

Census in the 21st Century: Improving Data Utilization and Dissemination

Side Meeting

Session 1

*The 2010 Round of Censuses: New approaches to conducting
and disseminating census data and implications for data
quality and access*



Studies on new methodologies for population census: the Brazilian experience

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Studies on new methodologies for population census: the Brazilian experience

- Background
- The project
- General Objectives
- Activities
- Internal Organization
- Final Remarks

Background

The challenge for the National Statistical Offices to produce always updated information, with geographic and thematic detail, with constant pressure for reduction of costs.

The purpose of the census

- Official population number for small areas, specially all the counties and other administrative districts
- Description of socio-demographic characteristics at all geographic levels
- Sample base for surveys

The situation in 2000

- Ten years period between censuses
- Increasing demand for information :
 - At a local scale : decentralization, more responsibility for municipalities,
 - Population numbers for the counties every year
- Administrative registers not complete
- Progress in :
 - Sampling techniques
 - Geographic information system (GIS)

General Objective

To promote the study and the evaluation of alternative methodologies for population censuses in the Brazilian context.

Brazil Dimensions



Distribution of the Municipalities by population numbers, 2000

Classes	Número de Municípios	%	População	%
Até 2.000	105	1,91	172.392	0,10
2.001 a 3.000	394	7,15	996.191	0,59
3.001 a 5.000	829	15,05	3.313.577	1,95
5.001 a 10.000	1.309	23,77	9.351.732	5,51
10.001 a 20.000	1.381	25,08	19.603.512	11,55
20.001 a 50.000	964	17,50	28.832.600	16,98
50.001 a 100.000	301	5,47	20.928.128	12,33
100.001 e mais	224	4,07	86.601.038	51,00
Total	5.507	100,00	169.799.170	100,00

Activities

- 1st Workshop on Alternative Approaches to Population and Housing Censuses, IBGE, Rio de Janeiro, October 2004
- International symposiums and meetings during 2004
- Technical mission at INSEE (France) - February, 2005
- 2nd Workshop on Alternative Approaches to Population and Housing Censuses, INEGI, Mexico, July 2005

Internal Organization

We are organized in 5 working groups with a multidisciplinary approach, defined to look for the different dimensions of the project:

- Geographic Base and Master Address File;
- Distribution of IBGE's Local Agencies;
- Conceptual design;
- Sampling, Estimation and Accumulation of Data;
- Integration between Census and Surveys.

WG Geographical Base and Master Address File

Evaluation of the impacts that the adoption of continuous alternatives of census taking will produce on the activities of Geographic actualization.

First estimate of the human resources for implementation based on the simulations of the sampling, estimation and accumulation WG.

WG Distribution of the Local Agencies

Proposal of a new structure for the network of IBGE's local agencies in case of adoption of an alternative approach for Census taking.

WG Conceptual Design

To study the content of forms to be applied in the new approach, and to look for the best way to attend the increasing demand for fresh information on the characteristics of the population and the households at local level.

WG Conceptual Design

The WG asked thematic experts to analyze deeply the essential and changing information needs required for the new models, based on the observed changes in the forms when passing to the new alternatives:

- **Household characteristics;**
- **Demographic characteristics; race; disability;**
- **education;**
- **Fertility, infant mortality and migration;**
- **Labor force and income;**
- **Families and FAO demand**

WG Sampling, Estimation and Accumulation of Data

Studies on Sampling and Estimation
Methodology to allow space and time
accumulation of the data collected

WG Sampling, Estimation and Accumulation of Data

Actual work:

- Studies on the New French Census and American Community Survey, specially the sampling and estimation methodology
- Studies on the sampling and estimation methodology used for the 1960, 1970, 1980, 1991 and 2000 Brazilian Censuses
- New sampling design for the traditional 2010 Census

WG Harmonization between Population Censuses and Household Surveys

- Actual situation in Brazil
- Studies on how other National Statistical Offices deal with harmonization of the System of Household Surveys and Census, specially those who adopted a new approach.

