

Philippines - Annual Survey of Philippine Business and Industry 2005

National Statistics Office

Report generated on: February 16, 2023

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Overview

Identification

ID NUMBER

PHL-NSO-ASPBI-2005-v01

Version

VERSION DESCRIPTION

v1: Edited data, first version, for internal use only

PRODUCTION DATE

2007-12-01

Overview

ABSTRACT

The 2005 Annual Survey of Philippine Business and Industry (ASPBI) is one of the designated statistical activities undertaken by the National Statistics Office (NSO). It seeks to collect and generate information on the levels, structure and trends of economic activities in the entire country.

The objectives of the 2005 Annual Survey of Philippine Business and Industry (ASPBI) is to provide key measures on the performance and structure of businesses and industries that will be used for planning and policy formulation by the government and private sectors. The data collected from the ASPBI will constitute bases upon which the government and the private sector can formulate policies and evolve economic development plans.

Specifically, the survey results are used in the construction of national and regional accounts of the Philippine economy, formulating and monitoring plans/policies in the attainment of national and regional economic goals, determining and comparing regional economic structures and performances, providing updates for the frame of establishment and market research and feasibility studies.

A survey commissioned by the Department of Science and Technology was undertaken as a rider to the 2005 ASPBI. This rider survey was the 2005 Survey on Research and Development Personnel.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

The establishment is the unit of enumeration for this survey. An establishment is defined as "an economic unit under a single ownership or control, i.e., under a single legal entity, engaged in one or predominantly one kind of economic activity at a single fixed location." In actual practice, however, there are difficulties in applying the definition of an establishment. Thus, it is defined in operational terms to take into account the organization and record-keeping practices of establishments by making the single location and activity criteria more flexible. This necessitates the use of the kind-of-activity unit for certain sectors as the single location restriction is eliminated.

For construction; transport, storage and communications; insurance; real estate buying, developing, subdividing and selling; and investigation and security activities, the establishment is defined in operational terms as "the unit that is engaged in the production of the most homogenous group of goods and services, usually at one location, but sometimes over a wider area, for which separate records are available that can provide data concerning production of these goods and services and the materials, labor and physical resources used in this production."

Scope

NOTES

The 2005 ASPBI covers establishments classified according to economic sectors or major divisions as defined in the amended 1994 Philippine Standard Industrial Classification (PSIC).

The scope and coverage of the survey are listed below :

A - AGRICULTURE, HUNTING AND FORESTRY

All establishments

B - FISHING

All establishments

C - MINING AND QUARRYING

All establishments

D - MANUFACTURING

All establishments

E - ELECTRICITY, GAS AND WATER SUPPLY

All establishments

F - CONSTRUCTION

All establishments

G - WHOLESALE AND RETAIL TRADE; REPAIR AND MAINTENANCE OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL HOUSEHOLD GOODS

All establishments, except sari-sari stores with no regularly paid employee, open market stalls and meat, fish or fruit vendors in public markets, and ambulant peddlers and hawkers (do not have fixed locations).

H - HOTELS AND RESTAURANTS

All establishments

I - TRANSPORT, STORAGE AND COMMUNICATIONS

All establishments, except operators of tricycles, jeepneys, calesas and pedicabs; government postal and telegraphic offices; and booking offices of foreign airlines

J - FINANCIAL INTERMEDIATION

All establishments

K - REAL ESTATE, RENTING AND BUSINESS ACTIVITIES

All establishments, except those engaged in letting and operating real estate such as residential and non-residential buildings and land rentals

M - EDUCATION

All establishments, except those engaged in public education

N - HEALTH AND SOCIAL WORK

All establishments, except those engaged in public medical, dental and other health services

O - OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICE ACTIVITIES

All establishments, except those activities of membership organizations, n.e.c.

