Following [43], a fuzzy set is a continuous measure for which a researcher establishes, for each condition and for the result, a value of belonging to the set (fully in, with the variable taking the value of 1), a non-set value (fully out, with the value of 0) and a crossover point (0.5). The calibration process causes all conditions and the outcomes to take values ranging from 0 to 1.

The percentile approach was chosen as the basis for data calibration, which is an appropriate approach when data are continuous, as with the data for the factors [32]. Through this approach, the fully in point was identified by 95th percentile, the fully out point by the 5th percentile and the neither in nor out point by the median. The same criterion was used for all conditions and outcomes. For the whole set of calculations, the fs/CA software package was used (version 2.5).

#### 4. Results

We divide this section into two different sub-sections, with the first presenting the results of factor analysis as well as the identification of the components used in fsQCA. The second sub-section analyzes the results of the fsQCA, identifying the main conditions that influence the rankings under analysis.

##### 4.1. Factor Analysis Results

Our first step was the division of the variables to be used into different groups, with the objective of reducing information in order to identify possible dimensions to be used later. So, and as previously identified, two different factor analyses were performed.

The first factor analysis was run for the demographic variables (1) to (13), while the second one was done for the socio-economic variables (14) to (35). The exploratory results of both factor analyses are presented in Table 2, and the results show good levels for the KMO statistic. Regarding the Bartlett test, the null hypothesis of no correlation between the variables is rejected, indicating that those variables are significantly correlated.

**Table 2.** Exploratory factor analysis results. \* means rejection of the null hypothesis at a 5% significance level. \*\* means rejection of the null hypothesis at a 1% significance level.

Group	Used Variables	KMO	Bartlett's Test
#1	(1) to (13)	0.754	5355.44 **
#2	(14) to (35)	0.837	5969.29 **

For the first group of variables, based on the value of the eigenvalues (it was considered a minimum value of 1.5) and in the variance of each component, it was decided to retain two components, which jointly explain about 60% of the total variance (this is an adequate value, according to [44] or [29]).

Table 3 shows the results of the relations of each variable with the two retained components, after rotation.

**Table 3.** Relationship between variables and different components, after rotation (first group).

Variable	Component	
	1	2
Mortality rate	−0.934	
Population's natural increase	0.871	0.421
Longevity Index	−0.846	−0.349
Aging index	−0.807	−0.344
Divorce rate	0.620	
Marriage rate	0.366	
Migratory increase		
Child mortality rate		
Fertility rate		0.969
Fecundity index		0.955
Birth rate	0.409	0.862
% Population residing in places with 10,000 or more inhabitants	0.399	0.549
Population density		0.536

**Legend:** Shaded values are for variables with a coefficient greater than 0.5 with the respective component.

In Table 3 variables with a coefficient greater than 0.5 are shaded, making it possible to distinguish two different components related to demography: The first component associated to longevity and the second component associated with fecundity.

A similar procedure was made for the second group of variables. In this case, three components were obtained (responsible for about 51.4% of the variance). The relationship of each of the variables with the components, after rotation, is presented in Table 4. In this case, it seems possible to identify three components: The first related to the overall economic conditions of the municipalities (we call it economy), the second component, which includes some variables more related to life conditions, and the third component, called overpopulation.

**Table 4.** Relationship between variables and different components, after rotation (second group).

Variable	Component		
	1	2	3
Non-financial corporations	0.959		
Balance of current account of municipalities	0.949		
Gross value added	0.945		
Volume of business	0.937		
Number of health centers	0.936		
Number of rooms	0.903		
Number of collective lodgings	0.843		
Purchasing power	0.656	0.652	
Cinema: spectators	0.518	0.423	
Inhabitants per ATM		−0.604	−0.501
Basic remuneration	0.498	0.588	
Water quality		0.437	
Inhabitants per doctor		−0.433	
Unemployment		−0.409	
Crime			
Current expenditure of municipal councils			
Students enrolled			
Personnel employed in health centers		−0.340	0.683
Municipal expenditure on environment			0.657
Medical appointments in health centers			0.591
Deaths per 100 road accidents			0.403
Computers with Internet connection			

**Legend:** Shaded values are for variables with a coefficient greater than 0.5 with the respective component.

#### 4.2. fsQCA Results

With factor analysis, five different components were obtained: (i) Economy; (ii) Living Conditions (conditions); (iii) Overpopulation (overpop); (iv) Demography-Longevity (dem1); (v) Demography-Fecundity (dem2).

