

## Brazil 2006: Survey Information

### Summary table

<b>Generic information</b>	
Name of Survey	National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios – PNAD)
Institution responsible	Brazilian Geographical and Statistical Institute (Instituto Brasileiro de Geografia e Estatística – IBGE – www.ibge.gov.br)
Main objective	To provide basic information for the study of the socio-economic development of the country.
Survey structure	Cross-sectional
Frequency	Yearly
Survey year/ Wave	PNAD 2006
Coverage	Permanent dwellings and their inhabitants. National coverage.
<b>Sampling</b>	
Sampling design	Sampling was probabilistic and conducted in three stages.
Sampling frame	Same territorial division used in the 2000 Brazilian Demographic Census.
Final sample size	118,590 dwellings and 410,241 individuals.
<b>Collection</b>	
Collection period	Last quarter of 2006.
Instruments and main contents	A questionnaire with several sections: -Housing characteristics. –General characteristics and intra-family relationships of the inhabitants of the dwelling. –Migration. –Education. –Complementary characteristics about education and access to meals for children between 0-17 years old. –Child labor (5-9 years old). –Employment and income of individuals 10 years old and older. –Additional characteristics of labor for children aged 5-17 years old. –Access to money transferences from social programs. –Fertility of women 10 years old and older. –Food consumption patterns.
<b>Definitions</b>	
Household	A private household is defined as the person or group of persons related either by kinship, domestic dependence or norms of common living (common-law couples, for instance). PNAD includes only private households; collective households/dwellings are excluded.
Household head	Person identified as such by the other members of the household.
<b>Data quality aspects</b>	
Unit response rate	97.30%
Item non-response/ imputation	Not performed
Weighting	Given that there is no specific information about sample correction for non-response, it is assumed that only the basic expansion factor determined by the sample design is available.
<b>Labour market information</b>	
Source	Interview
Reference period	General rule: The reference period is the reference week (week of September 24-30, 2006). Information referring to the reference period of 365 days (period from October 1, 2005 to September 30, 2006) and to the reference month (September 2006) was also collected. Finally, for job search and related activities: reference week, data collection period of 23 days, 30 days, 305 days and 365 days.
Definition of employment	A person is considered employed during the specified reference period (week of reference or 365-day period of reference) if he/she worked part or the entire period. This definition includes a person who held a paid job during the specified period but was temporarily absent for reasons of vacation, leave, strike, illness, etc.
Treatment of military personnel	Identifiable via specific questions.
<b>Income</b>	
Source	Interview
Reference period	Reference Month: September 2006
Unit of collection	Individual
Unit of time	Monthly
Restrictions	None
Gross/net	Gross incomes. There is no information about taxes in the survey.

This document is based upon “Pesquisa Nacional por Amostra de domicilios (2006), Ministério do Planejamento, Orçamento e Gestão – IBGE, Vol. 27.”, and “Pesquisa Nacional por Amostra de domicilios (2006), Notas metodológicas, Pesquisa Básica” published by the Brazilian Geographical and Statistical Institute (IBGE)<sup>1</sup>.

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### **A. Generic characteristics**

#### Official name of the survey/data source:

Pesquisa Nacional por Amostra de Domicilios (National Household Sample Survey) - PNAD

#### Administrative unit responsible for the survey:

Brazilian Geographical and Statistical Institute (Instituto Brasileiro de Geografia e Estatística – IBGE)

[www.ibge.gov.br](http://www.ibge.gov.br)

The household survey system, gradually implemented by Brazil since 1967 led to the National Household Sample Survey (PNAD). This survey has the purpose of producing basic information for the study of the socio-economic development of the country.

Because of its multiple purposes, this sampling survey system investigates various socioeconomic characteristics, some on a permanent basis, such as the general characteristics of the population, education, employment, income and housing

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<sup>1</sup> This document has also been benefited from the input of Vandeli dos Santos Guerra, IBGE.

conditions; and others of variable periodicity such as patterns of migration, marital status, health, nutrition, fertility, and other topics that are included in the system according to the informational needs of the country.

