

Jersey-UK Relative Consumer Price Levels for Goods and Services 2013

Statistics Unit: www.gov.je/statistics



Overview

This report presents consumer price levels for Jersey relative to the United Kingdom. The methodology follows that developed by the UK Office for National Statistics (ONS) to compare price levels between regions of the UK. More than 400,000 price observations¹ were used to compile this report, the majority of which were collected by the ONS as part of the international Eurostat-OECD Purchasing Power Parities (PPPs) Programme.

Summary

In 2013:

- Price levels for consumer goods and services (excluding housing costs², health and education) in Jersey were 9% greater than the UK average. Consumer prices levels were marginally greater in Jersey than in London (by 2%).
- Price levels for *Food and non-alcoholic drinks* were nearly a fifth greater (19%) in Jersey than the UK average.
- There was large price variation for the expenditure categories comprising predominantly services; *Household and housing services* were nearly a fifth greater in Jersey (19%) than the UK average and *Miscellaneous goods and services* were 15% greater in Jersey.
- There was little variation in price levels for *Alcohol (off-license sales) and tobacco*. Price levels in Jersey and the various UK regions were similar to the UK average.
- Price levels for *Clothing and footwear* were 8% lower in Jersey than the UK average.
- The overall price level for consumer goods and services in Jersey (when housing costs, health and education are included) was a fifth (20%) greater than the UK average.

¹ UK price data was provided in a non-disclosive aggregate format and treated as strictly confidential by the Statistics Unit.

² Rents, mortgages and rates

Introduction

This report examines relative consumer price levels in Jersey and the United Kingdom in 2013 by measuring the cost of purchasing a common basket of consumer goods and services.

The methodology applied to compile Jersey-UK price level indices follows that of the ONS for the production of UK Relative Regional Consumer Price Levels (RRCPLs)³ and is based on that developed by Eurostat for the Purchasing Power Parities (PPPs) Programme⁴.

PPPs are used internationally as indicators of price level differences across countries, taking into account different national currencies. National PPPs for OECD countries are produced centrally via the Eurostat-OECD PPPs Programme. The calculation of PPPs involves collating and matching expenditure and price data for a wide range of consumer goods and services from all countries involved in the comparison. It is not currently feasible for Jersey to produce a PPP relative to other countries in this way; however, the ONS have provided UK price data collected as part of the PPP Programme to enable the States of Jersey Statistics Unit to carry out a regional comparison with the UK, overall and by region.

The ONS collected price data for seven regions of the UK: London, South, North, Midlands, Scotland, Wales and Northern Ireland through a combination of CPI data, regional prices surveys and prices collected centrally by the ONS. Similarly, Jersey price data has been compiled from existing data collected for the Jersey RPI as well as through additional local price collection exercises.

More than 4,000 individual price observations were used in the calculation of the Jersey average item prices. The dataset provided by the ONS was derived from more than 400,000 prices extracted from the CPI database and around 12,000 prices collected through a nationwide regional price survey as well as additional prices collected centrally by the ONS.

The average spend by Jersey households on different goods and services, from the Jersey Household Spending and Income Survey, is used to weight the prices according to spending patterns in Jersey. Similarly, expenditure weights are derived for each UK region from the UK Living Costs and Food survey. In this way, different spending patterns between the various regions are taken into account.

Results are presented in the form of Price Level Indices (PLIs) which are a series of index numbers that compare prices across different geographical locations at the same point in time. Comparing PLIs shows where goods and services are more or less expensive relative to each other, and also enables comparison with the national average.

In this report price levels are presented with respect to the UK average⁵; this is set equal to 100. At the most basic level, PLIs are constructed from the ratio of prices of the same good or service in different locations. These ratios are called price relatives and are a simple form of Purchasing Power Parities.

The RRCPL methodology is concerned with individual consumption expenditure by households. By definition, this does not include mortgage payments, property rates or individual consumption expenditure by government (e.g. health, education and other services generally provided by government⁶). Rents (public and private sector) are also excluded due to the difficulty in measuring and collecting prices for property rents across UK regions on a like-for-like basis. However, in order to

³ The RRCPL report was a by-product of another project carried out by the ONS to produce Spatial Adjustment Factors (SAFs) for Eurostat which are required every six years as part of the Eurostat PPPs programme.