These are the dimensions used as conditions for the outcome, so that the model in question will be: Ranking = f (economy, conditions, overpop, dem1, dem2), where f (.) means function of.

The five components were obtained based on the equations calculated from the factor analysis performed. After this, the variables were calibrated, as identified in the methodology, in order to apply the fsQCA.

Our analysis intends to evaluate the relationship between the different variables measuring the different components with better or worse positioning in the Bloom Consulting classification. The analysis is done for four different rankings: The general ranking and each of the three sub-rankings identified in the publication: business, visiting and living.

The first step is to analyze the necessary conditions to contribute to the ranking in question, with the results in Table 5 showing that information. Considering the minimum consistency level of 0.75 [43,45], it is possible to identify that, for the main ranking, the only relevant condition is “dem1”, which refers to demographic variables related to longevity (“conditions” component almost reaches the 0.75 level).

**Table 5.** Necessary conditions for a better classification.

	General Ranking		Business		Visiting		Living	
	Cons.	Cov.	Cons.	Cov.	Cons.	Cov.	Cons.	Cov.
economy	0.7011	0.8077	0.6816	0.7938	0.6960	0.8016	0.6884	0.7972
~economy	0.5947	0.5254	0.6039	0.5394	0.6005	0.5304	0.6001	0.5329
conditions	0.7487	0.7624	0.7553	0.7775	0.7223	0.7353	0.7586	0.7764
~conditions	0.5365	0.5272	0.5363	0.5326	0.5566	0.5467	0.5306	0.5240
overpop	0.5270	0.5343	0.5216	0.5346	0.5728	0.5804	0.5087	0.5184
~overpop	0.7418	0.7320	0.7549	0.7531	0.6880	0.6787	0.7788	0.7724
dem1	0.7910	0.7705	0.7978	0.7856	0.7340	0.7147	0.8156	0.7985
~dem1	0.4849	0.4983	0.4815	0.5002	0.5285	0.5428	0.4727	0.4882
dem2	0.7292	0.7512	0.7314	0.7617	0.7000	0.7208	0.7303	0.7562
~dem2	0.5545	0.5389	0.5551	0.5453	0.5674	0.5512	0.5531	0.5402

**Legend:** “Cons.” refers to the consistency level of the condition and “cov.” to the coverage level. The symbol ~ refers to the absence of the given condition. Shaded values identify conditions with consistency higher than 0.75.

Note that Table 3 shows that the variables of mortality, longevity and aging are negatively related to this component. This is relevant because the “dem1” variable is positively related to the ranking, but since these variables are inversely related to the component, it is possible to conclude that the municipalities with the highest ranking are those with lower longevity levels, that is, municipalities with higher demographic dynamism (see, for example, the positive impact of the natural balance variable on that component).

In the “business” sub-ranking, “dem1” continues to be relevant, but “conditions” and “overpop” are also important necessary conditions for a higher position in the ranking. The living sub-ranking is also influenced by the same conditions. Considering the “visiting” sub-ranking, none of the conditions are considered necessary to improve municipalities’ ranking. The relevant variables with relevance for this ranking will probably be more tourism-related aspects, some of which are not available for this type of analysis (for example, weather conditions).

Despite the analysis of necessary conditions leading to higher values of the outcome, the fsQCA also allows to analyze which conditions are most relevant for non-verification of that outcome. In this case, it means that is possible to identify which conditions are most related to worse position in the rankings, with the results presented in Table 6.