The National Household Sample Survey (PNAD) was launched in the second half of 1967, and its results were presented on a quarterly basis since the first quarter of 1970. Since 1971, data collection was carried out on a yearly basis, the survey being conducted in the last quarter. The survey was interrupted during the demographic censuses in 1970, 1980, 1991 and 2000.

The goal of becoming nationally representative was achieved gradually by the PNAD. Launched in 1967 in the area comprising the State of Rio de Janeiro, towards the end of the decade the PNAD was covering the Northeastern, Southeastern and Southern regions, as well as the Federal District. Re-launched in 1971, the PNAD covered the areas that make up the current state of Rio de Janeiro, the state of Sao Paulo and the Southern region. By 1973 it covered the Northeastern, Southeastern and Southern regions, the Federal District and the urban area of the Northern region and of the other units of the Federation of the Midwest Region. This coverage was maintained until 1979. In 1981, the geographic coverage of the PNAD was once again enlarged to include only the rural area of the former Northern Region, which used to comprise the following units of the Federation: Rondônia, Acre, Amazonas, Roraima, Para and Amapa. This coverage was maintained for the surveys during the 1990s, and for 2001, 2002 and 2003. In 2004, the PNAD was also carried out in the rural area of Rondônia, Acre, Amazonas, Roraima, Pará and Amapá, reaching complete coverage of the national territory.

## **B. Population, sample size and sampling methods**

### Population coverage

The resident population is comprised of those persons who make the dwelling unit (either a private home or a room in a collective household) their habitual residence, and who at the time of the interview were declared to be present, or absent for a period no longer than 12 months in relation to the date of the interview.

Excluded from the survey are those persons residing in embassies, consulates and delegations. Also excluded are individuals residing in institutional communal dwellings such as army barracks, prisons, boarding schools, orphanages, nursing homes, hospitals, monasteries, etc.

### Sample size

In 2006 the PNAD interviewed 410,241 individuals and 118,590 dwellings distributed across all the units of the Federation<sup>2</sup>.

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<sup>2</sup> For more details about the composition of the sample, see [PNAD \(2006\)](#).

## Sampling design

The selection of the sampling frame as well as the selection of the primary and secondary units of the PNAD (municipalities and areas census) were based on the territorial and zonal division effective since August 1st 2000, and used to perform the Demographic Census of 2000.

The PNAD was conducted through a random sample of households obtained in a three-stage selection: Primary sampling units - municipalities; secondary sampling units - census areas; and tertiary sampling units – residential units (private dwellings and rooms in collective households).

In the first stage, primary sampling units (municipalities) were classified into two categories: Self-representative (probability of being selected equal to 1) and non-self-representative.

The municipalities that belong to the second category went through a process of stratification; in each stratum they were selected with reposition and with probability proportional to the residing population, obtained from the Demographic Census of the year 2000.

In the second stage, the sampling units (census areas) were selected in each municipality that made up the sample, with proportional probability and with replacement as in the first stage. The number of existing dwellings at the time of the 2000 census was used as a measure of size.

In the last stage, private dwellings and rooms in collective dwellings were selected with equal probability and in each census area of the sample, with the purpose of investigating the characteristics of the inhabitants and of these residential units.

The inclusion of the rural areas of Rondônia, Acre, Amazonas, Roraima, Pará and Amapá in 2004 was implemented using the following methodology. The first phase remained unchanged. In the second stage, rural sectors were selected in the same way as the urban and maintaining the same fraction of the sample used for the urban sectors. Since for some municipalities the direct application of this fraction would have resulted in a huge number of dwellings to be interviewed by sector, the fraction was redefined to account for this issue<sup>3</sup>.

## **C. Data collection and acquisition**

### Collection period

The data were collected in the last quarter of 2006.

### Reference period

The reference period varies according to the type of information being considered. Possible reference periods:

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<sup>3</sup> For more details about the redefinition of this fraction, see [PNAD \(2006\)](#).

- Day of reference – September 30, 2006.
  - Week of reference - Week of September 24-30, 2006.
  - Month of reference - September 2006.
  - 365-day reference period – period from October 1, 2005 to September 30, 2006.
  - 12-month reference period – period from October 1, 2005 to September 30, 2006.
- Employment: Information on employment status was collected with a yearly reference period (October 1, 2005 to September 30, 2006) and with a weekly reference period (week of September 24-30, 2006).
  - Income:
    - Month of reference - September 2006.