The following major divisions are excluded from the scope of the survey :

L - PUBLIC ADMINISTRATION AND DEFENSE; COMPULSARY SOCIAL SECURITY

P - PRIVATE HOUSEHOLDS WITH EMPLOYED PERSONS

Q - EXTRA-TERRITORIAL ORGANIZATIONS AND BODIES

KEYWORDS

Employment, Revenue, Cost, Compensation, Industry, Establishment, Annual Survey, Business, ASPBI

Coverage

GEOGRAPHIC COVERAGE

Geographic Domain

For establishments with an Average Total Employment (ATE) of less than 20, the whole country served as the geographic domain, while for establishments with an Average Total Employment (ATE) of 20 and over, the 17 administrative regions served as the geographic domains.

The following lists the geographic domains (regions) and the provinces comprising the region for ATE 20 and over.

National Capital Region (NCR)

City of Manila, Quezon City, Mandaluyong City, Marikina City, Pasig City, San Juan, Caloocan City, Malabon City, Navotas, Valenzuela City, Makati City, Pateros, Taguig, Parañaque City,

Las Piñas City, Muntinlupa City, Pasay City

Cordillera Administrative Region (CAR)

Abra, Apayao, Benguet, Ifugao, Kalinga, Mt. Province

Region I - Ilocos Region

Ilocos Norte, Ilocos Sur, La Union, Pangasinan

Region II - Cagayan Valley

Batanes, Cagayan, Isabela, Nueva Vizcaya, Quirino

Region III - Central Luzon

Aurora, Bataan, Bulacan, Nueva Ecija, Pampanga, Tarlac, Zambales

Region IVA - CALABARZON

Cavite , Laguna, Batangas, Rizal, Quezon

Region IVB - MIMAROPA

Oriental Mindoro, Occidental Mindoro, Romblon, Marinduque, Palawan

Region V - Bicol Region

Albay, Camarines Norte, Camarines Sur, Catanduanes, Masbate, Sorsogon

Region VI - Western Visayas

Aklan, Antique, Capiz, Guimaras, Iloilo, Negros Occidental

Region VII - Central Visayas

Bohol, Cebu, Negros Oriental, Siquijor

Region VIII - Eastern Visayas

Biliran, Leyte, Southern Leyte, Eastern Samar, Northern Samar, Western Samar

Region IX - Zamboanga Peninsula

Isabela City (Basilan), Zamboanga Del Norte, Zamboanga Del Sur, Zamboanga Sibugay

Region X - Northern Mindanao

Bukidnon, Camiguin, Lanao Del Norte, Misamis Occidental, Misamis Oriental

Region XI - Davao Region

Compostela Valley, Davao del Norte, Davao del Sur, Davao Oriental

Region XII - SOCCSKSARGEN

North Cotabato, Sarangani, South Cotabato, Sultan Kudarat, Cotabato City

Caraga

Agusan del Sur, Agusan del Norte, Surigao del Sur, Surigao del Norte

Autonomous Region in Muslim Mindanao (ARMM)

Basilan (excluding Isabela City), Lanao del Sur, Maguindanao (excluding Cotabato City), Sulu, Tawi-Tawi

UNIVERSE

Frame of Establishments

The updated 2004 List of Establishments (LE) was the frame used in drawing the sample establishments for the 2005 ASPBI.

The 2004 LE was the product of the 2004 Updating of the List of Establishments (ULE) conducted in the National Capital Region and in selected urban barangays in cities, provincial capitals and first class municipalities outside the NCR during the period from September 2004 to May 2005. The 2004 ULE captured business births and updated the status and characteristics of establishments in the merged list of establishments. The merged list consisted of establishments from the following:

NSO (2003 List of Establishments, List of Importers and Exporters, 2003 Census of Agriculture and Fisheries list of agriculture and fishing establishments)

Securities and Exchange Commission list of corporations and partnerships with the accompanying 1999-2002 financial statements.

