

Jersey Income Distribution Survey 2002

Introduction

The Jersey Income Distribution Survey was undertaken in mid-2002 to better understand the differences in the incomes of Jersey residents including the most vulnerable and low-income groups. The work was needed as part of the process to develop a new benefits system and as an input into the ongoing fiscal review.

The incomes of Island households were investigated through a random sample of all private households, which resulted in usable data from 1,240 respondent households. All results shown have been derived from the raw survey data by weighting according to demographic and socio-economic profiles recorded by the 2001 Jersey Census.

This report provides a summary of the full results and some further interpretation. The initial report containing the full results (Jersey Income Distribution Study, 2002) was published in September 2003.

A continuous theme throughout this report is income both before and after the inclusion of housing costs: Before Housing Costs (BHC) and After Housing Costs (AHC), respectively.

Outline

This report is structured to aid the understanding of the complexities of income distributions:

Section 1 looks at the composition of household income (wages, pensions, benefits, tax and other contributions) and compares various measures of income across types of household. These comparisons are done both before and after housing costs.

Section 2 describes the process known as equivilisation which converts individual household incomes onto a comparable basis by taking into account the household structure (i.e. the number and type of people within the household).

Section 3 covers the analysis of income after equivilisation. This includes: looking at the overall distribution of income; detailed analysis by type of people and households; and comparisons with the UK.

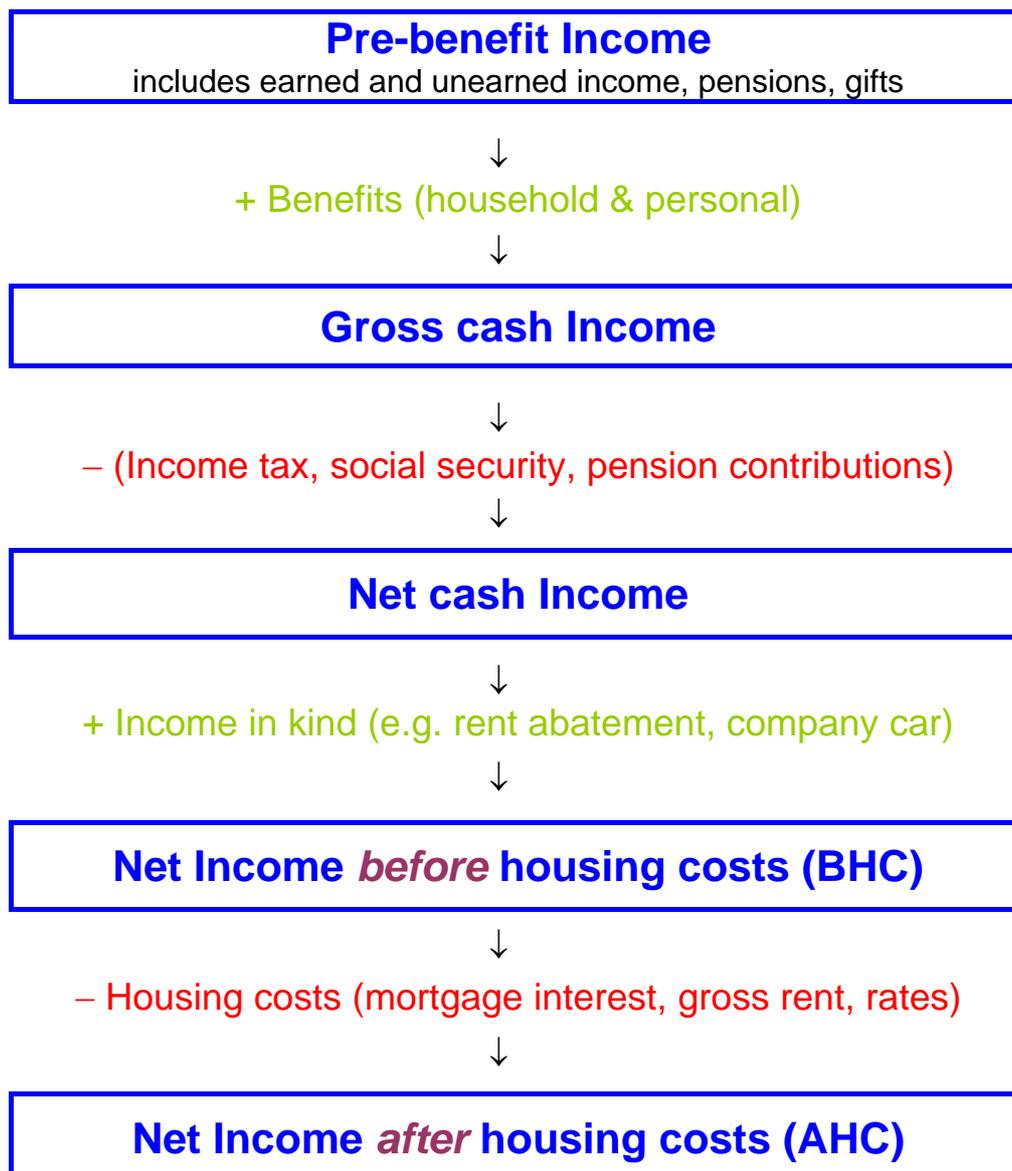
Section 4 concludes the report by examining the issue of *relative* low income including comparisons with the UK.