⁴ EUROSTAT-OECD Methodological manual on purchasing power parities (PPPs) 2012 Edition, Annex V: Calculation and Aggregation of PPPs.

⁵ Excluding Jersey.

⁶ Sewerage charges were also excluded as although they are provided privately in the UK, they are provided by government in Jersey.

provide an indication of the difference in overall price levels in Jersey and the UK, including expenditure on housing, health and education, a separate analysis including these items has also been carried out (see Appendix A).

Methodology

The principle for comparing price levels between geographical locations is similar to that used for compiling the Retail Prices Index (RPI), which compares price levels through time. As for the RPI, it is not practical to collect prices for all consumer goods and services purchased by households, or to collect prices from every shop or outlet that supplies them. Therefore, price levels are determined by collecting a sample of prices for a selection of 'representative' goods and services from a range of retail outlets and service providers in each location.

The basic methodology for calculating PLIs involves calculating average prices for each region and item. Regional price relatives are then calculated by aggregating and weighting together these average prices. Expenditure weights for each region are derived from Jersey and UK household expenditure surveys. Both UK and Jersey expenditure weights are used in the calculations to ensure that differing expenditure patterns in the various regions are taken into account.

Data collection

Average price data for around 500 representative goods and services were provided by the Office for National Statistics (ONS) for seven regions of the UK. Crucially, each such item had a tightly defined specification to ensure that quality and quantities were comparable across regions and that any price differences were due to price alone and not to varying quality across regions. This enabled comparable price data for Jersey to be collated so that comparisons could be made at item-level on a like-for-like basis.

Calculation

The calculation of the Price Level Indices involved the following steps, consistent with the OECD-Eurostat PPP methodology:

- Mean average prices were calculated for each region for each item.
- A bilateral⁷ comparison of each item's average price was calculated for each combination of regions. With eight regions, this meant 64 unique price relatives for each item.
- These price relatives were combined by using an equally weighted geometric mean for each pair of regions.
- The price relatives were mapped to their respective basic heading for each region. Basic headings are made up of similar, well-defined goods or services (eg. *Bread, Women's clothing or Postal services*).
- Regional weights were used to aggregate the basic headings up to successive COICOP⁸ levels. This was done in three stages for each basic heading:
 - a matrix of Laspeyres-type PPPs were constructed using the first region's expenditure weights;
 - a matrix of Paasche-type PPPs were constructed using the second region's expenditure weights;
 - the geometric mean of the Laspeyres and Paasche-type PPPs was taken to produce a matrix of Fisher-type PPPs.

⁷ A price comparison between two regions.

⁸ COICOP (Classification Of Individual Consumption by Purpose) is an internationally agreed classification system for consumer prices and expenditure, developed by the United Nations Statistics Division.

- Transitivity was enforced on the Fisher-type PPPs. Transitivity ensures that the same results are obtained when comparing price relatives directly through two regions and when comparing price relatives indirectly through a third region. Transitivity was imposed by applying the EKS (Éltető-Köves-Szulc) method⁹.
- The EKS PPPs were standardised in order to obtain price relatives with a common base set to 100. In this case the base is the UK average, excluding Jersey.

Exclusions in the PLI analysis

The ONS RRCPL methodology is concerned with individual consumption expenditure by household and not individual expenditure by government. Therefore the *Health* and *Education* COICOP categories are excluded from the PLI calculations because they are services primarily provided to households by government.

Similarly, owner occupied housing costs are excluded from the calculation of PLIs as they are not considered to be consumption expenditure under COICOP. Property rents were excluded from the main analysis due to the difficulty of pricing comparable properties in Jersey and across the UK on a like-for-like basis.

⁹ See EUROSTAT-OECD Methodological manual on purchasing power parities (PPPs) 2012 Edition, Annex V: Calculation and Aggregation of PPPs.

Jersey and UK regional price levels compared to the UK average

Figure 1 presents Price Level Indices (PLIs) for seven UK regions and Jersey for calendar year 2013. PLIs have been rounded to the nearest percentage point to reflect the degree of uncertainty¹⁰. It is important to note that, as acknowledged in the introduction and in Appendix A, the PLIs do not include the cost of housing, health or education.