**Table 6.** Necessary conditions for a worse classification.

	General Ranking		Business		Visiting		Living	
	Cons.	Cov.	Cons.	Cov.	Cons.	Cov.	Cons.	Cov.
economy	0.4627	0.5330	0.4728	0.5387	0.4686	0.5399	0.4685	0.5370
~economy	0.8331	0.7359	0.8190	0.7156	0.8278	0.7315	0.8230	0.7233
conditions	0.5186	0.5280	0.5190	0.5226	0.5387	0.5487	0.5129	0.5196
~condition	0.7667	0.7531	0.7791	0.7569	0.7401	0.7273	0.7793	0.7616
overpop	0.7284	0.7383	0.7469	0.7488	0.6744	0.6839	0.7681	0.7746
~overpop	0.5406	0.5333	0.5358	0.5228	0.5862	0.5786	0.5224	0.5128
dem1	0.5116	0.4982	0.5081	0.4895	0.5552	0.5409	0.4993	0.4838
~dem1	0.7644	0.7852	0.7774	0.7899	0.7072	0.7268	0.7921	0.8096
dem2	0.5253	0.5411	0.5268	0.5367	0.5382	0.5545	0.5243	0.5373
~dem2	0.7585	0.7368	0.7661	0.7362	0.7291	0.7086	0.7621	0.7366

**Legend:** “Cons.” refers to the consistency level of the condition and “cov.” to the coverage level. The symbol ~ refers to the absence of the given condition. Shaded values identify conditions with consistency higher than 0.75.

An interesting result is that it is possible to identify more conditions to explain worse classifications than to explain good ones. For the general ranking, the absence of four conditions is relevant in the explanation of worse positioning: Lack of economic conditions, lack of general conditions as well as low levels of both demographic components. To some extent, municipalities with worse economic performance, worse levels of conditions and less dynamic demographic conditions occupy lower positions in the general ranking. The same conditions are found relevant in the case of the business sub-ranking.

Regarding the “visiting” sub-ranking, the absence of general conditions is the only relevant condition. This is likely to be related to the lack of conditions to boost tourism, whether for the creation of infrastructures or for promotion.

Finally, for the “living” sub-ranking, besides the variables identified for the general and business rankings, the existence of overpopulation is also a condition explaining a worse position in the ranking.

The fact that few conditions are identified to explain the best positions in the rankings, while in the case of worst positions we can find many conditions, is an interesting result and may be related to the existence of asymmetries in the country and the fact that, probably in terms of infrastructure, the different municipalities are not evenly endowed with these infrastructures. Additionally, municipalities in the top places present some difficulty of differentiation between themselves, with these differences being more noticeable in municipalities well down the rankings. This may be an important conclusion for decision-makers, especially for places at the bottom of the rankings.

We continue the analysis with the interpretation of sufficient conditions, following the procedure proposed by [46], where the intermediate solution is identified. We can distinguish between the most important conditions (core conditions, which are shared with the parsimonious solution) and peripheral conditions (identified with minor symbols). The most important conditions are those which are shared by the intermediate and parsimonious solutions, while a peripheral condition is presented only in the intermediate solution. For this analysis, we just considered conditions or combinations of conditions with a single coverage greater than 0.01.

When explaining the sufficient conditions, we use two new concepts: Unique coverage (original coverage) and total coverage (raw coverage, in the original). Single coverage is the ratio explained by a particular condition or combination of conditions that are relevant to explain an outcome. Total coverage is the extent to which the set of conditions of a solution explains that outcome result [42].

Table 7 shows the results of the sufficient conditions to obtain better positions in the general ranking and business sub-ranking, while Table 8 shows the same results for the remaining two sub-rankings.

The general ranking and the business sub-ranking present the same set of sufficient conditions. The two main combinations of solutions, according to total coverage, are the combination of the absence of overpopulation with the second demographic component, coupled with the combination of good

conditions and demographic/longevity conditions. As can be seen in Table 7, results are the same for both rankings, only differing in consistency and convergence levels (but with differences that are not significant). The third condition combines the following components: Economy, longevity and the absence of birth rate. Finally, there is a joint combination of conditions of economy, comfort and life. These last two sets of combinations end up having lower coverage levels. The relevance of the results is illustrated by the high levels of coverage and convergence in each of the solutions.

