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MEXICO

REPORT ON THE OBSERVANCE OF STANDARDS AND CODES

July 2015

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MEXICO

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REPORT ON THE OBSERVANCE OF STANDARDS AND CODES (ROSC)—DATA MODULE VOLUME I

The Report on the Observance of Standards and Codes (ROSC)—Data Module, provides an assessment of Mexico's macroeconomic statistics against the *Special Data Dissemination Standard (SDDS)* complemented by an assessment of data quality based on the IMF's Data Quality Assessment Framework (DQAF) July 2012. The DQAF lays out internationally accepted practices in statistics, ranging from good governance in data-producing agencies to practices specific to datasets.

The dataset assessed in this report is the national accounts compiled by the National Institute of Statistics and Geography, and can be accessed at www.inegi.org.mx.

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This report is based on information provided prior to and during a staff mission from July 14–15, 2014 and publicly available information. The mission team comprised Mr. Marshall Reinsdorf and Ms. Lisbeth Rivas (senior economists, IMF Statistics Department).

CONTENTS

Acronyms

2008 SNA	*System of National Accounts 2008*
BI	Benchmark to indicator ratio
BM	Bank of Mexico
CFC	Consumption of fixed capital
COICOP	Classification of Individual Consumption by Purpose
COFOG	Classification of the Functions of Government
DQAF	Data Quality Assessment Framework
GDP	Gross Domestic Product
GFSM 2001	*Government Finance Statistics Manual, 2001*
IMF	International Monetary Fund
INEGI	National Institute of Statistics and Geography
ISIC rev.4	International Standard Industrial Classification of All Economic Activities, revision 4
LSNIEG	Law of the National System of Information on Statistics and Geography
NAICS	North American Industry Classification System
ROSC	Report on the Observance of Standards and Codes—Data Module
SDDS	Special Data Dissemination Standard
SHCP	Secretariat of Finance and Public Credit
SNIEG	National System of Statistics and Geographic Information
STA	IMF Statistics Department

OVERALL ASSESSMENT

1. **Mexico has been a subscriber of the Special Data Dissemination Standard (SDDS) since August 1996,** posting its metadata on the Fund's *Dissemination Standards Bulletin Board* (*DSBB*) in March 1998. Mexico is in observance of the SDDS, meeting the specifications for data coverage, periodicity and timeliness, and the dissemination of advance release calendars. Mexico avails itself of a flexibility option on the timeliness of general government or public sector operations. Appendix I provides an overview of Mexico's dissemination practices compared with the SDDS.

2. **This Report on the Observance of Standards and Codes (ROSC) data module is a reassessment of the exercise conducted in February 2010,** but applies an updated framework (IMF's Data Quality Assessment Framework (DQAF May 2012)) and covers the national accounts. The National Institute of Statistics and Geography (INEGI) is responsible for the compilation and dissemination of the national accounts. National accounts statistics are generally of a high quality (see Table 1), and adequate to conduct effective surveillance. The mission found a high degree of quality awareness, professionalism, and integrity at the INEGI.

3. **Macroeconomic statistics are in a period of consolidation after the Law of the National System of Statistical and Geographic Information (LSNIEG), strengthened the legal backing and changed institutional arrangements.** The LSNIEG created a national system of statistical and geographic information (SNIEG) overseen by the National Statistical Council, with the support of specialized committees.[1] INEGI is an autonomous legal entity separate from the Secretariat of Finance and Public Credit (SHCP) that has a clear legal mandate to compile and disseminate data on national accounts and price statistics and that serves as the coordinator of the SNIEG. This more robust institutional framework allows the participants in the SNIEG to take a holistic view of the statistical system and gives INEGI a central role in coordinating the use of common statistical standards across all datasets of national interest.[2]

4. **The ROSC mission assessed the quality of the national accounts statistics at the time of the visit.** The mission observed improvements made since 2010 regarding consultation with users, inter-institutional coordination, data coverage, and data accessibility through the improvement of INEGI's website. The 2007 North American Industry Classification System (NAICS) for classifying economic activity across public institutions has been introduced, the System of National Accounts 2008 (SCN 2008) has been implemented, and the base year has been updated to 2008.

[1] For the subsystem of economic information, the specialist committees comprise representatives of the INEGI, the Secretariat of Finance and Public Credit (SHCP), the Bank of Mexico (BM), the Ministry of Economy, and the relevant ministries and public institutions by area (macroeconomic information, energy, tourism, agriculture, science and technology, and employment).

[2] The mission understands that the datasets of national interest include national accounts, price statistics and the results of several surveys.

5. Despite the progress made and envisaged, there is scope for further improvement. The mission identified the need for greater consistency in data recording across agencies and for regular inter-institution reconciliation exercises to resolve data discrepancies. One source of discrepancies is fixed capital formation of state and local governments, which—given the weight that these sub-national units have in the aggregate—may well contribute to the significant divergence between measures of investment in the government finance statistics and in the national accounts. Another discrepancy is between the deficit published by the Finance Ministry and the estimate of government saving and investment in the national accounts. The creation of the SNIEG provides an excellent opportunity to improve this situation, and to proactively respond to emerging issues. Wider adoption of international statistical standards as the manual of Government Finance Statistics Manual 2001 would also promote consistency between the SHCP's and INEGI's government data.

6. The remainder of this section presents the mission's main findings, which are presented at the level of the DQAF's quality dimensions, by agency for the first two dimensions, and across datasets for the remaining four.

Prerequisites of quality and assurances of integrity

7. The LSNIEG establishes that **INEGI** has the exclusive responsibility for integrating the national accounts (Article 59); has legal backing to collect information for the national accounts (Article 45 (1)); and must safeguard the strict confidentiality of the information provided (Article 37). Further, Article 26 of the Constitution grants INEGI technical and operating autonomy. Resources are adequate at the INEGI, but 32 percent of the staff is contractual; this may affect the continuity of national accounts projects if staff contracts are suddenly not renewed. In addition, there are some resource constraints to maintain the National Survey of Micro-Business (which is planned to be conducted every two years) and the agricultural census (which is planned to be conducted every 10 years) as well as to compile seasonally-adjusted data series in a timely fashion. Consultations with users were conducted as part of the change of the base year project. A portal on the INEGI website exists as a communication channel. Inter-institutional coordination has improved owing to the functioning of the SNIEG committees by topic. INEGI firmly adheres to the principle of objectivity in the collection, processing, and dissemination of statistics. It demonstrates professionalism, is transparent in its policies and practices, and provides guidelines and training to staff on ethical conduct. INEGI's autonomy guarantees that no government authority has access to its statistics before they are officially released.

8. The methodological soundness of the national accounts is satisfactory, as they generally follow the conceptual advice in the *System of National Accounts 2008 (2008 SNA)*. Economic activities, products, household final consumption expenditure, and government final consumption expenditure are classified following updated international classifications (see Table 3). However, most government transactions at a quarterly frequency are on a cash rather than accrual basis.

9. Accuracy and reliability of national accounts data are generally adequate and have improved since 2010. Source data and statistical techniques are sound and most statistical outputs sufficiently portray reality. A broad range of source data are available, with economic censuses every five years and a vast program of monthly and annual surveys. For most surveys, scientific sampling techniques are used and standard errors and confidence intervals are released, but imputation methods differ among surveys and the cluster analysis technique is seldom applied. The coverage of state and local government data has limitations. Changes in inventories data are no longer obtained as residuals, as survey data on inventories in manufacturing, mining and petroleum industries are used to compile estimates. There are still some weaknesses, however. Agriculture is not benchmarked to the annual data since the agricultural work-in-progress is estimated quarterly but not in the annual estimates. The average benchmark-to-indicator ratio (BI) of the previous year is used for aligning quarterly estimates to annual data instead of the BI of the fourth quarter of the previous year. Using the BI ratio of the previous year creates a step problem in the first quarter.

10. The estimates of changes in inventories are incomplete because raw materials inventories and inventories held in wholesale and retail trade are not included; these omissions may be contributing to the size of the statistical discrepancy. Single indicator methods with fixed coefficients applied to volumes are used to estimate value added for goods-producing industries, although double deflation is used for services. Taxes and subsidies on products at constant prices are estimated by applying the GDP growth rate, a deviation from best practice.

11. While the **serviceability** of data has improved since 2010, further improvements are still needed in two areas. First, there is a pressing need to improve consistency across datasets, not least because the reconciliation of data does not appear to be done on a regular basis. Second, there is a general need to provide more information to users on sources of revisions, a conclusion clearly supported by user consultations. Data are available with adequate periodicity and timeliness, and sometimes exceed, SDDS requirements, with the exception of the timeliness of general government operations. Beyond the SDDS specifications, the timeliness of the annual integrated economic accounts by institutional sector has improved, but still needs improvement.

12. **Accessibility** of the data is better than in 2010. Most notably, there has been a marked improvement in the assistance to users in a timely manner and in the range and detail of the indicators that are released. Time series can easily be downloaded from the INEGI website, and key statistics are presented in easy to find tables and charts. Nevertheless, the detail on actual compilation practices provided in the metadata is insufficient and locating some kinds of information on the website can be difficult.

13. Section II provides a summary assessment based on a four-part scale. A summary of users' views is shown in Section III. This is followed by staff recommendations in Section IV. Practices compared to the SDDS are summarized in Appendix I. The authorities' response to this report and a volume of detailed assessments are presented in separate documents.

ASSESSMENT BY AGENCY AND DATASET

14. Assessment of the quality of —national accounts,—was conducted using the DQAF, May 2012. In this section, the results are presented at the level of the DQAF elements and using a four-point rating scale (Table 1). Assessments of the prerequisites of data quality and the assurances of integrity (Dimensions “0” and “1” of the DQAF) are presented in Tables 2a–c. For each dataset, the assessment of methodological soundness, accuracy and reliability, serviceability, and accessibility (Dimensions “2” to “5” of the DQAF) are shown in Tables 3a–f.

Table 1. Data Quality Assessment Framework 2012—Summary Results

Key to symbols: O = Practice Observed; LO = Practice Largely Observed; LNO =Practice Largely Not Observed; NO = Practice Not Observed; NA = Not Applicable

Datasets / Dimensions/Elements	National Accounts
0. Prerequisites of quality	
0.1 Legal and institutional environment	O
0.2 Resources	LO
0.3 Relevance	O
0.4 Other quality management	O
1. Assurances of integrity	
1.1 Institutional integrity	O
1.2 Transparency	O
1.3 Ethical standards	O
2. Methodological soundness	
2.1 Concepts and definitions	O
2.2 Scope	O
2.3 Classification/sectorization	O
2.4 Basis for recording	LO
3. Accuracy and reliability	
3.1 Source data	LO
3.2 Assessment of source data	O
3.3 Statistical techniques	LO
3.4 Assessment and validation of intermediate data and statistical outputs	O
3.5 Revision studies	O
4. Serviceability	
4.1 Periodicity and timeliness	O
4.2 Consistency	LO
4.3 Revision policy and practice	LO
5. Accessibility	
5.1 Data accessibility	O
5.2 Metadata accessibility	LO
5.3 Assistance to users	O

Practice observed: Current practices generally meet or achieve the objectives of DQAF internationally accepted statistical practices without any significant deficiencies. **Practice largely observed:** Some departures, but these are not seen as sufficient to raise doubts about the authorities' ability to observe the DQAF practices. **Practice largely not observed:** Significant departures and the authorities will need to take significant action to achieve observance. **Practice not observed:** Most DQAF practices are not met. **Not applicable**: Used only exceptionally when statistical practices do not apply to the country's circumstances.

Table 2. Assessment of Data Quality—Dimensions 0 and 1—National Institute of Statistics and Geography (INEGI)	
0. Prerequisites of quality	**1. Assurances of integrity**
Legal and institutional environment The INEGI operates under the LSNIEG, published in April 2008. It has exclusive responsibility for conducting the national census and integrating the system of national accounts (Article 59). Under Article 26 of the Constitution it is a public institution with technical and managerial autonomy. In general, the flow of source data among agencies is timely. There are pre-established calendars for the dissemination of data from surveys and censuses, which are strictly observed. INEGI is the coordinator of the SNIEG, which includes a National Advisory Council and committees by type of statistic, and involves inter-institutional coordination. Confidentiality of individual data is guaranteed by the Second Title, Chapter V of the LSNIEG and by the Federal Law of Administrative Responsibilities of the Public Servants (March 2002). The legal power of INEGI for compiling statistics is clearly set out in Chapter V of the LSNIEG, which refers to the rights and obligations of users and respondents. Article 45 (1) states that "system respondents are obliged to provide accurate and timely data and reports as and when requested…." The Law also provides penalties for refusing data requests or falsifying information. **Resources** The human and financial resources allocated to national accounts are in general commensurate with INEGI's institutional programs although the conduct of the agricultural census and the national survey on micro-business have presented financial issues. Staff attend training courses offered by international organizations. Compensation levels were frozen for some years, affecting the retention of experienced staff, but have been rising annually according to inflation and merit considerations since 2010. Thirty-two percent (32 percent) of staff are on contract, which might affect the continuity of important projects if these contracts are suddenly not renewed. Computing resources and physical infrastructure are adequate. The INEGI seeks to take advantage of modern information technology for the compilation of national accounts. **Relevance** INEGI made a consultation and a presentation to users on the change of base year of the national accounts to 2008 in 2011 and has a regular process of consultation with main users of national accounts on the needs for recurrent and new information. There is a portal in INEGI website that provides a permanently open communication channel to users for consultations on methodology and conceptual issues. INEGI is updated on the developments in national accounts methodology and compilation techniques through its participation in different international forums. **Other quality management** Article 3 of the LSNIEG states that the INEGI has the objective of providing to society and to the State quality information that is relevant, trustful and timely, in order to help national development. The SNIEG entails the design of strategic programs (long-term), national programs (6 years), and annual programs with objectives and goals in order to improve and broaden statistical products as well as implement international standards. INEGI seeks expert advice for improving statistics. The standards of quality are designed to enhance efficiency in the use of resources.	**Professionalism.** Professional competence is the basic principle for recruitment and promotions of the INEGI staff. The choice of sources and methods is governed only by statistical considerations. The INEGI prepares press notes and provides interviews stating its position against the errors of interpretation found, making these notes available to the broad public by means of the web page of the INEGI. **Transparency.** The press releases indicate that the published data are compiled under the responsibility of the INEGI and in accordance with the LSNIEG. The autonomy conferred to the INEGI guarantees that no government authority has access to the statistics before their release, although a note is sent to the Presidency of the Republic the same day of the release. The data are published in a press release with the logo of the INEGI. When there is a change in the base year of the national accounts, the most recent methodological standards are adopted. Any substantial modification of the source data and/or methodology used is publicized in advance. **Ethical standards**. The conduct of INEGI's staff is subject to the norms and sanctions established by the Federal Law on Administrative Responsibilities of the Public Servants and to INEGI's ethical code issued under Article 7 of the LSNIEG.

