

## 2016 Barbados Survey of Living Conditions Executive Summary

The 2016 Barbados Survey of Living Conditions (BSLC) is a joint effort of the Barbados Statistical Service (BSS) and the Inter-American Development Bank (IDB) that has generated a comprehensive dataset on the most important dimensions of welfare in Barbados. This included, among others, education, health, fertility, labour supply, housing, and migration. The survey also collected information on the consumption patterns, incomes and expenditures of Barbadian households, intended to update the Consumption Price Index basket and inform the System of National Accounts.

The BSLC visited a representative probability sample of 7,098 individuals living in 2,508 households interviewed over a 12-month period – from February 2016 until January 2017. That is the fully nationally representative sample was randomly divided into 12 monthly sub-samples so that the data collected is representative of a typical full year considering possible seasonal variations on the indicators of interest. Given the relatively large sample size with respect to the Barbados population and sample stratification at the Parish level, the survey provides information with good statistical precision not only for the full country but also for each Parish. In terms of topics covered and representativeness, the BSLC is the more comprehensive and precise survey of living conditions available today in the entire Caribbean region. Below we provide a summary of the main indicators obtained along with comparisons, when available, with similar indicators obtained in the 2010 Barbados Country Assessment of Living Conditions (CALC).

### Poverty and inequality

Following the World Health Organization's caloric requirements for a moderate physical activity person, the minimum caloric need for an average person in Barbados (considering the distribution by age, sex and share of pregnant women) was computed as 2,104 kilocalories per day. As such, the extreme poverty or indigent poverty line was computed as the cost of buying this minimum caloric requirement equivalent to BDS\$297.28 per month per person. Then, households with monthly per capita consumption below this line were considered **indigent poor accounting for 3.39% of the Barbados population** which compares favourably to the extreme poverty rate reported in 2010 of 6.9%.

In terms of overall poverty, the poverty line is the extreme poverty line plus an amount to account for basic non-food consumption. To estimate the non-food part of the total poverty line, we analysed households with total consumption close to the extreme poverty line. These are households that would need to use all their resources to buy enough food to barely satisfy their caloric needs and, hence, would have no resources for non-food goods and services. However, since these households decide not to use all their resources to buy food, they do not meet their minimum caloric requirement, and the non-food goods and services they consume are as the food they purchase. This characteristic, forgoing basic food intake to consume non-food goods and services, is the reason why their non-food consumption is also considered essential. The resulting poverty line was BDS\$642.52 per month per person (this includes the food component of BDS\$297.28 plus the non-food component of BDS\$345.24). Then, households with monthly per capita consumption below above the indigent poverty line but below the overall poverty line

were considered **non-indigent poor accounting for 13.82% of the Barbados population** which compares unfavourably to the non-indigent poverty rate reported in 2010 of 8.1%.

**Finally, the total poverty rate (resulting from the addition of the indigent and non-indigent poverty rates) was found to be 17.21%.** This overall poverty incidence is above the rate found in 2010 which accounted for 15% of Barbadian households. However, the composition of poverty in 2016 is different with a significant lower share of indigent poor and an increased incidence of non-indigent poverty. Poverty dynamics also showed geographical heterogeneity. The Parish of Saint John is the poorest and the one that has witnessed the largest increase in both indigent and non-indigent poverty rates since 2010 (Table 1). All other parishes experienced a decrease in extreme poverty. However, overall poverty increased in every parish except for Saint James, Saint Andrew and Saint Peter where both extreme and overall poverty decreased since 2010.

Table 1: Geographical poverty distribution and comparison with 2010.

