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Study on the Local Purchasing Power
2017

Purchasing Power above the national average in 32 out of the 308 municipalities

32 out of the 308 Portuguese municipalities scored above the national average in the *per capita* purchasing power. These are municipalities mostly located in the two metropolitan areas of Lisbon (8 out of the total 18 municipalities) and Porto (6 out of the total 17) or coincident with district capitals.

The indicator Purchasing Power Percentage (PPP) reveals that 22 municipalities concentrated 50% of national purchasing power. Taken together, the two metropolitan areas accounted for more than half (52%) of the purchasing power, although concentrating 44% of the national population.

Statistics Portugal releases the 13th edition of the Study on the Local Purchasing Power referred to 2017 (EPCC 2017), which aims to provide information at municipality level on the purchasing power revealed in these territories.

In this edition, 16 *per capita* variables were considered. Based on a set of indicators and a factor analysis model, three indicators are disseminated – Per Capita Indicator, Proportion of Purchasing Power and Dynamism Relative Factor. These indicators are computed at municipality level, and values for NUTS 1, 2 and 3, as well as for the country, are calculated based on the weighting 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, in *per capita* terms, in the different municipalities or regions, having the national value as a reference (Portugal = 100).

IpC results for 2017 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 87.3 and 86.5, respectively, for the autonomous regions of Açores and Madeira. The metropolitan area of Lisbon (124.1) was the only NUTS 2 region scoring above the national average. For the Algarve, the value (99.1) was close to 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, 90.1 in the Alentejo and 88.3 in the Centro.

In 2017, in 32 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 (219.6), more than doubling the national reference value, and, in the first 15 positions corresponding to an IpC higher than 110, three additional municipalities from Área Metropolitana de Lisboa could also be found: Oeiras (156.5), Cascais (122.1) and Alcochete (118.8). From the total of 18 municipalities that comprise Área Metropolitana de Lisboa, ten scored a purchasing power below the national average, with Moita (82.0), Odivelas (89.3) and Seixal (89.7), with less that 90% of the national average.

The metropolitan area of Porto scored an IpC value (104.4) above the national average. Among the six municipalities that surpassed the national average, four also scored above the metropolitan average - Porto (157.8), São João da Madeira (135.4), Matosinhos (123.0) and Maia (110.7) – while Espinho scored a purchasing power of 103.0 and Vila Nova de Gaia a purchasing power of 100.1. Among the 11 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 (70.8) and Paredes (79.8).

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 (132.5), Coimbra (128.7), Aveiro (123.1) and Évora (117.3), scoring an IpC higher than 110. Also with results above that threshold, it is worthwhile to mention the municipalities of Sines (128.7), in Alentejo Litoral, Funchal (114.3), in the Autonomous Region of Madeira, and Albufeira (112.0), in Algarve. This analysis, therefore, suggests a positive association between the territorial units' level of urbanization and the purchasing power revealed in the territories.

In the national territory, 149 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, five were from the Interior of Norte region (spreading across the sub-regions of Tâmega e Sousa, Douro and Terras de Trás-os-Montes), four from the Autonomous Region of Madeira and one from the Centro region.