Table 3. Assessment of Data Quality—Dimensions 2 and 5—National Accounts

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
Concepts and definitions. National accounts are compiled following the 2008 SNA. **Scope.** Annual and quarterly GDP estimates are compiled by the production and expenditure approaches at current and at constant prices. The complete sequence of accounts by institutional sector is annually compiled. The economic territory, production and assets boundary are in accordance with the 2008 SNA. Illegal activities are not included. **Classification/sectorization.** Economic activities are classified according to the 2007 North America Industry Classification System, compatible with ISIC rev.4. COICOP and COFOG are used to classify household consumption and government expenditures, respectively. **Basis for recording**. All transactions are recorded in accordance with the valuation principles of the 2008 SNA. Transactions are recorded on accrual basis, except for the quarterly government accounts. Work-in-progress for agriculture is not included in annual estimates. Transactions between establishments from the same enterprise are recorded on a gross basis.	**Source data.** Mexico has a very comprehensive regular system of censuses and economic surveys. Censuses have a five year frequency; and surveys are conducted with monthly and annual periodicity. Sampling frames are based on the censuses, updated annually. Data on the balance of payments (BOP) are received from BM. Quarterly data on the federal government and the state governments are available but on a cash basis; information on state and local governments is incomplete and not timely. Most samples do not include small enterprises, but there is a special small enterprise survey. **Assessment of source data.** Appropriate methods are applied to validate the source data. **Statistical techniques.** Detailed supply and use tables were constructed for the base year of 2008. Quarterly GDP by production is compiled at a quite disaggregated level, ensuring an adequate capture of changes in the production structure. GDP by expenditure is estimated independently, as changes in inventories are directly measured, albeit not in a complete way. Wide use of single indicator method to estimate GDP. The Denton method is used for benchmarking the quarterly data, except for agriculture. The BI of the previous year is used instead of the BI of the fourth quarter of the previous year. Seasonal adjusted data are estimated using the X-12-ARIMA program. Taxes on goods at constant prices are not properly estimated. Imputation methods are not standard for all surveys and the cluster analysis technique is seldom applied. **Assessment and validation of intermediate data and statistical outputs.** When detected, discrepancies are investigated and addressed. The supply and use framework is used to make the national accounts data consistent. **Revision studies.** Revision studies are conducted regularly, but only the most significant revisions are disclosed. Explanations of revisions are inadequate.	**Periodicity and timeliness.** Periodicity and timeliness of the national accounts exceeds the SDDS requirements. **Consistency.** Data are consistent for long periods. With each change of the base year, the series are recalculated backward up to the previous base year period; the 2008 base data were recalculated back to 2003 for quarterly data. Quarterly estimates are reconciled with the annual estimates, except for agriculture. National accounts are broadly consistent with the BOP data but there are differences in the classification of services, and differences exist with the government finance statistics. The flow of funds table is not reconciled with that compiled by BM. **Revision policy and practice.** There is a well-established cycle of production and current revisions, which is known to the general public. In December, a dissemination calendar for the following year is posted on the Internet and disseminated also through the press. Exact release dates are provided a quarter ahead. Quarterly data for the current year are revised with the release of each new quarter. However seasonally-adjusted data are released with a variable lag. Revisions of previous years' data are made when the first annual estimates are published near the end of the year following the reference period. There is a five-year cycle for changing the base year.	**Data accessibility.** Quarterly data are simultaneously released in a press release containing an analysis of current-period developments and on the INEGI website. Data on quarterly GDP by production with sufficient breakdown is made available on the website, along with tables of global supply and use of goods and services. Seasonally adjusted GDP series are also published. Detailed annual estimates are compiled, but the published level of detail is not sufficient for many types of analysis and locating some kinds of information on the website can be difficult. More detailed non-confidential data are made available upon request. **Metadata accessibility.** Metadata is available on the Internet and in INEGI publications, but lacks sufficient detail on compilation methods. Summary methodologies are posted on the IMF's DSBB and on the OECD website. **Assistance to users.** Some publications and the INEGI website provide the area, e-mail, telephone number, and address of the unit responsible for preparing the data, and the address and e-mail of the Consultation and Marketing Center. The customer service unit of INEGI monitors users' requests through INEGI website and provides a prompt response.

USERS' VIEWS

15. With the assistance of INEGI, the Data ROSC mission conducted a survey of users of Mexico's national accounts statistics to obtain their views on the quality of these statistics. Twenty six responses were received from representatives of the private sector, commercial banks, consulting companies, academic institutions, and government agencies. The survey used a questionnaire developed by IMF staff. As a complement to the survey, the mission had two general meetings with about ten users, all organized by INEGI.

16. Overall, users were generally satisfied with the quality of national accounts statistics. Respondents felt that the official statistics of Mexico are better (79 percent) or at least as good as (8 percent) those of other countries in the region.

17. Most respondents found it easy to access data, reaching an average level of satisfaction of 81 percent. The respondents indicated that the official statistics most used were prices and national accounts. The majority of respondents obtain official statistics from official press releases and statistical publications, and 88 percent indicated that they refer to official descriptions of the sources and methods. Respondents use official statistics mainly for research, comparison with economic developments in other countries, econometric models and projections, and for analysis of current development for short-term decision making.

18. In terms of the different elements of data quality, 88 percent of the respondents believe the coverage of the national accounts is satisfactory and 81 percent think the detail and frequency of the data are satisfactory. Most respondents (85 percent) were also generally satisfied with the methodological soundness of national accounts. There were medium scores (58 percent) regarding the availability of information on revisions and most respondents indicated access to the national accounts through the Internet.

19. In the meetings with users and written comments, the mission found a generally positive attitude towards the work of the INEGI, but there were some comments on the long lags in the release of the seasonally-adjusted data and their inconsistency issues (monthly, quarterly and annual), the lack of availability of sufficient long time series data, the lack of timeliness of the indicator of quarterly regional gross domestic product in some instances, information about significant revisions, and lack of quarterly regional gross domestic product. Also, on website design some users expressed difficulty in finding primary sources and specific information on metadata.

STAFF RECOMMENDATIONS

20. **Based on the review of Mexico's statistical practices, discussions with the INEGI, and responses from data users** (see Appendix III of the Detailed Assessment volume), **the mission developed a set of recommendations**. These are designed to increase further Mexico's adherence to internationally accepted statistical practices and would, in the mission's view, enhance the analytical usefulness of the national accounts statistics. Some additional technical suggestions are included in the Detailed Assessments volume.

Cross-cutting recommendations

- Conduct regular reconciliation exercises to verify consistency among the macroeconomic datasets; in particular, between government finance and national accounts statistics.
- Work with the Bank of Mexico (BM) to maintain consistency as BM makes changes in the BOP statistics to conform with the sixth edition of the Balance of Payments and International Position Manual.

National accounts

- Assign the compilation of seasonally adjusted series of national accounts to the National Accounts Directorate (DCN) in order to avoid delays in the publication of these series and improve the consistency of these series and analysis of the results.
- Include a module on monthly/quarterly costs for the agricultural cycle (sowing, growth, and harvest) in the 2014 Agricultural Survey for important crops in order to obtain the data to calculate quarterly agricultural work-in-progress.
- Standardize the imputation methods across surveys and use the cluster analysis technique (the percentage change of the data from an establishment with similar size and technology in the same economic activity and geographic area, if available; if not, the percentage change of the activity class for the current period).
- Explain in more detail the compilation methods and the causes of revisions to the national accounts data in INEGI's national accounts publications.
- Develop a complete set of measures of changes in inventories by bringing in the trade industries and raw materials and by collecting data in quarterly surveys. Incorporate inventory valuation adjustments into procedures for making current price estimates of production or expenditures, as appropriate.
- Undertake research on the need for under-reporting adjustments for data from household surveys on income from informal activities and some kinds of expenditures.

- In the quarterly accounts, develop methods to measure quarterly government consumption on an accrual basis and to make sure that estimates of government investment reflect changes in work-in-progress.

- Include questions on intermediate inputs that can be used in monthly surveys of manufacturing industries to improve the quarterly and preliminary annual estimates of intermediate inputs.

- In calculating financial intermediation services indirectly measured (FISIM), include the opening balance in the average stock of loans or deposits. In the case of subsidized loans from the Development Banks, measure the output of FISIM based on arms-length rates charged on similar loans to calculate the subsidy on the interest rate and record a current transfer from the Development Bank to the government to finance the subsidy.

- Develop complete estimates of consumption of fixed capital (CFC) for general government. Include the CFC expense in the measure of government output (and the measure of output of nonmarket producers whose output is based on expenses).

- Calculate the volume index for net taxes on products in a way that takes account of changes in the mix of products subject to the taxes. Either apply volume indexes for each type of good or import subject to taxes (or subsidies) to separate base year estimates of the net taxes from each type of good or import, or estimate volume measures of taxes/subsidies on products by applying base-year-tax/subsidy rates to the volume of transactions subject to a specific tax/subsidy.

- In the annual accounts for agriculture, develop estimates of carry-over work-in-progress for short-lived crops with the help of improved annual survey procedures. This will allow agriculture to be included in the benchmarking of quarterly to the annual data.

- Use the BI ratio of the fourth quarter of the previous year to avoid a step problem in the first quarter.

- Put in place procedures to ensure consistency between seasonally-adjusted estimates. The identification of outliers or other events treated as irregulars and other assumptions and options used in estimating seasonal factors should be consistent across time series. The decisions made in estimating the seasonally adjusted series and economic meaningfulness of the results from the seasonal adjustment process should be reviewed for reasonableness by an economist with expertise in national accounts.

- Calculate balanced supply and use tables on a yearly basis to verify the internal consistency of the accounts.

- Investigate inconsistencies between the capital accounts and the financial accounts.

- To provide a specific explanation of the difference between general government saving and investment in the national accounts and the deficit and investment figures published by the Ministry of Finance, publish a reconciliation showing the sources of differences jointly with the SHCP.

- Publish more detailed information on products and on expenditures of households as estimated in the framework of the national accounts.

- National accounts series are sometimes hard to locate on the website, and users may not even be aware of what is available. The website functionality should be improved, and an index by keyword of the available SCNM series should be available on the website. Significant newly available data should receive additional publicity.

- Establish and announce a schedule for publishing the seasonally adjusted data.

- Provide detailed information on calculation procedures, either in the metadata documents or in analytical background papers or working papers to help sophisticated users to understand and interpret the data.

- Post responses to the most common questions on a national accounts "frequently asked questions" (FAQ) page.

Appendix I. Practices Compared to the SDDS Coverage, Periodicity, and Timeliness of Data

Mexico (MEX)						
SDDS Data Category	**Coverage (meets SDDS)**	**Periodicity**		**Timeliness**		**Comments (Flexibility Options, etc.)**
		SDDS	**MEX**	**SDDS**	**MEX**	
National accounts (Oferta y Demanda Global Trimestral)	Yes	Q	Q	1Q	53D	
Production index (Indicador mensual de la actividad industrial)	Yes	M	M	6W (1M encouraged)	NLT 42D	
Forward-looking indicators (Indicadores adelantados, encuesta cualitativa del sector manufacturero, encuesta mensual de opinión empresarial, confianza del consumidor)	No	M or Q	M	1M or 1Q	3W NLT 8D	Synthetic index is disseminated with 65D lag
Labor market: Employment (Mexican Labor Survey: National Survey on Occupation and Employment (Encuesta Nacional de Ocupación y Empleo. ENOE))	Yes	Q	M	1Q	NLT 25D	
Labor market: Unemployment (Mexican Labor Survey: National Survey on Occupation and Employment (Encuesta Nacional de Ocupación y Empleo. ENOE))	Yes	Q	M	1Q	NLT 25D	
Labor market: Wages/Earnings (Índice de Remuneraciones Medias reales por persona ocupada en la industria manufacturera)	Yes	Q	M	1Q	2M	
Price index: Consumer prices	Yes	M	F	1M	10D	
Price index: Producer prices	Yes	M	M	1M	NLT 10D	
Note: Periodicity and timeliness: (D) daily; (W) weekly or with a lag of ## week(s) from the reference date; (WD) working days, or business days; (M) monthly or with a lag of ## month(s); (NLT) not later than; (Q) quarterly or with a lag of ## quarter(s); (A) annually; (SA) semiannual; and (...) not applicable.						

INTERNATIONAL MONETARY FUND

MEXICO

June 24, 2015

REPORT ON THE OBSERVANCE OF STANDARDS AND CODES (ROSC)—DATA MODULE VOLUME II

RESPONSE BY THE AUTHORITIES

This document contains the response by the authorities of the National Institute of Statistics and Geography (INEGI) on the recommendations and advice expressed by the Mission of the International Monetary Fund (IMF), during the three weeks of evaluation on quality of national accounts data and the statistical infrastructure that support them, as well as some other areas of the Institute, using the *Special Data Dissemination Standard (SDDS)* complemented by the IMF's Data Quality Assessment Framework (DQAF) July 2012, which lays out internationally accepted practices in statistics, and summarized in the MEXICO Report on the Observance of Standards and Codes (ROSC), 2014.

The authorities of the Institute, its directors and technicians recognize the usefulness of these periodic assessments and thank to the Directorate of the IMF, the Statistical Office and the members of the designated Mission their willingness, methodological strictness and provided theoretical and empirical orientations, particularly, to the national accounts staff.

CONTENTS

Glossary

BM	*Bank of Mexico*
CAB 2013	*Base year change to 2013*
CTE-EM y CN	*Technical Specialized Committee of Macroeconomic Statistics and National Accounts*
DGACN	*Deputy Directorate on National Accounts*
DGEE	*Directorate-general of economic statistics*
DGIAI	*Directorate-general of research, analysis and integration*
DGVSPI	*Directorate-general of links with the public information service*
EAC	*Annual National Wholesale and Retail Survey*
ENA	*National Agricultural Survey*
ENEC	*National Building Enterprises Survey*
ENIGH	*National Survey of Income and Expenditure of Households*
ENOE	*National Survey of Labor and Employment*
IMMEX	*Program for Manufacturing, Maquiladora and Export Services*
INEGI	*National Institute of Statistics and Geography of Mexico*
MQNA	*Manual of Quarterly National Account, FMI*
NAICS	*North America Industrial Classification System*
SE	*Secretariat of Economics*
SHCP	*Secretariat of Finance and Public Credit*
VAEMG	*Value Added Export of Global Manufacturing Industries*

NATIONAL INSTITUTE OF STATISTICS AND GEOGRAPHY´S RESPONSE

A. RESPONSE ON CROSS-CUTTING RECOMMENDATIONS

1. Conduct regular reconciliation exercises to verify consistency among the macroeconomic datasets; in particular, between government finance and national accounts statistics.

The Institute shall submit for consideration of the SHCP the creation of a Specialized Technical Committee with representatives of the State Units (EU) responsible for harmonization and creation of public finance statistics of the Federal, State and Municipal governments, in order to meet this recommendation and others related to the System of Public Finance Statistics.

Thus, the Institute will promote the reconciliation of figures as part of its functions of coordinating the National System of Statistical and Geographic Information (SNIEG), contributing to the improvement of public financial information, even when it is not responsible for the harmonization and generation of administrative records, budget, public accounts and other accounting documents of the three levels of Government.

2. Working with the Bank of Mexico (BM) to maintain consistency as BM makes changes in the BOP statistics to conform with the sixth edition of the Balance of Payments and International Position Manual.

The Institute has been working on this recommendation through its role as coordinator of the SNIEG, and carries out specific meetings with Bank of Mexico staff, to strengthen the consistency between the Balance of Payments and the Rest of the World Account of the System of National Accounts of Mexico.

RESPONSE ON NATIONAL ACCOUNTS RECOMENDATIONS

3. In the annual accounts for agriculture, to develop estimates of carry-over work-in-progress for short-lived crops with the help of improved annual survey procedures. This will allow agriculture to be included in the benchmarking of the quarterly to the annual data.

National agricultural surveys (ENA) 2012 and 2014 have covered the production and characteristics of the agricultural and livestock production units, providing information on major crops and livestock species, production costs and machinery and related equipment, for a period covering two main agricultural crops short cycle. The results of both surveys will be evaluated and taken into account for agricultural crops and animal species. With this information, complementary to the related administrative records, the feasibility of offering a broader picture of the supply and use of 33 products subject to the ENA, from the Base year change to 2013 (CAB 2013), will be assessed.

4. Collecting and use of data on inventories in quarterly or monthly surveys of the wholesale and retail trade industries.

In the annual wholesale and retail survey (EAC), good´s inventories for resale information is available, according to the economic activity, given that in each event the annual survey the holdings information is requested at the end of the year of reference and the immediately preceding year, thus allowing to calculate changes of inventories. This information is available from the new statistical design of the EAC and will be evaluated jointly with the valuation methods commonly used in commercial activities surveyed, to incorporate them in annual calculations of national accounts, from the CAB 2013.

Thus, the possibility of incorporating these questions in the monthly wholesale and retail survey of businesses should be considered carefully in order to avoid affecting timeliness and quality of responses, and the positive attitude of respondents will be evaluated. Recognizing that measurement of inventories on a monthly or quarterly basis is a complex task, due to the difficulty of timely compiling and the quality of the response by all companies considered.

5. Estimating changes in inventories for raw materials and the trade industries, and collecting quarterly data on changes in inventories. Incorporating inventory valuation adjustments into procedures for making current price estimates of production or expenditures, as appropriate.

As mentioned in the previous recommendation, best practices will be explored to assess, in economical manner and without burdening our informants, the possibility of incorporating a module of questions as recommended for the monthly wholesale and retail survey of businesses.

6. In calculating FISIM, include the opening balance in the average stock of loans or deposits. In the case of subsidized loans from the Development Banks, measure the output of FISIM based on arms-length rates charged on similar loans to calculate subsidy on the interest rate and record a current transfer from the Development Bank to the government to cover the cost of the subsidy to the borrower.