Parish name	Extreme poverty 2010	Extreme poverty 2016	Extreme Poverty Difference 2016-2010	Overall Poverty 2010	Overall Poverty 2016	Poverty Difference 2016-2010
Saint Michael	8.09%	3.38%	-4.71%	17.86%	18.64%	0.78%
Christ Church	5.96%	4.00%	-1.96%	14.09%	17.38%	3.28%
Saint Philip	6.74%	3.35%	-3.40%	10.11%	12.62%	2.51%
Saint George	6.22%	1.73%	-4.49%	13.33%	19.65%	6.32%
Saint James	8.06%	2.39%	-5.67%	19.35%	13.46%	-5.89%
Saint Thomas	5.29%	2.09%	-3.19%	10.58%	15.93%	5.35%
Saint John	4.17%	5.88%	1.72%	8.33%	23.90%	15.56%
Saint Joseph	8.20%	6.48%	-1.72%	14.75%	20.26%	5.51%
Saint Andrew	5.56%	4.04%	-1.52%	22.22%	17.09%	-5.13%
Saint Peter	6.78%	2.26%	-4.52%	18.64%	15.57%	-3.07%
Saint Lucy	9.23%	4.55%	-4.69%	16.92%	17.80%	0.88%

In terms of inequality, we calculated the Gini coefficient of per capita consumption. This coefficient ranges from a value of zero (which represents a situation where all households consume the same amount or extreme equality) to a value of unity (which represents a situation where a single household consumes all resources in the country or extreme inequality). The resulting **Gini coefficient in the 2016 BSLC was 0.32** which is below the coefficient shown in the 2010 CALC of 0.47. This suggests that Barbados have become a country with higher equality across households in terms of consumption.

### Demographics

In 2016, 16.8% of individuals were under 15 years old; while in 2010 this share was 19.43% suggesting a demographic transition explained by decreased fertility of younger cohorts. The average number of persons under 15 years old per household (for households with children) was 1.54 (compared to 1.7 in the 2010 CALC). For those 15 years of age and over, the average

number per household was 2.4 individuals (compared to 2.3 in the 2010 CALC). Overall, average household size was 3.6 individuals. In comparison, the average household size from the 2010 survey was 3.1.

The sex distribution was 48.2% males and 51.8% females (the corresponding shares from the 2010 survey were 45.6% males and 54.4% females. For adults, the distribution was 47.8% male and 52.16% female, while for children it was 50.2% males and 49.8% females. The corresponding figures for 2010 were 44.4% male and 55.6% female, while for children it was 50.7% males and 49.3% females.

### **Housing**

In general, Barbadian population has access to dwellings of good conditions. Indeed, 54% of households own their dwelling without mortgage. In terms of quality of construction, 60% of households have outer walls built with masonry, 51% have roofs built from corrugated metal sheets, and floors are made from masonry in 63% of cases. With respect to access to utilities: 88% of households have WC connected to a well, 96% have piped access to water into dwelling, and 97% are connected to electricity.

### **Education**

Overall 97.02% of respondents had attended a formal education institution, on average starting their education at 3 years of age. In total, 23.4% were currently enrolled; 88.2% of which were at a public institution and 11.9% at a private institution. Of these, 89.4% were full-time and 10.6% part-time. In the 2010 CALC, 14.3% were enrolled; 75.9% of which were at a public institution and 24.1% at a private institution. Of these, 55.3% were full-time and 44.7% part-time.

Turning to those not currently enrolled, the majority (66.1%) had at least completed secondary education while 32.3% had gone on to get higher qualifications (13.5% technical/vocational and 18.8% tertiary). The division by sex shows that past the secondary school level, males were more likely to enter a technical/vocational college and females more likely to enter tertiary institutions.

Educational attainment is positively related with consumption levels. Figure 1 below shows that almost 80% of individuals with below primary education are within the 3 lowest quintiles of the per capita consumption distribution. This share declines steadily as educational attainment rises and, for individuals with tertiary education (undergraduate university degree or above), 65% are in the top 2 quintiles of the consumption distribution. This evidence unambiguously shows the importance of education for increased welfare. Therefore, it is important to assess how levels of educational attainment have varied across different cohorts.

Figure 2 shows the share of population with tertiary education by cohorts and sex. First, we clearly observe that, in general, the incidence of tertiary education has grown for younger cohorts (currently between 25 and 39 years old) relative to older counterparts. However, when disaggregated by sex, we notice that this trend is entirely driven by females. Overall, females show significantly larger shares of tertiary educational attainment than males for all cohorts and these differences are being exacerbated across cohorts. In short, females not only historically have been achieving better educational outcomes than males but also this disparity has been consistently growing over time.

