

Poverty mapping in Suriname with 2004 census data



Eartha Groenfelt

Manager Census Office

General Bureau of Statistics

Poverty mapping with census data

- Purpose:

to compose a poverty map, using data collected during the 7th Population and Housing Census in Suriname in August 2004.

Poverty mapping with census data

- Definition of poverty used by GBS:

a unit (person, family or hh is considered to be poor when
- that unit does not have sufficient means to provide for its
basic needs,
in which the needs of food are of prime importance.

Poverty line:

the amount of money that (given size and composition of
the unit) demarcates the poor from the non-poor.

Poverty analysis using HBS

Up till now: use of Household Budget Surveys to estimate percentage of poor households and persons in larger districts of Suriname.

HBS 1968/1969: in Paramaribo and Wanica
(approx. 69% of total population)

HBS 1999/2000: in Paramaribo, Wanica and
Nickerie (excl. Wageningen)
(approx. 76% of total population)

Poverty analysis using HBS

(consumption as welfare indicator)

Percentage of poor households and of poor persons, in Paramaribo and Wanica

HBS period	Engel coefficient	Percentage poor households	Percentage poor persons
1968/1969	63	17	22
	56	23	29
	49	30	37
1999/2000	63	47	53
	56	52	59
	49	58	65

Source: GBS

Estimated percentage of poor persons in Suriname in 1999/2000: 49-74%

Poverty analysis using Census data (income as welfare indicator)

- Earlier analysis of the census-7 data revealed that
 - although response percentages of individual household members on the income question were acceptable (overall approx. 77%)
 - Because of missing income data for at least one hh-member in certain households,
 - Response percentages on total household income were no more than 60%

Poverty analysis using Census data (income as welfare indicator)

- Use of individual income distributions to estimate percentage of persons below the poverty line is in principle not prohibited.
- People make living arrangements as members of households, not as individuals.

Conclusion: census-7 income data has high item non-response; not suitable for poverty analysis

Poverty analysis using Census data

- Multidimensional approach

- Capability approach: rejects monetary indicators as the measure of well-being (means rather than ends).
- Access to monetary resources does not consider the individual's differences in transforming resources into valuable achievement - differences which depend on personal characteristics or on the life context
- Poverty : capability failure, a narrowing down of the set of available options, „beings and doings“ basic to human life.

**(source: The Multidimensional Measurement of Poverty:
Recent Development and Applications)**

Poverty analysis using Census data

- Multidimensional approach

- **Multidimensional measures for disaggregated data:**
- seeking to translate individual's deprivations into an overall measure.

Deprivation of a specific need of an individual or household is expressed as the normalized difference between the current achievement of the need and the minimum standard established.

(Source: QEH Working Paper Series – QEHWPS107)

Poverty analysis using Census data

- Multidimensional approach

- 1. Which dimensions should be considered?
- 2. How should they be measured?
- 3. Which weight should be given to each of them?
- 4. How should they be aggregated?

Multidimensional approach: dimensions

Depends on availability of Census-7 data.

Measured on dwelling and household level:

- Persons per sleeping room
- Condition of dwelling
- Availability of household goods and facilities:
 - Main source of water
 - Type of electricity
 - Type of cooking fuel
 - Type of sanitary facility
 - Type of telecommunication
 - Type of transportation

Multidimensional approach

How to measure dimensions

- Depends on the values assigned to the variables.

For the exercise to try and construct an index that was useful for poverty mapping, dichotomized variables were constructed out of existing census-7 data

Weights given to dimensions: unweighted

Multidimensional approach: aggregation

- Method used during MICS3 construction of a wealth index, divided into the following 'wealth index quintiles'.
 - 1 'Poorest'
 - 2 'Second'
 - 3 'Middle'
 - 4 'Fourth'
 - 5 'Richest'.

