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Study on the Local Purchasing Power

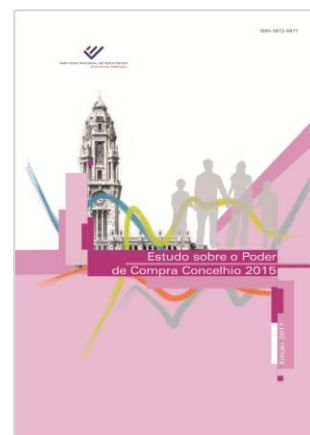
2015

***Per capita* Purchasing Power above the national average in 33 out of the 308 portuguese municipalities and in the Metropolitan Areas of Lisboa and Porto**

33 out of the 308 Portuguese municipalities scored above the national average in the *per capita* purchasing power indicator (IpC). Also above the national average were the metropolitan areas of Lisboa and Porto, as well as municipalities which are capitals of administrative districts.

The proportion of purchasing power indicator (PPC) puts in evidence the fact that 23 municipalities concentrated 50% of the total national purchasing power and that the 35 municipalities of the two metropolitan areas surpassed that value by concentrating 51% of the national purchasing power.

Statistics Portugal releases the 12th edition of the Study on the Local Purchasing Power referred to 2015 (EPCC 2015), which characterizes the Portuguese municipalities from a purchasing power broad view of material well-being, based on a set of indicators and a factor analysis model. This study aims to increase the scope of information available at municipality level by providing indicators that reflect the purchasing power revealed in the territories on a daily basis. Nevertheless, data produced within the scope of this study should not be interpreted in the same way as other variables with a well framed conceptual background, such as income or household consumption.



In this edition, 16 *per capita* variables were considered. Three indicators are disseminated – Per Capita Indicator, Proportion of Purchasing Power and Dynamism Relative Factor – and the values for NUTS 1, 2 and 3, as well as for the country, result from weighting the values at municipality level by the resident population in the different territorial levels. The present edition of the study is based on the Common Classification of Territorial Units for Statistics (NUTS 2013) set by the Commission Regulation (EU) No. 868/2014.

The publication includes an application that provides the user with the possibility of calculating the value for any of the three indicators according to other territorial classifications and specific groups of municipalities defined by the user. To have access to the publication and the application [click here](#).

Per Capita Purchasing Power Indicator

The Per Capita purchasing power Indicator (IpC) aims to capture the purchasing power revealed on a daily basis, in *per capita* terms, in the different municipalities or regions, having the national value as a reference (Portugal = 100).

IpC results for 2015 show that purchasing power is higher in Portugal's mainland territory than in the two Portuguese autonomous regions: it was 100.7 for Portugal's mainland and 85.5 and 86.9, respectively, for the autonomous regions of Açores and Madeira. The metropolitan area of Lisbon was the only NUTS 2 region scoring above the national *per capita* purchasing power average at 124.7. For the Algarve, the value (95.2) stood below the national average. The remaining three NUTS 2 regions in Portugal's mainland — Norte, Centro and Alentejo — scored relatively close *per capita* purchasing power values: 92.1 in the Norte; 91.0 in the Alentejo; and 88.8 in the Centro.