Figure 1. Per Capita Purchasing Power Indicator by municipality, 2017
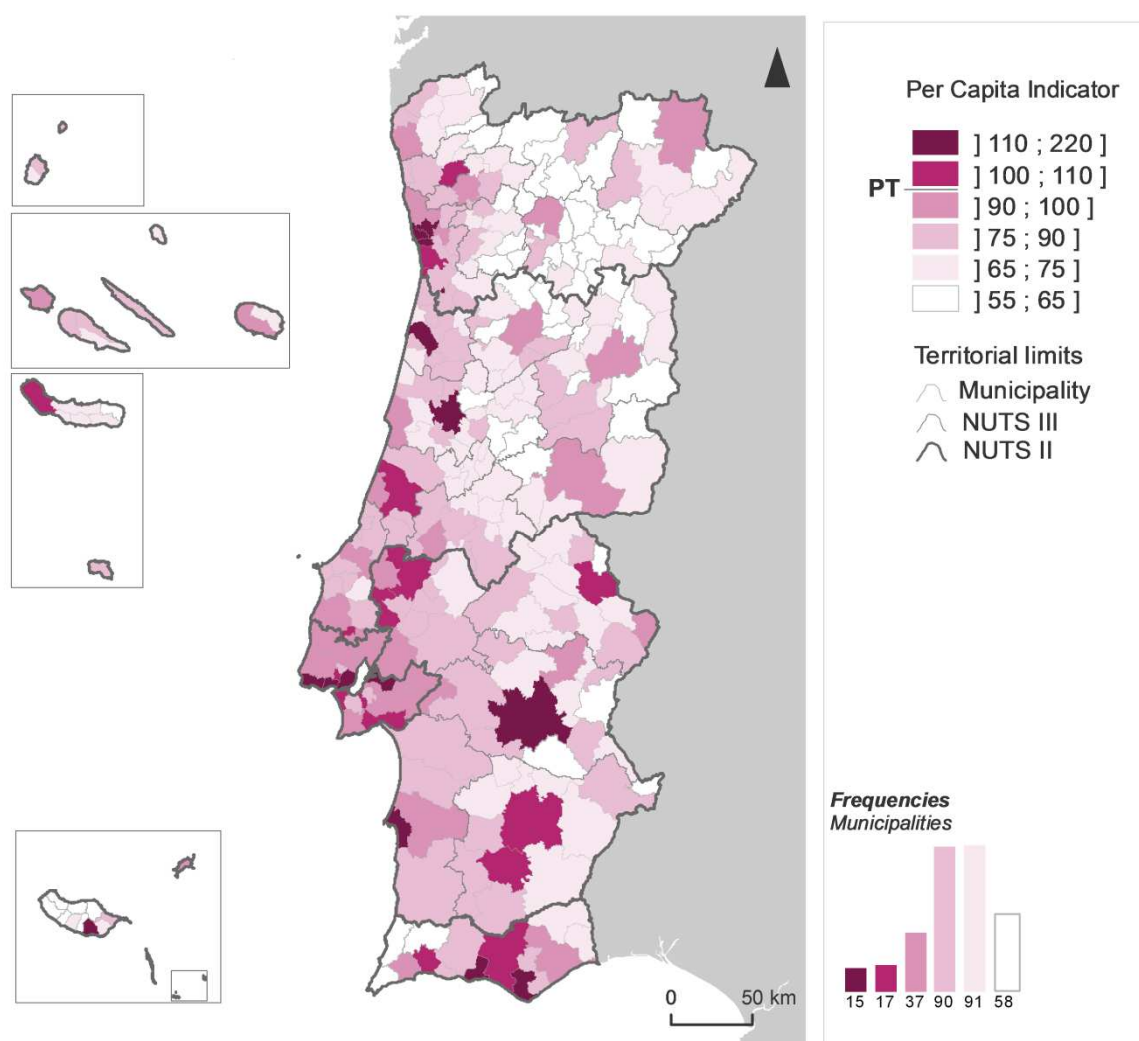
Having, simultaneously, the national and regional contexts as a reference to analyse the IpC calculated for the municipalities, makes it possible to assess the level of intra-regional cohesion and to identify the municipalities that stand out in these contexts [Figure 2].

In this vein, in 2017 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, Espinho and Vila Nova de Gaia) or to average-sized cities, mostly coincident with capitals of administrative districts (Faro, Coimbra, Aveiro, Évora, Braga, Beja, Portalegre, Leiria e Santarém), Funchal, in the Autonomous Region of Madeira, and Ponta Delgada, in the Autonomous Region of Açores;

- in 32 municipalities, the *per capita* purchasing power revealed in 2017 stood below the national average, but above the regional average – mainly municipalities of Portugal's mainland coastal area, mostly from the Centro

region (14 municipalities out of the total 100), but also from Alentejo and Norte (6 out of 58 and 6 out of 86, respectively), Região Autónoma dos Açores (5 out of 19) and Região Autónoma da Madeira (1 out of 11);

▪ 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 85%, in the Norte region;

▪ lastly, it is possible to identify the specific situation of six municipalities from Área Metropolitana de Lisboa that scored a *per capita* purchasing power above the national average, but below the respective regional average (124.1): Alcochete, Almada, Amadora, Barreiro, Cascais and Setúbal.