Section 1: Household Income

Composition of Income

Household income may be determined in five principal categories, starting from “Pre-benefit income”, which includes earnings and pensions, through to “Net income after housing costs”. Between each category specific benefits are included, or taxes and contributions deducted.

Figure 1: Major components of household income.



The arithmetic means of the income categories indicate the effect of additions and deductions at each stage (see table 1).

Table 1: Mean Weekly Household Income in the five categories of figure 1.

Income category	Mean household income £ per week
Pre-benefit	738
Gross cash	763
Net cash	666
Before housing costs	698
After housing costs	562

The effect of housing costs for different types of household can be gauged by considering net income before and after such costs.

Table 2: Mean Weekly Income by Type of Household (£ per week).

Type of household	Net BHC	Net AHC	% change due to housing costs
Person living alone (pensioner)	266	183	-31
Single parent with at least one child < 16	448	286	-36
Person living alone (not pensioner)	417	287	-31
Two or more pensioners	487	426	-13
Single parent with all children > 15	619	448	-28
Two or more unrelated persons	686	500	-27
Couple one pensioner	711	621	-13
Couple not pensioners	804	660	-18
Couple with at least one child < 16	980	778	-21
Couple with all children > 15	945	814	-14
Other ¹	1,350	1268	-6
All households	698	562	-19

Table 2 illustrates the impact of housing costs on income, namely that, averaging over all households, housing costs equate to around a fifth (19%) of net income. However, for those households with the lowest levels of income the impact is larger, with housing costs taking up around a third of net income for single persons living alone (pensioners and non-pensioners) and for single parents with at least one child under 16 years of age.

It would be expected that in general households who own or are buying their own homes have a higher income. Therefore, the analysis of income by tenure (table 3) shows that

¹ The 'Other' category comprises, for example: adult siblings; couples living with an elderly relative; couples with a live-in au-pair or foreign student.

housing costs take up over 30% of total income of those renting and reflects the earlier finding that housing costs have most impact on low income household.

Table 3: Mean Weekly Income by Tenure Category (£ per week).

Tenure	Net BHC	Net AHC	% change due to housing costs
States tenancy	393	250	-36
Parish or housing trust/association	455	226	-50
Private tenancy (including lodgers)	547	380	-31
Owner-occupier without mortgage	708	695	-2
Owner-occupier with mortgage	1,029	840	-18
Other ²	722	537	-26
All households	698	562	-19

At the time of the 2001 Census about half (51%) of all private households in Jersey were owner-occupiers³ and about one in seven households (14%) lived in social-rented accommodation, as States, Parish or housing trust/association tenants.

In terms of residential qualifications (as defined under the Jersey Housing Law), the mean net income AHC of j-category residents was more than double that of a-h residents and more than three times that of the non-qualified.

Table 4: Mean Weekly Income by Residential Qualification of Head of Household (£ per week).

Tenure	Net BHC	Net AHC	% change due to housing costs
Non-qualified	562	413	-27
a - h	692	560	-19
j	1,590	1,368	-14
All households	698	562	-19

The net income of non-qualified households is reduced by about a quarter due to housing costs, compared with about a fifth for a-h category residents.

² For example, accommodation provided rent-free by an employer. In such cases, the estimated value of the accommodation is included in "Benefits in kind" and deducted in "Housing costs."

³ The equivalent GB figure is 69%. Source: Living in Britain, 2002: published in 2004.

Section 2: Equivilisation

Equivilisation enables income to be compared on a consistent basis for different households in Jersey, and furthermore, for *distributions* of income in different jurisdictions to be compared, such as between Jersey and the UK.

In short equivilisation is a process which takes into account variations in the size and composition of households to reflect the basic notion that in order to enjoy the same standard of living a household with 3 adults will need a higher income than a household with one adult. However, as there will be economies of scale for people sharing houses it is not as simple as saying the 3 adult household would need 3 times the income as a one person household. Instead equivilisation⁴ works by taking a two adult household as a reference point, with an equivalence value of 1 compared to a value of 0.61 for a single adult or 1.49 for 3 unrelated adults, or 1.36 for a couple with 2 pre-school children, etc; and dividing the household income by the appropriate factor to produce an equivilised household income.

To illustrate the process for identical household incomes (£500 in the examples of table 5), the effect of equivilisation is to increase the effective income of the single-person household relative to that of a couple but to reduce the effective income of the larger household.

Table 5: Examples of the Effect of Equivilisation (£ per week).

Household structure	Total household income	Equivilised household income
Single person	500	820
Couple with no children	500	500
Couple with two pre-school children	500	370

The results reflect the intuitive view that if the three households each have an income of £500 per week the best off in relative terms will be the single person, then the couple then the family. But if the incomes were different (e.g. £400, £550 and £800) it would not be clear who would be better off (in fact they would be £655, £550 and £590 on an equivilised basis).

Throughout the report equivilisation is carried out on net income before and after housing costs.