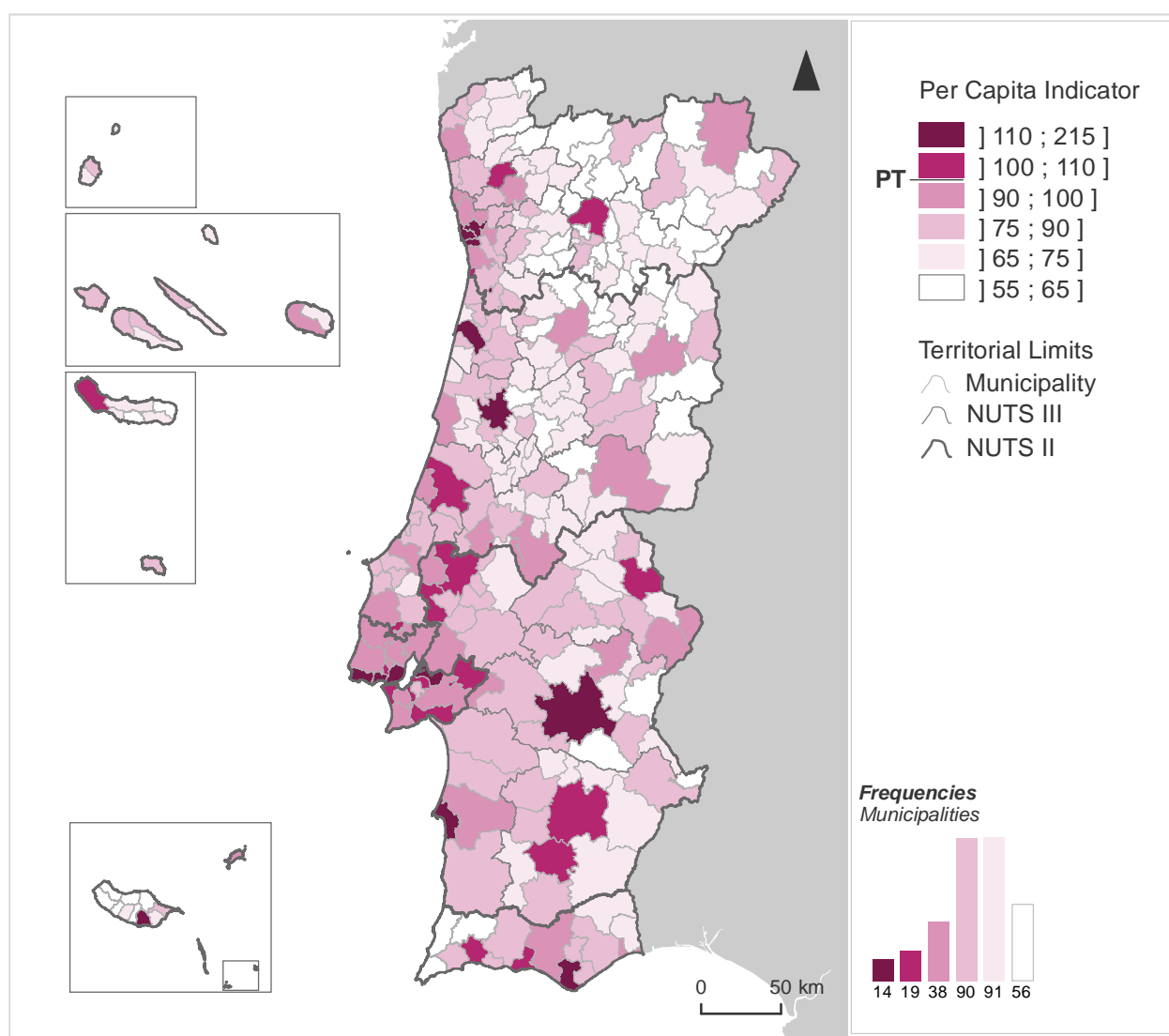
In 2015, in 33 out of the 308 Portuguese municipalities, the *per capita* purchasing power stood above the national average, with higher values of IpC associated with the metropolitan areas of Lisboa and Porto [Figure 1]. The municipality of Lisboa scored the highest IpC (214.5), more than doubling the national reference value, and, in the first 14 positions corresponding to an IpC higher than 110, three additional municipalities from Área Metropolitana de Lisboa could also be found: Oeiras (157.1), Cascais (122.7) and Alcochete (118.2). From the total of 18 municipalities that comprise Área Metropolitana de Lisboa, nine scored a purchasing power below the national average, with Moita (83.2) being the only municipality from this region scoring a value below 90% of the national average.