Bangko Sentral ng Pilipinas

Philippine Export Zone Authority

Bureau of Food and Drugs (BFAD) list of food and drug manufacturers and retailers

Cooperative Development Authority (CDA) list of cooperatives

National Food Authority (NFA) list of branches

Top Information Technology

Videogram Regulatory Board

Insurance Commission

Industry Associations

Integrated Telecommunications Suppliers of the Philippines

Hotel and Restaurant Association of the Philippines

Philippine Association of Hog Raisers

Chamber of Real Estate Builders Association

Employers Confederation of the Philippines

Philippine Universities and Colleges

Private Hospitals

Business Process Association of the Philippines

Philippine Retailers Association

Local government units (2004 list of establishments of San Juan, Metro-Manila, 2003 list of establishments of Barangay Dona Imelda, Quezon City)

Cainta Assessors Office, Decentralized Registry System covering the pilot areas of Magalang, Arayat, Candaba in Pampanga :2002-2003 data files)

Philippine Stock Exchange

Survey feedbacks from the Monthly Integrated Survey of Selected Industries (MISSI), Quarterly Survey of Philippine Business and Industry (QSPBI) and the 2003 ASPBI were also used to update and validate the 2004 LE.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Statistics Office	

FUNDING

Name	Abbreviation	Role
Philippine Government		

OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
National Statistical Coordination Board		formulates policies, delineates responsibilities, sets priorities and standards on statistics and administers the one-stop statistical information center

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Mario P. Ilagan II			Researcher and Encoder
Katrina G. Esclamad			Supervisor

DATE OF METADATA PRODUCTION

2008-06-14

DDI DOCUMENT VERSION

Version 1.0

DDI DOCUMENT ID

DDI-PHI-NSO-ASPBI-2005-v01

Sampling

Sampling Procedure

The 2005 ASPBI utilized stratified systematic sampling. The regions and industry groups, referred as the geographic and industry domains, respectively, served as the first stratification variable for establishments with ATE of 20 and over. The whole country and industry groups were the geographic and industry domains, respectively, for ATE of less than 20. Employment was used as a second stratification variable.

The design of the 2005 ASPBI is summarized below:

For ATE Size less than 20

Geographic Domain : National
 Industry Domain : All Sectors
 Employment Stratum : 1 - 9
 Sample Selection : Systematic Sampling (3 =< n =< 100)
 Employment Stratum : 10 - 19
 Sample Selection : Systematic Sampling (3 =< n =< 100)

For ATE Size 20 or more

Geographic Domain : Region
 Industry Domain : A, B, C, E, F, H, J, K, M, N, O
 Employment Stratum : 20 - 99
 Sample Selection : Systematic Sampling (3 =< n)
 Employment Stratum : 100 and over
 Sample Selection : 100% selection

Industry Domain : D, G, I
 Employment Stratum : 20 - 99
 Sample Selection : Systematic Sampling (3 =< n)
 Employment Stratum : 100 - 199
 Sample Selection : Systematic Sampling (3 =< n)
 Employment Stratum : 200 and over
 Sample Selection : 100% selection

Sampling Units

The sampling units of the major sectors are establishments classified in the following Economic Organization (EO) :

Sector / Sub-sector
 Single establishments (EO=1)
 Branch only (EO=2)
 Establishment and main office (EO=3)

Agriculture, Hunting and Forestry
 Fishing
 Mining and Quarrying
 Manufacturing
 Electricity, Gas and Water [(except E401 and E410 (Water Districts) with LO=5)]
 Wholesale and Retail Trade: Repair Services
 Hotels and Restaurants
 Financial Intermediation (except J65; J6701, J6072 & J6703; J6814, J682)
 Real Estate, Renting and Business Services (except K7012 & K7492)
 Education

Health and Social Work
Other community, Social and Personal Service Activities

Sector / Sub-sector

Single establishments (EO=1)
Establishment and main office (EO=3)
Main Office only (EO=4)

Electricity, Gas and Water

Generation, Collection and distribution of electricity [with Legal Organization (LO = 5) Cooperative]
Collection, purification and distribution of water (Water Districts with LO=5)

Construction

Transport, Storage and Communications

Financial Intermediation

Banking Institutions

Life Insurance

Pension funding/fund management

Non-life insurance

Pre-need plan activities

Activities Auxiliary to insurance

Real Estate, Renting and Business Activities

Real Estate Buying, developing, subdividing and selling

Investigation and security activities

Determination of Sample Size

Sample sizes for each of the strata were determined separately by sector or industry stratum and employment stratum to achieve the desired precision of estimates for the different industry domains.

