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Research Paper:

Jobless Working Age Households in Barbados

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INTRODUCTION

The aim of this paper was to discover the extent of household joblessness in Barbados, in households with working-age members and to reveal some basic characteristics of such households. The source used for the analysis was the Labour Force Survey (LFS) micro-data for the year 2004. These results were extracted from a dissertation that was submitted in partial fulfillment of the requirements for my MSc in Social Statistics degree, at the University of Southampton, England, in 2005. The 2004 results were subsequently compared with corresponding results produced for the years 2001 and 2007, derived from similar data sets for these years, to determine changes in household joblessness over time.

The reason for examining joblessness at the household level was given by Gregg and Wadsworth (2004). Individual and household based aggregate measures of joblessness can and do offer conflicting signals about labour market performance, if work is unequally distributed.

Another motivation for this paper was the desire to research the extensive micro-data sets that existed in the Statistical Department, but were not accessible to other researchers external to the organization because of confidentiality restrictions.

BACKGROUND

Household joblessness has been examined in literature on Organisation for Economic Co-operation and Development (OECD) countries, but similar studies have to date not been undertaken in Barbados. It was contended that high joblessness could lead to higher social distress and dependence on welfare services (OECD Observer, 2004). Children growing up in jobless households were particularly vulnerable to poverty, since their educational and future employment prospects were affected. Since the retirement age in Barbados was generally 65 years (during 2004), it was of greater interest to analyze households with all their working-age members (15 to 64 years) being jobless.

It was contended that the risk and extent of economic distress for individuals without work depended on many factors, one of which is the degree of income sharing with other household members. This view was expressed in the Organisation for Economic Co-operation and Development's *Employment Outlook* (June, 1998). In cases where no household member was in paid employment, the situation was more critical, as it could result in increased pressure being placed on the social security services of a country.

The unemployment rate, which was traditionally presented for individuals, allowed only a partial picture of the labour market condition of a country. Also, the labour supply decisions of individuals were often influenced by the situation with other members of their households.

Concepts used

Some of the key concepts used in this paper were explained as follows.

Joblessness was defined to be the condition where an adult had no paid employment during the period under review. Thus, it incorporated the *unemployed* and the economically *inactive* adults – using the International Labour Office's (ILO) definitions of these terms (Barbados Statistical Service, 2004, p. 4).

A **Household** has been defined in Demographic and Health Surveys (DHS) as a person or group of persons who usually live and eat together, whether they are related or not (Ayad, 1997, p. 2). These surveys (i.e. DHS) were not conducted in Barbados. However, the Labour Force Survey has been conducted in the island since 1975, on a quarterly basis and is also a household based survey.

A **Jobless Household** was therefore considered to be a household in which no adult member was in paid employment.

A **Working-Age Household (WAH)** was defined as a household with at least one *Working-Age* adult member (i.e. age 15 - 64 years).

Specific Research Questions

Some of the specific research questions that were investigated in this paper were:

1. How was joblessness distributed across WAHs?
2. Was there any difference between the household jobless rate and the individual jobless rate?
3. What were the characteristics of jobless households?
4. Were there any changes in jobless WAHs between quarters?
5. Was there any difference in the characteristics of jobless WAHs over time?

METHODOLOGY

A descriptive cross-sectional analysis of the Labour Force Survey data was undertaken, using the Statistical Package for Social Scientists (SPSS). A household file was created and joblessness was analysed by working-age households (WAHs). The transitions or changes in jobless WAHs between quarters, in the year 2004, were explored. The 2004 results were then compared with corresponding results derived for the years 2001 and 2007, to indicate whether there was any difference in household joblessness over time.

Data Source - Sample Design of the Labour Force Survey

The Labour Force Survey utilised a two-stage sample design, to select a representative sample of households. In the first stage, for each quarter (or Round) of the survey, 45 Enumeration Districts (EDs) were selected from 4 strata or partitions of the island - Barbados Statistical Service (2004).

At the second stage, an average of 40 households was selected from each of the chosen EDs. This resulted in at least 1,800 households (or 2% of private households) being selected each quarter. Sampling was undertaken, using the probability proportionate to size of the population methodology, which allowed for self-weighting of the sample data.