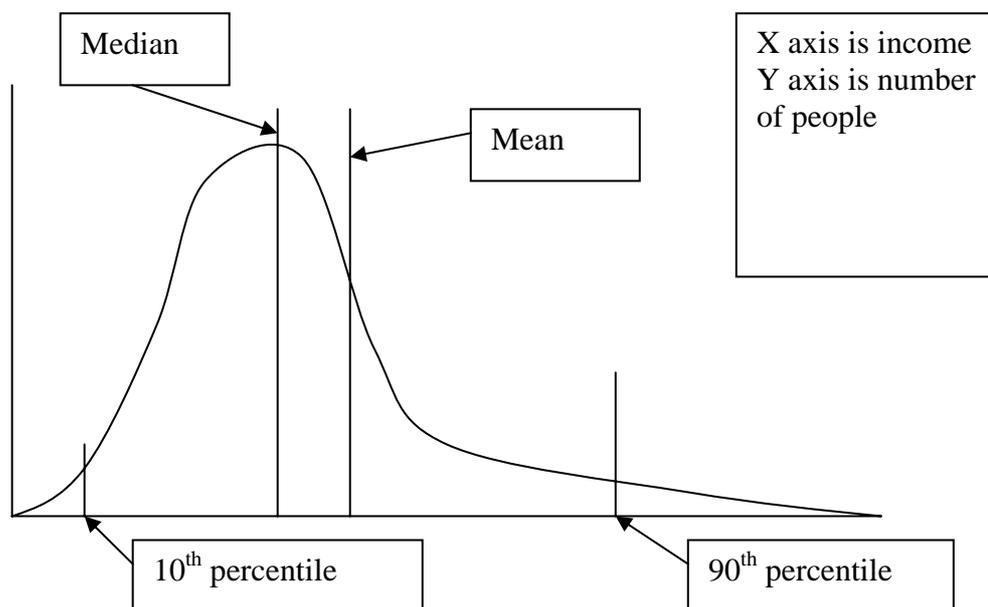
⁴ Analysis of the Jersey Income Distribution Survey was conducted by applying the McClements scale of factors, as generally used for similar analyses in the UK.

Section 3: Income (after equilisation)

Detailed tables of various distributions of equilised income at each stage of figure 1 were presented in the earlier report: Jersey Income Distribution Study, 2002, published September 2003. This report presents graphical results of these data to aid understanding of the results.

Income distributions are not symmetric, as illustrated by the figure below. The long tail represents the small proportion of the population who have significantly higher incomes than the majority. As such taking a simple arithmetic average (mean) of all incomes will not provide a number that represents a mid-point of the distribution. Thus for income distributions a more useful average is the median, the income level below which 50% of the population falls. (In view of this the averages (means) presented in section 1 are best used for illustrative purposes of the general points discussed in that section.)

Figure 2: An Illustrative Income Distribution



The median provides a central point from which to make comparisons. For example, as described later, a measure of 60% of the median can be used as a measure of relative low income. But to get an indication of dispersion or inequality across the whole income distribution two other measures are used:

90-10 percentile ratio:

- defined as the ratio of the income of individuals at the 90th percentile (i.e. 90% of the population have a lower income) and the 10th percentile (10% have a lower income), these points are illustrated on figure 2;
- the lower the 90-10 ratio, the more equitable the income distribution (i.e. the lower the level of inequality).

Gini coefficient:

- a widely-used indicator of income inequality; ranges from 0 to 1 with the lower the Gini coefficient, the lower the level of inequality :
- 0 implies everyone in the population has the same income (complete equality);
- 1 implies one person has all the income, the rest of the population has no income;
- typical values are 0.3 - 0.5 for democratic, industrialised countries;

Table 6: Indicators Derived from the Distributions of Equivilised Household Income.

Income category	Median £ per week	90-10 ratio	Gini coefficient
Pre-benefit	547	6.0	0.38
Gross cash	569	5.2	0.36
Net cash	505	4.6	0.34
Before housing costs	523	4.1	0.33
After housing costs	401	5.8	0.39

To understand the table it is easiest to consider each of the income categories in turn.

Pre-benefit → Gross cash:

the effect of benefits (included in gross cash income) is to raise the median income and to reduce inequality: both the 90-10 ratio and the Gini coefficient reduce.

Gross cash → Net cash:

the overall effect of Income Tax and of social security and pension contributions is to lower the median income but to reduce inequality: both the 90-10 ratio and the Gini coefficient reduce.

Net cash → Before Housing Costs:

the overall effect of other benefits in kind is to raise the median income and to further reduce inequality: both the 90-10 ratio and the Gini coefficient reduce.

Before Housing Costs → After Housing Costs:

Housing costs lower the median personal income by almost a quarter (23%) and increase the level of inequality: both the 90-10 ratio and the Gini coefficient increase.

The level of inequality as measured by the 90-10 ratio after housing costs is almost the same as that before implementation of the tax and benefits system; the level of inequality as measured by the Gini coefficient is greater than (but consistent with) that before tax and benefits.