For the sampling strata of ATE of 20 and over, the size of the sample was based on the 2002 weighted revenue data, while for ATE of less than 20, the size of the sample was determined based on the 2002 ASPBI weighted employment data.

A minimum of three (3) establishments were taken for each industry stratum and employment stratum for the sampling strata of ATE of 20 and over. For ATE of less than 20, a minimum of three (3) and a maximum of 100 establishments were set for each of the industry domains and employment strata. However, when the total number of establishments (N) in the industry stratum and employment stratum is equal or less than the minimum number set, all establishments were taken as samples.

The formula for determining the sample size is shown below:

$$n_0 = (1/C) * (S_h/\bar{y}_h)^2$$

where:

C = desired squared coefficient of variation (CV)² of the sample estimate with CV = 15% = 0.15, c = 0.0225
S_h² = variance of the hth industry stratum of the 2002 ASPBI weighted total employment data, national level
 \bar{y}_h = mean of the hth industry stratum of the 2002 ASPBI weighted total employment data, national level

Since n_0/N_h is not negligible, then the sample size (n_1) was determined using the following formula:

$$n_1 = n_0 / (1 + [n_0/N_h])$$

where: N_h = number of establishments in the hth (industry stratum level), national level

Sample Size for ATE of 20 and over

At the national level by sector, the sample size was determined for each employment stratum in the ATE of 20 and over. The initial sample size (n_0) was determined by industry stratum at the national level. The assumption was that at 90% level of confidence, the confidence interval will be precise within 5% on either side of the sample mean for the revenue data at the

1-digit PSIC. The formula for determining the sample size (no) is shown below:

$$no = (tSs)^2 / (r\bar{y}s)^2$$

where:

t = 90% level of confidence = 1.645

r = distance from mean = $\pm 5\%$

Ss^2 = variance of the sth sector of the 2002 ASPBI weighted revenue data (1-digit level)

$\bar{y}s$ = mean of the sth sector of the 2002 ASPBI weighted revenue data (1-digit level)

Since no/Ns is not negligible, then the sample size (n2) is determined using the following formula:

$$n2 = no / (1 + Ns)$$

where: Ns = number of establishments in the eth employment stratum in the sth industry sector (1-digit level)

Sample Allocation for Non-Certainty Strata

Proportional allocation was used in allocating the number of samples for the industry domain and employment stratum. Basis of allocation was the number of establishments (N) in the industry domain and employment stratum.

Sample Allocation for ATE of less than 20

Proportional allocation was used in allocating the number of samples for the employment strata in the industry domain for the ATE of less than 20 at the national level. Basis of allocation was the number of establishments (N) in the industry stratum and employment stratum.

The number of samples of the industry stratum of a sector was proportionately allocated to the employment strata (ATE 1 to 9 and ATE 10 to 19). The formula used was

$$nsh_e = (Nsh_e / Nsh) * nsh$$

where:

Nsh_e = total number of establishments in the eth employment stratum in the hth industry stratum in the sth sector

Nsh = total number of establishments in the hth industry stratum of the sth sector

nsh_e = number of sample establishments in the eth employment stratum in the hth industry stratum of the sth sector

nsh = number of samples in the hth employment stratum of the sth sector

The total number of samples for the industry stratum is the aggregate of the sample allocations to the employment strata.

Sample Allocation for ATE of 20 to 199

Proportional allocation was used in allocating the number of samples of a major sector for the regions, industry domains and employment strata (ATE 20 to 99 for sectors A, B, C, E, F, H, J, K, M, N, and O and ATE 20 to 199 for sectors D, G, and I). The basis of allocation was the number of establishments (N) in a region, industry domain and employment stratum.