From the year 2004, the selection of households at the second stage of sampling was modified, to allow for the first time the introduction of a 50% sample rotation of households between two consecutive quarters. Previously, a new and independent sample of households was selected for each quarter, from the chosen EDs.

This modified sample design facilitated the measurement of changes between quarters in the jobless households.

The change in sample rotation was introduced as a consequence of a Study undertaken during the previous year, 2003, to enhance the Labour Force Surveys in Caribbean countries. The Study was part of a Caribbean Labour Market Information System Project (CLMIS 2002).

In practice, slightly larger samples than 1,800 households were selected for the survey. This was done to compensate for unusable units (e.g. vacant dwelling units) that tended to be included in each quarter's sample, as the LFS only covered the resident population living in private households – i.e. the survey excluded the resident population living in institutions.

Data Source - Response Rates

Over the four quarters in 2004, household non-response ranged from 5% to 7% (reference the Appendix, Table IV). In addition, 2% to 3% of the households in the quarterly samples were not applicable – e.g. they were not residents. Vacant units accounted for around 11% of the total samples in this year.

The original data file on individuals was first checked for consistency. Consistency checks included: checks for duplications, missing values for key identification variables and unusual/inconsistent values.

New variables were created to identify specific characteristics at the household level (e.g. jobless and working-age adults) and a household file was created – for year 2004. The same methodology was subsequently applied to micro-data for the years 2001 and 2007, to create household files for the latter years.

Within all responding households, adults of working-age were identified. These households, classified as working-age households, accounted for 87% of the responding households in each quarter of 2004 (reference Appendix, Table VI). The remaining 13% of responding households consisted of elderly adults (65 years and over). The analysis of

Jobless Working-Age Households (JWAHs) was restricted to data on WAHs only, since it was of greater importance for working-age members to seek employment.

RESULTS OF THE ANALYSIS

The distribution and socio-economic characteristics of jobless working-age households were identified, using the sample data for the year 2004. It was assumed that the ratios for the characteristics of interest from the sample were in the same proportions as those that existed for the population, since the sample chosen was representative of the population and the response rates for all quarters were very good (around 90% of all households visited).

How was Joblessness distributed across WAHs

As illustrated in Table 1 below, Jobless WAHs accounted for 9% of all WAHs on average for the year 2004. This was about a sixth of the WAHs with jobless adults (55%). WAHs with jobless adults amounted to more than half of the total WAHs. Out of these, WAHs with unemployed members averaged 16% for the year.

Table 1

Joblessness in WAHs & Characteristics of WAHs (% Households)

Description	1Qr 2004	2Qr 2004	3Qr 2004	4Qr 2004	Annual 2004
Jobless WAHs	9%	9%	8%	10%	9%
WAHs with Jobless Adults	55%	54%	55%	56%	55%
WAHs with Unemployed	16%	16%	16%	13%	16%
WAHs with Children ^{1/}	38%	38%	39%	39%	38%
WAHs with Elderly ^{2/}	18%	18%	19%	20%	19%
WAHs (%)	100%	100%	100%	100%	100%
WAHs (No.)	1,446	1,407	1,389	1,408	5,650

Notes:

1/ Under 15 years of age

2/ 65 years and over

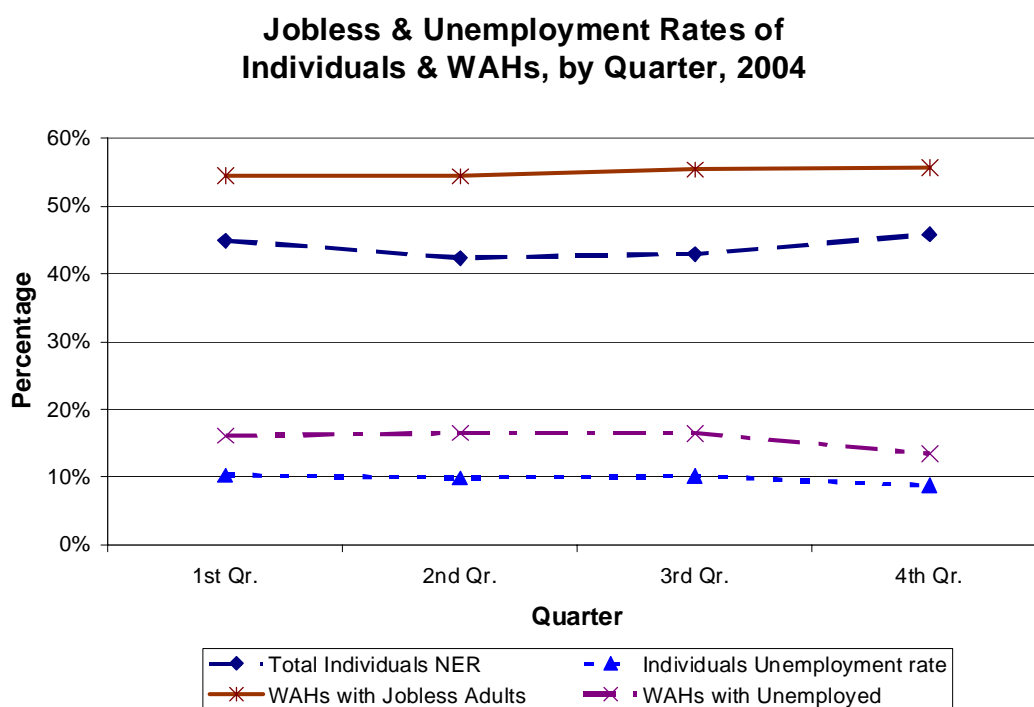
Source: Barbados Statistical Service, LFS micro-data for year 2004.

Differences between the Household Jobless rate and the Individual Jobless rate

The household jobless rate tended to be higher than the individual jobless rate, during 2004. This was revealed in Chart 1 below. WAHs with jobless adults amounted to over 55%; while at the level of the individual, the percentage of jobless adults to working-age adults (known as the non employment rate) was less than 46%.

WAHs with unemployed adults amounted to 16% on average during the year 2004; while at the level of the individual, the unemployment rate (the percentage of unemployed adults to the total labour force) was slightly less than 10% for the same period. The unemployment rates, for both individuals and WAHs, had similar trends over the year, with the WAHs' unemployment rate being higher.

Chart 1



Note: NER = Non Employment Rate (i.e. Jobless adults/Working-age adults)

Source: Barbados Statistical Service, LFS micro-data.

Characteristics of Jobless Households

The composition of jobless working-age households, relating to dependency, was illustrated in Table 2 below.

It was noted that almost twice as many JWAHs contained elderly persons, as compared to JWAHs with children. On average for the year 2004, almost a third of these JWAHs contained elderly persons – i.e. 32%. Significantly less jobless working-age households contained children, 17% on average.

Table 2

Characteristics of Jobless Working-age Households (% Households)

Description	1Qr 2004	2Qr 2004	3Qr 2004	4Qr 2004	Annual 2004
JWAHs with Children ^{1/}	14%	18%	19%	17%	17%
JWAHs with Elderly ^{2/}	28%	33%	31%	35%	32%
Unemployed	39%	38%	39%	27%	36%
JWAHs (%)	100%	100%	100%	100%	100%
JWAHs (No.)	136	130	118	139	523

Source: Barbados Statistical Service, LFS micro-data for year 2004.

Comparison with WAHs

A comparison of the characteristics of JWAHs with those of WAHs, during the year 2004, revealed that less than half the proportion of JWAHs supported children – 17% of JWAHs as compared to 38% of WAHs, as displayed in Table 3 below. On the other hand, 32% of JWAHs contained elderly persons, as compared to only 19% of WAHs with elderly. So JWAHs tended to have less children and more elderly persons than WAHs. JWAHs also had a greater proportion of unemployed members; 36% of JWAHs, which was more than twice that for WAHs (16%). This evidence suggested that JWAHs were more vulnerable to economic distress.