Analysis of Income Distribution by Quintile

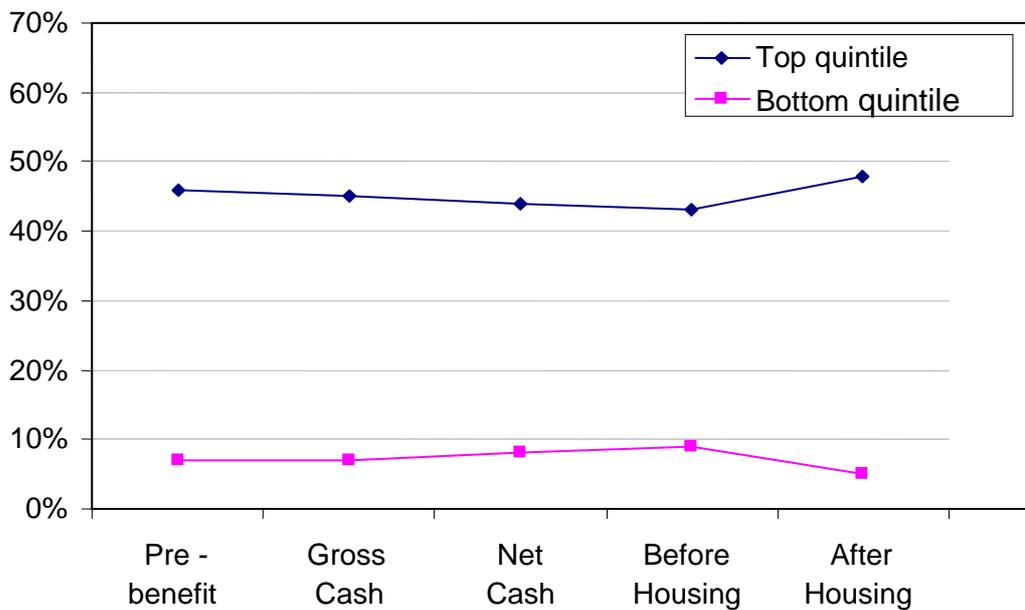
The equivilisation process enables income to be compared for households and individuals within households in a standardised way. An informative breakdown is to divide the equivilised distribution into five equally populated parts (quintiles) constituting the fifth of the population with lowest equivilised incomes through to the fifth with highest equivilised incomes. In this way, the characteristics of the people and households in the different parts of the income distribution may be studied.

The proportion of total income in Jersey received by the top and bottom quintiles varies little as we progress through the five stages of income as illustrated in figure 3:

- the top 20 per cent of households receive almost half of total income in the Island at each income stage, reaching 48% of the total at the final stage (income after housing costs).
- the bottom 20 per cent of households receive less than 10% of total income in the Island at each income stage, reducing to 5% at the final stage.

However, as indicated previously by the 90 -10 ratio and the Gini coefficient, the tax and benefits system in Jersey does have an influence on the relativity of incomes at the top and bottom of the income scale, but its influence is reversed by the effect of housing costs.

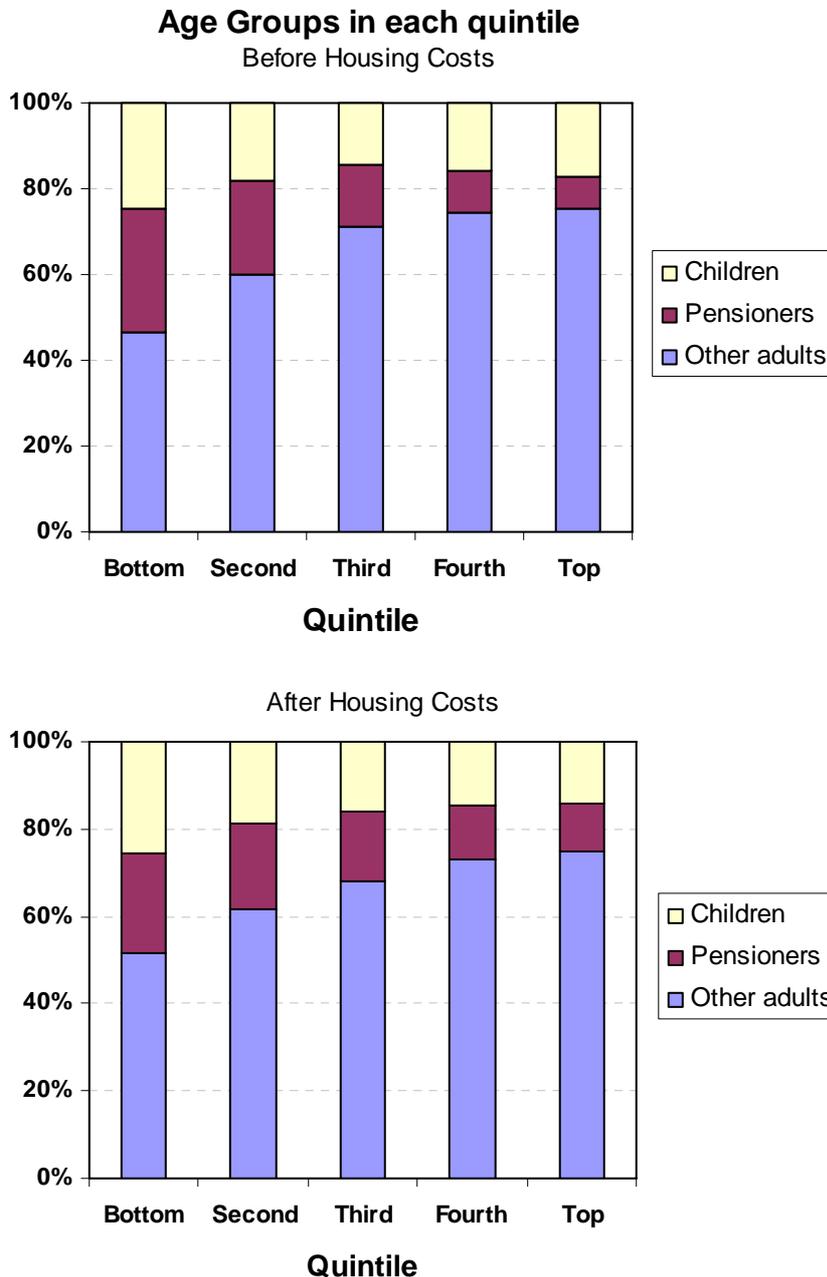
Figure 3: Percentage of Total Jersey income: Top and Bottom Quintiles