First Allocation

The total sample for each of the major sector included the samples for the certainty strata. However, only the number of samples in the non-certainty strata was allocated to the regions. The formula used was

$$nsr = (Nsr / Ns) * ns$$

where:

Nsr = total number of establishments in the rth region of the sth sector

Ns = total number of establishments in the sth sector

nsr = number of sample establishments in the rth region of the sth sector

ns = number of sample establishment in the sth sector

Second Allocation

After the number of samples for the sector was allocated to the regions, the number of samples for a region was again proportionately allocated to the industry strata . The formula used was

$$nsrh = (Nsrh/Nsr) * nsr$$

where:

Nsrh = total number of establishments in the hth industry stratum in the rth region of the sth sector

Nsr = total number of establishments in the rth region of the sth sector

nsrh = number of sample establishments in the hth industry stratum in the rth region of the sth sector

nsr = number of sample establishment in the in the rth region of sth sector

The total number of samples for the industry stratum in the region is the aggregate of the separate allocations to the industry strata.

Sample Selection

Sample establishments within each non-certainty stratum, both for ATE of less than 20 and ATE of 20 and over, were systematically selected without replacement. Selection of sample was carried out independently within each employment stratum contained in an industry stratum in the region.

Deviations from Sample Design

In the field operation of the 2005 ASPBI, special cases of establishments' questionnaires need to be given preferential treatment in distribution, collection and processing.

The special cases referred to are:

- * referral establishments
- * consolidated reports of establishments
- * closed or stopped operation
- * moved out or transferred/cannot be located (CBL)

Response Rate

SECTOR Number of Samples Response
ATE<20|ATE>=20|Total Rate

Agriculture,Hunting and Forestry
TotalSamples 156 573 729 94.50
Certainty - 343 343 93.50
Non-Certainty 156 230 386 98.10

Fishing
TotalSamples 54 199 253 92.50
Certainty - 199 199 93.50
Non-Certainty 54 - 54 88.90

Mining and Quarrying
TotalSamples 55 51 106 95.30
Certainty - 51 51 94.10
Non-Certainty 55 - 55 96.40

Manufacturing

TotalSamples 917 4,981 5,898 95.80
 Certainty 14 1,081 1,095 95.50
 Non-Certainty 903 3,900 4,803 97.30

Electricity, Gas and Water Supply
 TotalSamples 47 441 488 92.20
 Certainty - 441 441 92.30
 Non-Certainty 47 - 47 91.50

Construction
 TotalSamples 258 566 824 95.90
 Certainty - 184 184 96.30
 Non-Certainty 258 382 640 94.90

Wholesale and Retail Trade
 TotalSamples 452 1,799 2,251 95.69
 Certainty - 247 247 95.61
 Non-Certainty 452 1,552 2,004 96.02

Hotels and Restaurants
 TotalSamples 82 1,211 1,293 95.20
 Certainty - 164 164 95.10
 Non-Certainty 82 1,047 1,129 96.30

Transport, Storage and Communications
 TotalSamples 196 1,329 1,525 96.90
 Certainty - 131 131 97.00
 Non-Certainty 196 1,198 1,394 95.90

Financial Intermediation
 TotalSamples 251 748 999 97.90
 Certainty - 212 212 98.53
 Non-Certainty 251 536 787 96.02

Real Estate, Renting and Business Activities
 TotalSamples 1,087 1,400 2,487 97.20
 Certainty 522 978 1,500 97.60
 Non-Certainty 565 422 987 96.70

Education
 TotalSamples 114 1,180 1,294 96.00
 Certainty - 458 458 95.90
 Non-Certainty 114 722 836 96.50

Health and Social Work
 TotalSamples 100 543 643 97.80
 Certainty - 159 159 98.30
 Non-Certainty 100 384 484 95.00

Other Community, Social and Personal Service Activities
 TotalSamples 206 838 1,044 95.11
 Certainty 7 135 142 94.03
 Non-Certainty 199 703 902 99.50