**Table 7.** Sufficient conditions to reach a better position in the general ranking and in the business sub-ranking.

	General Ranking				Business			
	1	2	3	4	1	2	3	4
economy conditions		●	●	●		●	●	●
overpop	⊗			●	⊗			●
dem1		●	●			●	●	
dem2	●		⊗		●		⊗	
RC	0.5698	0.6303	0.3933	0.3280	0.5740	0.6353	0.3840	0.3199
UC	0.0396	0.0497	0.0394	0.0209	0.0411	0.0535	0.0361	0.0171
Cons.	0.8864	0.8730	0.8521	0.8470	0.9027	0.8894	0.8409	0.8351
OSCov.		0.8169				0.8176		
OSC		0.7927				0.8020		

**Legend:** Cons: consistency; RC: Raw coverage; UC: Unique coverage; OSC: Overall solution consistency; OSCov: Overall solution coverage. ● Core causal condition (presence). ● Peripheral causal condition (presence). ⊗ Core causal condition (absent). ⊗ Peripheral causal condition (absent).

**Table 8.** Sufficient conditions to reach a better position in visiting and living sub-rankings.

	Visiting			Living		
	1	2	3	1	2	3
economy conditions		●	●		●	●
overpop	⊗			⊗		
dem1		●	⊗		●	●
dem2	●		●	●		⊗
RC	0.5261	0.5916	0.3224	0.5875	0.6462	0.3914
UC	0.0207	0.0450	0.0255	0.0448	0.0513	0.0362
Cons.	0.8181	0.8190	0.8195	0.9184	0.8995	0.8521
OSCov.		0.7861			0.8310	
OSC		0.7441			0.8105	

**Legend:** Cons: consistency; RC: Raw coverage; UC: Unique coverage; OSC: Overall solution consistency; OSCov: Overall solution coverage. ● Core causal condition (presence). ● Peripheral causal condition (presence). ⊗ Core causal condition (absent). ⊗ Peripheral causal condition (absent).

In the left panel of Table 8, the results for the “visiting” ranking show that in this case, we just have three solutions. It is also the ranking with the lowest total coverage, although the value almost reaches the benchmark, which is usually considered (0.8). As in the case of the results from necessary conditions, this could mean that this sub-ranking needs another kind of information to have a robust analysis.

Finally, the “living” sub-ranking also presents different results, showing that the variables influencing the best position in this sub-ranking are different. It also considers the existence of just three solutions and the first two combinations of conditions found are the same: Combination of absence of overpopulation with higher levels of longevity, combination of good conditions and demographic/longevity. Recall that the longevity component is inversely related to the different variables, so the direction of influence is the same. The third combination of conditions joins good

economic conditions, the existence of longevity and absence of fecundity. In this case, it means that municipalities with low demographic dynamics will be better to live in. This result could be related to the fact that cities in the country with the best position in the ranking are district capitals, some of them with little demographic dynamic, since it is in the surrounding municipalities that this dynamic occurs.

This “living” sub-ranking has the highest total coverage level, meaning that it is the best explained outcome.

## 5. Discussion and Concluding Remarks

The main purpose of this research is to determine the necessary and sufficient conditions to explain the performance of Portuguese municipalities regarding the Portugal City Brand, developed by Bloom Consulting. This paper can be considered as contributing to the literature as it could be seen as a case study, with data from Portugal, but also because it could be used in the future for other territories. In this context, were used variables related to economic, business, demographic, well-being and cultural indicators from the Pordata database. Due to the existence of a high number of variables, A factor analysis was firstly performed in order to obtain the factors (based on principal components) representing the initial variables in a robust way. This analysis resulted in five factors, named longevity (demography 1), fecundity (demography 2), economy, overall conditions and overpopulation.