The metropolitan area of Porto scored an IpC value (104.8) below the value for Área Metropolitana de Lisboa (124.7), but above the national average. Among the five municipalities that surpassed the national average, four also scored above the metropolitan average - Porto (161.4), São João da Madeira (136.1), Matosinhos (123.7) and Maia (113.2) – while Espinho scored a purchasing power of 104.6. Among the 12 municipalities from Área Metropolitana do Porto (from a total of 17 municipalities) that scored a *per capita* purchasing power below the national average, were the municipalities of Arouca (69.5) and Paredes (78.2).

Besides the two metropolitan areas, some municipalities corresponding to capitals of district also scored a *per capita* purchasing power above the national average, especially in the case of Faro (132.1), Coimbra (131.5), Aveiro (125.1) and Évora (116.4), scoring an IpC higher than 110. Also with results above that threshold, it is worthwhile to mention the municipalities of Sines (133.5), in Alentejo Litoral, and of Funchal (115.3), in the Autonomous Region of Madeira. This analysis, therefore, suggests a positive association between the territorial units' level of urbanization and the purchasing power revealed in the territories on a daily basis.

In the national territory, 147 municipalities (48% of the total of municipalities) scored IpC values lower than 75. From the 10 municipalities with the lowest *per capita* purchasing power values, eight were from the Interior of Norte and Centro regions (spreading across the sub-regions of Tâmega e Sousa, Alto Tâmega, Douro, Terras de Trás-os-Montes and Viseu Dão Lafões) and two from the Autonomous Region of Madeira.

Figure 1. Per Capita Purchasing Power Indicator by municipality, 2015



Having, simultaneously, the national and regional contexts as a reference to analyse the IpC calculated for the municipalities, makes it possible to assess the level of intra-regional cohesion and to identify the municipalities that stand out from the corresponding regional context [Figure 2].

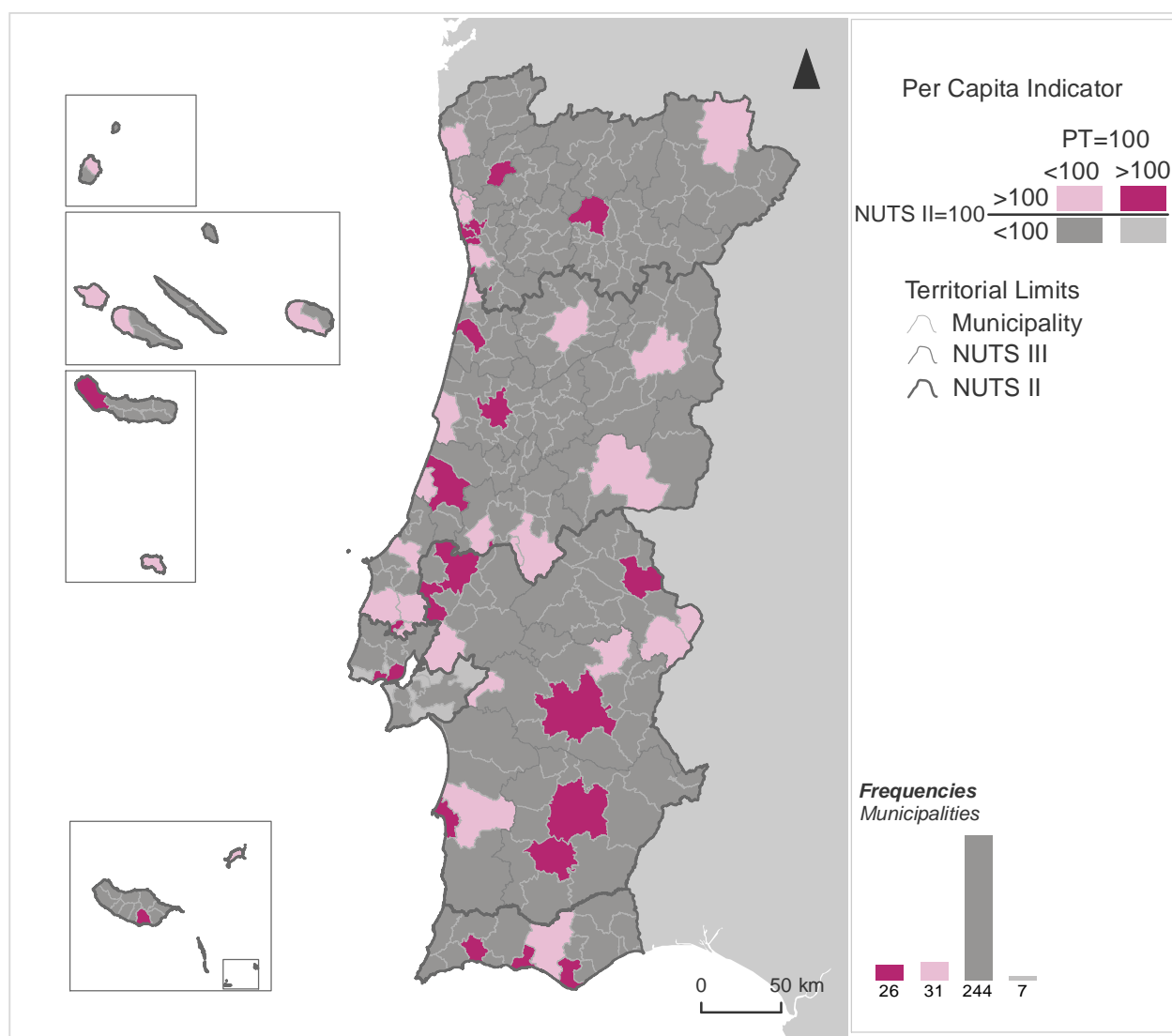
In this vein, in 2015 the 308 Portuguese municipalities were distributed as follows:

- 26 municipalities scored an IpC, simultaneously, above the national and regional *per capita* purchasing power values – corresponding mainly to municipalities from the two metropolitan areas (Lisboa, Porto, Oeiras, São João da Madeira, Matosinhos, Maia and Espinho) or to average-sized cities, mostly coincident with capitals of administrative districts (Faro, Coimbra, Aveiro, Évora, Funchal, Beja, Portalegre, Ponta Delgada, Braga, Santarém, Leiria and Vila Real), among others;
- in 31 municipalities, the *per capita* purchasing power revealed in 2015 stood below the national average, but above the regional average – corresponding mainly to municipalities of Portugal's mainland coastal area, mostly

from the Centro region (13 municipalities out of the total 100), but also from Alentejo (6 out of 58), Norte (5 out of 86), Região Autónoma dos Açores (5 out of 19), Região Autónoma da Madeira (1 out of 11) and from the Algarve (1 out of 16);

- around 80% of Portugal's municipalities (244 out of 308) had a *per capita* purchasing power, simultaneously, below the national average and the respective regional average (NUTS 2) – this proportion varied between 56% in Área Metropolitana de Lisboa, and 86%, in the Norte region;
- lastly, it is possible to identify the specific situation of seven municipalities from Área Metropolitana de Lisboa that scored a *per capita* purchasing power above the national average, but below the respective regional average (124.7): Cascais, Alcochete, Almada, Setúbal, Amadora, Barreiro and Montijo.

Figure 2. Per Capita Indicator by municipality in the context of the corresponding NUTS 2 regions, 2015