Weighting

Estimation Procedure

For ATE of less than 20

The estimate of the characteristic (x^h) of the employment stratum (ATE 1-9 or ATE 10-19) for the h th industry group is

$$x^h = Whj1Xhj1 + Whj2Xhj2 + Whj3Xhj3 + \dots + WhjnXhjn$$

where :

Xhj = value for the j th establishment in the employment stratum of the h th industry group

Whj = Nhj/nhj = weight of j th establishment in the employment stratum of the h th industry group

nhj = number of sample establishments in the employment stratum of the h th industry group

Nhj = total number of establishments in the employment stratum of the h th industry group

$j = 1, 2, 3, \dots, n$ establishments

The total estimate of a characteristic for the industry group was obtained by aggregating the estimates of all employment strata (ATE 1 to 9 and ATE 10 to 19) of the same industry group.

For ATE of 20 and over

Non-Certainty Employment (ATE 20-99 and ATE 100-199 for major sectors D, G, and I; all other sectors, ATE 20-99)

The estimate of the characteristic (X^rh) in the employment stratum of the h th industry group in the r th region, is

$$X^rh = Wrhj1Xrhj1 + Wrhj2Xrhj2 + Wrhj3Xrhj3 + \dots + WrhjnXrhjn$$

where :

$Xrhj$ = value for the j th establishment in the the employment stratum of the h th industry group in the r th region

$Wrhj$ = $Nrhj / nrhj$ = weight of j th establishment in the employment stratum of the h th industry group in the r th region

$nrhj$ = number of sample establishments in the employment stratum of the h th industry group in the r th region

$Nrhj$ = total number of establishments in the employment stratum of the industry group in the r th region

$j = 1, 2, 3, \dots, n$ establishments

Certainty Stratum

The estimate of a characteristic (Y^rh) of the employment stratum (ATE 100 and over, ATE 200 and over) for the h th industry group in the r th region is

$$Y^rh = Y^rhj1 + Y^rhj2 + Y^rhj3 + \dots + Y^rhjm$$

where :

Y^rhj = value for the j th establishment in the employment stratum of the h th industry group in the r th region

m = number of establishments in the employment stratum of the h th industry sub-sector in the r th region

$j = 1, 2, 3, \dots, m$ establishments

The total estimate of a characteristic for the industry group was obtained by aggregating the estimates of all employment strata (certainty and non-certainty strata) of the same industry group. Likewise, the estimate of the region was obtained by aggregating the estimates of all industry groups in the particular region. National total estimates by industry group were obtained by aggregating separately each of the total industry group estimates of all the regions.

Weight Adjustment Factor for Non-Responding Establishments

To account for non-response in the non-certainty strata, the adjustment factor, n/n' , was multiplied with the sampling weight (W) of each of the sampling unit. The sampling weight which is defined as N/n was recomputed as

General Formula: $W' = N/n'$

Thus, the adjusted weight ($W'hj$) for employment stratum ATE 1 to 9 and ATE 10 to - 19 was

$$W'hj = (Nhj/nhj) * (nhj/n'hj)$$

where:

Nhj = number of establishments in the employment stratum (i.e. ATE 1-9, ATE 10-19) of the h th industry group

$n'hj$ = number of responding samples in the employment stratum of the h th industry group

For employment stratum ATE 20 to 99 and ATE 100 to 199, the adjusted weight (W'_{rhj}) was recomputed as

$$W'_{rhj} = (N_{rh}/n_{rh}) * (n_{rh}/n'_{rh})$$

N_{rh} = number of establishments in the employment stratum (i.e. ATE 20-99, ATE 100-199) of the hth industry group in the rth region

n'_{rh} = number of responding samples in the employment stratum of the hth industry group in the rth region

Questionnaires

Overview

The 2005 ASPBI utilized only one type of questionnaire (ASPBI Form 1) for all the 14 sectors. Refer to external resources (2005ASPBIQuestionnaire.pdf). The survey questionnaire was granted clearance number NSO-0602-01 by the NSCB, with expiration dated March 31, 2007.