This recommendation is being studied in order to analyze the impact of the subsidy and the transfer generated by subsidized loans from development banks, in order to evaluate its possible instrumentation from the CAB 2013, taking into account the changes that the Bank of Mexico has planned with the adoption of the sixth edition of the Manual of Balance of Payments and the International Investment Position.

7. Use the BI ratio of the fourth quarter of the previous year to avoid a step problem in the first quarter.

The adopted procedure use one of the three methods of setting recommended by the IMF Manual of Quarterly National Accounts and ensures consistency in all short-term indicators, so the recommendation is considered as not applicable.

The results of the assessment in Institute were presented to the IMF mission, highlighting that in the case of Mexico, the instrumentation of the recommended method would generate distortions or breaks in the series between monthly and quarterly indicators, as well as between national and regional statistics, so BI annual average adjustment factor will still be used to minimize these differences. The aforementioned assessment covered more than 736 series observed between the original series and the Benchmarking ones, for quarterly GDP and monthly national indicators and by State.

8. Apply either volume indexes for each type of good or import subject to taxes and subsidies on products to separate base year estimates of the net tax from each type of good or import, or estimate volume measures of taxes/subsidies on products by applying base-year-tax rates to the volume of transactions subject to a specific tax/subsidy.

This recommendation is adopted to review the calculation procedures used for the determination of taxes and subsidies on products at constant prices. The analysis of this change in the method of calculation it is being evaluated to incorporate it from the CAB 2013.

9. In the quarterly accounts, developing methods to measure quarterly government consumption on an accrual basis and to guarantee that estimates of government investment reflect changes in the work-in-progress.

This recommendation is closely linked to the first cross-cutting recommendation, so it will be proposed to address the issue within the working group formed in the framework of the SNIEG**.**

10. Developing complete estimates consumption of fixed capital (CFC) for the general government. Include the CFC expense in the measure of government output and the measure of output of nonmarket producers whose output is based on expenses.

To meet the recommendation, series of collections of capital and the fixed capital consumtion of the General Government will be compiled, for their evaluation and incorporation, as soon as possible.

11. Besides, investigating sources of individual revisions that are especially large, investigate the presence of any systematic biases in the preliminary estimates in analytical studies of revision histories.

The information needed to analyze and evaluate the nature of these differences will be collected, in order to document the results of the assessment and present them with the corresponding statistics to CAB 2013, both in short-term and annual series.

12. Calculate balanced supply and use tables that show uses by industries of inputs produced by other industries on a yearly basis to verify the internal consistency of the accounts.

Best practices and international recommendations will be revised, in order to obtain and study, sources and methods regarding annual calculation of the inter-sectoral transactions. Its implementation from the Base year change to 2013 shall be assessed.

13. Investigate inconsistencies between the capital accounts and the financial accounts to spot their specific causes and identify ways to reduce their magnitude.

This recommendation will be adopted considering a review of major interrelationships between current accounts and capital of institutional sectors, as well as those referring to accounts of accumulation and funding, subject to the availability of information. It will be incorporated in the CAB 2013.

14. To provide a specific explanation of the difference between general government saving and investment in the national accounts and the deficit and investment published by the Ministry of Finance, a reconciliation showing the sources of differences should be prepared jointly by INEGI and the Ministry of Finance.

This recommendation will be part of the proposals that will be brought up to the group that is being proposed with State Units responsible for accounting harmonization and the generation of statistics of public finance, in accordance with the first recommendation of the cross-section.

15. To publish more detailed information on products and on expenditures of households as estimated in the framework of the national accounts.

Starting with the next CAB 2013, there are around 200 strategic products scheduled to be released, which we will disseminate the supply and intermediate and final uses, in order to publish them as a complement of supply and use tables. This action is considered that will attend the recommendation.

16. Providing detailed information on calculation procedures, either in the metadata documents or in analytical background papers or working papers will help users to understand and interpret the data.

International best practices will be reviewed to assess its implementation, so that users may better understand and interpret the results of the national accounts.

RESPONSE ON OTHER STATISTICS AND WEB PAGE RECOMENDATIONS

17. Assign the compilation of seasonally adjusted series of national accounts to the DGACN as they already perform this duty in order to avoid delays in the publication of these series:

INEGI is working on the proper procedure to strengthen the capacities of national accounts staff in short-term series seasonal adjustments. Capacity building activity will be led by the staff who is currently in charge of the seasonal adjustment.

Subsequently, the alternatives will be evaluated to ensure the disappearance of existing delays and increase the level of breakdown of series which are seasonally adjusted. It should be noted that, for the main aggregates, original and seasonally adjusted figures are disseminated at the same time.

18. Design seasonal adjustment procedures to minimize inconsistencies between seasonally adjusted estimates. The identification of outliers and other assumptions and options used in estimating seasonal factors should be consistent in the aggregate and the time series that it comprises. Important decisions made in estimating the seasonally adjusted series and economic meaningfulness of the results from the seasonal adjustment process should be reviewed for reasonableness by an economist with expertise in national accounts. Improving communication with key users of the accounts concerning seasonal adjustment procedures and outcomes should be a priority.

Regarding monthly, quarterly and annual indicators consistency, seasonal adjustment is only applied to the first two periodicities. The possible inconsistency among the indicators could be a result of the calendar effects correction (Easter week, trading days and leap year), jointly with the moving seasonality that indicators show along the years. International recommendations suggest not to force the sum (or average) of seasonal adjusted (s. a.) data to equal the sum (or average) of the original data from a theoretical point of view, since forcing can derive in: a) a bias in the seasonally adjusted data, especially where calendar and other non-linear effects are relevant, and b) a not optimal final seasonal adjustment. However, the best choice will be evaluated, taking aim to the best seasonal adjustment and communication with data users.

Regarding the inconsistency between monthly and quarterly s. a. series, the inter-institutional working group on seasonal adjustment in Mexico, comprised Bank of Mexico, Ministry of Finances, Ministry of Economics, and the INEGI, has been working closely on this issue for the last three years. As a result, a substantial improvement in such consistency has been achieved and the new approach has been applied to short-term indicators produced in the System of National Accounts since 2013. In 2014 this improvement was recognized within the Committee for Macroeconomic and National Accounts Statistics, to which the working group on seasonal adjustment reports.

Having in mind the aforementioned consistency, the analysis of different types of calendar effects requires greater detail in models revision and therefore, more time. However, since the X-12 ARIMA procedure involves the calendar effects correction and the use of filters, it is not reasonable to expect consistency between monthly and quarterly series for an indicator at 100 percent.

Regarding the inconsistency between the aggregates and the components, INEGI uses the direct approach. This approach is accepted by the international guidelines on seasonal adjustment of OECD and Eurostat. Also the IMF Manual of Quarterly National Accounts states that "Conceptually, neither the direct approach nor the indirect approach is optimal. There are arguments in favor of both approaches. It is convenient, and for some uses crucial, that accounting and aggregation relationships are preserved. Studies, however, have shown that the quality of the seasonally adjusted series, and especially estimates of the trend-cycle component, may improve, sometimes significantly, by seasonally adjusting aggregates directly or at least at a more aggregated level. Practice has shown that seasonally adjusting the data at a detailed level may leave residual seasonality in the aggregates, result in less smooth seasonally adjusted series, and provide series more subject to revisions."

In the case of Mexican series, the indirect approach for the aggregates frequently presents trend-cycle components with high volatility, provides more revisions, shows residual in the adjustment of calendar effects, and sometimes residuary seasonality. That is the main reason for preferring the direct approach, which provides better results on the behavior of the aggregates.

19. Establish and announce a schedule for publishing the seasonally adjusted data.

Recently, on last February, the dissemination of the products of short-term approach is now based on analysis of seasonally adjusted series. For this reason, dissemination of these is now associated with the official 2015 data release calendar.

20. Include a module on monthly/quarterly costs for the agricultural cycle (sowing, growth, and harvest) in the 2014 Agricultural Survey for important crops, in order to obtain the data to calculate annually and quarterly agricultural work-in-progress.

The national agricultural survey (ENA) is a survey that is currently carried out in Mexico in biannual basis, so it is not possible to obtain a monthly or quarterly indicator. Specifically, the part dealing with costs has not been captured in previous agricultural census. The first agricultural national survey (ENA) 2012 became a first approach to obtain expenses exclusively from large producers, whereas in the survey of 2014, obtaining the expenditure was extended to the whole production units, and it even sought to capture some specific expenditures for crops in order to provide a more accurate picture on the conditions in which the agricultural activities are made.

Data captured in both polls, 2012 and 2014, will be reviewed and utilized nationally and by State within the framework of the Base year change to 2013, with the aim of assessing the feasibility of calculating costs of harvested and in progress agricultural production, for the calendar year. With the conclusions that are to be obtained, it will be possible to propose improvements to the modules of expenses or costs in agricultural statistical projects.

21. Conduct a survey in the most important states and local governments in order to obtain timely and representative data on these institutional units.

State and municipal public finance statistics are not responsibility of the Institute, so the work is focused on the capture of information on income and expenditure of local governments on annual and monthly basis. This information has been used to complement the public finances of the General Government estimates. The figures generated by the Institute are scattered in different periods, taking into account the process of review and approval of the respective local congresses.

The absence of total accounting harmonization of a section of the federal entities and their municipalities strongly condition the recommended sample design, so with the compiled information from public accounts for the fiscal year of 2014, that will start in April this year and records of timeliness and completeness in the response showed by the entities over time, the best option will be assessed and we will propose it within the group to be formed on harmonization and generation of public finance statistics.

22. Study the results of the household surveys and the ENIGH in order to determine the extent of income underreporting and, if necessary, adjust output, compensation of employees and mixed income of the household sector to improve coverage of the informal sector and to reduce overall discrepancies between the biennial surveys and the annual national accounts.

The best practices and international recommendations for this type of settings will be explored, as well as those ones arising from groups of experts of the international organizations such as the OECD and the ILO, and through exchanging experiences in the interior of the Institute, in order to develop methods of adjustment that will reduce the discrepancies between the various forms of cash income that capture the occupation and employment surveys and the national surveys of income and expenditure of the households, among themselves and regarding primary income and gross disposable income in households accounts by institutional sectors.

23. Undertake research on the need for under-reporting adjustments for data from household surveys on income from informal activities and some kinds of expenditures to reduce disparities.

This recommendation is complementary of No. 22 and will be attending jointly, assessing the feasibility of using the results of the research on the subject and if that is the case, apply them in the next Base Year Change to 2013.

24. Include questions on intermediate inputs in monthly surveys of manufacturing industries to improve the quarterly and preliminary annual estimates of intermediate inputs.

The Institute redesigned the monthly survey of the manufacturing industry to capture establishments mainly serving the domestic market, as well as those that form part or belong to a manufacturing company of export within the "Program for Manufacturing, Maquiladora and Export Services (IMMEX)." In the case of IMMEX establishments, we are already questioning on expenditures on intermediate inputs of national and imported origin (raw materials, containers and packaging, freight charges and tolls, professional services, rentals, among others), which facilitates calculations of value added export of the manufactured global industries in the national accounts. (VAEMG).

Taking into account the foregoing, we will evaluate the possibility to extend to the rest of the establishments in the sample, the module of expenditures on intermediate inputs, which we hope will strengthen quarterly and annual national accounts estimates.

25. Standardize the imputation methods acrossall surveys and apply the cluster analysis technique (the percentage change of the data from an establishment with similar size andtechnology in the same economic activity and geographical area, if available; if not, the percentage change of the activity class for the current period).

In the framework of the Integrated System of Economic Units Surveys, a set of statistical methods for imputing missing data has been defined, which consider the specific characteristics of the sector of activity, the sample design and economic variables.

Missing data imputation methods use the technique of cluster analysis for establishments of the same economic activity of the North America Industrial Classification System (NAICS), and the evaluation of the method to extend its application is underway, considering also the size of the establishment based on employed personnel and income, as well as the geographical area to which it belongs, for all surveys in specific variables.

26. A survey of users of the accounts conducted by INEGI and discussions with users showed a strong demand for specific explanations for revisions. Include a discussion of the sources of the largest or most important revisions in press releases presenting revised estimates. If a longer investigation is needed to determine the cause for a large revision, the research findings should be reported when they become available.

This recommendation will be attended soon. It will be proposed to the Government Board of the Institute to supplement the guidelines currently governing policy of figures revisions, through incorporating a section dealing with the elaboration of explanatory notes on major changes in the figures when these are carried out.

27. The website functionality should be improved, and an index by keyword of the available SCNM series should be available on the website. Significant newly available data should receive additional publicity.

Regarding an index by keyword, communication has been established with the office in charge of Data Communication, to assess the possibility of this index to the GDP and National Accounts web portal, considering the current policies and guidelines to do it. Also, significant newly available data will receive additional publicity.

28. Post responses to the most common questions on a national accounts "frequently asked questions" (FAQ) web page.

This and the previous recommendation are complementary and they shall be adopted considering the current publishing policies of the Institute.

INTERNATIONAL MONETARY FUND

MEXICO

June 24, 2015

REPORT ON THE OBSERVANCE OF STANDARDS AND CODES (ROSC)—DATA MODULE VOLUME III

DETAILED ASSESSMENTS USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Mexico's Report on the Observance of Standards and Codes (ROSC)—Data Module. It also includes as appendices of the summary of the Special Data Dissemination Standard (SDDS) (Appendix I), the DQAF generic framework (Appendix II), and the results of the user's survey (Appendix III).

Approved by
Louis Marc Ducharme and Alejandro Werner

Prepared By
The Statistics Department

This report is based on information provided prior to and during a staff mission from July 14–15, 2014 and publicly available information. The mission team comprised Mr. Marshall Reinsdorf and Ms. Lisbeth Rivas (senior economists, IMF Statistics Department).

CONTENTS

Acronyms

1993 SNA	*System of National Accounts 1993*
2008 SNA	*System of National Accounts 2008*
BM	Bank of Mexico
CEMLA	Center for Latin American Monetary Studies
CFE	Federal Electricity Commission
COFOG	Classification of the Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPC	Central Product Classification
DCN	National Accounts Directorate
DGACN	Economic and Agricultural Censuses, Economic Surveys and Administrative Records, National Accounts
DGEE	General Directorate of Economic Statistics
DOF	Official Gazette of the Federation
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
ECLAC	Economic Commission for Latin America and the Caribbean
ENAMIN	National Micro-business Survey
ENDID	National Survey of Demographic Dynamics
ENE	National Employment Survey
ENEU	National Urban Employment Survey
ENIGH	National Survey of Household Income and Expenditure
ENOE	National Survey of Occupation and Employment
ESPC	Professional Career Service
GFSM 1986	*A Manual of Government Finance Statistics, 1986*
GFSM 2001	*Government Finance Statistics Manual 2001*
IMF	International Monetary Fund
IMSS	Mexican Social Security Institute
INEGI	National Institute of Statistics and Geography
ISIC	*International Standard Industrial Classification of all Economic Activities*
ISSSTE	State Workers Security and Social Services Institute
LSNIEG	Law of the National System of Information on Statistics and Geography
OECD	Organization for Economic Cooperation and Development
OFCs	Other Financial Corporations
Pemex	Mexican Petroleum
PIDIREGAS	Long Term Productive Infrastructure Projects financed by the private sector
ROSC	Report on the Observance of Standards and Codes
SAGARPA	Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food
SE	Secretariat of Economy
SCNM	Mexican System of National Accounts

SDDS	Special Data Dissemination Standard, 2013
SGIF	Office of the Manager of Financial Information
SHCP	Secretariat of Finance and Public Credit
SIAP	Agro-alimentary and Fishery Information Service
SII	Integrated Federal Government Revenue and Expenditure Information System
SIDAFF	Integrated Federal Financial Administration System
SIF	Financial Information System
SNIEG	National System of Statistics and Geography
STA	IMF Statistics Department
UGARPM	Unit of Government Accounting and Reports on Public Management
VAEMG	Global Manufacturing Exports Value Added

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK

The following detailed information on indicators of statistical practices in the area of the national accounts was gathered from publicly available documents and information provided by the Mexican officials. This information, which is organized along the lines of the generic DQAF (see Appendix II), was used to prepare the summary assessment of data quality elements, based on a four-part scale of observance, shown in Mexico's Report on the Observance of Standards and Codes (ROSC)—Data Module.