The PLIs provide a comparison of each region's price level relative to the UK national price level¹¹ which is set to 100. If the PLI for a region is greater than 100, this implies that prices are relatively more expensive in that region than the UK average, and vice versa.

Of the regions considered in this report, Jersey has the highest overall PLI. The Jersey PLI of 109 implies that prices in Jersey are 9% more expensive than the UK average. Similarly, the London PLI of 107 implies that prices in London are 7% more expensive than the UK average. Wales has the lowest price levels at 3% below the UK average. Price levels in other regions of England and Scotland are close to the UK average.

Figure 1: Jersey and UK regional price level relative to the UK average price level (UK = 100)



Using the price level indices presented above it is possible to compare price levels between regions directly. For example, to compare price levels in Jersey with those in London the following formula is used:

$$\text{Relative price difference} = \left(\frac{PLI_{\text{Jersey}} - PLI_{\text{London}}}{PLI_{\text{London}}} \right) \times 100\%$$

Using the Jersey and London PLIs of 109 and 107 respectively gives the relative price difference of 2%, implying that average price levels in Jersey are 2% greater than in London.

¹⁰ PLIs only provide an indication of the order of magnitude of the price level in one location relative to others, particularly when locations are clustered around a very narrow range. In such cases the degree of uncertainty associated with the basic price data and the methodology used for compiling PPPs may result in minor differences between PLIs and rankings which are not statistically or economically significant.

¹¹ In this report, the UK national average does not include Jersey.

Breakdown by expenditure categories

Table 1 shows price level indices for Jersey compared to five UK regions¹² for nine expenditure groups.

These expenditure groups are based on the divisions of the Classification Of Individual Consumption by Purpose (COICOP). For the purposes of this report, the *Communications* division has been added into the *Household & housing services* division. For a more detailed description of the goods and services included in each COICOP division see Appendix B.

Of the nine expenditure groups, price levels in Jersey are greater than the UK average for seven of the nine groups. Price levels in London are greater than the UK average for all nine expenditure groups. In contrast, Wales has a lower price level than the UK average for all nine groups.

Table 1: Jersey and UK regional price levels compared to the UK average price level (UK=100) for COICOP expenditure groups (divisions)

Expenditure group (Division)	Jersey	London	England (excluding London)	Wales	Scotland	Northern Ireland	UK Average
Food & non-alcoholic drinks	119	107	99	98	100	97	100
Alcohol & tobacco	102	102	100	98	100	99	100
Clothing and footwear	92	106	100	99	98	97	100
Household & housing services*	119	103	98	99	98	101	100
Furniture & household goods	108	109	101	89	103	98	100
Transport	105	101	102	97	97	103	100
Recreation & culture	100	111	99	95	102	93	100
Restaurants & hotels	111	114	95	97	99	97	100
Miscellaneous goods & services	115	108	102	96	99	96	100
All consumer goods & services**	109	107	100	96	100	98	100

*Includes communications, excludes rents and owner occupied housing costs

**Excluding Housing, *Health* and *Education*

The greatest price variations were seen for *Food and non-alcoholic drinks* and the predominantly services categories:

- Jersey relative price levels for *Food and non-alcoholic drinks* were nearly a fifth greater (19%) than the UK average. London was the next most expensive region with prices for this category being 7% greater than the UK average. All other regions of the UK show little variation from the UK average.
- The costs of *Household and housing services* were a fifth greater (19%) in Jersey than the UK average. There was little price dispersion from the UK average for the other UK regions. Price levels for *Miscellaneous goods and services* were 15% greater in Jersey than the UK average. London price levels for this category were 8% above the UK average.

¹² For the divisional breakdown, the regions of England have been combined to ensure that the data remains robust at this level.