#### Data collection

The data were collected in the last quarter of 2006. The collection instrument is the direct interview with paper forms. The respondent is a household member (excluding domestic service), mentally competent and well-informed on the characteristics of the other members of the household.

#### **D. Definition of the survey units**

The units of analysis are the residential units (private dwellings and rooms in collective dwellings) and their inhabitants.

Questions about migration and education were collected for all household members, while questions about fertility were asked only to women 10 years old and older.

Questions about labor and income were made in a more detailed way for household members 10 years old and older, and in a more restricted way for children between 5 and 9 years old.

#### Dwelling

Dwellings can be classified into private and collective.

*Private dwellings:* Dwellings are classified as private when they accommodate a person or group of persons whose relationship is determined by kinship, domestic dependency or norms of common living. (common-law couples, for instance).

*Collective dwellings:* Dwellings are classified as collective when they accommodate persons whose relationship is governed by administrative norms. Examples of collective dwellings are establishments that provide hosting services (hotels, guesthouses, and the like), institutions (orphanages, nursing homes, prisons, army barracks, hospitals, etc.), and also places that accommodate construction workers during their work season.

## Household head

Every dwelling must have a household head. The household head or reference person is the person responsible for the family, and is identified as head by the other members of the household.

## **E. Contents**

Because of its multiple purposes, this sampling survey system investigates various socioeconomic characteristics, some on a permanent basis, such as the general characteristics of the population, education, employment, income and housing conditions; and others of variable periodicity such as patterns of migration, marital status, health, nutrition, fertility, and other topics that are included in the system according to the informational needs of the country.

In the 1970's, the main issues investigated by the PNAD, in addition to the general aspects of the population, education, employment, income and housing conditions were migration and fertility. In 1974/1975 a special survey was carried out, the National Study of Family Expenditures (Estudio Nacional da Gastos Familiares – ENDEF) which, in addition to the topics above, investigated food consumption and household expenses. During the collection of the ENDEF, the PNAD was interrupted.

Surveys prior to the 1980's kept unchanged the basic characteristics of survey, with the purpose of generating a series of results. Supplemental surveys investigated the following topics: Health in 1981; education in 1982; labor and social security in 1983; female fertility in 1984; situation of minors in 1985; contraception, access to health services, food nutrition, and associativeness in 1986; socio-political participation and inventory of energy-intensive machines in 1988; and employment in 1989 and 1990.

In addition to the general aspects of the population, education, employment, income and housing conditions, the PNAD of 1992 included the following additional topics: migration, fertility and marital status. These same topics were kept in 1993 and 1995. In 1994, for exceptional reasons, the PNAD was not implemented. In 1996, the topic of social mobility was added and the topics of child labour (5-9 years old) and marital status were removed. In 1997, the topic of social mobility was withdrawn. In 1998, questions on health and child labour were included. In 1999, health questions were excluded. In 2001, the questionnaire was expanded to include queries on housing conditions. Questions about child labour (5-9 years old) were removed given that the survey included a supplement on labor of children between 5 and 17 years of age. In 2002, changes in the survey included the introduction of new features on housing conditions; the raising of the minimum age limit from 5 to 10 years old for employment and income research; the inclusion of a supplement on child labour for children between 5 and 9 years of age; and the withdrawal of questions on health, employment insurance and continuing education. In 2003, the survey incorporated the investigation of health issues for the population of children 5 to 17 years old, and participation in social programs focused on education. In 2004, some questions introduced in 2002 regarding housing conditions were withdrawn, as well as one health issue and participation in social programs focused on education. Additional questions on education and access to school lunch for the population under 18 years of age were included. Also included

were questions regarding the quality and nutritional content of food consumed, as well as access to certain income transfers from social programs. In 2005, it was introduced a complementary investigation on the possession of cellular movable telephone for personal use and access to Internet, and some question were removed: the module on complementary aspects of education and access to school lunch, the questions regarding the quality and nutritional content of food consumed and those related to access to certain income transfers from social programs. In 2006, the questions on the possession of cellular movable telephone for personal use and access to Internet were removed, and the issues on complementary aspects of labor child and access to certain income transfers from social programs were included again. In order to complement the investigation on child labor, the questionnaire incorporated complementary aspects of labor for the children between 5 and 17 years of age. Also, it was included a module on education and access to school lunch for the population under 18 years of age.