Proportion of Purchasing Power

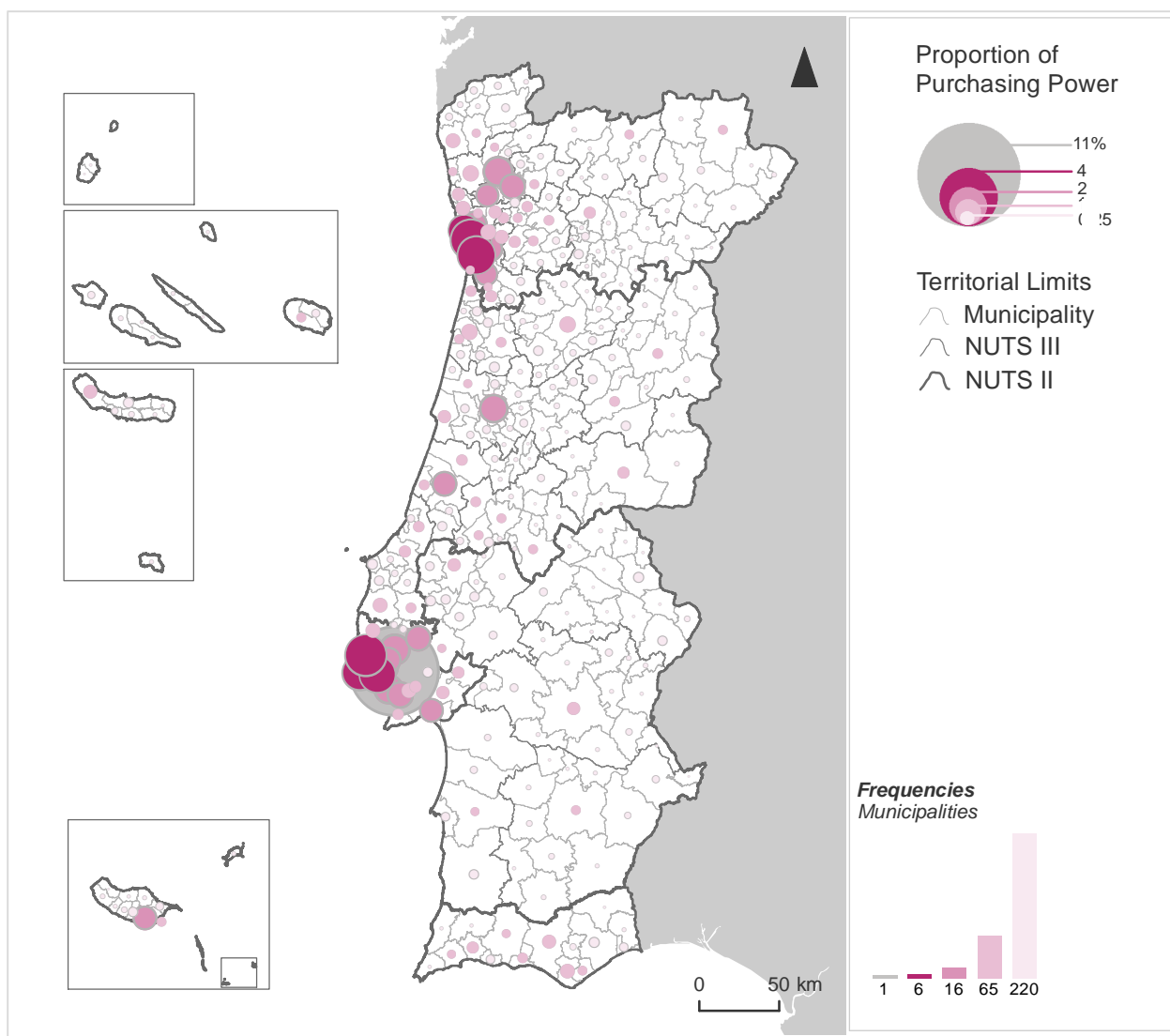
The Proportion of Purchasing Power (PPC) is an indicator derived from the Per Capita Indicator (IpC) and aims at assessing the degree of concentration of purchasing power in the different territories, having in mind that areas with more or less purchasing power in the national territory depend not only from the *per capita* purchasing power distribution across the country, but also from the spatial distribution of resident population.

In this context, the NUTS 2 regions of the metropolitan area of Lisboa and Norte concentrated two thirds of the purchasing power revealed regularly in the country. Greatly contributing to this result were the sub-regions of the metropolitan area of Lisboa (34%), which is simultaneously a NUTS 2 and 3 level region, and of the metropolitan area of Porto (17%). In addition, results show that the purchasing power was more concentrated in the coastal regions of Portugal's mainland. On the other hand, the sub-regions that concentrated less purchasing power were mainly located in the Interior of Norte and Centro regions: in ascending order, Alto Tâmega, Beira Baixa and Terras de Trás-os-Montes contributed, individually, with less than 1% to the national purchasing power.

