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**BARBADOS' EXPERIENCE WITH POVERTY SURVEYS**

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***AIM***

The aim of this paper is to give some insights into the methodological and other issues associated with and experienced in the conduct of poverty surveys in Barbados.

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## 1. INTRODUCTION

- **Location and brief information on the island.**

Barbados is a small coral island, located to the east of the Caribbean island chain, at latitude 13.2° north and longitude 59.5° west. It is about 166 square miles in area. Its population was estimated at 272,000 persons at the middle of 2003. The results of the 2000 Population and Housing Census indicate that the population consisted of 93% black, 3% white and the other 4% were of mixed, Indian and Chinese origin. The principal language is English. The island gained its independence from England in 1966.

In its earliest existence, the island's economy was primarily based on Sugar agriculture. It has since diversified into Light Manufacturing, Information Services and Tourism; the latter has now become the main foreign exchange earner.

- **Overview of the Poverty Survey conducted.**

The first national survey on poverty conducted in Barbados was the 1996-1997 Poverty Survey. This was made possible through technical assistance provided by the Inter-American Development Bank (IDB). It was executed as a *Poverty and Living Conditions Module* which was attached to the Department's *Continuous Labour Force Household Sample Survey* (conducted quarterly), over a period of one year from August 1996 to June 1997.

- **Objective of the Survey**

The objective of this study was to provide an estimation of the extent and main characteristics of poverty in the island and give a picture of income distribution. It facilitated the quantification of the number of households below a given income level and the estimation of a poverty line.

One of the main problems experienced in undertaking this exercise was the lack of previous studies done, to create an information base.

## 2. CONDUCT OF POVERTY SURVEY

- **Description of how it was conducted.**

As a module of the *Continuous Labour Force Household Sample Survey* (CLFHSS), it was possible to use the same sampling scheme for making national estimates. Also, information from one survey complemented the other.

Enumeration was undertaken by the Department's permanent cadre of field officers, assisted by a few temporary additions. Data Processing was achieved with the guidance of a consultant who was attached to the Department at the time (on a Commonwealth Fund for Technical Cooperation project, assisting with the CLFHSS). The office staff entered the survey data on personal computers, using the SPSS PC software. The tabulated results were

analyzed by the IDB experts in this field, who prepared a report on the study – Rafael Diez de Medina and Ricardo C Martinez.

- **Sample design used.**

A two stage sample design was employed. At the first stage a sample of areas, called Enumeration Districts (EDs), were selected. The island was first demarcated into four zones or strata, mainly along geographical lines. Based on the 1990 Population Census results, a total of forty (40) EDs were chosen from these strata. The number of EDs drawn from each stratum was proportionate to population size and covered all eleven parishes.

At the second stage a sample of households was selected – about forty (40) per ED on average. These were chosen with probabilities proportionate to size, so that the overall sample had a self weighting design. The household unit was defined as comprising all occupants of a dwelling (i.e. a non-institutional, residential unit).

Each quarter a new sample of households was drawn. This was an effort to reduce respondent burden and thus improve the response rates.

- **The Survey's components**

The module, incorporated into the country's *Continuous Labour Force Sample Survey*, included some variables that provided a clearer picture of the living standards in Barbados. The income concept adopted was the net annual income from all sources current at the time of the interview and considered as a regular means of support.

In the Labour Force Survey information on earnings for the last week was usually obtained from all adults (persons 15 years and older). All available wage information for all household members was converted to an annual equivalent. The total annual household income was derived by adding all income components. The survey included an estimation for the imputed rent of an owner occupied house or dwelling.

Per capita income was used as an indicator of the household's welfare.

Other variables included in the *Poverty and Living Conditions* (PLC) module included the following:

- (a) **Housing** – this category included questions on the type of dwelling, the materials of the walls and the roof, the number of rooms and bedrooms, water supply, toilet facilities, the sources of light and fuel, the type of tenure, the age of the building or structure, equipment and appliances available to the household;
- (b) **Access to social benefits** – this grouping included questions on regular assistance in cash or kind, subsidies on government transportation, home help, access to medical attention and education;
- (c) **Household income** – this was composed from a detailed breakdown of income items, received or earned by individual members;

- (d) **Household expenditure** – this was an attempt to collect information on the main categories of expenditure incurred by each household member.

### **3. RESOURCES FOR ANALYSIS**

- **Analysis of the results.**

The analysis of the results of the study was done by IDB officers. The results from another study (viz. the *Food Basket Study for Barbados*) prepared by the National Nutrition Centre of Barbados, was used in determining the cost of a food basket that met minimum nutritional requirements. A poverty line was then calculated, on an annual basis, against which was compared annual per capita household income.

The technical knowledge required for the analysis was unfortunately not passed on to the Department's established, technical staff. This presented a difficulty for the Department when a follow-up study was conducted in a later period (from the second quarter 1999 to the first quarter 2000).