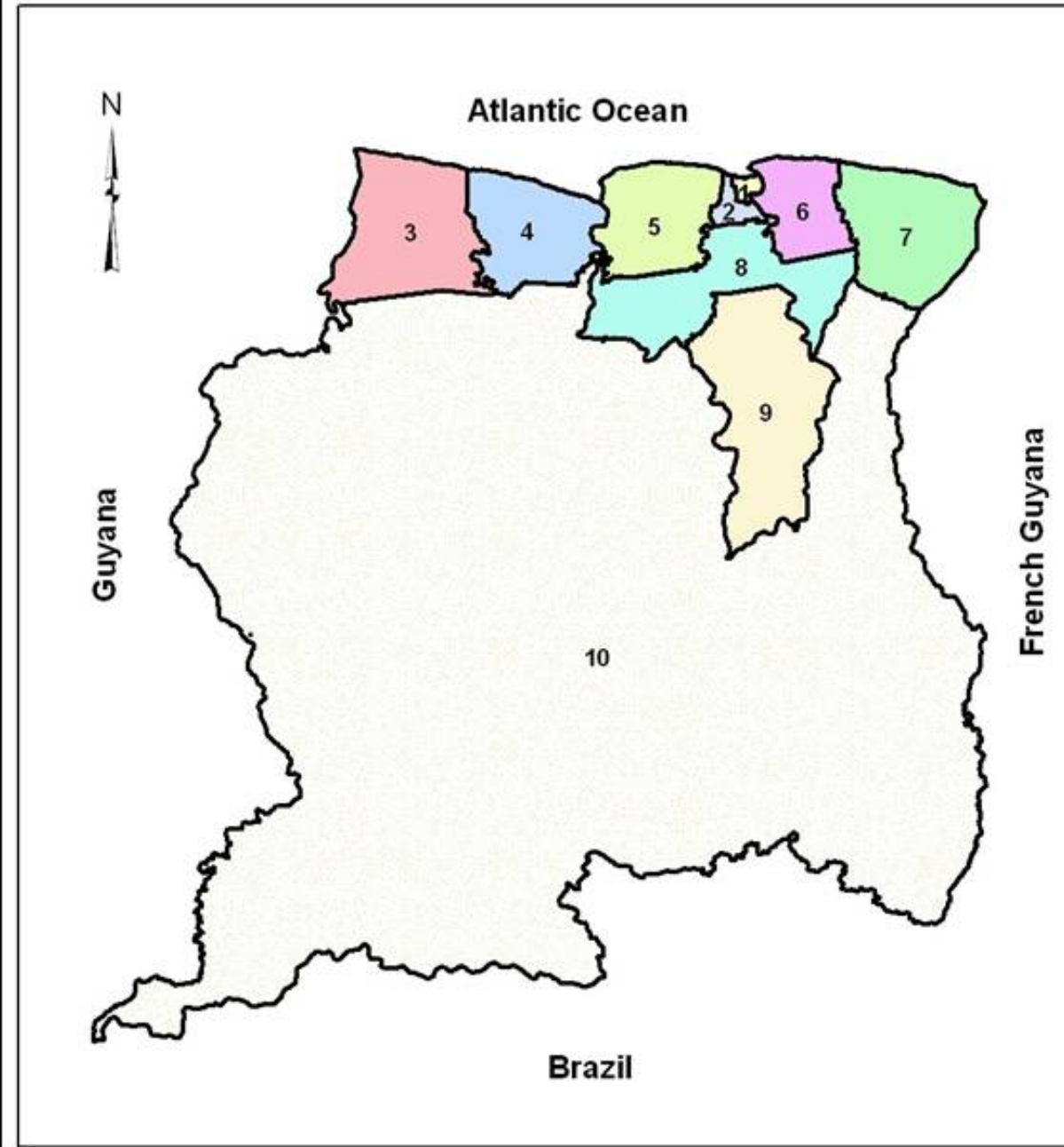
Outcome multidimensional approach

—

Whole of Suriname

wealth index quintiles	Frequency	Percent
Poorest	24,178	20.0
Second	24,179	20.0
Middle	24,183	20.0
Fourth	24,093	19.9
Richest	24,259	20.1
Total	120,892	100.0

Note: total nr of households in Census-7 is 123,463 .



Outcome multidimensional approach

—

Whole of Suriname and Selected districts

wealth index quintiles	Suriname	Paramaribo (Urban)	Commewijne (Rural)	Sipaliwini (Interior)
Poorest	20.0	6.3	17.0	88.0
Second	20.0	15.1	32.8	11.1
Middle	20.0	21.3	26.0	0.9
Fourth	19.9	26.0	18.1	0.0
Richest	20.1	31.3	6.1	-
Total	100.0	100.0	100.0	100.0
N (households)	120,892	58,809	6,244	9,299

Final remarks

- First attempt at constructing a poverty map.
- More need for literature study & analysis techniques.
- If a satisfactory method of construction is chosen, the exercise will benefit the next census; ability to produce poverty indices and related maps sooner after census.

Thank you!

Gran tangi!
(in Sranang tongo)