At municipality level, Lisboa stood out in the national context by gathering 10% of the total purchasing power. In 2015, only other 22 municipalities concentrated individually more than 1% of the national purchasing power. These correspond to municipalities from the metropolitan areas of Lisboa (Sintra, Oeiras, Cascais, Loures, Almada, Amadora, Seixal, Vila Franca de Xira, Odivelas and Setúbal) and Porto (Porto, Vila Nova de Gaia, Matosinhos, Maia, Gondomar and Santa Maria da Feira), as well as to municipalities corresponding to capitals of administrative districts (Braga, Coimbra and Leiria). The municipalities of Funchal (Autonomous Region of Madeira), Guimarães and Vila Nova de Famalicão (both in Ave sub-region) were also part of this group [Figure 3].

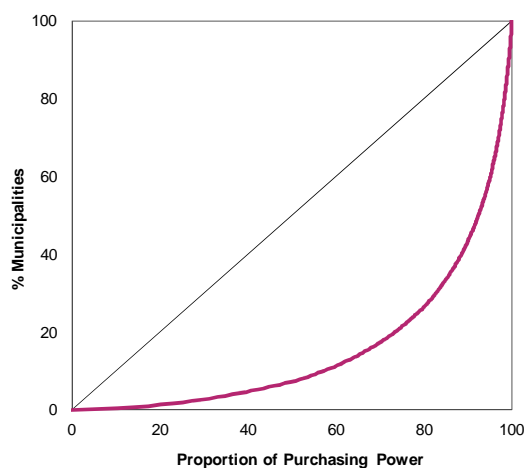
The municipalities of Corvo and Lajes das Flores (Autonomous Region of Açores), of Barrancos, in Baixo Alentejo, and of Porto Moniz, in the Autonomous Region of Madeira, represented individually less than 0.015% of the national purchasing power.

Figure 3. Proportion of Purchasing Power by municipality, 2015



The concentration analysis of the purchasing power in the 308 Portuguese municipalities [Figure 4] shows that, in 2015, around 7% (23) and 22% (67) of the municipalities concentrated, respectively, 50% and 75% of the national purchasing power. These results suggest that the purchasing power is associated with the urban dimension of the municipalities and is, therefore, territorially very concentrated.

Figure 4. Concentration of the Proportion of Purchasing Power in municipalities, 2015