- **Follow-up surveys**

The subsequent survey (referred to above) also attempted to obtain some subjective data in addition to the objective data requested as for the first study. The design of the survey instrument and the actual enumeration were undertaken by the Department's staff. Lack of mainly human resources (i.e. the technical capability for the analysis) and the preparations that needed to be done for the 2000 Population and Housing Census, prevented the processing and analysis of this latter study from being completed. Consequently, only the data entry was accomplished. The Department later lost the services of some of its senior staff and this exacerbated the situation.

### **4. RESULTS FROM THE SURVEY**

- **Extent Of Poverty**

The first major step in the methodology used for the poverty assessment was the determination of a normative poverty line. This did not exist before for Barbados. The per capita annual average poverty line was calculated as US\$2,751 (Bds \$5,503), which is a mean value for the whole population. There were two components to this process: (a) the calculation of a food basket that met the minimum nutritional requirements, and (b) the estimation of the cost of non-food requirements.

The second major task was the measurement of per capita household income. Total income was calculated by adding wage and non-wage incomes. Adjustments were made to compensate for biases which normally occur with such survey data and also to take account of imputed rent of owner occupied households.

The poverty line represented the per capita yearly income, below which Barbadians can be considered as *poor*. Using this criteria, poverty in the island was estimated to affect 8.7% of

the total households. This translated to approximately 7,000 households, living below this line, or about 35,000 persons.

- **Socio-Demographic Characteristics**

The results of the study indicated that larger household sizes were closely linked to poverty. Poor households had on average 5.0 persons, while non-poor households had on average 2.9 members. Most poor households were headed by females, almost 59%; while 42% of non-poor households had female heads. Single parents headed most of the poor households, 57.3%. Also, poor households tended to have younger heads – 48.4% of these were headed by persons below 44 years of age.

Education attainment was significant among the poor and non-poor. Most poor household heads had only primary or elementary education, accounting for 54% of the poor. Another 40% only had reached the secondary level.

Relating to public services, around 84% of the island's total households had their water supply piped into the dwelling. In the case of poor households this ratio fell to 74%. Pit latrines were present in 33% of poor households and in 21.2% of the non-poor.

- **Economic Poverty Profile**

High unemployment rates were closely associated with low income, a characteristic of the poor population. The mean unemployment rate within poor households was almost two and a half times that of the non-poor ones. Defining the unemployment rate within the household as the ratio of the number of unemployed household members to the total active household population (unemployed and employed), it was found that in poor households this rate was 30.8%, but in the non-poor households it was 12.4%. Also, unemployment among females, especially the young, was closely linked to poverty.

Poor households tended to make more intensive use of their women and youth. Also, they tended to have a higher percentage of old people still working.

- **Intensity of Poverty**

This concept refers to how far below the poverty line is a given household, person or group.

When the geographic distribution was considered, the poverty intensity in certain sample strata was high compared to others - especially in St. Michael, the stratum with the largest population.

Being single contributed to 53.6% of poverty intensity in Barbados. This was also closely associated with females.

- **Equity and Access to Social Benefits**

Education and health services were available to everyone almost free of charge. The study's sample information suggested that 2.4% of the population regularly received assistance from government, through a variety of institutions. However, this aid was not distributed

satisfactory, since only 3.6% of the poor households were receiving it. Also, 2.2% of the non-poor were regularly assisted.

Subsidized rents, water bills and electricity were received by 4% of the poor households, but the same proportion of non-poor households also benefited. Numerically, non-poor households outnumbered the poor. This situation indicated that the distribution of subsidies was inefficient.

## **5. IDENTIFICATION OF THE POOR**

### **▪ Limitations of the survey**

Since the PLC module was attached to the *Continuous Labour Force Sample Survey* it was constrained by the sample size and design of the latter, which was intended to produce national estimates only, for the key elements of the Labour Force and the adult population. As a consequence, it could not give reliable estimates for smaller areas, such as a parish or a community.

Also, this sample design would not necessarily locate poverty areas, which tend not to be uniformly distributed. It would not have specifically taken into account any pockets or concentrations of communities, where poverty was more acute. Such areas, if they existed, could therefore have been accidentally omitted from the sample and by extension, would not have been reflected in the results.

Other agencies have indicated a need for the identification of individual cases of poverty, for remedial action to be taken. Unfortunately, the Department cannot presently divulge this level of detail since it operates under the constraints of the Statistics Act, which prohibits disclosure of information on individuals. Thus the results of such studies may only provide a picture of poverty status at the national level; or at the parish or community level, if a larger size sample can be employed. Situations or areas of concern may be indicated by the survey results, where follow-up detailed studies would be required by the relevant agencies responsible for poverty alleviation.

## **6. CONCLUSION**

Follow-up national surveys are required to monitor and evaluate the effectiveness poverty reduction strategies initiated in the island – to be used by various social and government agencies concerned with the welfare of the island's inhabitants. To achieve this requirement specific expertise in the analysis of these types of surveys will need to be developed and institutionalized within the Department.

These national exercises will need to be supplemented by more detailed studies as necessary, by the relevant agencies responsible for the delivery of poverty alleviation, to enable them to target specific individuals/households or situations in need of their aid.