Figure 2. Per Capita Indicator by municipality in the context of the corresponding NUTS 2 regions, 2017
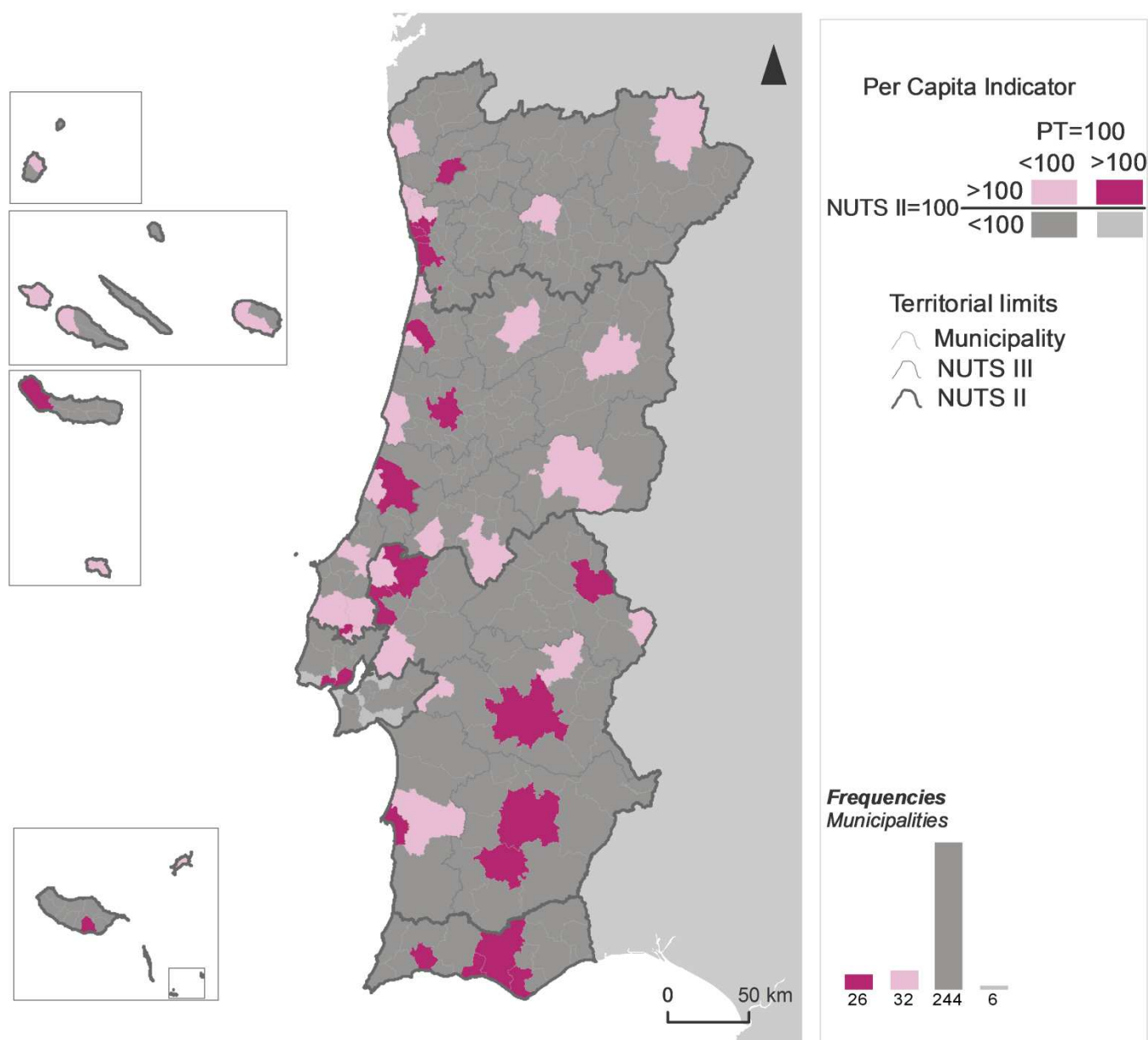
Proportion of Purchasing Power