NATIONAL ACCOUNTS

0. Prerequisites of Quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified

Mexico's national accounts are compiled and disseminated by the National Institute of Statistics and Geography (INEGI). INEGI's activity is governed by the Law on the National System of Statistical and Geographic Information (LSNIEG), published in the Official Gazette of the Federation (DOF) on April 16, 2008. Article 52 of the Law indicates that INEGI is an agency with technical and management autonomy, its own legal status and its own assets and liabilities, and it is responsible for regulating and coordinating the National System of Statistical and Geographic Information (SNIEG).

The priority objective of the INEGI is to take steps to ensure that information of national interest is subject to the guiding principles of the SNIEG which are: accessibility, transparency, objectivity, and independence. Likewise, the purpose of the SNIEG is to provide society and the State with information that is of good quality, relevant, truthful, and timely, in order to facilitate efforts to pursue national development (Article 3, LSNIEG).

Article 4 states that the SNIEG has the following objectives: produce information, ensure timely dissemination of information for consultation purposes, promote knowledge and use of information, and safeguard information. The composition of the SNIEG is defined in Article 5 and is as follows: the National Consultative Council, the National Information Subsystems, and the INEGI, which is the unit coordinating the system.

Article 59 states that the INEGI shall have as exclusive powers: carry out national censuses, establish the national accounts system and prepare national consumer and producer price indices. Finally, the article states that the terms national census or national accounts may not be used in the names or advertising for records, surveys, or listings other than those carried out by the INEGI.

Article 78 of the LSNIEG gives the system of national accounts the status of information of national interest. The Law is available on the INEGI's website at: http://www.inegi.org.mx/Normateca2010/menuNormateca.jsp.

There are Bylaws (DOF of March 31, 2009) to govern INEGI's operations and regulate the form and basis on which the INEGI exercises the functions and powers conferred upon it by the Political Constitution of Mexico (Article 26), the LSNIEG, and other laws, regulations, decrees, and resolutions of the Governing Board.

Support for the President of the INEGI includes the following structure for Economic Statistics: the General Directorate of Economic Statistics (DGEE) and in turn, four Deputy General Directorates—specifically, Economic and Agricultural Censuses, Economic Surveys and Administrative Records, National Accounts (DGACN), and Price Indices.

Article 22 of the Bylaws defines the specific functions of the Deputy General Directorate of National Accounts (DGACN), including: to direct the development and updating of the component calculations of Mexico's system of national accounts, with annual, regional, short-term indicators, sectoral, and thematic satellite accounts, in accordance with economic classifications and the prevailing international conceptual framework; work to bring about conceptual alignment between core statistics and macroeconomic statistics; and evaluate, validate, and submit for dissemination the constituent outputs of the national accounts system, as well as their pertinent methodologies.

Operationally speaking, the DGACN is comprised of four Area Directorates, namely: National Accounts, Satellite Accounts, Short-Term and Regional Accounts, and Input-Output.

0.1.2 Data sharing and coordination among data-producing agencies are adequate

In general, the flow of information needed to compile the national accounts is efficient and timely. To a large extent, the source data for compiling the national accounts, such as censuses and surveys, are covered by established timetables for information reporting, which are complied with rigor. With regard to data sources outside INEGI, the procedure is to request data from the public sector and from the private sector by means of an official letter; this creates no problems in terms of timely data delivery.

Coordination between the INEGI and the various information-producing agencies, the Bank of Mexico (BM), the Secretariat of Finance and Public Credit (SHCP), the Secretariat of Economy (SE), and the relevant secretariats and public institutions, is facilitated through the working groups of the specialized technical committees on economic statistics, and partly by the Macroeconomic Statistics and National Accounts Committee designed to ensure greater efficiency in the compilation and provision of source data for the national accounts and other macroeconomic systems. The information needs in terms of conceptual characteristics, coverage and periodicity of the data requested and the availability of respondents, taking into account the effort and economic cost involved are discussed at the meetings. Besides the formal meetings that are held at least every six months, communication between members of the working groups is smooth and helps to get their respective data on time.

There is in fact an established practice of exchanging information between INEGI and various public sector institutions, which provides timely and detailed information for compiling the national accounts. These arrangements include agreements with Mexican Petroleum (PEMEX), the Federal Commission of Electricity (CFE), the Energy Regulatory Commission (CRE), all federal government branches, decentralized agencies for accounts and balances, the BM for current and financial accounts data of balance of payments, international investment position and for the minimum catalogue of the financial intermediaries data, and the Information Service of the Secretariat for Agriculture, Livestock, Rural Development, Fishery, and Food (SIAP-SAGARPA), inter alia.

It is important to stress that coordination of the SNIEG based on the INEGI faculties conferred by the Political Constitution and the LSNIEG, has gotten a major development related to a sustained and regular operation of the executive committees of the national subsystems of information: Macroeconomic Statistics; Demographic and Social; Economic; Geographic and Environmental; and Government Information, Public Security and Justice, and their respective Specialized Technical Committees. The former are collegiate bodies which contribute to inter-institutional coordination and implementation of policies on the carrying out of statistical and geography-related activities. The specialized technical committees, created within the framework of the executive committees, presently 36 in operation, such as the Committee of Macroeconomic Indicators and National Accounts, are collegiate entities for participation and consultation created by resolution of the INEGI Governing Board, comprised of units of the INEGI and representatives of government entities (the SHCP, the BM, the SE), and the relevant secretariats and public institutions by area (macroeconomic information, energy, tourism, agriculture, science and technology, employment, environment, inter alia). The most recent meeting of the Economic Executive Committee, for which minutes have been published in the SNIEG website, was held on June 2nd, 2014. (see: http://www.snieg.mx).

0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only

Title Two in Chapter V of the LSNIEG guarantees the confidentiality of statistical data supplied to INEGI, stipulating that such data may be used only for statistical purposes. Article 37 of the Law states that "data provided for statistical purposes by system respondents to units under the law, shall be strictly confidential, and under no circumstances may they be used for any purpose other than a statistical purpose."

Article 38 of the Law declares that "data and reports provided by private parties for statistical purposes or derived from administrative or civil records shall be handled, for purposes of this law, with due regard to the principles of confidentiality and may not under any circumstances be disclosed in a personalized (*nominativa*) or individualized manner, nor may they be used as evidence before an administrative or fiscal authority, in judicial or other proceedings."

As an autonomous agency, INEGI is also governed by the Federal Law on the Administrative Responsibilities of Civil Servants (LFRASP) (DOF of March 13, 2002), Article 8 (V) of which obliges civil servants to "safeguard documentation and information that, by reason of their employment, post, or commission, they may have entrusted to their responsibility, and to prevent the unauthorized use, removal, destruction, concealment or impairment of the usability of such information." As well, paragraph XII prohibits civil servants from requesting, accepting, or receiving, whether by themselves or through intermediaries, money, movable assets, or immovable assets through sale at a price well below the domestic market price, gifts, services, employment, posts or commissions for themselves, when these originate from any individual or legal entity, whose activities are directly linked to, regulated or supervised by the civil servant in question in the performance of the latter's employment, posts or commissions, and where a conflict of interest might arise.

All questionnaires used for censuses, surveys and special investigations by INEGI make clear reference to the confidentiality requirements regarding the information, in a section placed on the first page which reads: "Pursuant to the provisions of Article 37 of the LSNIEG currently in force: data provided for statistical purposes by system respondents to units under the law, shall be strictly confidential, and under no circumstances may they be used for any purpose other than a statistical purpose." Article 38 states that "data and reports provided by system respondents for statistical purposes or derived from administrative records shall be handled with due regard to the principles of confidentiality and privacy and may not under any circumstances be disclosed individually or by name, nor may they be used as evidence before an administrative or fiscal authority, in judicial or other proceedings." Article 46 of Chapter VI states: "The units shall show due regard for the confidentiality and privacy of the data supplied by system respondents for statistical purposes."

Article 104 of the LSNIEG defines the violations imputable to civil servants at the INEGI or civil servants at the system units as follows: "the disclosure of confidential statistical data; violations of industrial or commercial secrets, or the provision by system respondents of data that is individualized or identified by name" (paragraphs I and II). Consequently, Article 108 of the Law provides administrative penalties for anyone who discloses confidential data: "a fine of 2,000 to up to 30,000 times the minimum monthly wage valid for the federal district at the time the violation was committed."

Article 13 of the LFRASP establishes mechanisms for imposing penalties on civil servants on grounds of administrative conduct deriving from their failure to fulfill their obligations pertaining to the custodianship of documentation and information, which mechanisms shall consist in a private or public warning; suspension; removal from office; economic penalty; and temporary disqualification from engaging in the employment, post, or commission for a period of not less than three days and not more than one year in the public service.

By the same token, in the resolution establishing the Regulations (*Estatute*) of the Professional Career Service (ESPC) for the INEGI (DOF of May 8, 2009), specific provision is made for disciplinary measures for personnel on grounds of noncompliance with current law, in particular Article 38 (V) which establishes that one of the grounds for separation from the INEGI shall be failure to fulfill the obligations inherent in the employee's post or those established in the Statutes or in the regulations deriving from it.

The ESPC points out that government employees must abide by the principles of confidentiality and privacy with respect to respondent data provided for statistical purposes, as well as with respect to confidential information obtained from administrative records and the application (in the performance of their duties) of the SNIEG code of ethics.

Article 38 (2) of the LSNIEG says that "When it is necessary to disclose information, said information must be aggregated in such a way that it is not possible to identify system respondents or those individuals or legal entities that are the focus of the information in question."

Staff assigned to the national accounts regularly check and ensure the non-disclosure of confidential data. Success in this regard is due largely to the fact that the maximum disaggregation for disclosure is at the three- and four-digit level of the North American Industry Classification System (NAICS).

The data provided by respondents are kept in the safekeeping of the officials responsible for their handling and are not shown to the public or other INEGI staff. The only people who have access to the information are those authorized to perform calculations with the data, and those people are reminded in writing of the confidential nature of the data. In general, INEGI staff is fully aware of the penalties for disclosing confidential data.

Security measures for protecting installations are under the responsibility of security personnel who inspect all persons and things entering and leaving the premises. In terms of information technology (IT) systems, the DGACN operates with an IT infrastructure based on the network platform Microsoft Windows 2003 server both at the local and national level, all services are with Windows, for e-mail, Microsoft Exchange, for Intranet, Microsoft SharePoint, for Internet, Microsoft IIS. For databases, personnel work with Visual FoxPro, and there are plans to migrate in future to Oracle or SQL server; with around 194 microcomputers. Local and networked computers have an access code barring use by outsiders. This working mechanism ensures information security for each user of the system.

Users of both the local and network microcomputers maintain the security of information by storing it on hard disks or in the corresponding space on the server.

Weekly backups of this information are made on rewritable disks, while quarterly fixed backups are made on non-rewritable disks.

The network servers and their backups are kept in areas of restricted access; in the offices of the network administrator, at Area Directorates. A backup is also kept away from premises, in the event that an accident befalls the building, under the responsibility of the Area Director.

Confidential information is destroyed in accordance with the following process: once the information has been used, it is kept for five years in a storage facility belonging to INEGI, located away from headquarters, and is then sent to the national archives where it is kept for further five years. At the end of 10 years, the document is destroyed.

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response

The legal powers of INEGI to compile information are clearly set out in Chapter V of the LSNIEG, referring to the rights and obligations of users and respondents of "National Statistics and Geographic Information Systems." Article 45 defines the obligations of respondents, while Article 40 requires respondents to provide the information requested in a truthful and timely manner. Article 45 (1) states that "system respondents are obliged to provide accurate and timely data and reports as and when requested by the competent authorities for statistical, census or geographic purposes, and to provide the required assistance."

There is no record of conflicts between legal provisions for the supply of information and those that protect respondents. Despite some discrepancies in the legislation, they do not affect the quality of national accounts estimates. For example, the banking secrecy law protects individuals and corporations at an individual level, but aggregated information is provided to the INEGI. A similar situation has occurred with the cancellation of the decree for promotion and operation of goods for processing enterprises (*maquiladoras*) and the change in mining legislation, which formerly required companies to provide monthly and annual information to the SE. With the new mining law exempting them from that obligation and the new decree for promotion of exports of manufacturing goods and service industries, the INEGI solved the situation, under the powers granted to it by the LSNIEG, by conducting a monthly survey on mining companies to gather the required information, maintaining the compilation of surviving *maquiladoras* and redesigning the sample size for monthly manufacturing industry to include exporting manufacturers and/or *maquiladoras*. A similar example is related to the Tributary Administration System data (SAT-SHCP) which prepares an annual summary tax declaration of greater tax payers by economic activity for working redistributive and financial transactions of Non Financial Corporations.

A similar example relates to the privatization of public enterprises: when they belonged to the government their data were obtained from administrative records, whereas cooperation agreements were negotiated with their new private owners to supply information on their activity.

Chapters I and II of Title IV of the LSNIEG spell out the administrative misconduct perpetrated by system respondents and the sanctions to which they are subject. Article 48 states that "In the exercise of its powers under this Law, the INEGI may conduct inspections to verify the authenticity of information, when the data provided are incompatible, incomplete, or inconsistent."

Article 49 indicates that verification inspections must be done under a written order from the competent authority: Paragraph I (d) states that "the order must specify the statistical or geographic information to be verified, as well as the documentation that must be exhibited for inspection by the system respondent."

The Law also provides penalties for refusing or falsifying information. Article 106 imposes a fine of "from 5 to 500 times the minimum daily wage valid for the federal district at the time the violation was committed."

Despite the existence of legal provisions for obtaining information, and penalties for noncompliance, they have rarely been enforced: the intent is to encourage voluntary reporting, by explaining to respondents in detail the use that will be made of their information, its confidential nature, and its importance for the country in terms of quantifying the characteristics and economic behavior of its activity.

The information burden imposed on respondents is a constant concern of the DGACN, which has taken several steps to minimize that burden: in preparing the questionnaires, for example, care is taken to request only the most significant information. INEGI staff is available at all times to help in reporting the data. Instructions are provided for recording the requested data, with a glossary of terms, and survey responses may be submitted electronically. In the case of public and private bodies providing administrative records to several national accounts areas, cooperation agreements have been established to avoid duplication of efforts and to include all information requirements in a single request and through only one unit of the INEGI (*ventanilla única*).

INEGI encourages cooperation by respondents in its everyday work, stressing the importance of reliable and timely information and highlighting the link between the quality of basic statistics and that of derived statistics.

INEGI also provides information on the basic and derived statistics that it produces and on procedures for consulting data to their respondents. It responds to respondents' requests for information where appropriate, without prejudice to the principle of confidentiality.

0.2 Resources

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs

The human and financial resources devoted to the national accounts are, in general, commensurate with the SNIEG's mission, which is to provide society with a timely supply of information of national interest by coordination among SNIEG members and the across-the-board adoption of national and international standards. In spite of this, the resources to conduct the Agricultural Census were not approved by Congress owing to other priorities. Nonetheless, the INEGI will conduct an Agricultural Survey to cover data needs, including calendar year information required for national accounts measurements. Also, the National Survey of Micro-Business (ENAMIN) has currently no budget to be conducted every two years as planned. This may affect the coverage and accuracy of the national accounts for the new base year 2013. Finally, delays occur sometimes in the publication of seasonally-adjusted series. Staffing problems and the delegation of seasonal adjustment to a unit outside the DGEE seem to be contributing to these delays.

Recommendation:

Assign the compilation of seasonally adjusted series of national accounts to the DGACN as they already perform this duty in order to avoid delays in the publication of these series.

INEGI's mission is pursued through a governing board comprised of one chair and four vice-chairs; in turn, the president of the INEGI is supported by eight general directorates and one internal comptroller's office. The general directorates include the following: Social and Demographic Statistics, Economic Statistics, Geography and the Environment, Government, Justice and Public Security, Coordination of the National System of Statistical and Geographical Information, Entailment and Information Service to the Public, Integration, Investigation, and Analysis, and Administration.

The INEGI has units at both the central and decentralized (regional) levels for generating, compiling and processing census and survey data, and a central unit for calculating derived macroeconomic statistics. In terms of the number of statisticians with national accounts experience available to meet the needs of the general public and the *System of National Accounts 2008 (2008 SNA)*, the staffing level in the DGACN is considered sufficient in light of the annual work program. This deputy general directorate of the DGEE has the support of all economic statistics generating areas of the INEGI, in the tasks of planning and developing the output of the *System of National Accounts of Mexico (SCNM)*.