Types of People and Household in each part of the Income Distribution

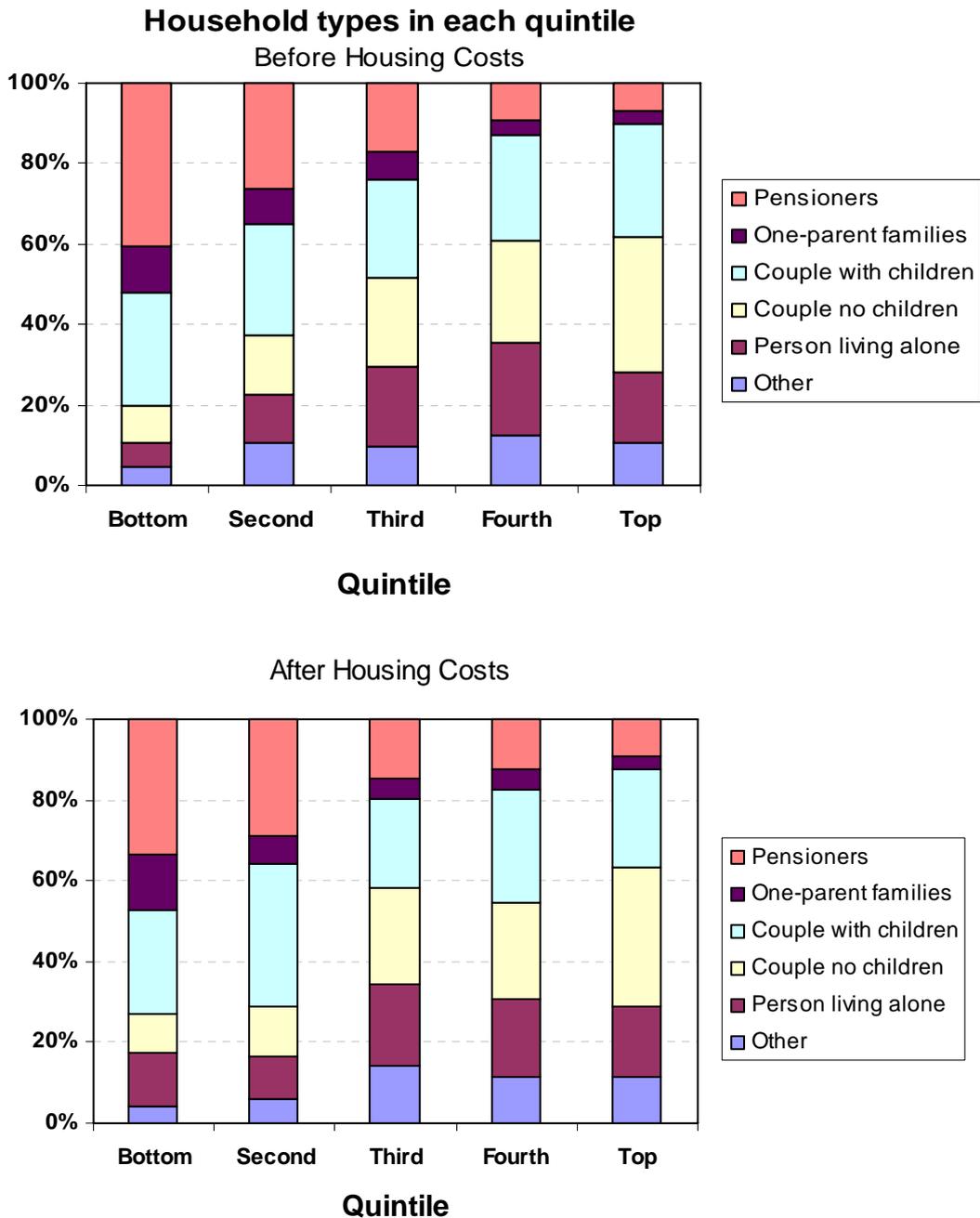
By breaking down the income distribution into quintiles it is possible to look at the distribution in terms of various factors and consider the impact that housing costs has on the distribution. Figures 4 to 7 look at age, household type, tenure and residential qualification.