The 2006 PNAD questionnaire consists of the following sections:

- a) Characteristics of the housing unit.
- b) General characteristics of the members of the household.
- c) Migration.
- d) Education.
- e) Additional characteristics of education and access to for children up to 17 years old.
- f) Child labor (5 to 9 years old).
- g) Labor and labor income of persons 10 years old upward.
- h) Additional characteristics of labor for children aged 5-17 years old.
- i) Access to monetary transfers from social programs.
- j) Fertility of women 10 years old upward.
- k) Food consumption patterns.

## **F. Quality of data**

### Response rate

The response rate is 97.3% and the refusal rate is 1.4%.

### Editing and coding

The National Household Sample Survey (PNAD) control system begins with a data entry plan that, among others aspects, admits only the typing of valid values on predefined options questions and a control plan that insures the right flow of the questions and the consistency between the information provided by the individuals and questions of the questionnaire. As a result of the application of the control plan, mistakes reports and alerts for unusual registries are sent out.

Control and codification stage is decentralized, but at the end of the process, a last centralized control stage is executed, reviewing the control of incomes values and unexpected problems that have not been detected in the earlier stages.

Collection supervision is developed in accordance with specific guidelines. In the PNAD, each supervisor is responsible for the monitoring of a small group of interviewers.

Supervisor tasks are, among others:

During the first collection days, they should monitor each of the interviewers, in at least two visited dwellings. In that observation, the supervisor must observe the interviewers behaviour in relation to the interviewee. He should pay attention at the approach of the interview, at the way he conducts it. Also he should corroborate that the concepts asked are understood by the interviewee, as well as other aspects that cannot be measured from the evaluation of the filled-in questionnaires. During the interview, the supervisor's work has to be, basically, to observe. The required indications must be done after the visit has concluded. Thanks to this procedure, it is possible to take early corrective measures at the beginning of the collection process. To keep the quality pattern, the supervisor has to program periodic meetings with his team, retrain the interviewers and monitor them again during the interviews.

He must examine basic aspects in every questionnaire and, for every five interviewed dwellings, make an integral verification of the filled-in of the questionnaire. The interviewer must clear out any detected doubt, who in case of mistake, must return to the dwelling to obtain the correct information.

In dwellings where interviews were not made, the supervisor must make the following procedures:

- In case of refusal, he must go to those dwellings and try to get the information.
- In the other cases, if there are up to 3 dwellings where interviews were not made, he must go to all of them to check. If they are more than 3, he must go to half of them, but if he finds a single case of mistake in the classification, he must go to all of them.

The re-typing of registries is not made. This is due to the fact that in previous tests it was verified that there was no significant difference in the typing mistakes between sets in which a single typing was made and those with a double typing.

### Imputation

Not performed.

### Weighing procedure

There is no information indicating the existence of any correction of the expansion factors for non-response bias. Therefore, it is assumed the expansion factors present in the database are those derived from the sampling design to expand the sample to the national population.

The sample is representative for Brazil, Great Regions, Units of Federation and nine metropolitan areas (Belem, Fortaleza, Recife, Salvador, Belo Horizonte, Rio de Janeiro,



Sao Paulo, Curitiba and Porto Alegre). Representativeness of the sample is not guaranteed for lower geographic levels (municipal, district and sector) and other metropolitan areas.

## **G. Uses of the survey**

The uses of the PNAD survey are diverse. Below we list a selection of them.