Data Collection

Data Collection Dates

Start	End	Cycle
2006-04-03	2006-12-31	N/A

Data Collection Mode

Distribute and collect the pre-addressed questionnaire (Self Administered Questionnaire)

Questionnaires

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Data Collectors

Name	Abbreviation	Affiliation
National Statistics Office	NSO	

Supervision

Regional Director

Attend 2nd Level Training for Field Operation at designated training center with the regional statisticians.
 Assist and ensure smooth conduct of the 3rd Level Training in the entire region
 Coordinate and supervise the conduct of survey operation and manual processing in the entire region
 Monitor the conduct of the survey operation and processing thru the prompt submission of Monthly Progress Report (ITSD-ADM Form 3c) to ITSD-Office of the Director.

Provincial Statistics Officer

Attend 2nd Level Training for Field Operation at designated training center with the provincial statistician
 Conduct the 3rd Level Training for Field Operation for the provincial statistical staff
 Submit Narrative Report of 3rd Level Training for Field Operation (at least 2 pages) to ITSD within 5 days after the training.
 Ensure the smooth conduct of the survey operation, (i.e. high response rate of collection and quality processing of questionnaires) in accordance with the survey requirements and timetable, as well as the prompt submission of the following reports to ITSD-Office of the Director, copy furnished the RD: Bi-Monthly Progress Report (ITSD-ADM Form 3b) Narrative Report (including financial report) of Field Operation (ITSD-ASD Form 4 & 4a) at end of survey period.

DSOs/SCOs/Other Provincial Staff

Attend 3rd Level Training for Field Operation at designated training center
 Distribute and collect survey questionnaires according to timetable. Ensure that high response rate of collection is achieved.
 Ensure confidentiality of data collected
 Field edit all collected accomplished questionnaires
 Submit on schedule the weekly Progress Report (ITSD-ADM Form 3a) to the PSO.

Data Processing

Data Editing

Data Processing

Processing or editing of survey data was done to check for completeness, consistency and reasonableness of data. It consisted of two stages: manual editing and machine processing.

Manual Processing

Manual editing of data was done in two levels, as follows:

Field editing of data was done by provincial office staff upon collection of the accomplished questionnaires from the establishments. The objective is to check for completeness and consistency of entries in the questionnaires, following the instructions provided in the Field Operations and Processing Manual. Any inconsistent or missing data were corrected at this stage as the staff were immediately able to verify from the respondents.

Office verification was done by provincial office staff upon receipt of the accomplished questionnaires from the field staff. In some instances, the staff contacted directly the establishments through phone call or sent email inquiries to verify some inconsistent or missing data.

Machine Processing

A microcomputer-based machine processing and tabulation system for the 2005 ASPBI was developed by the staff of the IRD using CsPro software.

CsPro is a software package developed by the International Processing Center (IPC) of the United States Bureau of Census. It has several modules specifically designed for processing census and survey data. However, only four of these modules were employed in the 2005 ASPBI computer system. These modules are the data dictionary editor, the data entry, the batch edit and the cross tab.

Data entry was done by IRD-FOMS staff while verification of completeness check and ID validation, generation of summary file report, preliminary and final tabulation were done by the SMD-ITSD statisticians.

Manual and machine processing of data in the Central Office was undertaken beginning July 2006 until February 2007.

Data Appraisal

Estimates of Sampling Error

Estimates of Sampling Error for the 2005 ASPBI were computed by Sector and Industry Stratum. The variables were Total Employment, Total Compensation, Total Revenue and Total Cost. The Means, Standard Deviations, Variances and the Coefficient of Variation were computed to determine the reliability of the estimates. (Refer to External Resources Estimates of Sampling Error.xls)

Other forms of Data Appraisal

A Brief Analysis of Results of the 2005 ASPBI were further discussed in the External Resources with file names BRIEF_ANALYSIS_A.pdf, BRIEF_ANALYSIS_B.pdf, , and BRIEF_ANALYSIS_O.pdf for each sector.