Figure 1: Educational Attainment by Expenditure Quintile

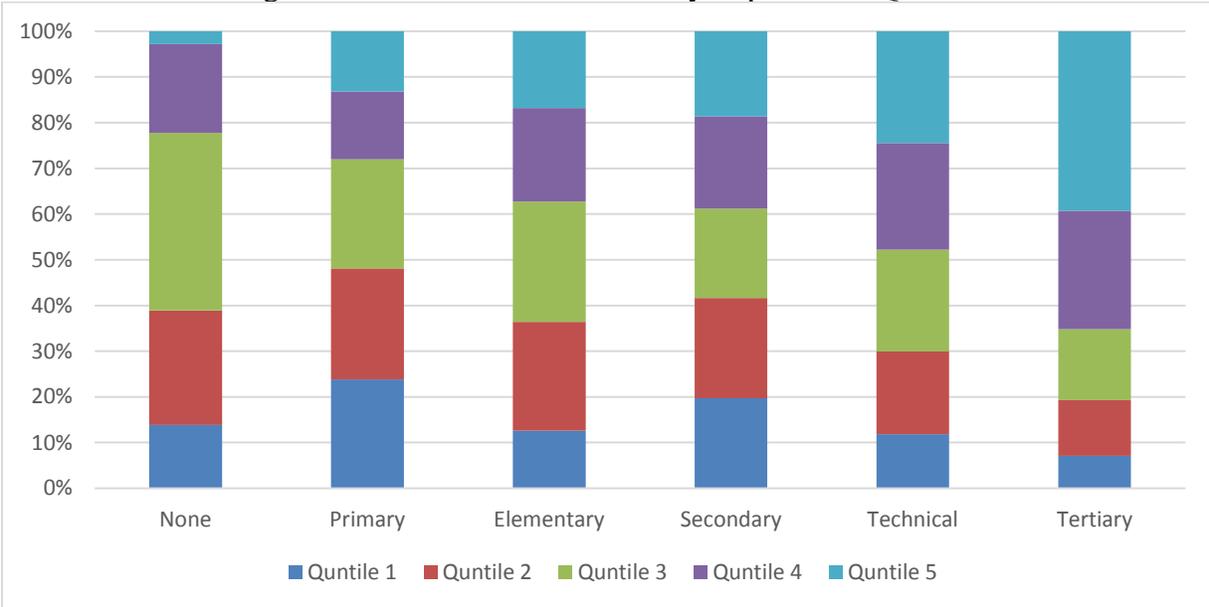
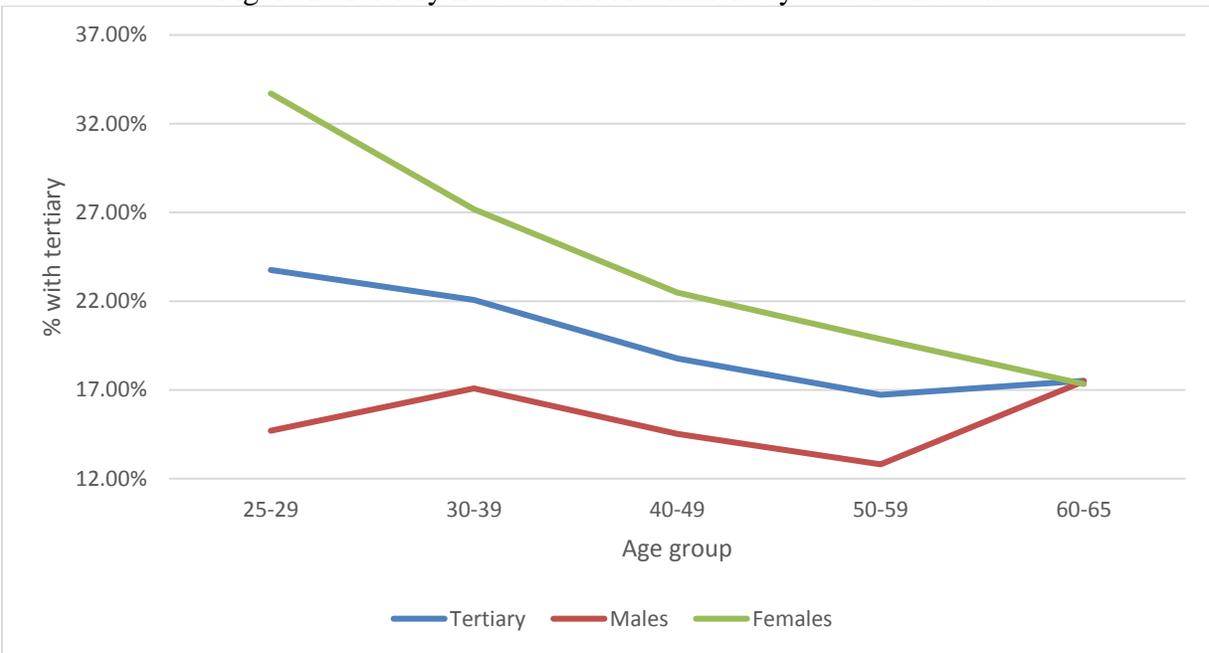