Table 3

**Barbados LFS: Annual 2004
Households' Characteristics
(% Households)**

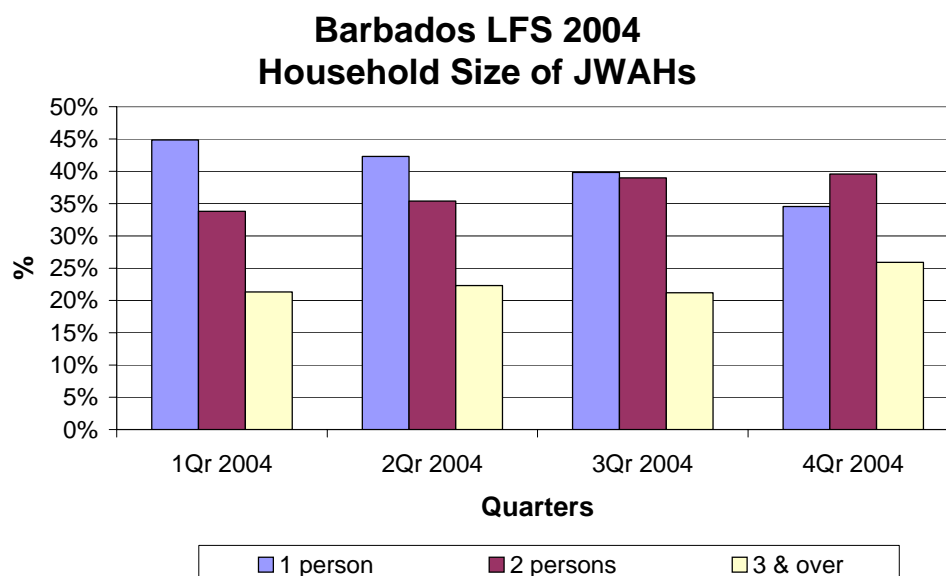
Characteristics	WAHs (a)	JWAHs (b)
Households with Children	38%	17%
Households with Elderly	19%	32%
Households with Unemployed	16%	36%
Totals (%)	100%	100%
Totals (No.)	5,650	523

Source: Barbados Statistical Service, LFS micro-data.

Household Size

The household sizes of JWAHs, by quarter, are presented in Chart 2 below. The chart indicated that on average 40% of JWAHs consisted of one (1) adult. This proportion (for 1 person JWAHs) started at 45% in the first quarter and declined steadily in successive quarters of 2004. On average, 37% of JWAHs had two adults and 23% of them had three or more adults. Thus, the majority of JWAHs were small in household size.

Chart 2



Source: Barbados Statistical Service, LFS micro-data.

Sources of Livelihood of JWAH Heads

The main source of livelihood of the JWAH heads was clearly from pensions, as shown in Table 4 below. On average for the year 2004, 46% of all JWAH heads were mainly supported by this source. Contributions from other relatives, not necessarily in the same households, provided the main support for another 24% of the JWAH heads. Only 7% of these heads were supported chiefly from investments. These statistics indicate a major reliance on the social security system for the main livelihood of JWAH heads.

Table 4

**JWAH Heads' Main Source of Livelihood, by Quarter, 2004
(% Households)**

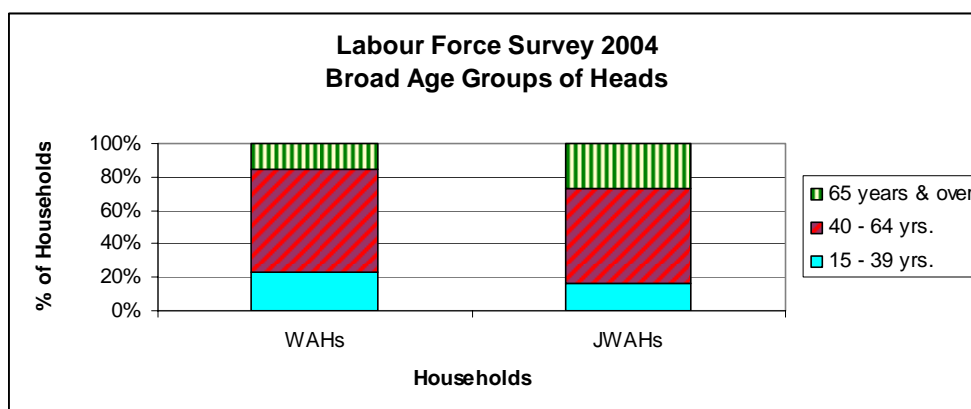
Main source of Livelihood	1Qr 2004	2Qr 2004	3Qr 2004	4Qr 2004	Annual 2004
Pension	49%	45%	38%	48%	46%
Contribution from relatives	25%	24%	23%	22%	24%
Disability/Unemployment benefits	7%	8%	14%	11%	10%
Investment	6%	9%	5%	9%	7%
Multiple & Other sources	13%	13%	19%	10%	14%
Total JWAHs (%)	100%	100%	100%	100%	100%
Total JWAHs (No.)	136	130	118	139	523

Source: Barbados Statistical Service, LFS micro-data.