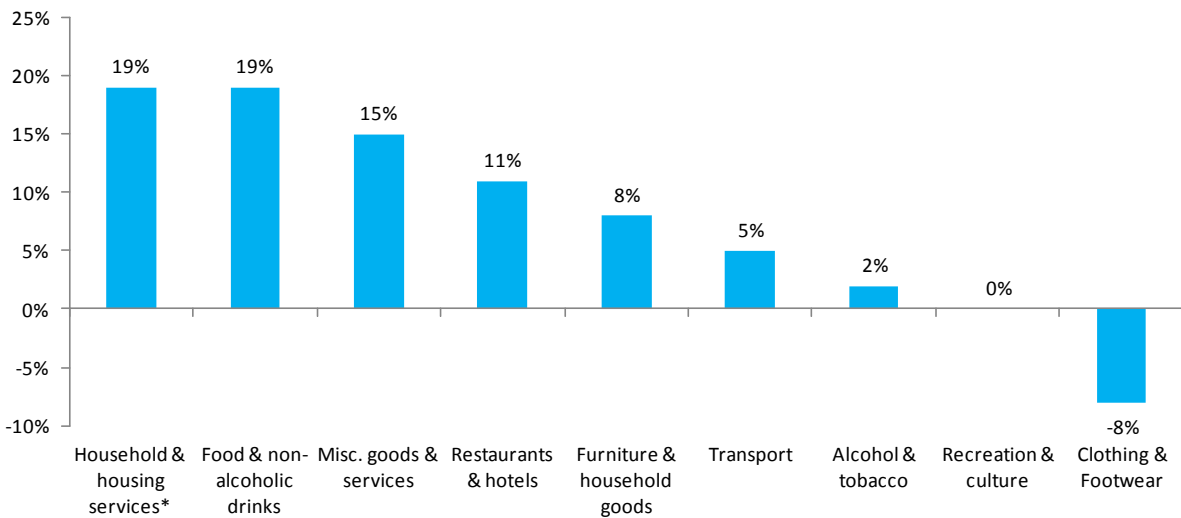
- Relative price levels for *Restaurants and hotels* (including on-license alcohol sales) were 11% greater in Jersey than the UK average. Price levels in Jersey for this category were marginally lower than in London.

The only category where price levels are lower in Jersey compared to the UK average is *Clothing and footwear*, with prices 8% below the UK average. Price levels for *Recreation and culture* in Jersey were similar to the UK average.

There was little variation in price levels across locations for *Alcohol (off-license sales) and tobacco*, with all regions, including Jersey, being similar to the UK average.

Figure 2 presents the percentage differences in price levels between Jersey and the UK average for the nine expenditure categories.

Figure 2: Percentage difference in Jersey and UK average price level for nine expenditure categories



*Includes communications, excludes rents and owner occupied housing costs

Appendix A: The effect of housing, education and health

The methodology for comparing Jersey and UK consumer price levels is consistent with that used by the ONS in the calculation of UK RRCPLs. The RRCPL methodology is only concerned with individual consumption expenditure by households. By definition, it excludes mortgage capital and interest payments, mortgage protection payments and property taxes¹³ (non-consumption expenditure) and individual consumption expenditure by government such as health, education and other services generally provided by government¹⁴. Due to the difficulty in measuring and collecting prices for property rents across UK regions, property rents are also excluded.

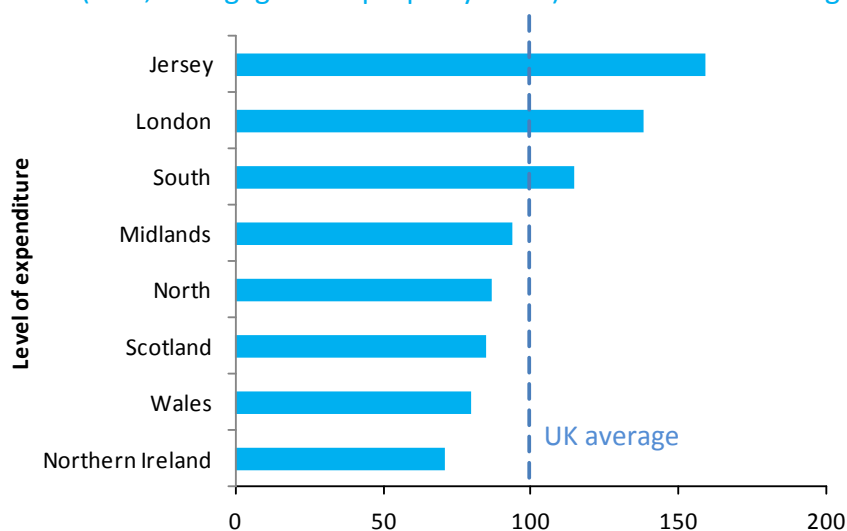
However, in order to provide a general indication of overall price levels in Jersey and the UK, including housing, health and education, a separate analysis has been carried out to include these items using a methodology developed by the States of Jersey Statistics Unit.