The directorate has 233 positions, of which there are 159 budgetary jobs and 74 extra-budgetary (on contract). Thirty-two (32) percent are on contract, which may affect the continuity of important projects if these contracts are suddenly not renewed. The positions are occupied as follows: 1 deputy general director, 4 area directors, 29 deputy directors, 71 department heads, and 128 operating technicians, including secretarial and support personnel. In general, the staff number is related one by one to the operating technicians (52.7 percent). The freezing of salaries for the period 1996–2009 finished in the beginning of 2010, and since then the salary has been rising annually according to inflation and merit considerations.

The academic level and training for personnel is considered adequate; the DGACN has 136 economists representing 58.4 percent of the total; 18 computer science and engineering graduates (7.7 percent), 15 mathematicians and actuaries (6.4 percent); 11 administrators and accountants (4.7 percent), 29 with different professional backgrounds (agronomists, sociologists, biologists, engineers, etc.), (12.4 percent); and 24 individuals with technical diplomas or without professional qualifications, (10.4 percent).

All INEGI staff is enrolled in a continuous training program that keeps them up to date on various issues, from statistics and computers to national accounts topics. The training program is regulated in the ESPC, which states that the INEGI conducts activities designed to promote the professional development and continuous skills upgrading of its personnel, in accordance with the needs of each of its areas of specialization.

The training program is divided into short-term courses, training cycles and diploma courses, as well as facilities (leave, special working hours, fellowships, tuition payments, etc.) for the pursuit of specialized studies, bachelor and postgraduate degrees.

In addition, national accounts officers attend courses, seminars and international conferences for training purposes. Visits are arranged every year to various international organizations for these purposes, including the Organization of Economic Cooperation and Development (OECD), the Economic Commission for Latin America and the Caribbean (ECLAC), the International Monetary Fund (IMF), and the Center for Latin American Monetary Studies (CEMLA).

There is also a noteworthy effort at on-the-job training in national accounts methodologies: this is accomplished by making all areas and all working groups, including the deputy directorates and area directorates of the DGACN, aware of the overall national accounts process and holding group sessions to discuss methodology and propose improvements, while looking for ways to streamline and simplify procedures. The *System of National Accounts 1993 (1993 SNA)* and *2008 SNA* is available in Spanish and English, including the consolidated 44 recommendations of the Inter-Secretarial Working Group on Natiobnal Accounts (ISWGNA), to all staff via the DGACN network, and were reviewed and discussed for taking many decisions around their implementation and the available basic data to do it.

The accumulated experience of DGACN staff extends over many years, during which officers have specialized in specific areas, applying the concepts and practices suggested in the *1993 SNA* and now in the *2008 SNA*, adapting them to local needs and information availability.

The stability of national accounts personnel in the Institution can be appreciated from the following table:

Time in service	Percentage of staff
1 to 5 years	39.4
6 to 15 years	26.6
16 to 21 years	23.2
21 years and over	10.8

The average seniority is 10.6 years. This stability in DGACN staffing can be explained, among other factors, by the ESPC, which guarantees employment security and serves to retain trained personnel within the INEGI. The ESPC also includes a system of staff incentives, which run from operational personnel in extra-budgetary jobs up to area directors; operational technical staff competes for the award of "employee of the month," and are eligible for an annual cash bonus and/or an additional 10 days of vacation if they meet previously established goals. Nowadays, a bonus has been offered for voluntary retirement to all public servants with 25 or more years working as a public servant, which is going to produce a restructuration in some of the areas of the DGACN.

The DGACN's computer resources are considered adequate, in accordance with the staff numbers assigned to each area directorate, as it has 245 microcomputers and 5 multifunction devices. The DGACN has one computer for each employee. In addition, the equipment is upgraded every five years, and new equipment is added as new staff is hired. This has meant that the DGACN produces efficient, recurrent and timely output, taking advantage of information technology resources for generating and disseminating the SCNM, using internally developed applications (database managers, compilers, programming languages) as well as commercially available products (office suites, operating environments and systems). Also, staff has being working on statistical data and metadata exchange (SDMX) to optimize work to exchange national accounts statistics.

INEGI seeks to take advantage of all the possibilities offered by modern information technologies through Internet links, e-mail, and intensive use of computer programs such as Excel, Word, PowerPoint, and Acrobat, which are part of the basic platform of the institutional software. Additionally, national accounts personnel have developed and introduced computer programs for automating, simplifying and streamlining work procedures. Installation of a second network server within the DGACN recognizes the importance of the work of the Directorate of Short-term and Regional Accounts in compiling current short-term macroeconomic statistics, and the confidentiality that they require.

The IT equipment available for national accounts is distributed on the basis of the personnel assigned to the various area directorates of the DGACN and the work programs to be carried out.

Twenty six additional staff will be hired to compile quarterly sectoral accounts following recommendation15 of the Data Gap Initiatives.

The financial resources available to national accounts are deemed adequate and sufficient in light of the authorized work programs, and they are compatible with the resources available within the INEGI. Funding is reasonably secure for the identified needs of the statistical program and the funding horizon is amendable for planning for statistical developments. Budgeting practices provide clear information to financing authorities.

The DGEE has adopted its own measures of budgetary austerity, designed primarily to reduce current expenses (telephones calls, travels, per diems, photocopier and paperwork) without jeopardizing the primary objective of completing its mandated work programs.

0.2.2 Measures to ensure efficient use of resources are implemented

Article 5(X) of INEGI's Bylaws states that the governing board shall approve the annual work program of the INEGI, which shall be prepared on the basis of the annual program of statistics and geography and the preliminary draft annual budget. The work programs and their strategies are disseminated among the various layers in the chain of command, because it is necessary to set deadlines for achieving the expected results on a basis of consensus. Furthermore, this implementation strategy involves the entire staff and includes three presentations by the director. Monthly progress reports are prepared for the Internal Comptroller's Office.

INEGI is attempting to make more efficient use of resources by applying consistent and standardized concepts both in the statistics-generating areas as well as in the DGACN. Within the DGACN, working meetings are held to discuss and comment concepts and international recommendations relating to guidelines and new statistics requirements of the *2008 SNA*. Also, the national accounts areas have made suggestions to the surveys and censuses areas (2014) for improving and aligning basic statistics, according to the framework and some of the data requirements of the *2008 SNA*, and collaborating to facilitate census personal for the collection of data on the energy and banking sectors, through the office of respondents to National Accounts data requirements.

The INEGI applies a semi-annual "Performance Appraisal Form" to its staff: this covers goals achieved with respect to the quality, timeliness and reliability of their statistical products/works. Actually, includes a theoretical-empirical course on the topics that national accounts areas are working on since the implementation of the *2008 SNA*, and a test to measure the level of comprehension about them.

Working procedures are designed to minimize coding, editing and tabulation errors. The process of producing and coding data has been systematized and simplified, and the results are reviewed more quickly and efficiently by identifying activities that can be pursued at the same time as, or immediately after, recurrent calculations, such as statistical cross-checks, calculation of consistency ratios and variables, preparation of graphs and summary tables, correlation analysis, and other statistical techniques. The areas producing the calculations are no longer responsible for printing, but for the preparation of tables, graphics and data files which will be published on INEGI´s website for three types of users (tourist, farmer and miners of data), with the support of the Directorate of Information Technologies.

The Internal Comptroller Office of the INEGI is responsible, inter alia, for carrying out audits and inspection visits to the INEGI's administrative units to verify that the INEGI's goals and objectives are being achieved in an efficient, effective, and economical fashion; it is also responsible for monitoring compliance with the provisions of applicable laws and regulations.

Article 91 of the LSNIEG, and Article 47 of the INEGI Bylaws state that supervision of the INEGI's resources shall be entrusted to an Internal Comptroller Office and an external audit appointed by the Governing Board from a shortlist made by the Superior Auditor of the Federation. To consult information on the functions of the Audit Office, click on the following link: http://www.inegi.org.mx/transparencia/x_resultados.aspx/.

Programs and working procedures are reviewed regularly with the planning staff of the DGEE, which promotes the review of working processes in the context of an activity entitled "Management of Working Procedures," which main purpose is to detect suitable areas for proposing processes and activities designed to achieve improvements. Currently, planning unit is working on a project called Control Board, which is going to integrate all planning tools in order to monitor advances on each programmed statistics product. In addition, manuals of organization and procedures have a proposal for updating since May 2014, to reflect the actual DGACN´s working areas and to be consistent with the general rule of the Federal Public Administration (AFP).

The national accounts area is aware of the importance of the efficient administration of financial resources with a management review process that allocates resources to high priority activities such as maintaining the work program and preparing new products such as: Changing of the base year to 2008 and implementing the *2008 SNA*, elaborating annual sectoral balance sheets and accounts, a new short-term economic indicator, the 2008 Input-Output Table, satellite accounts on culture and housing, and maintaining and developing programs and a database of national accounts, within the constraints of the current budget and internal limitations, but also negotiating additional resources for projects on information of national interest.

Innovations have been introduced to reduce time and costs throughout the chain of statistics production, edition and dissemination, by making full use of the available information technologies. For data production, steps have been taken to systematize processing and calculation, using database managers instead of the previous worksheets, an approach that reduces errors and saves time and resources, such as paper, printer cartridges, and machine time, not to mention the use of multifunction devices which make it possible to obtain printouts, photocopies, and document scanning.

The actual release of documents for mass dissemination is carried out by each of the DGACN Area Directorates, supported by Area Directorate of Information Technologies and Deputy Directorates of Public Service of Information and Computing and Data Processing in accordance with the normative criteria specified for the edition of institutional publications and the register in the National Institute of Copyrights and other provisions pertaining to editorial production for the release of electronic publications.

IMF experts conducted visits to Mexico in 2002, 2005, 2006, 2008, and 2009 to assess the methodology and systems for the compilation of the input-output table 2003 and the new national accounts annual series as well as the new quarterly series and provided recommendations for improvement, all of which were tested and implemented as available statistics facilitate them. In addition, the DGACN participates in the technical meetings of international agencies such as the

United Nations, the OECD, the World Bank, and ECLAC, and responds to specific questionnaires on national accounting practices with transparency.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored

There is a portal in the INEGI's website which provides users with a permanent and open communication channel on requests for information, methodologies, and conceptual issues. In addition, specialized committees have been established as discussed in 0.1.2.

In this context, and according to Article 88 of LSNIEG, the INEGI has to make public consultations regarding the information of national interest. The DGEE made a public consultation through the Internet during May 2012 to carry out the change of base year of the national accounts from 2003 to 2008 and implement the *2008 SNA*. In addition, the DGEE held five meetings with users from government agencies, consulting firms, universities, banks' economists, and industrial chambers in order to explain and gather comments and proposals about the changes in the scope of the new System of National Accounts and details of classifications of goods and services accounts, sectoral annual accounts and balance sheets, breakdown of quarterly gross domestic product (GDP) and supply and final demand components, monthly indicators of economic activity, and the 2008 input-output matrix, by products and industrial activities, among others. This Public Consultation on the "2008 Change of Base Year of the SCNM," settled a precedent among public entities producing data and specialized users of macroeconomics indicators, because DGEE officials explained and debated with them on the causes and expected benefits derived from this project, and also because their feasible proposals were taken into account. In addition, the INEGI has been capturing users' needs through meetings organized to celebrate its 30th anniversary on developing the national accounts in 2011, as well as presentations of new statistical products like the Integration of Principal Enterprises with data of 2008 censuses in 2012, the Table of correspondence between imports-exports tariff codes and the North American Industrial Classification System (TIGIE-SCIAN) in 2012. The INEGI has regular annual meetings with users.

The INEGI keeps abreast of progress and developments in national accounts through its participation in various international forums, including those organized by the UN, the OECD, and ECLAC; participants at these meetings also identify the information needs of those international institutions.

Article 38 (XIII) of the Bylaws states that the General Directorate of Entailment and Public Service of Information will propose normative dispositions for integrating a System to Evaluate Users Satisfaction and detecting needs of the SNIEG. This Directorate made a diagnosis of national accounts status in the website and the number of consultations made by users, and proposed some changes that have made easier the accessibility to national accounts data so as to increase the number of users several times.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality

Article 3 of the LSNIEG states that the purpose of the SNIEG is to provide Society and the State with good quality, relevant, truthful, and timely information, in order to facilitate efforts to achieve national development.

Quality of statistical products is ensured through the work of the National Consultative Council, which comprises the president of the INEGI, representatives of the state secretariats, of the judicial power, of the different chambers of congress, of the federal states, and of the BM. Other public institutions and social and private institutions may be invited to the council's meetings when relevant. The council provides opinions on the statistical projects and programs and proposes topics for discussion. The meetings of the National Consultative Council help to a continuous upgrade of the products by providing opinions from a user perspective, and on the relevance of the new projects and programs proposed.

The SNIEG also entails the design of a long-term strategic program of twenty four years, a six year national program, and an annual program for statistical improvement with objectives and goals to broaden statistical products as well as implement international standards, which are approved by INEGI's Board.

INEGI has implemented externally recognized processes or activities that focus on quality that has granted INEGI with the ISO 9001-2000 certification to the treatment phase of the monthly survey on private non-financial services. The National Price Indices were certified with the ISO 9001-2008.

Staff training programs emphasize the importance of quality and give staff an understanding as to how quality may be achieved. The INEGI provides an infrastructure for quality by recognizing trade-offs, economies of scale, and interrelations between datasets.

0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program

Processes for monitoring quality are based on indicators that assess progress achieved in the work programs at monthly, quarterly and annual intervals based on the achievement of established goals. Response rates to surveys are calculated, and revision history and timeliness evaluations are carried out.

Relevant steps have been taken to ensure that the statistics that the INEGI produces are subject to review by national and international organizations on a permanent basis in order to improve their quality. The INEGI requested a ROSC to the IMF in order to assess the change of base year and the implementation of the *2008 SNA* and provide recommendations for improvement.

The DGEE's responsibilities include assessing quality and coverage of economic information and promoting continual improvements in economic statistics, in particular, those statistics generated by the INEGI, through the development of classifications (SCIAN 2012), conceptual frameworks, and studies of various economic sectors, short-term issues, long-term issues, and related emerging trends (as impact of globalization on statistics compilation), pursuant to Article 20 (VIII) and Article 21(IX) of the INEGI Bylaws.

With respect to the quality of the information made available to users, efforts are made to maintain high rates of reliability in figures, which are examined by international organizations.

1. Assurances of Integrity

1.1 Institutional Integrity

1.1.1 Statistics are produced on an impartial basis.

Mexico recognizes the importance of ensuring professional independence for personnel compiling statistics. For this reason, Mexico promulgated the resolutions establishing the rules of the ESPC of the INEGI (DOF of May 08, 2009); these set forth the rules enabling the INEGI to have a professional career for the staff that is agile, efficient, and transparent, that promotes and fosters staff development and hires the best people. The guiding principles are: lawfulness, efficiency, objectivity, quality, impartiality, equity, independence, and competence based on merit (Article 3). Issues regulated by the Statutes are: income, training, performance assessment, incentives, separation, rights and obligations of government employees, and appeals (Article 4).

Under Articles 67, 68, and 69 of the LSNIEG, the ultimate authority of the INEGI is the governing board, which is comprised of five members appointed by the president of Mexico with the approval of the senate chamber, one of whom is appointed president of the INEGI and is entrusted with responsibility for presiding over the INEGI's Governing Board.

Article 68 states that the tenure of the president of the INEGI will be six years and that of the vice-presidents of the governing board will be eight years. The tenure of the president of the INEGI will commence the first of January of the fourth calendar year of the tenure of the president of Mexico The tenure of the vice-presidents of the governing board will be spread out at intervals of two consecutive years commencing the first of January of the first, third and fifth year of the tenure of the president of Mexico. The members of the governing board may be selected for the post up to two times and will hold their posts only during the designated time. The members of the governing board may be selected for the post up to two times and will hold their posts only during the designated time.

Title 3, Sections I and II of the LSNIEG make provision for the organization of the INEGI, as well as the requirements to be complied with by members of the governing board, who must be distinguished professionals in issues pertaining to statistics, geography, or economics, and who must have served for at least five years in some high-level post in the public or private sectors, or be a recognized academic in these fields.