After this brief analysis, an fsQCA was applied in order to understand which factors (or new variables) are necessary and sufficient conditions for attaining a higher position for Portuguese municipalities in that ranking. The results point towards there being few conditions explaining higher positions in the rankings but many conditions explaining the lowest ones. This may be related to the existence of some asymmetries, especially in terms of infrastructure. Additionally, the municipalities in the top places present some difficulty in differentiation between them, with these differences being more noticeable in municipalities placed lower down. This could be an important conclusion for decision-makers, especially for places at the bottom of the rankings. Furthermore, it is also important to note the existence of differences of results for the sub-rankings. For example, the living sub-ranking presents different results, showing that the influencing variables are different.

The result about the absence of overpopulation as a condition for having better positions in the different sub-rankings is very interesting, drawing authorities’ attention to this particular issue. In fact, the results seem to indicate that overpopulation has a negative impact on several dimensions of the ranking, probably related to issues like road traffic, pollution or even gentrification, which affect not only living conditions but also activities such as tourism.

Another important result is that the conditions for global attractiveness are different among the different sub-rankings. From a political point of view, it is important to realize the positions of the respective municipality and determine goals. For example, if a given municipality wants to enhance its position in the business sub-ranking, policies and actions should be different from those of a municipality which considers tourism as the main goal.

Despite the possibility of distinguishing different conditions for different sub-rankings, and even that some conditions seem to cross all the sub-rankings (namely, overpopulation, overall conditions and demographic/longevity), managers should take into account that changes in urban spaces for a specific group (or category) will have a positive influence on others. For example, investing in mobility solutions would have positive impacts not only for living but also for tourism or even for business, so decision-makers should balance their actions not only for promotion of the territories but also investing in urban development.

This paper proposes a novel approach, comparing city brand rankings across cities in a given country, which makes it difficult to compare our results with the previously existing literature. Nonetheless, some of our results confirm previous evidences. For example, cities with better conditions have an influence in the general ranking and in each of the sub-rankings, which was already identified (see, for example, [22,25,27]).

Another condition that seems to be important is overpopulation, in this case negatively affecting the position of a city in the rankings. As far as we're concerned, previous studies do not relate overpopulation with city branding, but as overpopulation could have, as a consequence, a decrease in the quality of life (see, for example, [47]), the results are in line with the literature. The issues related to demographic dynamics are also detected in this study, but they seem difficult to identify in earlier studies and, as such, to compare with the existing literature.

Although we propose a new approach, it is necessary to recognize possible limitations, namely the lack of more available data, which could prevent a wider set of possible dimensions. Nevertheless, the non-availability of more data for municipalities is not easily overcome. Another possible weakness of this study is the methodologies used, which are based on linear assumptions. Other methodologies, such as neural networks, could be used in the future to compare the results. Finally, and despite the interest of a case study for Portuguese municipalities, in the future a similar study could be extended to a wider set of cities, given the existence of European and also world rankings measuring city branding.