Figure 4: Age Groups in the Quintiles of Equivalised Income



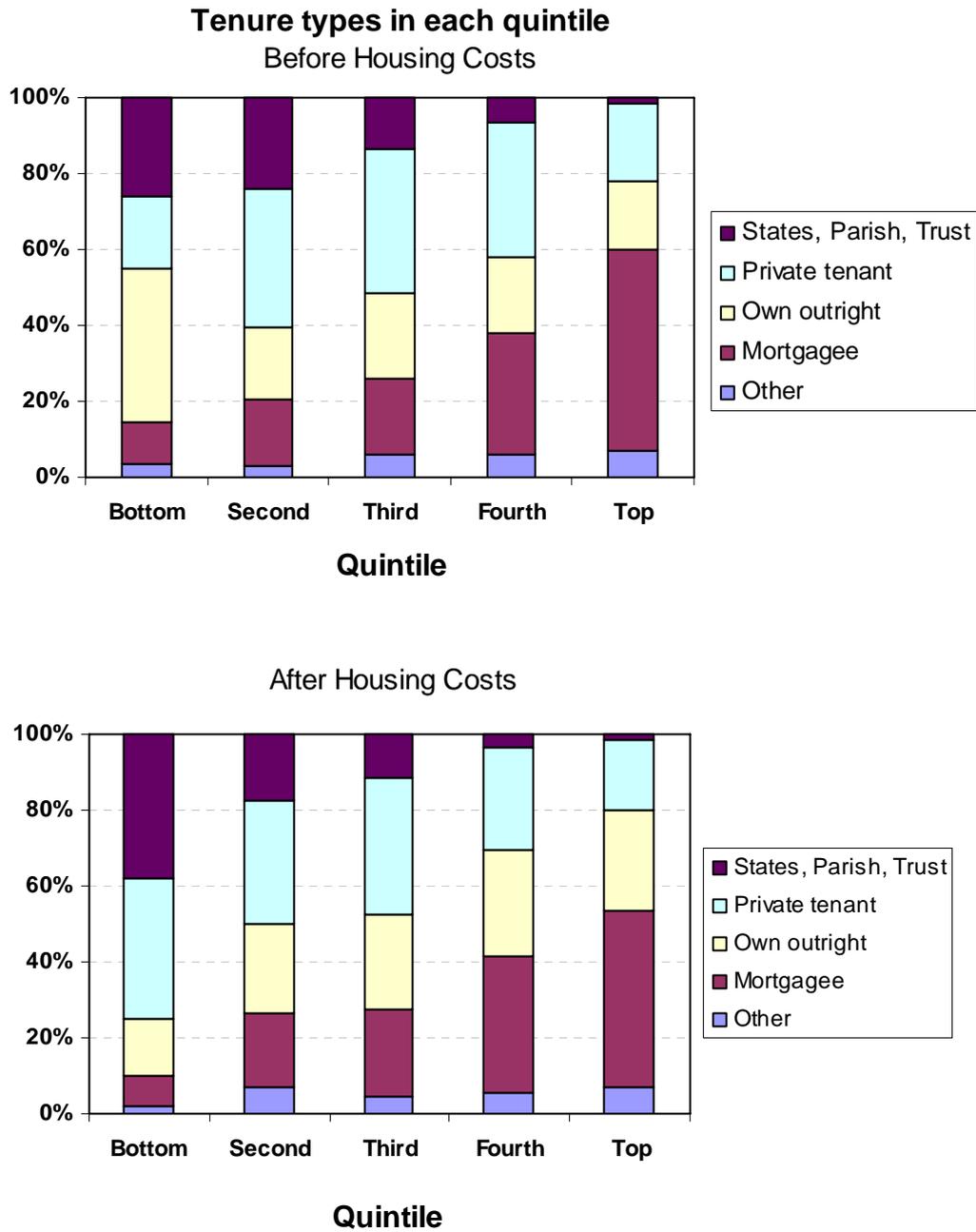
- More pensioners tend to be in the lower quintiles and working adults in the higher ones, both before and after housing costs;