The Proportion of Purchasing Power (PPC) is an indicator derived from the Per Capita Indicator (IpC) to assess 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 two metropolitan areas of Lisboa and Porto accounted for more than half (52%) of the purchasing power, the first with 34.2% and the second with 17.5%. Nevertheless, these two NUTS 3 regions concentrated 44% of the national population (27.5% in the Área Metropolitana de Lisboa and 16.7% in the Área Metropolitana do Porto). 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. Besides these, the sub-regions of Alentejo Litoral, Alto Alentejo and Baixo Alentejo also contributed, individually, with less than 1% to the national purchasing power.

At municipality level, Lisboa stood out in the national context by gathering 11% of the total purchasing power. In 2017, 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, Odivelas, Vila Franca de Xira 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].

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

Figure 3. Proportion of Purchasing Power by municipality, 2017
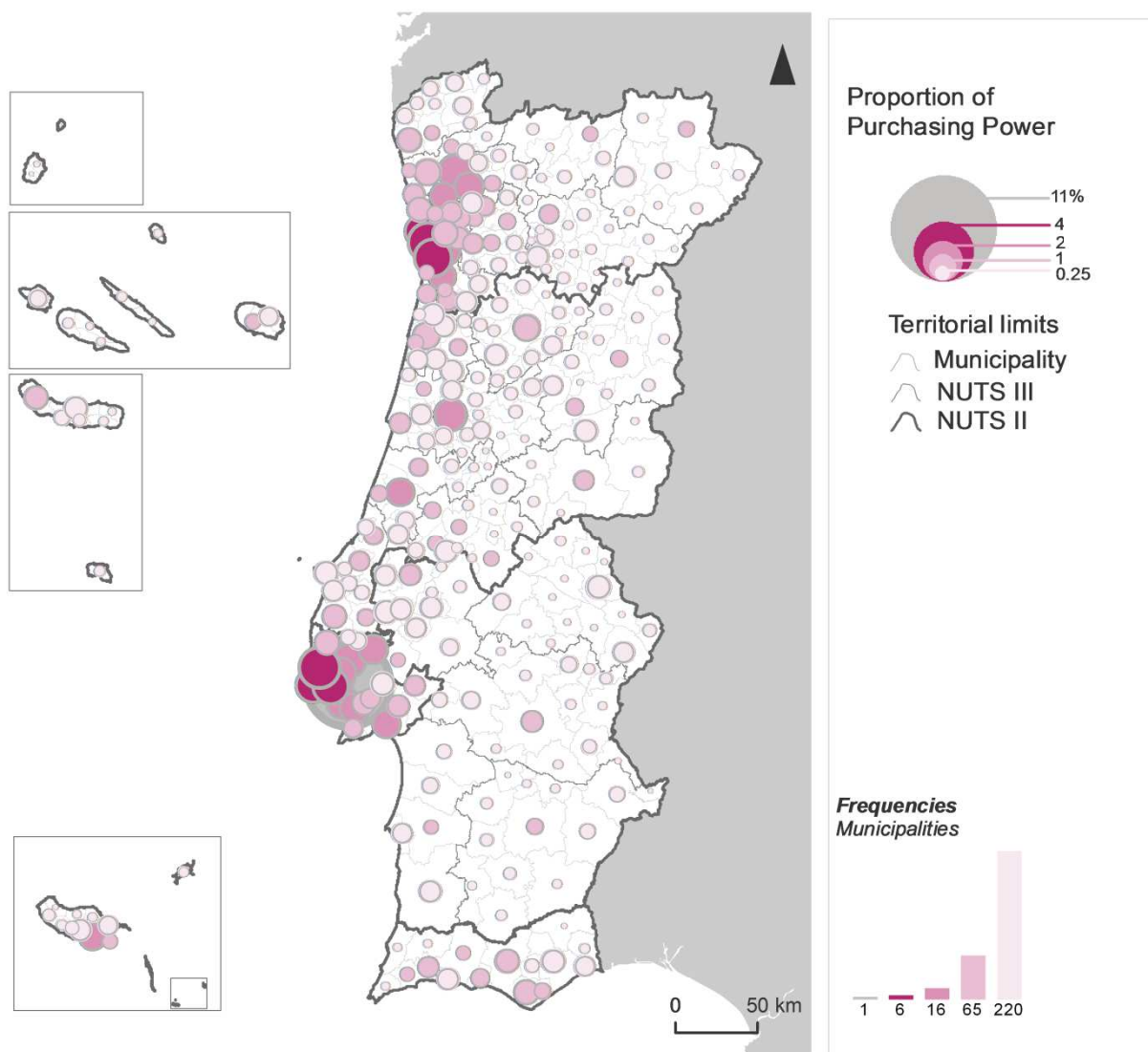
The concentration analysis of the purchasing power in the 308 Portuguese municipalities [Figure 4] shows that, in 2017, around 7% (22) and 21% (64) of the municipalities concentrated, respectively, 50% and 75% of the national purchasing power. These results suggest that the purchasing power is associated with the urban dimension of the municipalities and is, therefore, territorially very concentrated.