Housing costs

In the absence of comparable price data for the housing items, proxy price relatives were calculated using average household expenditure costs¹⁵ for gross rents¹⁶, mortgages and property taxes. This approach is therefore not strictly a comparison between price levels but does provide an indication of differing costs faced by households in Jersey and the UK.

Figure A1 shows the how the annual average household expenditure on gross rent, mortgages and property taxes varies across the various regions compared to the UK average.

Figure A1: Levels of housing expenditure for Jersey and UK regions (rent, mortgages and property taxes) relative to UK average price level (UK = 100)



The average expenditure for these housing items was three-fifths greater (60%) in Jersey than the UK average.

Housing expenditure in London and the South was greater than the UK average. Expenditure on these items for the remaining UK regions was lower than the UK average.

¹³ UK council tax and Jersey rates.

¹⁴ Sewerage charges were also excluded as although they are provided privately in the UK, they are provided by government in Jersey.

¹⁵ Data is derived from expenditure data collected in the 2009/10 Jersey Household Spending Survey (HSS) and the 2012 Living Costs and Food Survey (LCF) produced by the ONS. Price indices for Jersey and the UK have been used to adjust the prices to reflect 2013 prices.

¹⁶ To remove the effect of differing benefit systems present in Jersey and the UK, expenditure on gross rents have been used for comparison between the jurisdictions. Gross rents are rents paid before benefits, rebates and allowances have been deducted.

Estimation of overall Jersey-UK relative price levels

Proxy price relatives for each of the excluded items were combined with the PLI analysis for consumer goods and services using the appropriate expenditure weights for Jersey and the UK.

The addition of health and education added less than one percentage point to the overall Jersey price level relative to the UK average due to the relatively small expenditure weightings for these groups in both jurisdictions.

When housing, health and education costs are combined with the PLI analysis using the appropriate expenditure weights, the overall estimated relative price level for goods and services in Jersey is 20% greater than the UK average.

Appendix B: Classification of consumer expenditure

In this report household consumption expenditure has been broken down into groups based on the Classification Of Individual Consumption by Purpose (COICOP). This is an internationally agreed classification system for consumer expenditure and prices and is used by Eurostat in the international PPPs programme.

Table B1 provides a broad overview of the types of goods or services on the basis of COICOP division as applied to this analysis. The *Communications* division has been subsumed into the *Household and housing services* division for the purposes of this report. Mortgages (capital, interest and mortgage protection payments) and property taxes are not considered to be final consumption expenditure and are therefore not part of the COICOP classification.

As previously noted, following RRCPL methodology, property rent and the *Health and Education* divisions are also excluded from the PLI analysis and hence excluded from the expenditure categories presented in this report.

Table B1: Broad definitions of modified COICOP divisions (expenditure groups)

Division	Includes
Food & non-alcoholic drinks	All fresh, frozen and chilled food brought home, soft drinks brought home
Alcohol & tobacco	Off-license sales of all wine, beer and spirits brought home, cigarettes, cigars and other tobacco
Clothing & footwear	Clothing materials, garments for men women and children, accessories, haberdashery, footwear
Household and housing services*, communications	Materials and services for maintenance and repair of dwelling, household energy, water , postal services, telephone (fixed and mobile) and telefax equipment and services
Furniture & household goods	Furniture, ornaments, carpets, household textiles, household appliances, tools and cleaning materials, domestic services e.g. cleaners
Transport	Purchase of cars, motor cycles, bicycles and spare parts, motor fuels and lubricants, motor repairs and other services, parking and other motor fees, transport by railway, road, air and sea
Recreation and culture	Audio visual, photographic and information processing equipment, recreational items and equipment, cultural services, newspapers and books, package holidays
Restaurants and hotels	Food and drink (including alcohol) bought in restaurants, cafes and bars, accommodation services, catering services
Miscellaneous goods & services	Personal care, personal effects, Other services (e.g. personal grooming establishments, social protection)

*Excludes property rents