Professional competence is the basic criterion for recruitment and promotion within the INEGI. Determination of professional competence is governed by the ESPC, which requires examinations and competitions for recruitment and promotion.

The ESPC points out that training is the process whereby public servants continue to develop the skills they need to do their jobs at the INEGI, with the aim of enhancing their performance on the job and their capacity to participate in competitions for vacancies or newly created posts.

Meetings, conferences and presentations are frequently arranged with academics from public and private universities in the country, consultants, industrial representatives, specialized journalists, central and other levels of government officials, and representatives in order to publicize every new product of the national accounts.

Publications containing national accounts results are carefully reviewed and validated by the management of the DGACN which is responsible for the dissemination of outputs, in terms of their technical aspects and the INEGI's publication standards, in order to protect the professional independence and reputation of the INEGI.

The INEGI promotes a research program among its staff to generate new data and to write articles and papers in the magazine Data and Spaces. The objective is to provide the data to users in a friendly manner.

1.1.2 Choices of sources and statistical techniques, as well as decisions about dissemination, are informed solely by statistical considerations

The choice of sources and methods is governed solely by statistical considerations and by the guidelines and recommendations made by international organizations in the form of documents and manuals.

It should be pointed out that censuses information as well as information generated by surveys are the responsibility of the Deputy General Directorate of Economic and Agricultural Censuses and the Deputy General Directorate of Economic Surveys and Administrative Records, which are responsible for ensuring quality, timeliness, and for taking account of international statistical guidelines and for the implicit costs of respondents; it follows that only information deemed relevant is requested.

Regarding information from other data sources such as state secretariats, and public and private enterprises, not canvassed by the INEGI, cooperative agreements on the provision of information are prepared, bearing in mind that such statistics should possess the characteristics of quality, homogeneity, comparability, and timeliness, which are indispensable for meeting preset release dates.

INEGI has as practice to provide methodologies and technical explanations of its measurements in publications and in its website, thereby underlining the professional independence of its staff, while observing international guidelines at all times.

It is important to mention that Article 88 of LSNIEG establishes that INEGI should define and consult publicly through the Internet the methodologies of new products or relevant changes in the regular ones before their implementation, in order to take into account users' comments and views and include the relevant ones.

The presentation of work plans and programs is governed by the INEGI Bylaws which state that specific functions of the DGACN which include planning, organizing, and identifying strategies for obtaining SCNM projects and planning and programming the development, maintenance, and validation of annual calculations for the national accounts, as well as short-term accounts.

The Bylaws mention the criteria issued by the DGEE for the purpose of conferring homogeneity upon the processes for the production of economic statistical information, as well as for the dissemination of the related data and indicators.

Decisions governing the disclosure of information are informed solely by statistical considerations as defined in the National Economic Information Subsystem—specifically, in Article 24 of the LSNIEG.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics

In the performance of its functions under the Law, and pursuant to rules for defining information that is of national interest, the INEGI is entitled to comment on errors of interpretation or misuse of statistics generated by it. In addition, it also issues press releases explaining the INEGI's position on errors of interpretation, and these are posted on the INEGI's website for public information.

Also, the Office of the President of INEGI closely monitors the specialized press and other media and prepares executive summaries that are stored electronically for internal consultation by sector of activity and by date of publication in order to comment publicly and in a timely manner on erroneous interpretations or misuse of the statistics in the media and in other fora.

1.2 Transparency

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public

INEGI website includes the text of the LSNIEG, which informs about INEGI's standards of confidentiality and professionalism of its president and Governing Board. The law can also be obtained in print in Spanish. The INEGI Bylaws are available to staff.

The LSNIEG includes the code of conduct under which official statistics are compiled and disseminated, the approval process for data dissemination, and the procedures to hire and remove the head of the data producing agency.

The INEGI website (http://www.inegi.org.mx) contains an email address to send additional requests, suggestions, and contact INEGI personnel. INEGI publications contain information on the INEGI website, its address, e-mail address, and phone number. In addition, the INEGI has a unit, Consultation Marketing Service, in charge of providing information to the public.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified

The autonomy that the INEGI enjoys guarantees that no government authority has access to its statistics before they are publicly released. Thus, no government unit or public servant has access to the data before they are published. In particular, in the case of market conditions reports, on the day they are published a note is sent to the president of Mexico and in accordance with INEGI’s market data release timetable, the reports are released to the press and general public on the date specified therein, and posted on the INEGI website.

The press releases indicate that the data have been prepared under the responsibility of INEGI, although it is not explicitly stated that approval of the results lies exclusively with the INEGI (Article 23, 24, and 59).

1.2.3 Products of statistical agencies/units are clearly identified as such

Because INEGI is an autonomous agency with respect to technical, management and, budgetary issues, and with its own assets and liabilities, the content of the system of national accounts and the national censuses, as well as price indices, are INEGI’s exclusive responsibilities, and furthermore, the term “national census” or “national accounts” may only be used by the INEGI.

Data are published in a press bulletin bearing INEGI logo and indicating clearly that the information was prepared by INEGI. At the same time, the press bulletin is posted on INEGI website, and specific information on it is posted on Facebook, Twitter, and RSS.

The INEGI has a policy of releasing its annual publications in a standard format, in which presentation, titles, colors, typography, logos, etc. are consistent. Nonetheless, some of the areas are changing to electronic publications following a set of normative guidelines for publication.

In the case of joint publications with other institutions, the contribution of each is clearly identified, indicating that data associated with the national accounts are the exclusive responsibility of INEGI. Such publications bear the logos of the participating institutions, consistent with INEGI's editorial standards. In addition, the Federal Copyright Law mandates citation of information sources when these are disclosed.

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques

Any substantive change in source data and/or methodology is announced in advance by Internet and by meetings, seminars, and in publications, which contain notes specifying the sources and methods implemented and specifying whether the data are preliminary or revised, stressing that the results may undergo changes resulting from the updating of the basic statistics. Press notes specify the changes made in publications.

In particular, when there is a change of base year, the most recent methodological standards are adopted, resulting from revisions of documents about best international practices and manuals, as occurred with the change of base year to 2008. A public campaign is undertaken before application of the changes, concerning the scope, conceptual and methodological features of the census data, price indices or the national accounts. This campaign is carried out through the Internet and by means of presentations and consulting to public and private institutions, universities and state secretariats, and depending of the type of project, it may be carried out by press and multimedia (art. 88 LSNIEG).

1.3 Ethical standards

1.3.1 Guidelines for staff behavior are in place and are well known to the staff

In light of the technical autonomy conferred upon the INEGI, it was deemed necessary to create a code of ethics to govern the standards of conduct to be complied with by all those who engage in statistical and geography-related activities within the SNIEG, including the INEGI itself. Under Article 7 of the LSNIEG, INEGI has issued a code of ethics for use within the SNIEG.

In addition, INEGI personnel are subject to standards of conduct and penalties for their noncompliance, established in the Federal Law on the Responsibilities of Public Servants as well as those set forth in the LSNIEG. Detailed specifications on the rights and obligations of INEGI personnel are established in the General Conditions of Employment on file with the "Federal Court of Conciliation and Arbitration" on February 1, 1994.

The established standards of conduct are statistical and geographical culture, quality, excellence, cooperation, lawfulness, transparency, confidentiality, equality, integrity, respect, responsibility, solidarity, commitment, learning, leadership, and accountability.

All levels of management are aware of the pressing need to ensure irreproachable conduct within and beyond the institution, and for officials and workers of INEGI to fulfill their obligations to maintain the public credibility of the information they process.

During the induction of new workers, INEGI informs them of their rights and obligations as employees and ensures that they are familiar with the organization, procedure manuals and the annual work program and its quality content.

Daily practice and the quality process within INEGI provide constant reminders of the obligation to meet existing standards.

2. Methodological Soundness

2.1 Concepts and definitions

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices

The national accounts of Mexico are based on the conceptual framework of the *System of National Accounts 2008 (2008 SNA)*.

2.2 Scope

2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices

The system of national accounts implemented by Mexico includes annual, quarterly and monthly estimates. The published series of national accounts uses 2008 as the base year.

Supply and use tables are published annually at current and constant 2008 prices, from which estimates for GDP at current and constant prices are derived, from both the production and the expenditure approaches. The lines in the supply and use tables show the origin and use of products by economic activity for 259 four digit branches of the NAICS. Series of integrated economic accounts for the entire economy and for each institutional sector, from the production account to the financial account, the revaluation account, the other volume changes account, and the opening and closing balance sheet accounts are also compiled each year and are available for the series 2003–2013. There is a project to compile quarterly sectoral accounts in order to implement recommendation 15 of the G-20 Data Gaps Initiative.

The quarterly accounts include GDP estimates at current and constant 2008 prices derived from the balancing of the supply and use tables, which served as a basis for this work and for the preparation of the symmetrical 2008 input-output matrices, in a manner similar to the annual calculations. A volume index, the "Global Indicator of Economic Activity," is a relevant short-term indicator calculated each month. This is an index of the weighted average percentage change (base year 2008) of indicators of growth by economic activity. There is also a monthly indicator of private consumption in the domestic market.

The INEGI also compiles satellite accounts on: Culture, Economy and Ecology, Non-Profit Institutions, Health, Non-Remunerated Household Work, and Tourism.

The national accounts are consistent with the *2008 SNA* in terms of the definition of units that make up the economy: these include Mexican government offices abroad, bonded areas, Mexican frontier workers and residents working abroad for less than one year. The production boundaries are also consistent with *2008 SNA* definitions, with a few exceptions reflecting data limitations.

With respect to the measurement of production for own-account consumption in the new base year 2008, it is measured by means of indirect methods through the National Survey of Household Income and Expenditure (ENIGH) and the National Survey of Occupation and Employment (ENOE), from which the pertinent inferences were made.

Production generated by illegal activities is not included completely; only prostitution is included. As required by the *2008 SNA*, own-account production of capital goods is included.

The coverage and classification of assets is in general in agreement with the *2008 SNA*. These assets include national defense expenditures on construction and equipment that may potentially be set aside for civilian use. Assets also include work-in-progress for the main agricultural products in the quarterly estimates, but only for perennial crops in the annual estimates. Lack of adequate information precludes the inclusion of valuables and historical monuments in assets. Although information on intellectual property assets such as patents, brands and industrial processes is incomplete, the 2009 economic censuses captured qualitative information on the register and development of patents and payments of royalties for using patents. Also a service activity of revenue from licensing the use of patents, brands and franchises (533110) was included to allow estimation of annual production of these services. These supply-side data were reinforced with data on payment of royalties in the annual surveys to estimate these transactions using data from the demand side.

Regarding the measurement of Intellectual Property Products for production of original literary and artistic works, it was possible to retrieve some information for the new base year 2008 on the demand side in sectors for which source data is obtained via administrative records—for instance, some decentralized federal government agencies and banks. This makes it possible to take initial steps towards measuring assets of this nature.

On the other hand, original entertainment products such as the production of movies (512111) and music recording (512210) are included. The production of computer programs (541510) was captured only when they were for sale to third parties: the production of programs for internal use within the business is not sufficiently identified. In-house research and development work is not identified separately, and expenditures on this activity are reflected in intermediate consumption for the principal activities, but INEGI staff are reviewing data from the survey of research and development carried out by own account by INEGI and the National Council for Science and Technology (CONACYT) in 2008, 2010 and 2012, in order to incorporate those results in the estimates. Mineral exploration is explicitly included in production in the case of oil and gas exploration and perforation, and a minimum estimation for mining activities.

Financial leasing has been a more common way of financing capital goods acquisition in Mexico, significant transactions within the public sector, specifically in the energy sector (Investment Projects with Deferred Impact on Expenditure) and through Financial intermediaries have been identified and included in the accounts, recording the corresponding items in the capital and financial accounts.

With respect to subsoil reserves, INEGI has produced estimates of equivalent crude oil proven reserves, but not of reserves of minerals. Water is still not measured as economic asset, but INEGI has estimated the part of land which is not occupied by buildings and structures.

2.3 Classification/sectorization

2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices

The classification of institutional units, transactions and other flows in the system of national accounts of Mexico are consistent with the recommendations of the *2008 SNA*. The classification of economic activities is based on the 2007 North American Industry Classification System (NAICS), which is a classification system prepared and adopted jointly with Canada and the United States, and has a corresponding level to the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 4.0 at two digits. The 2007 NAICS includes 1049 classes, 617 sub-branches, 304 branches, 94, sub-sectors, and 20 sectors. The INEGI is applying the 2013 NAICS in the 2014 Census and will apply it in the change of base year of the national accounts to 2013.

For the base year 2008, the classification implemented regarding products is a hybrid of census´s products and the Central Product Classification (Version 2.0.) for the coding of products and commodities consistent with international recommendations.

Household consumption expenditures are classified in accordance to the "Classification of Individual Consumption According to Purpose" (COICOP), while government consumption is classified in accordance to the "Classification of the Functions of Government" (COFOG).

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

The Mexican national accounts record all transactions at market prices prevailing at the time the transactions take place, in accordance with the valuation principles of the *2008 SNA*. Production is valued at basic prices, while intermediate consumption is valued at purchase prices, excluding the deductible portion of the value added tax (VAT). The components of expenditure on final goods are valued at purchase prices, i.e., including trade margins and taxes on the corresponding products. Production for consumption is valued at basic prices for equivalent market production in the case of services of owner-occupied dwellings, and at cost in the case of other products. In the Mexican accounts, adjustments to market prices are made when transfer pricing is detected between a parent company and its subsidiaries, particularly in the automotive industry and the oil industry. Consistent with the *2008 SNA* guidelines, total exports and imports are valued at free on board (f.o.b.) prices.

Transactions in foreign currency are converted using the mid-point exchange rate prevailing in the market at the moment they take place.

2.4.2 Recording is done on an accrual basis

Most transactions are recorded on an accrual basis. Work-in-progress is recorded for construction, industrial goods involving a long production process, and a portion of agriculture. However, agricultural work-in-progress is only recorded in the quarterly accounts, annual estimates are based on harvested crops. Annual data for government revenues include adjustments to payments in cash and in kind for devolutions and re-classifications in order to record revenues on accrual basis. Cash transactions are also adjusted to an accrual basis in the case of government expenditures. Nonetheless, quarterly government transactions are recorded on a cash basis. The survey on private services compiles rental housing data mostly on accrual basis. Private education services are consumed and paid mainly on accrual basis.

Recommendation:

Include a module on monthly/quarterly costs for the agricultural cycle (sowing, growth, and harvest) in the 2014 Agricultural Survey for important crops in order to obtain the data to calculate annually and quarterly agricultural work-in-progress.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices

Consistent with the *2008 SNA* guidelines, transactions between establishments of the same enterprise are recorded on a gross basis.

3. Accuracy and Reliability

3.1 Source data

3.1.1 Source data are collected from comprehensive data collection programs that take into account country-specific conditions

INEGI has a regular program of five-year economic censuses and monthly and annual surveys covering most economic activities. Data are collected through Tablets using pre-loaded programs that validate the data entries to carefully control the information that is uploaded to the database.

The 2009 economic censuses and the 2014 economic censuses collected data at the level of the establishments that form an enterprise. The National Statistical List of Economic Units

(DENUE) provides sampling frames for economic censuses and surveys. This list currently includes 4,410,198 establishments, and is thoroughly updated every five years with information from the economic censuses. In between economic censuses, the DENUE is updated with information from employer units registered by the Mexican Institute of Social Security and tax payer units detected by the SHCP, as well as with reports of openings and closings of establishments detected by field agents when conducting surveys by economic activity. Changes in large establishments are continuously monitored through the Large Establishments Monitoring (SEG) program, which uses data obtained from chamber organizations and producers' associations and public agencies, as well as daily monitoring of the media. In the update of 2013, 36,268 new establishments were added to the DENUE, and 27,013 closed establishments were removed.

INEGI also has a sampling frame monitoring unit used for planning fieldwork for economic censuses and surveys. The sample for these surveys is based on the sampling frame derived from the economic censuses.

The economic censuses collect data on the visible economic activity of households and establishments in areas with more than 2,500 inhabitants in 6,000 localities, 32 states and 2457 municipalities. For rural areas or areas with less than 2,500 inhabitants, a probabilistic survey is designed with populated geo-statistical areas by federal state to capture economic units in these communities. The censuses also capture a more detailed questionnaire mainly from large and medium enterprises to get data on inputs and outputs, assets, environment, and other topics.