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## References

1. Bickford-Smith, V. Creating a city of the tourist imagination: The case of Cape Town, the fairest cape of them all. *Urban Stud.* **2009**, *46*, 1763–1785. [[CrossRef](#)]
2. Sahin, S.; Baloglu, S. City branding: Investigating a brand advocacy model for distinct segments. *J. Hosp. Mark. Manag.* **2014**, *23*, 239–265. [[CrossRef](#)]
3. Hosany, S.; Ekinci, Y.; Uysal, M. Destination image and destination personality: An application of branding theories to tourism places. *J. Bus. Res.* **2006**, *59*, 638–642. [[CrossRef](#)]
4. Kaplan, M.; Yurt, O.; Guneri, B.; Kurtulus, K. Branding places: Applying brand personality concept to cities. *Eur. J. Mark.* **2010**, *44*, 9–18.
5. Skinner, H. The emergence and development of place marketing's confused identity. *J. Mark. Manag.* **2008**, *24*, 915–928. [[CrossRef](#)]
6. Sahin, S.; Baloglu, S. Brand personality and destination image of Istanbul. *Anatolia* **2011**, *22*, 69–88. [[CrossRef](#)]
7. Ahmad, M.; Abdullah, Z.; Tamam, E.; Bolong, J. Determinant attributes of city brand personality that influence strategic communication. *Can. Soc. Sci.* **2013**, *9*, 40–47.
8. Emirza, E.; Seri, I. The measurement of brand personality in the City brand: A case of Kayseri. In Proceedings of the International Conference on Economic and Social Studies, Sarajevo, Bosnia and Herzegovina, 10–11 May 2013; Volume 1, pp. 168–179.
9. Glinska, E.; Kilon, J. Desirable traits of the city brand personality in the opinion of managers for the promotion of the city government in Poland. *Procedia Soc. Behav. Sci.* **2014**, *156*, 418–423. [[CrossRef](#)]
10. Amatyakul, S.; Polyorat, K. City Brand Personality: The Application of Brand Personality Concept in the City Context. *Rev. Integr. Bus. Econ. Res.* **2016**, *5*, 108–121.
11. Zenker, S.; Beckmann, S. Measuring brand image effects of flagship projects for place brands: The case of Hamburg. *J. Brand Manag.* **2013**, *20*, 642–655. [[CrossRef](#)]
12. Kavartzis, M.; Ashworth, G. City branding: An effective assertion of identity or a transitory marketing trick? *Place Brand. Public Dipl.* **2006**, *3*, 183–194. [[CrossRef](#)]
13. Molina, A.; Fernandez, A.; Gómez, M.; Aranda, E. Differences in the city branding of European capitals based on online vs. offline sources of information. *Tour. Manag.* **2017**, *58*, 28–39. [[CrossRef](#)]
14. Zenker, S. How to catch a city? The concept and measurement of place brands. *J. Place Manag. Dev.* **2011**, *4*, 40–52. [[CrossRef](#)]
15. Kladou, S.; Kehagias, J. Assessing destination brand equity: An integrated approach. *J. Destin. Mark. Manag.* **2014**, *3*, 2–10. [[CrossRef](#)]