Figure 2: Tertiary Educational Attainment by Cohort and Sex



**Early Childhood Development**

The BSLC undertook objective anthropometric measurement of height and weight of children in the 0-5 years old range so that valid international benchmarks for stunting could be computed. The number of measured children in the 0-5 age range was 271. With this information, we calculated World Health Organization’s standardised anthropometric indicators. On average, children in Barbados have Weight-for-Age 0.79 standard deviations above the world average,

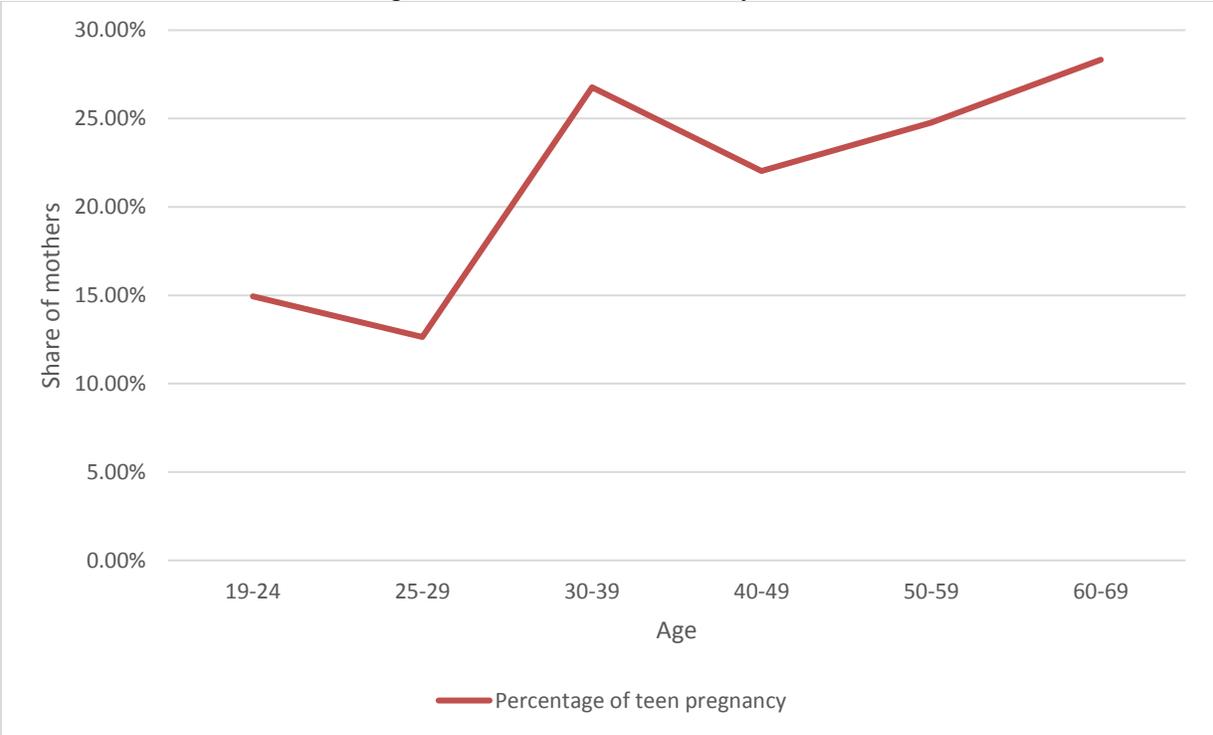
and Height-for-Age 1.11 standard deviations above the world average. This situates Barbados within an advantaged international situation in terms of children physical development within the critical first 5 years of life. Only 2% of measured children were found to be stunted. Although this problem is relatively minor, it is more severe within poor households. Indeed, 4% of children living in extreme poverty were stunted.