Figure 4. Concentration of the Proportion of Purchasing Power in municipalities, 2017
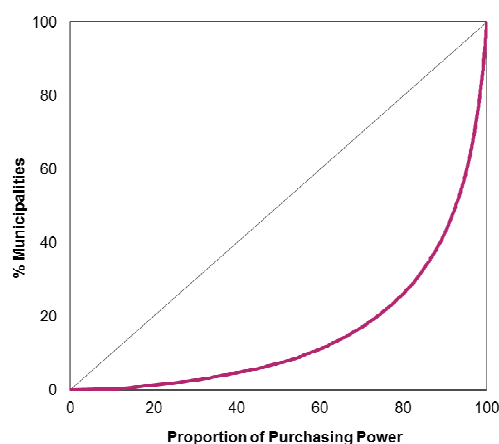
Dynamism Relative Factor

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.

In this vein, it is import to highlight the Algarve region in the context of this indicator [Figure 5]. In fact, in 2017, out of the 18 municipalities with a FDR higher than the standard deviation of the distribution, 12 were located in that region: Vila do Bispo, Albufeira, Lagos, Loulé, Lagoa, Aljezur, Tavira, Castro Marim, Portimão, Vila Real de Santo António, Silves and Monchique. Among these, Vila do Bispo and Albufeira stood out by scoring a FDR higher than 7 standard deviations. The municipalities of Grândola (3.310), in Alentejo Litoral, Nazaré (2.040) and Óbidos (1.752), both in Oeste sub-region, Porto Moniz (1.486), in the Autonomous Region of Madeira, and Lisboa (1.287) and Cascais (1.109), in the metropolitan area of Lisboa, completed the group of 18 municipalities with a FDR higher than 1 in 2017.