### Publications

- Barros, Ricardo Paes, Mirela de Carvalho, Samuel Franco and Rosane Mendonça (2006): “Determinantes Imediatos da Queda da Desigualdade de Renda Brasileira”, Chapter 12 in Barros, Foguel and Ulysea (eds. 2006).
- Barros, Ricardo Paes, Miguel Foguel and Gabriel Ulysea (eds. 2006): Desigualdade de Renda em Brasil: uma análise da queda recente. Rio de Janeiro: IPEA.
- Barros, R. P.; Carvalho, M.; Franco, S. Desigualdade De Renda. In: Seminário De Análise Dos Resultados Da Pnad De 2004, 2006, Brasília. Anais... Brasília: Centro de Gestão e Estudos Estratégicos, 2006.
- Delgado, Guilherme C. “Política social e distribuição de renda no Brasil” in Baltar, Paulo et alli (orgs.).
- Delgado, G. C e Carolina, A. Q “Inclusión previsional y asistencial em Brasil” (1988-2005). Alcance e limites. in Bienestar y Política Social CISS. Universidad Ibero-americana, México- vol. 1 nº- 1 – set. 2005.
- Ferreira, Francisco H.G., Leite, Phillippe G. and Ravallion, Martin, "Poverty Reduction without Economic Growth? Explaining Brazil's Poverty Dynamics, 1985-2004" (December 1, 2007). World Bank Policy Research Working Paper No. 4431
- Hoffmann, R. Effect of the rise of a person's income on inequality. Brazilian Review of Econometrics, v. 21, n. 2, p. 237-262, Nov. 2001.
- Soares, S. S. D. Distribuição de renda no Brasil de 1976 a 2004 com ênfase no período entre 2001 e 2004. Brasília : IPEA, 2006. (Texto para discussão/IPEA, n. 11/66).
- Pesquisa Nacional por Amostra de domicílios (2004), Ministério do Planejamento, Orçamento e Gestão Instituto Brasileiro de Geografia e Estatística – IBGE, Vol 25.
- Pesquisa Nacional por Amostra de domicílios (2006), Ministério do Planejamento, Orçamento e Gestão Instituto Brasileiro de Geografia e Estatística – IBGE, Vol 27.

## Poverty and Income Distribution

Although there are no official indicators of poverty and income distribution in Brazil, there are indexes prepared by the Institute of Applied Economic Research (Instituto de Pesquisa Economica Aplicada – IPEA). The following are selected indicators to give an overview of the evolution of poverty and income distribution in the country.

### **Poverty and Income Distribution Indicators in Brazil, by reference unit and year of the survey**

Year	Gini	Theil Index	Headcount - Extreme Poverty - Households (%)	Headcount - Moderate Poverty - Households (%)	Headcount - Extreme Poverty - Individuals (%)	Headcount - Moderate Poverty - Individuals (%)
1976	0.62	0.86	17.63	40.66	23.12	48.23
1977	0.62	0.91	12.04	31.99	16.34	39.63
1978	0.60	0.74	19.80	37.87	20.69	42.55
1979	0.59	0.72	11.77	31.21	15.93	38.78
1981	0.58	0.68	12.92	33.40	17.28	40.84
1982	0.59	0.70	13.13	33.35	17.80	41.01
1983	0.60	0.72	17.56	41.02	23.07	48.79
1984	0.59	0.70	16.60	41.00	21.76	48.39
1985	0.60	0.73	13.58	34.78	18.17	42.07
1986	0.59	0.72	6.40	20.96	8.83	26.45
1987	0.60	0.74	11.83	28.16	17.13	38.77
1988	0.62	0.78	16.19	37.20	20.89	43.64
1989	0.64	0.89	14.86	35.01	19.33	41.41
1990	0.61	0.77	15.61	36.10	19.98	41.99
1992	0.58	0.69	15.42	35.02	20.03	42.17
1993	0.60	0.77	15.41	35.52	20.30	43.04
1995	0.60	0.73	11.31	28.13	15.19	35.08
1996	0.60	0.73	11.83	28.16	15.63	34.72
1997	0.60	0.74	11.79	28.40	15.58	35.18
1998	0.60	0.73	10.69	27.12	14.52	33.97
1999	0.59	0.71	11.12	28.25	15.03	35.26
2001	0.60	0.73	11.40	28.08	15.24	35.11
2002	0.59	0.71	10.23	26.97	13.95	34.34
2003	0.58	0.69	11.25	28.14	15.15	35.69
2004	0.57	0.66	8.91	24.83	12.14	31.99
2005	0.57	0.66	7.76	22.31	10.63	29.21
2006	0.56	0.64	6.48	19.07	8.74	25.15

Source: Instituto de Pesquisa Econômica Aplicada (Ipea)