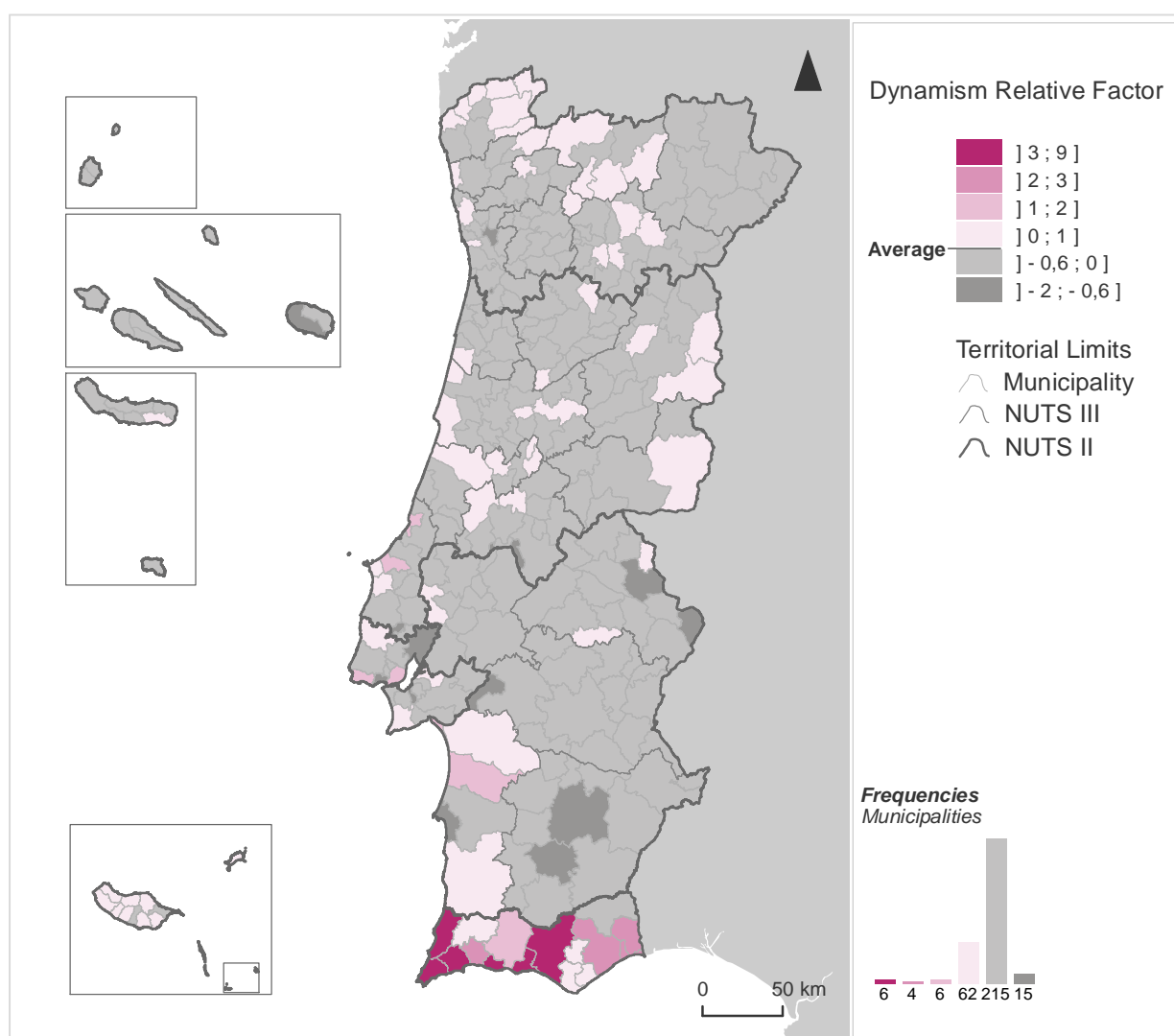


Dynamism Relative Factor

The Dynamism Relative Factor (FDR) aims at capturing the irregular purchasing power, usually of a seasonal nature, and that is associated with population flows induced by tourism activity, thus reflecting the remaining dynamic in the input variables besides the one reflected in the first factor extracted from the factor analysis – the *per capita* purchasing power revealed in the territories on a daily basis.

In this vein, it is import to highlight the relevance of the Algarve region in the context of this indicator [Figure 5]. In fact, in 2015, out of the 16 municipalities with a FDR higher than the standard deviation of the distribution, 11 were located in that region: Albufeira, Vila do Bispo, Lagos, Loulé, Lagoa, Aljezur, Tavira, Castro Marim, Portimão, Vila Real de Santo António and Silves. Among these, Albufeira and Vila do Bispo stood out by scoring a FDR higher than 8 standard deviations. The municipalities of Grândola (1.952), in Alentejo Litoral, Nazaré (1.776) and Óbidos (1.610), both in Oeste sub-region, and of Lisboa (1.590) and Cascais (1.088), in the metropolitan area of Lisboa, completed the group of 16 municipalities with a FDR higher than 1 in 2015.

Figure 5. Dynamism Relative Factor by municipality, 2015



An additional group of 7 municipalities scored FDR values between 0.5 and 1 — Porto Moniz and Porto Santo (Autonomous Region of Madeira), Monchique, São Brás de Alportel, Faro and Olhão (Algarve), and Odemira (Alentejo Litoral).