The sampling frame includes establishments mainly from large and medium enterprises, which generate 80 percent of total output, except the ones in agriculture, livestock and forestry, passenger transport, political parties and embassies, whose data are collected from other sources. Small enterprises are surveyed every two years through the National Survey of Micro-business, which is a supplement to the National Occupation and Employment Survey (ENOE).

As noted earlier, INEGI has regular programs for surveying establishments on monthly and annual bases. The economic censuses for 2009 were one of the main data sources for compiling estimates for the base year 2008. Those censuses collected information for calendar year 2008 for all economic activities except federal, state and local government branches, and agriculture. Data for agriculture were taken from the Agriculture-Food and Fishery Information Service (SIAP)—a decentralized entity of the Secretariat of Agriculture, Livestock, Rural Development, Fisheries, and Food (SAGARPA), and the 2007 census of agriculture, which was compiled in 2008. The 2007 census of agriculture provided detailed information on land and harvests for 32 principal crops and on livestock herds.

The 2009 economic censuses collected detailed information at the six-digit level of the 2007 NAICS. Information of relevance to the compilation of national accounts included data on output and sales per product (finished goods) in quantities and values, and data on major inputs consumed, also in quantities and values, other detailed production expenses, compensation of workers, separated into wages and salaries, number of persons employed, capital formation and stock of capital by type of good, own-account fixed capital formation and inventory stocks at the beginning and end of the period, broken down by type of inventory (finished products, work-in-progress and raw materials). The 2009 economic censuses with data for 2008 were processed and used as the basis for the elaboration of supply and use tables for the new base year 2008 and to obtain balanced production and primary income accounts and employment for 2008, besides other data for reclassifying economic units as ancillary producer of services, and for developing or improving estimates on financial services indirectly measured (FISIM), insurance and intangible assets, according to the *2008 SNA*.

The annual surveys gather information on the value of output and sales at aggregated levels, not by product (this detail is available in the monthly survey). Information on intermediate consumption disaggregated by commodity is not available in the surveys, but it is available in the censuses. In addition, there are 12 disaggregated expenditure categories in the surveys, such as wrappings and packaging; fuels and lubricants; electric power consumed; spare parts and accessories; and other expenditure connected with freight paid; among others.

Other data from the annual economic surveys are similar in coverage and detail to those of the economic censuses. The annual data represent the six-digit level of the above-mentioned economic activity classification for the activities covered. The annual surveys cover manufacturing, trade, non-financial private services, transport, and construction. For the latter, only the formal sector is covered, and is complemented with data from the National Occupation and Employment Survey to measure the informal sector. The annual surveys on manufacturing collect data on inventories that, along with agriculture, crude oil and its products have being used in the compilation of changes of inventories for national accounts.

Monthly surveys are representative at the six-digit level of the classification used at the national level, but because they do not cover some activities, they must be supplemented with special research. There are monthly surveys available for manufacturing, mining, trade, non-financial private services, and construction companies. Monthly manufacturing surveys provide information on output and sales by product, in values and quantities, as well as data on compensation and persons employed, and hours worked by the categories of personnel on the payroll, whether as staff or non-staff. Nowadays, monthly surveys on non-financial services are used as pivot information for services estimates in the compilation of national accounts, a survey on domestic trade is used as structural basis for the production account, and a survey on *maquiladoras* (goods for processing) is losing respondents and representativeness, but it is conducted as a part of the Manufacturing industries.

Manufacturing and trade surveys are based on deterministic samples. In the case of manufacturing, 240 classes of activity were selected in the base year 2008, and establishments that accounted for at least 80 percent of production were identified. Surveys of construction companies and some services are probabilistic. The methods used for imputing data in the event of non response in the probabilistic surveys are generally adequate: the expansion factor is corrected.

Between 60 and 80 percent of the data from annual and monthly surveys are collected through the Internet and the rest through e-mail and establishment visits.

INEGI has a regular established program of household surveys, with varying periodicity: the National Urban Employment Survey (ENEU), which was monthly; the National Employment Survey (ENE), which was quarterly and annual, both of them until 2004; the ENOE with quarterly and monthly periodicity, with the latter beginning in 2005 and a second phase survey on national micro-business called ENAMIN; a Household Income and Expenditure Survey (ENIGH), which is conducted every two years; and non-regular surveys, such as the National Survey of Demographic Dynamics (ENDID).

The ENIGH is nationally representative, covering all geographic zones and the entire population, both urban and rural. The survey is based on a multi-stage random sample design. It provides estimates of household expenditure to a disaggregation of 700 groups of goods and services. Its results have not been widely used in the national accounts, in part because these surveys collect information only over a three-month period, from August 21 to November 28, of the reference year, instead of during a complete calendar year, and the data might have seasonality. However, a Household Expenditure Survey for the whole year was conducted in 2012 (though the INEGI website continues to refer to the three-month collection period). INEGI staff has being participating in a working group which is studying alternatives to eliminate disparities between household surveys results and national accounts estimates. They are considering carrying out a project next year to adjust and incorporate the results of the survey to the national estimates of national accounts.

Households tend to underreport income in income and expenditure surveys. The INEGI staff adjusts the reported income by a percentage of underreporting in order to avoid bias in the estimates on the informal sector and the household accounts and to reduce the statistical discrepancy between net lending from the capital account and that of the financial account.

Recommendation:

Study the results of the household surveys and the ENIGH in order to determine the extent of income underreporting and, if necessary, *adjust output, compensation of employees and mixed income of the household sector to improve coverage of the informal sector and to reduce overall discrepancies between the biennial surveys and the annual national accounts.*

INEGI receives almost complete annual data on government finance, including budgetary performance and non-budgetary expenditures of the federal government, the social security system. However, this information is not harmonized conceptually and methodologically to the IMF's Government Finance Statistics Manual 2001. Data on outcomes for revenues and expenditures of the federal government, including non-budgetary items, are obtained in detailed form from the SHCP. On the other hand, the SHCP does not provide data on finances of state and local governments, and the available data on these governments are sometimes incomplete and subject to long delays. To close this data gap, INEGI compiles statistics for "State and Municipal Government

Finance" based on information obtained directly from the finance secretariats of each entity and the government of the Federal District.

Quarterly data on a cash basis are available for the federal government only.

Recommendation:

Conduct a survey to the most important states and local governments in order to obtain timely and representative data on these institutional units.

The available quarterly data are considered adequate for compiling reliable estimates of GDP by industrial activity. As noted above, monthly surveys are conducted for manufacturing, construction, trade, and nonfinancial private services. For agriculture, forestry and fishery as well as mining, monthly information is obtained from administrative records. For the financial sector, income and financial statements are received from the BM. For services not covered by the surveys, special research projects are conducted periodically. In short, there are adequate indicators available for each economic activity at the six-digit level.

Quarterly estimates of GDP from the expenditure side are adapted to the availability of periodic information from economic surveys, foreign trade and balance of payments statistics, price indices, and administrative records. Reflecting the sources available, household consumption and gross fixed capital formation are estimated through the commodity flow approach. Although the stocks of inventories at the beginning and end of the year are investigated in the annual manufacturing survey, and for the quarterly estimates, only the goods producing industries data are used as part of QGDP by expenditure.

Recommendation:

Collect and make use of data on inventories in quarterly or monthly surveys of the wholesale and retail trade industries.

3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required

Source data reasonably approximate the concepts, definitions and scope of data required for compiling the national accounts. The high level of disaggregation in the source data allows corrections on the classifications. Valuation adjustments must be made to data from the manufacturing survey, since output values are reported at producer prices and not at basic prices. Pilot tests have been conducted to ensure that data collected will allow compilation of estimates according to international guidelines.

The coverage of total economic activities (in terms of value added) by all data sources is good since most economic activities are covered. In general, the coverage of activities within the most important industrial groups is also good (85 to 95 percent).

Economic Activity	Coverage	Non response
Agriculture	92.0	8.0
Petroleum	100.0	0.0
Mining	98.0	2.0
Manufacturing	88.8	11.2
Refining and Petrochemical	100.0	0.0
Electricity and Water	100.0	0.0
Construction	87.8	12.2
Domestic Trade	90.9	9.1
Financial Services	100.0	0.0
Non-Financial Services	89.8	10.2
Government Services	90.0	10.0

In the case of imports f.o.b, calculations for freight and insurance were allocated applying a similar method as the past change of base year; this was possible because in 2008 INEGI staff could allocate freight and insurance on the basis of tariff items, identifying various factors influencing their amount, such as the weight of the merchandise, the distance covered, and the resulting percentage rates that are being used since then. The improvement continues to be dependent on the extent to which it is possible to identify freight and insurance on the basis of tariff items from the original information source (Customs registers), in order to make a direct allocation by product or class of activity.

3.1.3 Source data are timely

In practice, the data for compiling the national accounts are received on time for use in monthly, quarterly and annual estimates. These data are supplied by other units of INEGI in accordance with a strict delivery schedule that reflects the production cycle for the national accounts. Likewise, there is no problem of timeliness with the data produced by other entities, except in the case of state and local governments. Consumer and producer price indices are now compiled by INEGI, so they are received on time, as are the farm price indices supplied by SAGARPA, the detailed foreign trade and balance of payments statistics from BM, monetary statistics.

3.2 Assessment of source data

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes

Information on sampling errors for probabilistic surveys is available, as well as on non response and imputation methods. Survey results are monitored and atypical values are clarified and/or corrected with the respondents. Surveys and censuses are audited to verify the accuracy of the individual survey data. Normally, survey data are compared with other sources where available. There are around 300 validation criteria to assess survey data that are applied by INEGI staff. Some are applied in the field at the time of the interview, some are applied in the questionnaires received thorough the Internet while the businessman is filling it, and some are applied in the applications and databases used to process the survey data.

Administrative records and other secondary sources are continuously evaluated by the national accounts compilers, who review them for consistency and accuracy and consult the sources on any inconsistencies. For international trade, there is a process for verifying consistency between foreign trade statistics, the balance of payments and customs records before they are included in the SCNM. Tariff item records are also reviewed so that temporary and definitive exports and imports can be determined and classified properly.

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources

The compilation process includes steps for verifying both the source data and the estimates, including checks for internal consistency and consistency with other sources. All estimates are carefully reviewed before publication. Results from surveys and censuses are audited to verify the validity of the data, and survey results are compared with other data sources when possible. For international trade, there is a process of checking consistency between the national accounts, the balance of payments accounts and customs data files.

When necessary, adjustments are made to source data for differences from national accounts definitions, missing observations, incomplete coverage, or differences in classifications. Adjustment procedures include imputation for missing data and benchmarking using ancillary information. However to improve these procedures, the adjustments should be based on other data from the same cluster or detailed aggregates containing similar observations to the observation that is missing. There is room for improvement in the case of deterministic (non-random) surveys, as imputation methods are not standard for all surveys and the cluster analysis technique is seldom applied.

Recommendation:

Standardize the imputation methods across surveys and apply the cluster analysis technique (the percentage change of the data from an establishment with similar size and technology in the same economic activity and geographic area, if available, if not, the percentage change of the activity class for the current period).

To improve coverage, special studies are carried out on activities for which there are no surveys or administrative records or that have recently begun to occur in Mexico. Informal sector activities are measured and included using data from household surveys and surveys of micro-businesses (ENAMIN). Nevertheless, SCNM estimates do not include illegal activities such as the manufacture and distribution of narcotics and psychotropic substances and trade and transportation of contraband because of the difficulty inherent in estimating such activities without consistent and reliable data.

Household income of employed persons in the ENOE is adjusted for under-reporting using average income levels from the ENIGH.

Imputations for missing observations or incomplete coverage are usually done by projecting forward the recent trend or by applying the rate of change of a broad aggregate.

Recommendation:

Undertake research on the need for under-reporting adjustments for data from household surveys on income from informal activities and some kinds of expenditures to reduce disparities.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques

Most source data come from surveys designed by INEGI to be consistent with national accounts definitions. Econometric estimation procedures are used for hedonic adjustment and to derive relationships for extrapolating back in time for measures introduced as part of the 2013 rebasing of the national accounts.

Production approach procedures

Production estimates are compiled separately for approximately 800 activities at the six-digit level of the NAICS 2007 classification. These are grouped into 19 sectors, 79 subsectors, and 259 branches of economic activity, which summarize total economic activities for Mexico. Correspondence with ISIC Rev.4.0 is at two digits, with some minor exceptions.

Except in cases where direct measures of output values are available, output in current prices is calculated by multiplying quantities by average prices. Constant price measures are calculated using the average price during the base year and the quantities produced during each period.

Extremely detailed supply and use tables and input-output matrices with more than 800 industries and products were compiled and balanced for the base year of 2008. In the supply and use tables, uses of imported intermediate inputs are tracked separately from uses of domestically produced inputs.

Procedures for Annual Estimates:

In the preliminary version of the annual accounts, which are published nine months after the end of the year, in the case of goods producers output volume measures for years other than the base year are calculated by multiplying base year outputs at a detailed level by the corresponding quantity indexes. For goods producers, intermediate consumption at constant prices is calculated by assuming a fixed coefficients (Leontief) technology, so that detailed constant price intermediate inputs are a fixed proportion of the volume of output. Constant price intermediate inputs are multiplied by price indexes to arrive at current price measures of intermediate inputs. Usually the price indexes are unit value indexes constructed from data on value and physical quantities of detailed kinds of industry outputs. Unit value indexes can be affected by changes in the mix of qualities included in the unit values, but they must often be used when no producer price index is available.

In the case of services, the double deflation method is employed: gross output and intermediate inputs at current prices are each deflated by Laspeyres price indexes constructed at the level of branch or class of activity or based on indexes of physical volume of relevant indicators. For government, the volume of output is derived by deflating values of properly classified expenditures by indexes of input price indexes; value added at constant prices is found by multiplying base year compensation of government employees by an index of government employee adjusted for the number of annual working days.

The revised version of the annual national accounts is published seven months after the preliminary version. Annual survey data on intermediate inputs are used to estimate these inputs in the revised annual accounts. The complete data on expenditures of state governments, rather than a sample, are also incorporated at this time.

Intermediate consumption data are compiled at the same level of detail as output, i.e., complete production accounts are prepared at the 6-digit level of the NAICS. Intermediate consumption in the base year is estimated from quantities and prices of inputs consumed in the production process, so no adjustment for holding gains on inventories of raw materials is necessary.

For estimating value added at current prices of household micro-enterprises and business services, fixed coefficients are assumed because information on changes in cost structures is unavailable.

Procedures for Quarterly Estimates:

In the quarterly accounts, a single indicator approach is used to estimate intermediate consumption because no data on uses of intermediate inputs are available. For good producers, fixed proportions are assumed between input quantities and output quantities, and the constant price measures are inflated with the appropriate price indices calculated by using the weight structure of intermediate consumption expenditure by branch/class of the previous year if possible, or the structure from the 2008 input-output table.

Techniques used to address Specific Issues of GDP Calculation:

The measures of gross operating surplus in the petroleum and mining industries reflect the legal environment of Mexico. In particular, in Mexico the government is the owner of sub-soil assets, so severance tax payments to the government for right to extract minerals and petroleum and natural gas are actually rents paid to a property owner. If severance tax payments are payments of property income to the government, then they must be treated as a use of the income arising from the industry's gross operating surplus rather than a tax that reduces gross operating surplus.

The estimates of imputed rents for owner-occupied dwellings are based on market rental prices for similar dwellings. The base-year estimate for the housing stock was obtained from the 2005 count of the population and housing and from the 2010 census of population and housing, taking into account estimates of capital formation in housing based on surveys of the construction industry. The base-year rent estimates were obtained from a detailed study using hedonic prices by type of housing, because owners' evaluations were viewed as likely to be biased. The model also includes neighborhood quality indicators and a census tract level measure of location. Estimates of the secondary and vacation residences were included. Current period estimates are made by extrapolating the base-year estimates with the housing stock index and the rent indices compiled by the INEGI. New benchmark information on the 2012 stock of housing is currently being prepared.

Financial intermediation services indirectly measured (FISIM) are calculated separately for loans and deposits using the reference rate approach. The reference rate is based on an inter-bank interest rate. In the annual accounts, flows of FISIM are measured by multiplying interest rate spreads compared with the reference rate by the average balance of loans or deposits based on the ending balances of the four quarters. The inter-bank reference rate has worked well in practice. However negative output has been recorded on loans from the Development Bank, which offers subsidized interest rates because it is government-owned.