The international literature has found strong negative relation between low birth weight (below 2,500 grams), child health and adult productivity. Therefore, it is important to assess the incidence of this phenomenon and how strong it might be correlated with poverty. The results show that 40% of children living in households under extreme poverty had low birth weight. The figure for children living in non-indigent poverty is 12% and for children that are non-poor is 9.5%. Therefore, current poverty is heavily associated with an indicator that is predictive of future productivity thereby favouring a potential inter-generational poverty trap.

**Teen Motherhood**

Teen motherhood (on or before age 19) has been found to be a problematic factor precluding women to develop their full potential across the life cycle. Therefore, is relevant assessing the behaviour of this indicator across different cohorts. Figure 3 below shows that the incidence of teen motherhood was stable at approximately 25% for cohorts 30 years old and older in 2016. However, consistent with the previous finding of higher educational attainment for women in their twenties, these cohorts show a significantly lower incidence of teen motherhood located around 14%.

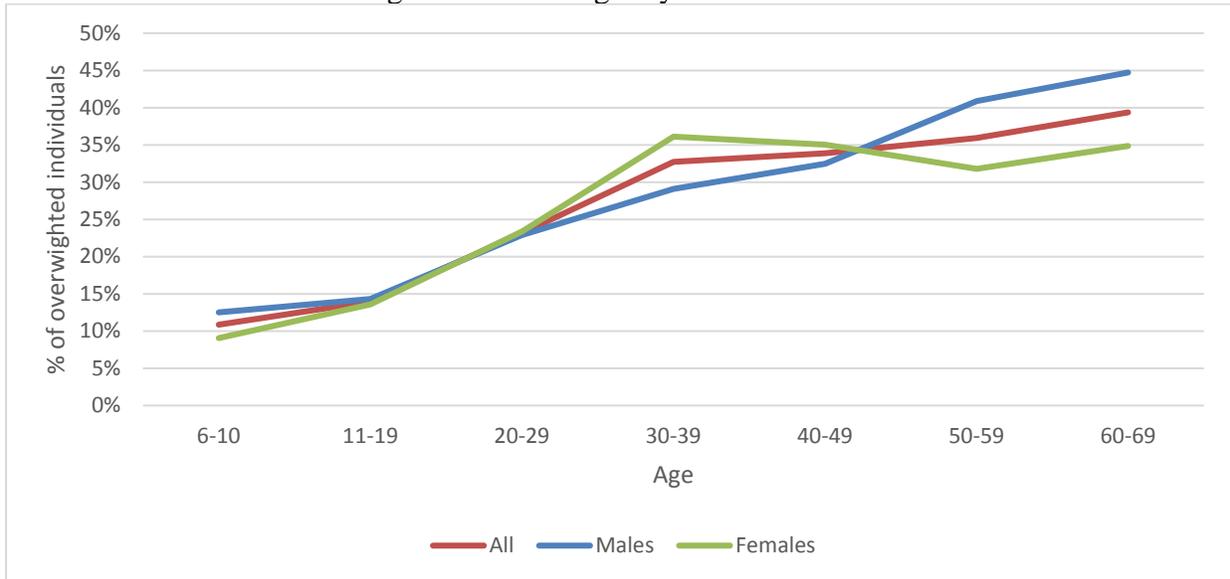
Figure 3: Teen Motherhood by Cohort



### Overweight and Obesity

The incidence of overweight (individuals with BMI between 25 and below 30) is high with 30.8% of individuals found in overweight. This share is even between males (31.4%) and females (30.2%). However, the incidence of this situation is relatively higher for cohorts aged 30 years old and above in 2016 (Figure 4).

Figure 4: Overweight by Cohort and Sex



Obesity (individuals with BMI of 30 and above) also shows a high incidence with 24.3% of the population in this situation. However, obesity is significantly higher among women with 30.6% of them found obese, while only 17.05% of men exhibited this problem. Figure 5 presents the incidence of obesity by age where can be see the permanent difference between men and women.