Age Structure of JWAH heads

An examination of the ages of the JWAHs heads, for the year 2004, revealed that the majority of them were in the age-group 40-64 years (reference Chart 3 below). This age group accounted for 57% of the total JWAHs on average for the year 2004. JWAHs with heads in the age-group 65 years and over (i.e. 27%) were more than 1.5 times those with heads in the under 40 years age group (i.e. 16% of JWAHs). When compared to WAHs, the situation for these latter two age groups was reversed – i.e. less elderly (15%) and more youthful WAHs heads (23%).

Chart 3



Notes: WAHs = Working-Age Household; JWAHs = Jobless Working-Age Households

Source: Barbados Statistical Service, LFS micro-data.

Marital status of JWAH heads

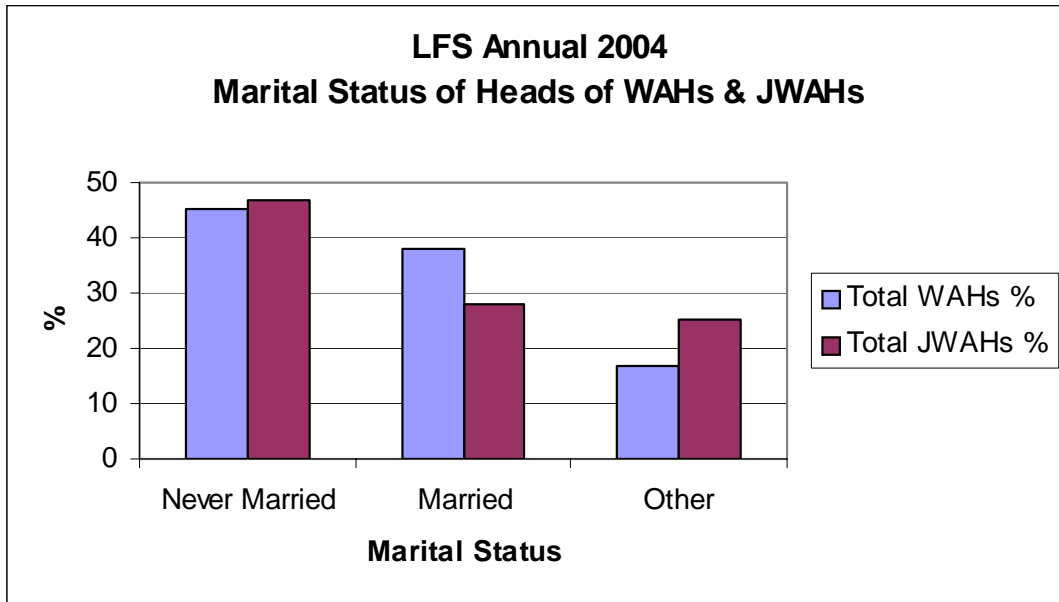
The marital status of JWAH heads, compared to those of WAH heads, was presented in Chart 4 below. It revealed that on average for the year 2004, 47% of JWAH heads had never married, while only 28% of them (JWAHs) were married. The remaining JWAH heads (on average 25%, *other*) were widowed, divorced or separated.

Compared to WAH heads, less JWAH heads were married (i.e. 28% of JWAHs vs 38% of WAHs), but more of them were in the *other* category (i.e. widowed, divorced or separated – 25% of JWAHs compared to 17% of WAHs). The support and coping mechanisms of this latter group (of JWAH heads) would require further investigation.