Figure 5: Household types in the Quintiles of Equivilised Income



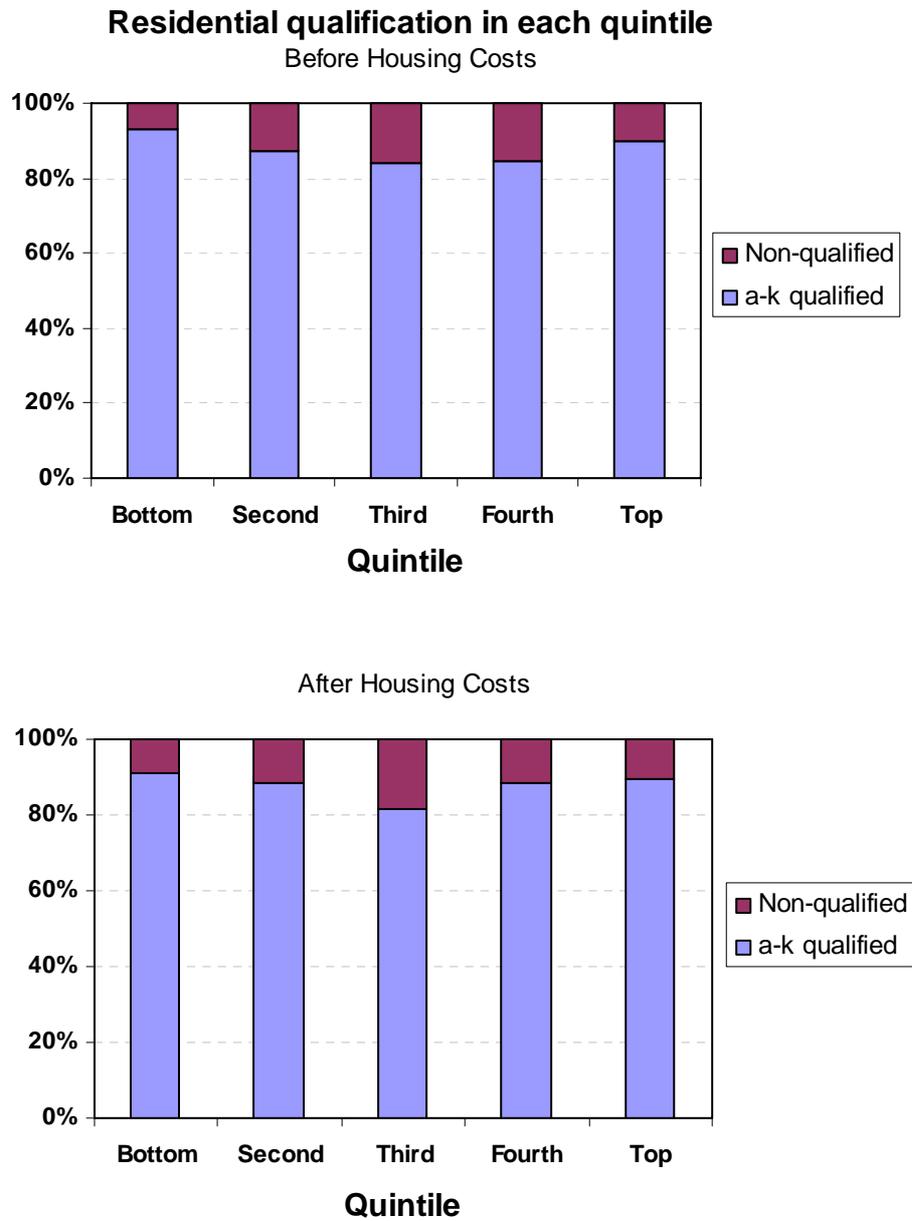
- the proportion of pensioners in the lowest quartiles reduces slightly after housing costs are taken into account, reflecting the number of pensioners who own their home outright, whilst the proportion of people living alone increases.
- single parent families tend to be in the lower quintiles both before and after housing costs;
- couples with children tend slightly towards the lower quintiles especially after housing costs are considered, but those with no children are to be found more frequently in the higher quintiles, both before and after housing costs.

Figure 6: Tenure Categories in the Quintiles of Equivilised Income.



- Owner occupiers without mortgages (“Own outright”) tend to be in the lower three quintiles (particularly the lowest) before housing costs, but evenly spread across the highest four after housing costs, reflecting the benefit of home ownership;
- States and Parish tenants tend to be found in the lower two quintiles before housing costs and even more so after housing costs;
- Private tenants are clustered in the middle three quintiles before housing costs, but after housing costs more are found in the lower three quintiles;
- People with mortgages tend to be found in the higher quintiles of the income distribution both before and after housing costs.

Figure 7: Residential Qualification (head of household) in the Quintiles of Equivilised Income.



- Non-qualified households tend to be found in the centre of the income distribution (the middle three quintiles) both before and after housing costs.

Comparison with the UK

As described in section 2, one of the reasons to calculate equivalised (net) incomes is to compare income distributions between countries. Such a comparison for Jersey and the UK is presented below:

Table 7: Comparison of Equivilised Household Income in Jersey and the UK Before and After Housing costs:

	<u>Before</u> Housing Costs		<u>After</u> Housing Costs	
	Jersey 2002	UK 2001/02	Jersey 2002	UK 2001/02
Median	£ 523	£ 311	£ 401	£ 274
90-10 ratio	4.1	4.0	5.8	4.8
Gini coefficient	0.33	0.35	0.39	0.38

Median income:

- before housing costs, the median Jersey equivalised income was some 68% higher than the UK equivalent;
- after housing costs, however, the Jersey median was 46% higher, reflecting the higher cost of housing in Jersey;

Inequality

- the level of inequality as measured by the Gini coefficient was slightly lower in Jersey before housing costs and slightly greater after housing costs;
- the 90-10 ratio for Jersey was similar to that of the UK before housing costs but was considerably greater after housing costs.

Reconciliation of the differences in household income between Jersey and the UK.

As indicated in table 7, median equivalised income in Jersey, before housing costs, was about two thirds (68%) higher than in the UK. After housing costs were taken into consideration, the Jersey figure was still almost a half (46%) higher.

This does not mean that actual incomes are that much higher as there are two principal factors contributing to the higher level of equivalised personal income in Jersey compared with the UK⁵:

- 1) Higher earnings per worker in Jersey: gross pay per full-time equivalent (FTE) worker in Jersey in 2002 was about 10% higher than in Great Britain.

⁵ The earnings and workforce data on which the comparison is based is, strictly, for Great Britain, and not the UK; the former does not include Northern Ireland. Sources for earnings are: the Jersey Average Earnings Survey and the New Earnings Survey in Great Britain. Sources for numbers of FTE workers are the 2001 Jersey Census and the Income Distribution Survey itself, for Jersey, and the Labour Force Survey and New Earnings Survey for Great Britain.

2) More FTE workers per household in Jersey: the average number of FTE workers per household in Jersey in 2002 was 1.24; compared to 0.96 in Great Britain.