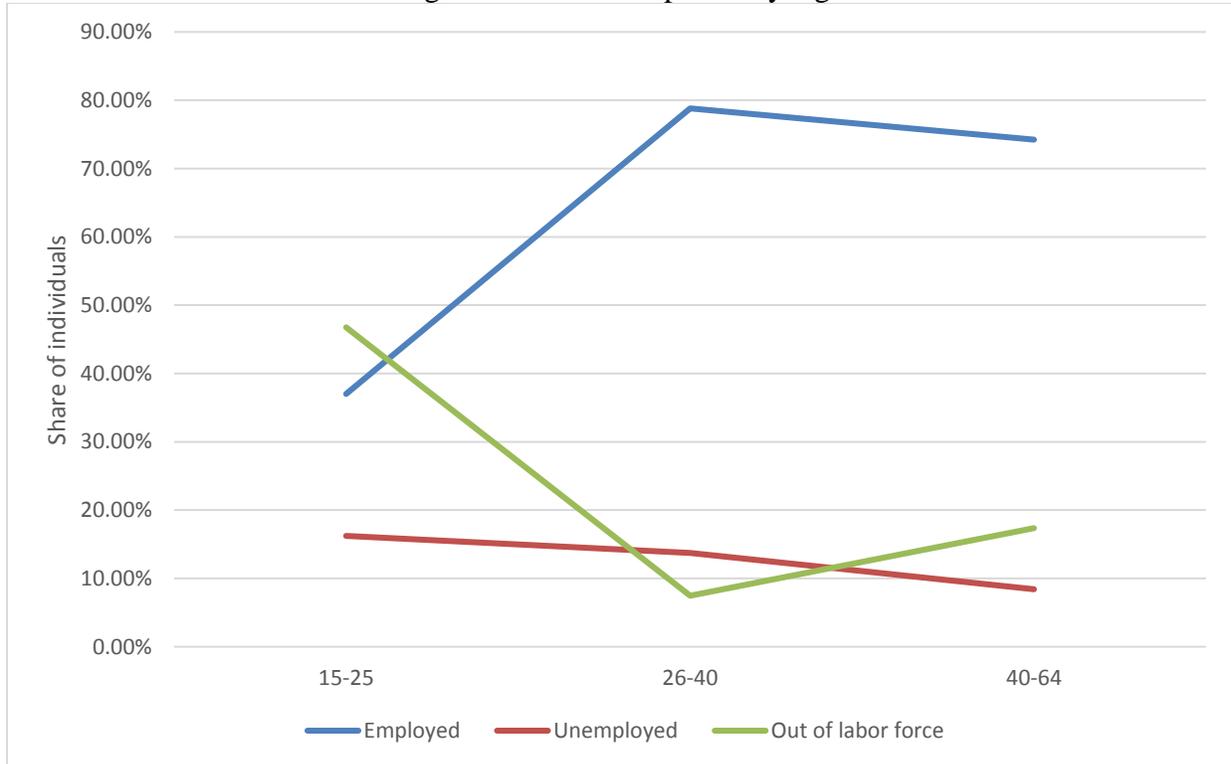
Figure 5: Obesity by Cohort and Sex



## Employment

Labour force participation between ages 15 and 25 is relatively low as 47% of individuals in this age range are out of the labour force mainly due to continued full-time education (Figure 6). However, from age 26 onwards, the share of individuals who are out of the labour force drop to 7% (between 26 and 40 years old); with a subsequent increase to 17.4% within the 40-64 age range due to higher incidence of retirement. The employment rate for the economically active population has been found to be 84.94%, being very similar between males (85.7%) and females (84.3%).

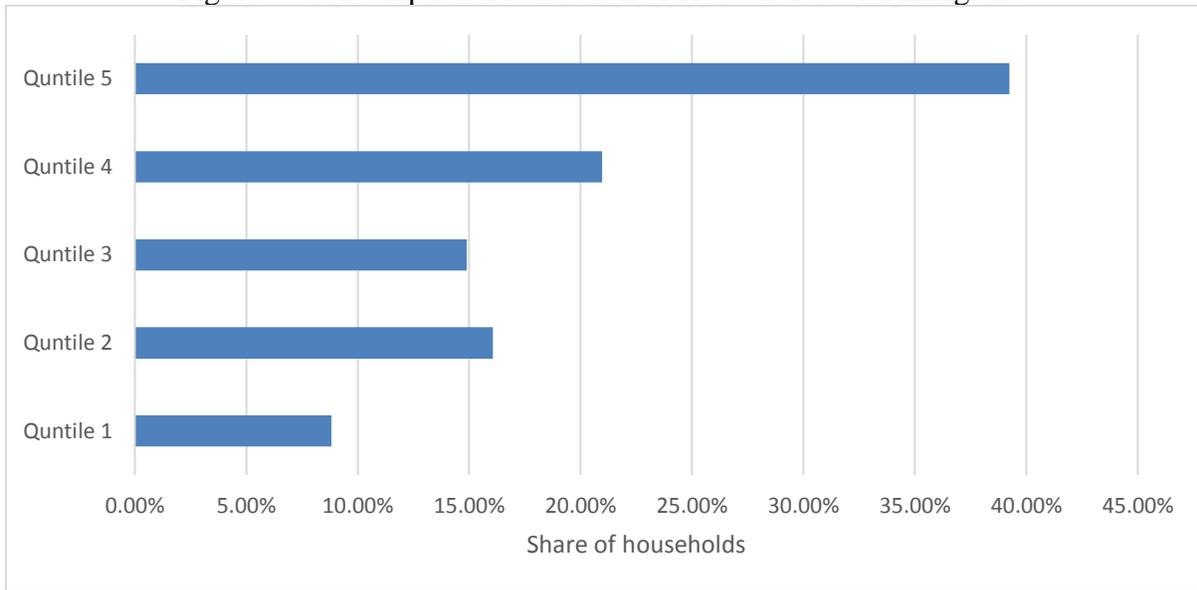
Figure 6: Main Occupation by Age



## Migration

The 2016 BSLC found that 11% of households have at least one member who moved out of Barbados within the previous 5 years (this figure was a very similar 12.6% in the 2010 CALC). In terms of gender, males accounted for 43.2% of emigrants while women conformed the majority (56.8%). The majority of those leaving were children of the head of household which accounted for 52%, followed by siblings (23.1%) and other relative (11.0%). Households with at least one emigrant are associated with higher consumption levels. Indeed, Figure 7 shows that 60% of households with emigrants are situated within consumption quintiles 4 (21%) and 5 (39%). This contrasts with only 9% of households located in the lowest consumption quintile.

Figure 7: Consumption Distribution of Households with Emigrants



Emigrants are, on average, more educated than local counterparts. Indeed, the share of emigrants with secondary or higher educational attainment is 86% compared to non-emigrants counterparts who average 78%. Regarding tertiary education, the share of emigrants with this level of education is 37% compared with 21% for non-emigrants.