16. Askegaard, S. Brands as a global ideoscape. In *Brand Culture*; Schroeder, J., Morling, M., Eds.; Routledge: London, UK, 2006; pp. 91–102.
17. Aitken, R.; Campelo, A. The four Rs of place branding. *J. Mark. Manag.* **2011**, *27*, 913–933. [[CrossRef](#)]
18. Berthon, P.; Holbrook, M.; Hulbert, J.; Pitt, L. Viewing brands in multiple dimensions. *MIT Sloan Manag. Rev.* **2012**, *48*, 37–43.
19. Heilbrunn, B. Brave new brands: Cultural branding between utopia and a-topia. In *Brand Culture*; Schroeder, J., Morling, M., Eds.; Routledge: London, UK, 2006; pp. 103–117.
20. Schroeder, J. The cultural codes of branding. *Mark. Theory* **2009**, *9*, 123–126. [[CrossRef](#)]
21. Kotler, P.; Gertner, D. Country as brand, product, and beyond: A place marketing and brand management perspective. *J. Brand Manag.* **2002**, *9*, 249–261. [[CrossRef](#)]
22. Riza, M.; Doratli, N.; Fasli, M. City Branding and Identity. *Procedia Soc. Behav. Sci.* **2012**, *35*, 293–300. [[CrossRef](#)]
23. Zhang, L.; Zhao, S. City branding and the Olympic effect: A case study of Beijing. *Cities* **2009**, *26*, 245–254. [[CrossRef](#)]
24. Ashworth, G. The instruments of place branding: How is it done? *Eur. Spat. Res. Policy* **2009**, *16*, 9–22. [[CrossRef](#)]
25. Cozmiuc, C. City branding—just a compilation of marketable assets? *Econ. Transdiscipl. Cogn.* **2011**, *14*, 428.
26. Zhao, Y. China's leading historical and cultural city: Branding Dali City through public–private partnerships in Bai architecture revitalization. *Cities* **2015**, *49*, 106–112. [[CrossRef](#)]
27. Van Hoof, J.; Kazak, J. Urban ageing. *Indoor Built Environ.* **2018**, *27*, 583–586. [[CrossRef](#)]
28. Bloom Consulting. *Portugal City Brand Ranking 2016*; Bloom Consulting: Lisboa, Portugal, 2016.
29. Hair, J., Jr.; Black, W.; Babin, B.; Anderson, R. *Multivariate Data Analysis*, 7th ed.; Pearson Education Limited: Essex, UK, 2014.
30. Kaiser, H. An Index of Factorial Simplicity. *Psychometrika* **1974**, *39*, 31–36. [[CrossRef](#)]
31. Vis, B. The Comparative Advantages of fsQCA and Regression Analysis for Moderately Large-N Analyses. *Sociol. Methods Res.* **2012**, *41*, 168–198. [[CrossRef](#)]
32. Ragin, C. *Redesigning Social Inquiry: Fuzzy Sets and Beyond*; The University of Chicago Press: Chicago, IL, USA, 2008.
33. Ragin, C. *The Comparative Method: Moving beyond Qualitative and Quantitative Strategies*; University of California Press: Berkeley, CA, USA, 1987.
34. Wagemann, C.; Schneider, C. Qualitative Comparative Analysis (QCA) and Fuzzy-sets: Agenda for a Research Approach and a Data Analysis Technique. *Comp. Sociol.* **2010**, *9*, 376–396.
35. Vis, B.; Woldendorp, J.; Keman, H. Do miracles exist? Analyzing economic performance comparatively. *J. Bus. Res.* **2007**, *60*, 531–538. [[CrossRef](#)]
36. Schneider, M.; Schulze-Bentrop, C.; Paunescu, M. Mapping the institutional capital of high-tech firms: A fuzzy-set analysis of capitalist variety and export performance. *J. Int. Bus. Stud.* **2010**, *41*, 246–266. [[CrossRef](#)]
37. Ferreira, P.; Dionísio, A. GDP growth and convergence determinants in the European Union: A crisp-set analysis. *Rev. Econ. Perspect. Národohospod. Obz.* **2016**, *16*, 279–296. [[CrossRef](#)]
38. Ferreira, P.; Dionísio, A. What are the conditions for good innovation results? A fuzzy-set approach for European Union. *J. Bus. Res.* **2016**, *69*, 5369–5400. [[CrossRef](#)]
39. Khefacha, I.; Belkacem, L. Modeling entrepreneurial decision-making process using concepts from fuzzy set theory. *J. Glob. Entrep. Res.* **2015**, *5*, 1–21. [[CrossRef](#)]
40. Ferreira, P.; Dionísio, A. Entrepreneurship rates the fuzzy-set approach. *East. Eur. Bus. Econ. J.* **2016**, *2*, 111–128.
41. García, J.; Puente, E. The complex link of city reputation and city performance. Results for fsQCA analysis. *J. Bus. Res.* **2016**, *69*, 2830–2839. [[CrossRef](#)]
42. Ragin, C. Set relations in social research: Evaluating their consistency and courage. *Political Anal.* **2006**, *14*, 291–310. [[CrossRef](#)]
43. Ragin, C. *Fuzzy-Set Social Science*; The University of Chicago Press: Chicago, IL, USA, 2000.
44. Hinkin, T. A brief tutorial on the development of measures for use in survey questionnaires. *Organ. Res. Methods* **1998**, *1*, 104–121. [[CrossRef](#)]
45. Fiss, P. Building better causal theories: A fuzzy set approach to typologies in organization research. *Acad. Manag. J.* **2011**, *54*, 393–420. [[CrossRef](#)]

46. Ragin, C.; Fiss, P. Net effects versus configurations: An empirical demonstration. In *Redesigning Social Inquiry*; Ragin, C., Ed.; Chicago University Press: Chicago, IL, USA, 2008; pp. 191–212.
47. Heylighen, F.; Bernheim, J. Global Progress I: Empirical Evidence for ongoing Increase in Quality-of-life. *J. Happiness Stud.* **2000**, *1*, 323–349. [[CrossRef](#)]



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