Figure 5. Dynamism Relative Factor by municipality, 2017
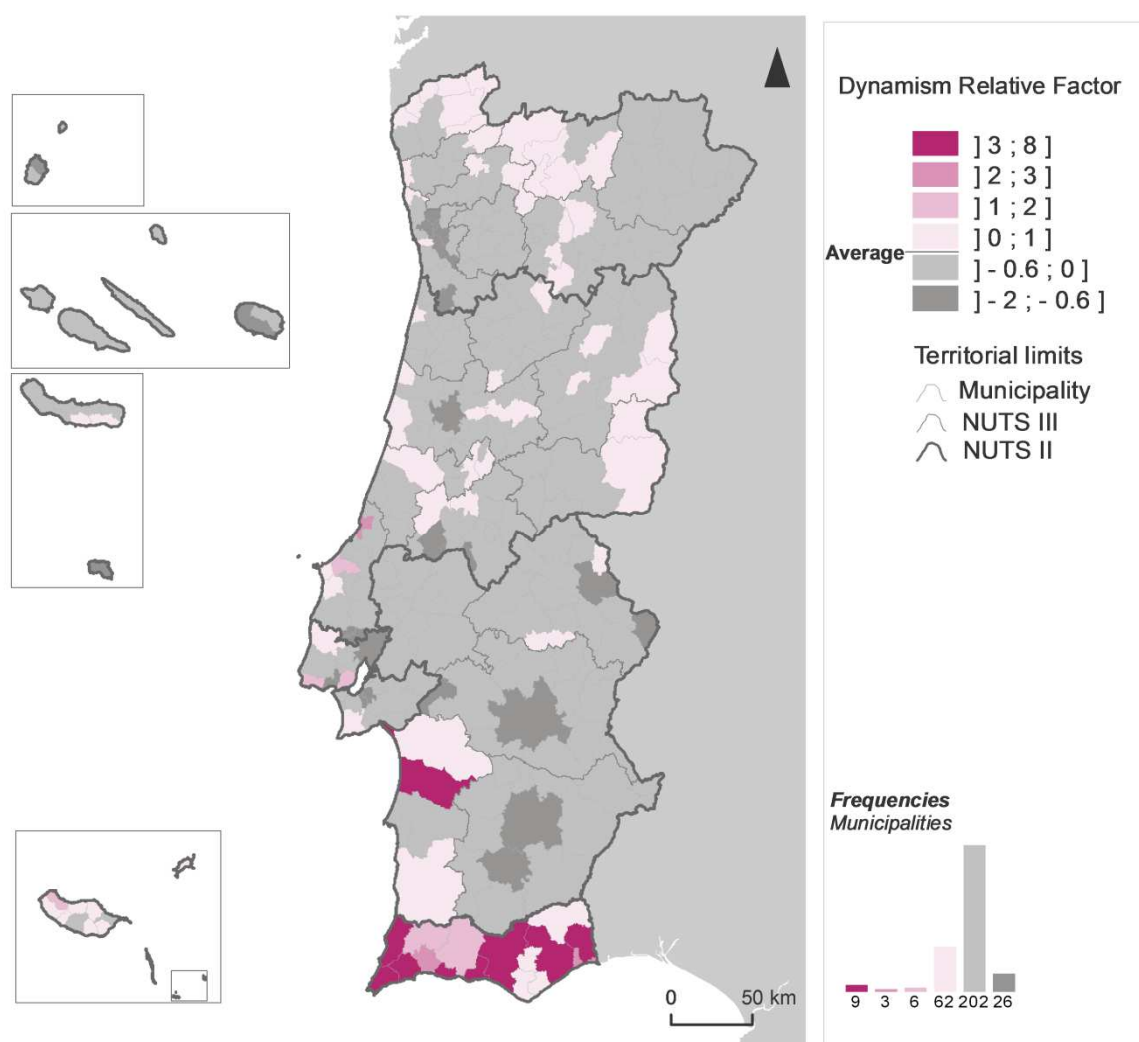
An additional group of 10 municipalities scored FDR values between 0.5 and 1 — São Brás de Alportel and Olhão (Algarve), Porto Santo and Calheta (Autonomous Region of Madeira), Caminha, Ponte da Barca e Melgaço (Alto Minho), Peniche (Oeste), Povoação (Autonomous Region of Açores) and Odemira (Alentejo Litoral).

At the other end, among the municipalities scoring lower FDR values in 2017, were large urban centres, including municipalities from the metropolitan areas of Lisboa (Oeiras e Vila Franca de Xira) and Porto (São João da Madeira and Valongo), capitals of administrative districts in the Interior of Portugal's mainland (Beja and Portalegre), but also some municipalities from Alentejo (Campo Maior, Castro Verde and Vendas Novas), Médio Tejo (Entroncamento), Oeste (Sobral de Monte Agraço and Arruda dos Vinhos) and Autonomous Region of Açores (Angra do Heroísmo). This group of 13 municipalities scored FDR values equal or below -0.7.

Furthermore, it is important also to highlight the case of municipalities scoring, at the same time, high IpC and FDR values in 2017. In this perspective, the municipalities of Albufeira, Loulé and Portimão, in the Algarve, but also Lisboa, Cascais and Funchal should be mentioned. These six municipalities were in the first 10% of IpC and FDR distributions, simultaneously.

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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 2017 - 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 2017 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, 46.3% 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, 26.1% 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 1.5, INE* (available at www.ine.pt, in Metadata, Metadata System, Methodological documentation). The need for updating the previous 1.4 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.