Comparison of Household Heads by Sex

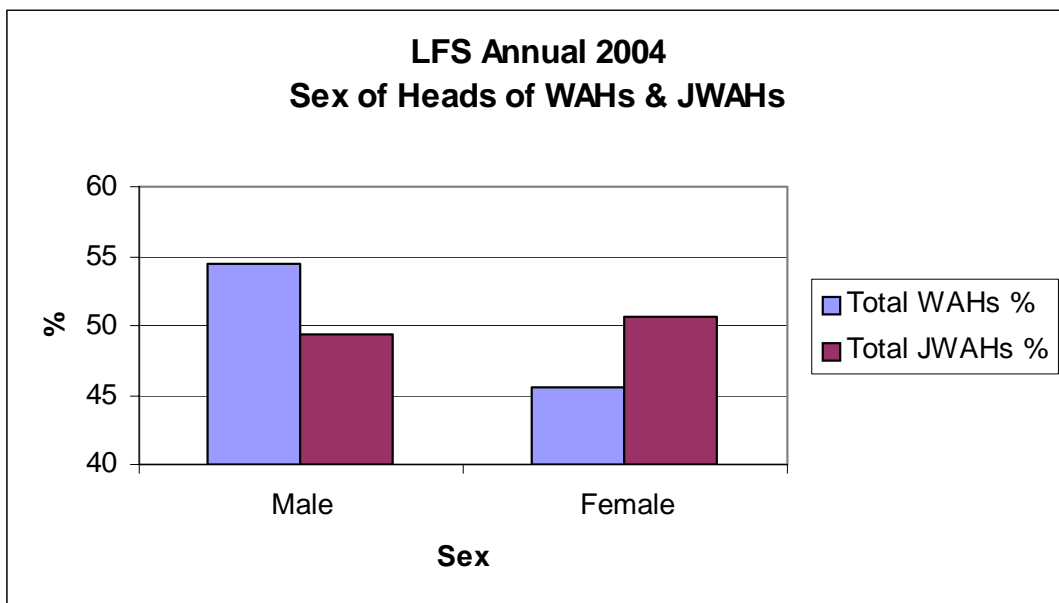
Female household heads constituted an annual average of 51% of all JWAHs, compared to 46% of all WAHs, for the year 2004 – reference Chart 5 below. That is, for JWAHs, more of their heads tended to be female. For WAHs on the other hand, significantly more of their heads were male.

Chart 4



Source: Barbados Statistical Service, LFS micro-data.

Chart 5



Source: Barbados Statistical Service, LFS micro-data.

Changes in jobless WAHs between quarters in 2004

Approximately one-fifth of the total jobless households, in the first rotation order (14b), changed their jobless status over the first and second visits (i.e. with reference to Table 5 below: 2% of all households, out of 9% of all households that were jobless in the first visit; and 2% of all households out of 10% of all households that were jobless in the second visit). That is, they changed their status from having all members jobless, to having at least one member employed.

The rotation order referred to a partition of each sample, consisting of 50% of the households, which were revisited in a consecutive quarter. Over the second and third rotation orders (15a and 15b respectively), a third to a quarter of the total jobless households changed their jobless status (in and out of joblessness) between visits.

Table 5

**Barbados Labour Force Survey Year 2004
Jobless WAHs: Visit 1 by Visit 2, by Rotation order
(No. of Households)**

Rotation order	Jobless in Visit 2	Jobless in Visit 1		Total
		At least 1 adult employed	Jobless Household	
14b	At least 1 adult employed	611	14	625
	Jobless Household	17	50	67
	Total	628	64	692
15a	At least 1 adult employed	613	19	632
	Jobless Household	21	50	71
	Total	634	69	703
15b	At least 1 adult employed	598	13	611
	Jobless Household	19	41	60
	Total	617	54	671
(% of Households)				
14b	At least 1 adult employed	88%	2%	90%
	Jobless Household	2%	7%	10%
	Total	91%	9%	100%
15a	At least 1 adult employed	87%	3%	90%
	Jobless Household	3%	7%	10%
	Total	90%	10%	100%
15b	At least 1 adult employed	89%	2%	91%
	Jobless Household	3%	6%	9%
	Total	92%	8%	100%

Notes: 14b - Visits to households in Quarters 1 and 2, 2004
 15a - Visits to households in Quarters 2 and 3, 2004
 15b - Visits to households in Quarters 3 and 4, 2004

NB. Due to rounding, the sum of some figures (%) may not equal the totals.