Thus on average, there are 29% more FTE workers per household in Jersey than in Great Britain as a result of:

- Greater economic activity rates in Jersey: as recorded by the 2001 Jersey Census more women and men of working age (16-59/64 years) are economically active (i.e. in work or looking for work) than in the UK; the rate in Jersey is 4 percentage points higher than the UK, for both genders (87% compared to 83% for men and 76% compared to 72% for women).
- Different household structures: the 2001 Census showed that Jersey has a lower proportion of both children under 16 years of age and of pensioners than the UK.
- The ratio of full-time to part-time workers is higher in Jersey than in the UK (around 7:1 in Jersey, compared to 3:1 in the UK).

Section 4: Relative Low Income

In the EU, including the UK, a common indicator of *relative* low income is the threshold: 60% of the median equivalised income.

Under this criterion, households below the threshold in a given jurisdiction might be categorised as being of low income in that particular jurisdiction. In this way, low income is defined in a *relative* sense, i.e. in the context of the income distribution found within a given jurisdiction.

The equivalised income dataset also allows analysis of individuals within households as is shown in tables 11 and 12.

Characteristics of Relative Low Income Households in Jersey

**Table 8: Relative Low Income in Jersey by Household Type
(% of each household type)**

Type of household	Before Housing Costs	After Housing Costs
Person living alone (pensioner)	33	45
Two or more pensioners	40	36
Single parent with at least one child < 16	37	64
Single parent with all children > 15	23	37
Couple with at least one child < 16	17	28
Couple with all children > 15	4	11
Couple one pensioner	15	19
Person living alone (not pensioner)	6	19
Couple not pensioners	5	9
Two or more unrelated persons	4	4
Other	7	11
All households	16	24

- Overall, about a sixth of all households in Jersey lie below the relative low income threshold before housing costs; the proportion rises to about a quarter after housing costs.
- Almost half of pensioners who live alone are below the low income threshold, after housing costs.
- About two-thirds of single parents with at least one school-age child are below the threshold, after housing costs.

Table 9: Relative Low Income in Jersey by Tenure (% of each tenure category).

Tenure	Before Housing Costs	After Housing Costs
States, Parish, Housing trust tenancy	32	64
Private tenancy (including lodgers)	10	27
Owner-occupier without mortgage	28	16
Owner-occupier with mortgage	5	9
Other	4	7

- After housing costs, about two-thirds of tenants of social-rented housing are below the relative low income threshold.

Table 10: Relative Low Income in Jersey by Residential Qualification (of head of household) (% of each band of qualification).

Residential Qualification	Before Housing Costs	After Housing Costs
Non-qualified	7	18
a – j	17	26

- The residentially qualified are more likely to be below the relative low income threshold than the non-qualified, due in large part to the situation of residentially qualified pensioners and single-parents.

Table 11: Relative Low Income in Jersey by Gender (% of each gender)

	Before Housing Costs	After Housing Costs
Males	16	23
Females	17	25

- Females are slightly more likely to be in relative low income households than men, (predominantly because women live longer than men, thus there are more women pensioners, and fewer women than men of working age are economically active)

Table 12: Relative Low Income in Jersey by Age Group (total numbers of persons).

Age group	Before Housing Costs	After Housing Costs
Children (under 16)	3,400	5,100
Pensioners	4,200	4,500
Other adults	6,000	10,700
All persons	13,600	20,300

Comparison with the UK

Applying the threshold criterion of 60% of median equivalised income to the (net) income distributions of Jersey and the UK produces the low income thresholds (in £ per week) shown below.

Table 13: Comparison of low income thresholds for different household types in Jersey and the UK (£ per week).

Type of household	<u>Before Housing Costs</u>		<u>After Housing Costs</u>	
	Jersey 2002	UK 2001/02	Jersey 2002	UK 2001/02
Adult living alone	192	114	133	91
Couple no children	314	187	241	165
Couple, two pre-school children	427	254	328	223
Couple, two children aged 5 and 11	458	273	354	242
Single parent, two children aged 5 and 11	336	200	246	168

Reflecting the respective equivalised income distributions of table 7, the low income thresholds in Jersey are 68% higher than in the UK before housing costs; and 46% higher than in the UK after housing costs (table 13)

The overall proportion of the Jersey and UK populations living below the corresponding low income thresholds of table 13 are very similar: approximately one sixth of either population before housing costs and almost a quarter after housing costs.

Table 14: Comparison of proportion of population living below low income threshold in Jersey and the UK (% of each age group category).

Age group	<u>Before Housing Costs</u>		<u>After Housing Costs</u>	
	Jersey 2002	UK 2001/02	Jersey 2002	UK 2001/02
Children	22	21	33	30
Pensioners	31	22	33	22
Other adults	11	14	19	19
All persons	16	17	24	22

From table 14 we can infer that the proportion of children living below the respective low income thresholds in Jersey and the UK is very similar; but the proportion of pensioners living below the respective relative low income thresholds is greater in Jersey than in the UK (about a third of pensioners in Jersey are below the relative Jersey threshold; about a quarter of pensioners in the UK are below the relative UK threshold).

In making such comparisons, it should be remembered that the process is not a measure of absolute poverty but a useful way of comparing relativities with other jurisdictions. Equally, it must be re-iterated that the criterion for defining relative low income within a particular jurisdiction (i.e. 60% of median equivalised income in the jurisdiction) results in threshold income levels in Jersey which are almost a half higher than in the UK.

*Statistics Unit
July 2004*