At the other end, among the municipalities scoring lower FDR values in 2015, were large urban centres, namely municipalities from the metropolitan areas of Lisboa (Oeiras, Vila Franca de Xira and Barreiro) and Porto (São João da Madeira and Valongo), to capitals of administrative districts in the Interior of Portugal's mainland, such as Beja and Portalegre, but also to municipalities from Alentejo (Castro Verde, Campo Maior, Sines and Vendas Novas), Médio Tejo (Entroncamento and Constância), Autonomous Region of Açores (Angra do Heroísmo) and Oeste (Sobral de Monte Agraço). This group of 15 municipalities scored FDR values equal or below -0.6.

Furthermore, it is important also to highlight the case of municipalities scoring, at the same time, high IpC and FDR values in 2015. In this perspective, the municipalities of Albufeira, Portimão and Faro, in the Algarve, but also Cascais, Lisboa and Funchal should be mentioned. These six municipalities were, simultaneously, in the first 10% of IpC and FDR distributions.

Technical note

The Local Purchasing Power analysis (EPCC) is a statistical study of biennial frequency and national coverage. The observed statistical unit is the municipality, data collection is indirect and the variables used to compute the study result from administrative procedures and from statistical operations carried out within the National Statistical System.

On the basis of 16 *per capita* (using the resident estimated population by Statistics Portugal for 31 December 2015 - Annual Provisional Resident Population Estimates series, begun in 2011, including the final 2011 Census results) and standardized (with an average equal to 0 and a standard deviation equal to 1) variables mainly referenced to 2015 and a principal component factor analysis model, the study disseminates three indicators:

- the **Per Capita Indicator (IpC)** on purchasing power which is derived from the first factor determined by the factor analysis and explains, after rotation, 45.1% of the total variance of the input variables. The coefficient of variation of the *Gross income declared for tax purposes per capita* was considered for the final calculation of this indicator, which is presented referenced to the national value (Portugal = 100);
- the **Proportion of Purchasing Power (PPC)**, which is an indicator derived from the first factor determined by the factor analysis – IpC – and reflects the share of purchasing power revealed regularly in each municipality or region in reference to the national value (for which the PPC assumes the value of 100%). Hence, with this indicator, the study aims to assess the concentration of purchasing power in the different territories, having in mind that areas with more or less purchasing power in the national territory depend not only from the *per capita* purchasing power distribution across the country, but also from the spatial distribution of the resident population. In summary, the PPC indicator is not a direct result from the factor analysis, but it is derived from the IpC and the demographic weight of each territorial unit in the national context;
- the **Dynamism Relative Factor (FDR)**, which corresponds to the second factor extracted from the factor analysis, explaining, after rotation, 29.2% of the total variance of the input variables. The main objective in obtaining the FDR indicator is to exempt the main indicator, the IpC, from the effect of the irregular purchasing power (mainly induced by tourists) hence, the two factors should capture different dynamics from each other. In this vein, it is important to highlight that a low FDR value in a given territorial unit does not mean that tourism activity is not relevant in that territory, but rather that this activity becomes less evident in comparison with higher values of purchasing power revealed in that territory. The FDR indicator is presented as a standardized variable (with an average equal to 0 and a standard deviation equal to 1), and the unit of measure used for dissemination purposes corresponds to the standard deviation of the distribution by municipalities.

The conceptual and computational methodological options of the study are presented in the methodological document *Estudo sobre o Poder de Compra Concelhio, código 335 / versão 1.4, INE* (available at www.ine.pt, in Metadata, Metadata System, Methodological documentation). The need for updating the previous 1.3 version of the methodological document results from changes in the input data and in the coefficients, which are endogenously determined by the model and allow the computation of the factors as linear combinations of the input variables. Data disseminated within the scope of this study are available at www.ine.pt, in Statistical information, Statistical data, Database.