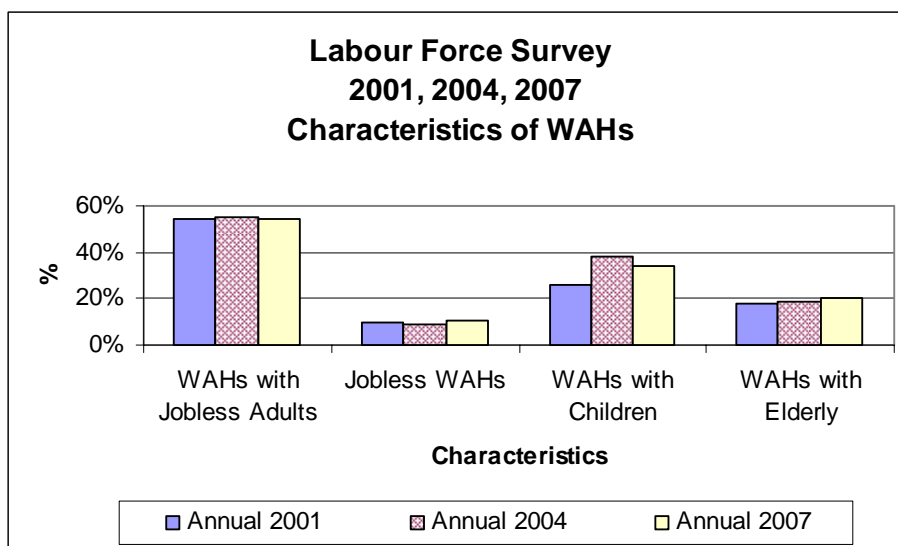
Source: Barbados Statistical Service, LFS micro-data.

Comparison of Results for year 2004 with those for 2001 and 2007

A comparison of the proportion of WAHs to all responding households, for the years 2001, 2004 and 2007, revealed slightly declining proportions over the years (88% in 2001, 87% in 2004 and 86% in 2007: reference Tables I to III, in the Appendix).

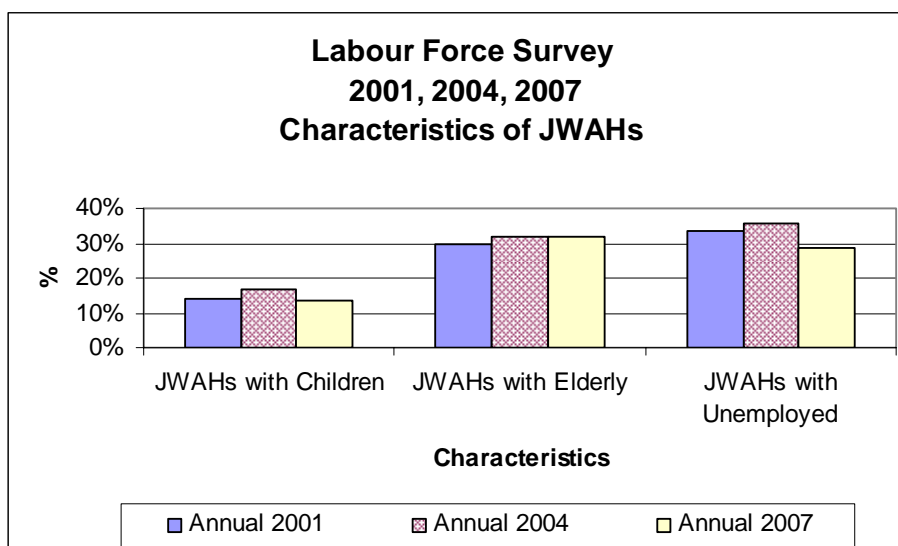
For WAHs with jobless adults, the proportions were similar (54% in both 2001 and 2007), as shown in Chart 6 below. This indicated some consistency over the years.

Chart 6



Source: Barbados Statistical Service, LFS micro-data.

Chart 7



Source: Barbados Statistical Service, LFS micro-data.

A comparison of the households' jobless characteristics for the year 2004 with corresponding results produced for the years 2001 and 2007, revealed almost identical proportions for JWAHs (i.e. 10% of WAHs in both years: reference Chart 6 above).

For the years 2001 and 2007, there were similar proportions of JWAHs with elderly members (i.e. 30% and 32%, respectively) - reference Chart 7 above.