WG Harmonization between Population Censuses and Household Surveys

Items considered:

- Conceptual design;
- Geographic operational base;
- Sample design, Address File and listing procedures;
- Field work and supervision procedures;
- Training;

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WG Harmonization between Population Censuses and Household Surveys (II)

Items considered:

- Classifications;
- Coding Models;
- Data Capture Technology;
- Editing, imputation and tabulation;
- Expansion and estimates;
- Dissemination

Rolling Census versus Traditional Census

Main advantages

- Opportunity: Annual Results for all geographic units
- Sampling is fast: the results can be delivered more quickly
 - Costs: after the initial investment it can be less costly
 - Flexibility: Themes can be modified
 - Efficiency: Field work on a continuous base allow more efficient management
 - Quality: Permanent training of the teams

Rolling Census versus Traditional Census

Main difficulties

- The photography is lost : Reference periods variable
- The brand is lost : less impact
- Exogenous influence: local events can influence
- User reaction: users must be convinced of data quality
- Law: Need of legal support
- Coverage: Must be assured

Final Remarks

- **Adaptation to Brazilian context and reality**
- **Timing for implementation of an alternative approach in Brazil**
- **Participation of thematic experts in the analysis**
- **Participation of users in the studies**
- **Evaluation Program accompanying the operation from the very beginning**

The End

Number of Municipalities and population - Brazil and United States

Municipalities by population dimension	Number of municipalities		Population	
	Brasil	EUA	Brasil	EUA
Total.....	5 507	3 219	169 872 856	285 230 516
Até 20 000 Habitantes.....	4 018	1 362	33 480 336	13 641 500
Mais de 20 000 até 100 000 Habitantes.....	1 265	1 326	49 789 329	58 284 536
Mais de 100 000 até 500 000 Habitantes.....	193	419	39 628 673	87 715 791
Mais de 500 000 Habitantes.....	31	112	46 974 519	125 588 689

Proportion of Municipalities and population Brazil and United States

Municipalities by population dimension	Number of municipalities(%)		Population (%)	
	Brasil	EUA	Brasil	EUA
Total.....	100,0	100,0	100,0	100,0
Até 20 000 Habitantes.....	73,0	42,3	19,7	4,8
Mais de 20 000 até 100 000 Habitantes.....	23,0	41,2	29,3	20,4
Mais de 100 000 até 500 000 Habitantes.....	3,4	13,0	23,3	30,8
Mais de 500 000 Habitantes.....	0,6	3,5	27,7	44,0

Número de municípios e População residente por classes de tamanho dos municípios - Brasil e França

Classes de Tamanho dos Municípios	Número de municípios		População residente	
	Brasil	França	Brasil	França
Total.....	5 507	35 860	169 872 856	57 000 000
Até 1 000 Habitantes.....	4	28 000	13 847 312	29 000 000
Mais de 1 000 até 10 000 Habitantes.....	2 633	7 000		
Mais de 10 000 Habitantes.....	2 870	860	156 025 544	28 000 000

Proporção de municípios e de população residente por classes de tamanho dos municípios - Brasil e França

Classes de Tamanho dos Municípios	Número de municípios (%)		População residente (%)	
	Brasil	França	Brasil	França
Total.....	100,0	100,0	100,0	100,0
Até 1 000 Habitantes.....	0,1	78,1	8,2	50,9
Mais de 1 000 até 10 000 Habitantes.....	47,8	19,5		
Mais de 10 000 Habitantes.....	52,1	2,4	91,8	49,1

Atividades futuras

Desenho Conceitual

Análise das demandas dos usuários

- Indicadores de Avaliação dos Desafios do Plano Plurianual - PPA
- Grupo de Washington (Pessoas Portadoras de Deficiência)
- Países do Cone Sul
- UN - HABITAT
- Food and Agriculture Organization - FAO
- Metas do Milênio
- Demandas de outros organismos internacionais
- Outros

Alterações propostas nas perguntas de temas existentes

Elaboração da proposta a partir da análise das demandas

Testes Cognitivos

Provas Piloto

Análise das propostas de acumulação e avaliação dos indicadores

- Análise dos indicadores da ACS e do Censo Francês, estudo do efeito da acumulação.
- Proposta de indicadores para os diversos temas.
- Avaliação dos modelos de acumulação propostos para os diversos temas.

Consulta aos Usuários

- Usuários Internos
- Órgãos Governamentais: Ministérios, Secretarias, etc.
- Reuniões com a Comissão Consultiva do Censo Demográfico
- Reuniões com Especialistas por área temática
- Elaboração e envio de carta consulta aos usuários
- Reunião de Consulta Geral