For JWAHs with children, there were also similarities in the proportions (14% and 13% in the years 2001 and 2007, respectively; slightly less than the 2004 figure of 17%)

The proportion of JWAHs with unemployed members showed a little more fluctuation over the years – 33%, 36% and 29% in 2001, 2004 and 2007, respectively. This trend was generally following the individuals' unemployment rates for these years – i.e. 9.9%, 9.8% and 7.4%, respectively.

CONCLUSION

This study examined the extent of joblessness at the household level, to facilitate an assessment of whether it was a cause of concern for the economic well being of household members in Barbados. The information gained from this analysis would be useful for public and private sector planners, policy and decision makers, other social researchers (who may undertake future research) and interested parties.

Limitations of the research

The research focused only on jobless households. No detailed analysis was conducted for WAHs with jobless members, who may be especially vulnerable to economic distress – e.g. where only one household member had employment, but was working an inadequate number of hours or for a low remuneration.

The pattern of non-response in the LFS during the year 2004 was not investigated. So it was not known for sure whether this non-response could have affected the results.

Summary of Findings

JWAHs existed in about 9% of all WAHs on average during 2004 and in 10% of all WAHs during the years 2001 and 2007. In the year 2004, their household size was smaller, with fewer children and more elderly members. The majority of their heads were over 40 years of age.

Their main support was from pensions and from relatives' contributions.

Approximately 2 to 3% of jobless WAHs changed this status between each quarter, in the year 2004.

Recommendations

More research is needed to further assess the vulnerability of particular categories of JWAHs, such as female heads that were widowed, divorced, or separated and single parent heads.

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APPENDIX – Additional Tables

Table I - Percentage WAHs in 2001

Barbados Labour Force Survey - Year 2001
% of Households with Working-age Adults

Working-age Adults	1Qr 2001	2Qr 2001	3Qr 2001	4Qr 2001	Annual 2001
1	28%	29%	27%	30%	28%
2	31%	30%	33%	31%	31%
3 & over	29%	28%	28%	28%	28%
Sub-total: WAHs	88%	87%	88%	89%	88%
None	12%	13%	12%	11%	12%
Total responding households (%)	100%	100%	100%	100%	100%
(No.)	1,651	1,667	1,645	1,624	6,587

Source: Barbados Statistical Service, LFS micro-data.

Table II - Percentage WAHs in 2004

Barbados Labour Force Survey - Year 2004
% of Households with Working-age Adults

Working-age Adults	1Qr 2004	2Qr 2004	3Qr 2004	4Qr 2004	Annual 2004
1	26	27	26	26	26
2	33	33	32	33	33
3 & over	28	28	29	28	28
Sub-total: WAHs	87	87	87	87	87
None	13	13	13	13	13
Total responding households (%)	100	100	100	100	100
(No.)	1,662	1,609	1,588	1,617	6,476

Source: Barbados Statistical Service, LFS micro-data.

Table III - Percentage WAHs in 2007

Barbados Labour Force Survey - Year 2007
% of Households with Working-age Adults

Working-age Adults	1Qr 2007	2Qr 2007	3Qr 2007	4Qr 2007	Annual 2007
1	27%	28%	29%	30%	29%
2	30%	29%	31%	28%	30%
3 & over	29%	29%	26%	28%	28%
Sub-total: WAHs	87%	86%	86%	86%	86%
None	13%	14%	14%	14%	14%
Total responding households (%)	100%	100%	100%	100%	100%
(No.)	1,593	1,577	1,497	1,531	6,198

Source: Barbados Statistical Service, LFS micro-data.

Table IV – Response Rates: Year 2004

Barbados Labour Force Survey - Year 2004
Response Rates (for all Households)

Response	1Qr 2004	2Qr 2004	3Qr 2004	4Qr 2004	Annual 2004
No.					
Table Total	1,987	2,018	2,027	2,016	8,048
%					
Responding households	84%	80%	78%	80%	80%
Non-response *	5%	6%	7%	7%	6%
Other households, n.a.	2%	3%	3%	3%	3%
All Households	90%	89%	89%	90%	89%
Vacant units	10%	11%	11%	10%	11%
Table Total	100%	100%	100%	100%	100%

Notes: * – Refusals and non-contacts during enumeration periods.
n.a. – Not applicable

Source: Barbados Statistical Service, LFS micro-data.