Output of non-life insurance services is calculated as premiums plus adjusted premium supplements less a measure of adjusted claims that is based on provisions for future claims taken by non-life insurance companies. These provisions may not be a good measure of expected claims—a more robust procedure would be to model expected loss rates based on the history of claims patterns.

To identify foreign trade and production involving goods sent from abroad for processing, cases in which the exports are manufactured using almost exclusively imported inputs are assumed to represent goods for processing. This criterion is used because direct measurement of changes in the economic ownership of imported goods is not feasible. The production associated with goods sent from abroad for processing is treated as a part of the Global Manufacturing Exports Value Added (VAEMG, as a Spanish acronym), and net exports of these goods are treated as exports of services and of the domestic goods inputs used in the processing.

The output of the wholesale and retail trade industries is defined as the trade margin. The trade margin is calculated from the estimated flow of goods channeled through trade establishments. Changes in inventories held by the trade industries are not estimated.

In estimating production, the national accounts record work-in-progress for construction and manufacturing of major durable equipment that has a long production process. In the quarterly national accounts, work-in-progress is also recorded for agriculture in connection with longer-lived plants and farm animals. Annual estimates of agricultural production are, however, based on total harvested crops, with no work-in-progress carried over between years.

Inventory valuation adjustments are not estimated. They are not needed to measure output because the change in inventories plays no role in the calculation of output; in most cases, output at current prices is measured as product of physical production and average prices. Nevertheless, even if the change in inventories is not used to calculate output, it would have to be subtracted from output to estimate shipments (sales), which are needed to estimate expenditures of the users of the output using the commodity flow method. Estimates of change in inventories of raw materials based on data that are subject to an inventory valuation adjustment may also be needed to estimate intermediate inputs correctly.

Preliminary periodic estimates of values of output in current prices for manufacturing are based on extrapolation of volume indexes multiplied by price indexes. However, intermediate consumption at current prices is sometimes derived by extrapolation with indexes of values reported in the economic surveys. Note that this method of estimating intermediate consumption at current prices is not consistent with the method used to compile intermediate consumption at constant prices, which assumes fixed volume ratios between inputs and output. Nevertheless, for the revised estimates of the production accounts for manufacturing in value terms, indexes of values reported in the annual manufacturing survey for detailed inputs and output are used.

Stocks of fixed capital are estimated by the perpetual inventory method using linear depreciation schedules. This requires keeping track of vintages in the capital stock, because in the linear depreciation model the rate of depreciation is an increasing function of the age of the asset. (Geometric depreciation is a more common international practice, it does not require keeping track of vintages and because it yields consistent estimates of capital services for purposes of measuring multi-factor productivity.) Estimates of consumption of fixed capital are produced along with the estimates of the capital stock. The estimates of the consumption of fixed capital cover the entire economy except for a large portion of general government. For general government, consumption of fixed capital is estimated only for the social security subsector. As a result, estimates of government output are underestimated.

Recording is on an accrual basis. There are a few exceptions, however, most notably the government sector in the quarterly accounts. On the other hand, improved methods have been introduced in the quarterly accounts for the real estate, rental and leasing industry to measure its output in way that reflects accruals rather than cash. Instead of deflating the rentals that are actually paid by the price index of the rentals (consumer price index (CPI)) for dwellings and the producer price index (PPI) for commercial buildings), output is now estimated with a volume indicator of rental dwellings. If the dwellings are occupied, then a service is provided.

Recommendation:

In calculating FISIM, include the opening balance in the average stock of loans or deposits. In the case of subsidized loans from the Development Banks, measure the output of FISIM based on arms-length rates charged on similar loans to calculate subsidy on the interest rate and record a current transfer from the Development Bank to the government to cover the cost of the subsidy to the borrower.

Procedures for compiling volume measures of GDP:

Output estimates at constant prices are generally obtained by extrapolation of production value from the base-year, using a Laspeyres-type volume index with a 2008 base. These indices are constructed from detailed monthly output data derived from economic surveys, and average product prices in the base year. The estimates of the indices of production volume are calculated using the information supplied by the Monthly Industrial Survey with a lengthy list of products differentiated at the level of 231 classes of activity—this catalogue is based on the results of the 2009 economic censuses and is revised annually, incorporating new products or discontinuing those products which respondents no longer report.

Quarterly and preliminary annual accounts estimates of intermediate consumption at constant prices for goods-producing industries are obtained by assuming fixed-input ratios from the base year. In the case of services, a double indicator method is used, deflating intermediate consumption at current prices with a Laspeyres price index, although at a sufficiently detailed level by branch of activity. In the definitive annual accounts, intermediate inputs are directly estimated from source data.

Government output is obtained by the sum of production costs at constant prices, where compensation of employees is calculated by extrapolation with an employment index, and intermediate purchases are deflated by corresponding price indices.

The volume index of net taxes on products is assumed to be identical to the volume index of value added for the entire economy. This is inconsistent with internationally accepted practice, where tax rates for the base year are applied only to transactions subject to taxes/subsidies.

On the other hand, trade margins at constant prices are calculated using an appropriate procedure by applying the pertinent rates for the base year to the volumes of transactions channeled through trade on a detailed basis.

GDP estimates at constant prices have a fixed 2008 base, from which Laspeyres-type GDP volume indices are derived. The base year is updated every five years.

Detailed estimates of intermediate consumption are not available annually, but full supply and use tables and input-output matrices are available for the base year. Available levels of detail for the 2008 supply and use tables include 79 subsectors, 259 branches of economic activity and 783 activities. Annual supply and use tables are not produced because of a lack of estimates of intermediate uses by industries of their own output. Nevertheless, a full supply and use table for 2012 is being developed.

Expenditure approach procedures

Independent estimates are made for household consumption, gross fixed capital formation. Household consumption and gross fixed capital formation are estimated by the commodity flow approach at the most detailed level possible.

For consumption, data on coefficients of transformation of food products, on mark-ups, and on consumption per capita and consumer expenditures are used in this process. One use of these data is to exclude consumption of foreign visitors while in Mexico and to include consumption abroad of residents of Mexico. Data on consumption patterns of food products, health and education from household surveys are also used to develop controls for the estimates of these items.

Estimates of household consumption expenditure are produced—but not published—at detailed levels at the six-digit level of the activity classification for the domestic component and for imports. Household consumption expenditure is classified by the COICOP categories, including its broad categories of durable, semi-durable, and nondurable goods.

Government consumption is calculated as government output less incidental production of market goods and services. Government consumption expenditure is classified in accordance with the COFOG. Gross fixed capital formation is compiled by economic branch of origin, type of good and by institutional sector.

Estimates of gross fixed capital formation include intangible capital assets from research and development, mineral exploration, software and databases, artistic and entertainment originals, and intellectual property products. In the case of the petroleum industry, exploratory wells are included in mineral exploration investment.

Change in inventories for manufacturing, changes in assets by type, royalties and lease payments are measured based on data from annual surveys of manufacturing. Administrative data on physical advances in public works (Avance Físico y Financiero de la Obra Pública) are used to measure construction by type, and work-in-progress on government construction projects.

The volume index for net taxes on products is based on the volume index for GDP; a deviation from best practice.

Estimates of household consumption at constant prices are obtained by extrapolation using the detailed volume indices of output or sales (shipments) for the domestic component and by deflating the imported component of expenditure by unit value indices for the respective imports. Exports of goods and services at constant prices are obtained by deflating current values with suitable output price indexes, and other price indexes for international or North American markets. For deflating imports, unit value import price indexes or international or North American market indexes are used. Imports of goods are deflated with appropriate price indices for each class of activity.

Government final consumption at constant prices is obtained by the sum of production costs at constant prices, where compensation of employees is calculated by extrapolation with an employment index, and intermediate purchases are deflated by corresponding price indices.

Specific techniques for quarterly compilation

Estimates of quarterly GDP at current prices are prepared for 668 classes of activity and published for 171 classes of activities. These classes have data on production value or output value of services, and these are used to prepare value indices on the basis of which base year production is extrapolated; for those classes lacking information on current values, such information is estimated on the basis of constant production values, using representative price indices for the activity in question.

Quarterly intermediate consumption at current prices is estimated by using the input-output ratios from the annual calculations from the previous year or, in some cases, by estimating the ratios to be applied in the current year with the value changes reported in the surveys for classes related to the main inputs. This can occur even if data on intermediate consumption are available from some monthly surveys.

For benchmarking quarterly series to annual totals, the Denton interpolation technique is used. The Denton technique is applied to output and intermediate consumption at the level of class of economic activity, and value added at current prices is then obtained as a residual. The system for benchmarking generates original (not seasonally adjusted) estimates.

One problem in benchmarking procedures for the quarterly accounts is that, agriculture is not benchmarked to the annual data since the agricultural work-in-progress is estimated quarterly but not in the annual estimates. Another is that the average benchmark-to-indicator ratio (BI) of the previous year is used for aligning quarterly estimates to annual data instead of the BI of the fourth quarter of the previous year. Using the BI ratio of the fourth quarter is recommended in the IMF's Quarterly National Accounts Manual (Annex 6.2) to avoid a step problem in the first quarter. Although INEGI has found that in empirical tests both methods usually give similar results, the theoretically correct method can be presumed to be more reliable.

Seasonally adjustment of data for quarterly GDP is done using the X12-ARIMA (Autoregressive Integrated Moving Average model) software from the US Census Bureau. The adjusted series take calendar and public holiday effects into account. Monthly time series for 16 activities in the Global Indicator of Economic Activity (IGAE) are also seasonally adjusted using X12-ARIMA.

Each time series is adjusted for seasonality independently. As a result, seasonally-adjusted series can have discrepancies over time between the months and the quarters, and also in the cross section between the sum of the components of an aggregate and the direct measure of the seasonally-adjusted aggregate. An inter-institutional working group on seasonal adjustment (BM, SHCP, SE and INEGI) has been established to improve communication with users of the national accounts concerning this issue and other issues in seasonal adjustment. However users (such as BM) continue to be concerned about these inconsistencies and the seasonal adjustment processes in general.

Recommendations:

In the quarterly accounts, develop methods to measure quarterly government consumption on an accrual basis and to make sure that estimates of government investment reflect changes in work-in-progress.

Include questions on intermediate inputs in monthly surveys of manufacturing industries to improve the quarterly and preliminary annual estimates of intermediate inputs.

Develop complete estimates of consumption of fixed capital (CFC) for general government. Include the CFC expense in the measure of government output and the measure of output of nonmarket producers whose output is based on expenses.

Estimate changes in inventories for raw materials and the trade industries, and collect quarterly data on changes in inventories. Incorporate inventory valuation adjustments into procedures for making current price estimates of production or expenditures, as appropriate.

Apply either volume indexes for each type of good or import subject to taxes and subsidies on products to separate base year estimates of the net tax from each type of good or import, or estimate volume measures of taxes/subsidies on products by applying base-year-tax rates to the volume of transactions subject to a specific tax/subsidy.

In the annual accounts for agriculture, develop estimates of carry-over work-in-progress for short-lived crops with the help of improved annual survey procedures. This will allow agriculture to be included in the benchmarking of the quarterly to the annual data.

Use the BI ratio of the fourth quarter of the previous year to avoid a step problem in the first quarter.

Design seasonal adjustment procedures to minimize inconsistencies between seasonally adjusted estimates. The identification of outliers and other assumptions and options used in estimating seasonal factors should be consistent in the aggregate and the time series that it comprises. Important decisions made in estimating the seasonally-adjusted series and economic meaningfulness of the results from *the seasonal adjustment process should be reviewed for reasonableness by an economist with expertise in national accounts. Improving communication with key users of the accounts concerning seasonal adjustment procedures and outcomes should be a priority.*

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable

The source data used in national accounts compilation are compared with alternative data, whenever possible. For example, farm prices supplied by SAGARPA are checked against PPI prices compiled by the INEGI, and foreign trade records. For checking consistency with related data sources, comparisons are made with alternative information sources that show correlation with the observed variables in levels or in trends. In particular, for manufacturing industry, information originating from surveys is compared with data supplied by chambers of producers and producers associations and foreign trade statistics. Some examples of external data sources used for validation are reports from: the Tequila Regulation Council (Consejo Regulador del Tequila), the Chamber of the Cement Industry, the Chamber of the Iron and Steel Industry, the Automobile Industry Association, National Association of Producers of Tractor-Trailers, and the National Association of Self-Service and Department Stores. Similarly, financial information originating from public entities and enterprises is compared with the Account of the Federal Public Treasury, among others. Intermediate results from surveys are validated against historical information and by obtaining basic relationships between related variables, such as input-output ratios, relative participations, and comparative analysis of growth of volume and implicit prices, with similar activities on national producer index.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Wherever necessary, discrepancies affecting the variables are investigated and measures are taken to eliminate them.

The surveys use a validation model that makes it possible to detect statistical discrepancies or inconsistencies, which are investigated directly by checking against information sources. In the cases of administrative records and accounts, data providers may be asked to clarify the interpretation of the numbers and the transformations needed to obtain concepts appropriate for national accounts.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated

The supply and use framework is used to identify potential problems and discrepancies in the GDP data. Detailed supply and use tables (with 783 classes of activity in the base year) can be used to distinguish whether discrepancies can be traced to the original source data or come from the adjustments to these data. Since 2013 estimates of changes in inventories have been calculated directly by activity, allowing the national accounts to show a statistical discrepancy between GDP estimates by economic activity using the production approach and GDP estimates by expenditure component using the expenditure approach. Sources of any large discrepancy are investigated. Estimates are compared with data from other countries, and with private sector estimates if available.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out routinely and used internally to inform statistical processes (see also 4.3.3)

The national accounts office watches for differences in the trend and magnitude between preliminary and definitive data that have been caused by revised or new information in data sources. Studies of revisions identify the sources of any discrepancy, and appropriate adjustment mechanisms are used. The studies are not published, but the sources of the most significant differences are disclosed in accordance with the data revision policy.

The results of research on revisions in data compilation have made national accounts compilers aware of the need to work more closely with respondents and the sources of basic statistics, in order to improve the content, quality, timeliness, disaggregation, coverage and concepts of basic statistics in subsequent periods, and thereby enhance the reliability of the calculations.

Although revision studies are conducted, findings are not used to improve methods for making preliminary estimates including the detection of bias. Studies of major revisions as the change in base year are made.

Recommendations:

A survey of users of the accounts conducted by INEGI and discussions with users showed a strong demand for specific explanations for revisions. Include a discussion of the sources of the largest or most important revisions in press releases presenting revised estimates. If a longer investigation is needed to determine the cause for a large revision, the research findings should be reported when they become available.

Besides investigating sources of individual revisions that are especially large, investigate the presence of any systematic biases in the preliminary estimates in analytical studies of revision histories.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards

GDP estimates are compiled quarterly and annually and are in compliance with the requirements of the Special Data Dissemination Standards (SDDS) in terms of coverage, periodicity, timeliness, and dissemination of advance release calendars to meet users' needs.

4.1.2 Timeliness follows dissemination standards

Having subscribed to the SDDS, Mexico meets the requirements of periodicity and timeliness for the quarterly accounts, and in fact exceeds those requirements. Quarterly GDP estimates by economic activity at constant prices and current prices are published 52 days after the end of the reference period. Preliminary estimates of annual goods and services accounts are published within nine months of the end of the year and preliminary estimates of institutional sector accounts are published within 11 months of the end of the year. The revised versions of these accounts are published 16 and 18 months after the end of the year, respectively. Complete supply and use tables were published for 2008, and similar tables will be published for 2012.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset

GDP estimates are derived from the balances in the supply and use tables, and consistent estimates of the breakdowns of GDP by economic activity and by final expenditure component are also derived from these tables. The expenditure estimates are calculated based on the flow of commodity approach and take into account data on changes in inventories in manufacturing, mining and petroleum industries as well as estimates of work-in-progress.

Quarterly GDP estimates are mainly consistent with the annual estimates, since both use the same concepts, definitions and classifications. The source data and compilation methods are also similar, except in the case of agricultural activity. Agricultural work-in-progress is estimated quarterly, but not in the annual figures except for developing tree plantations and perennial crops; annual estimates for agriculture are based on the harvested output of all products, except for trees and perennial crops.

The quarterly data are adjusted to annual values so that the sum of the quarters coincides with the annual figure, with the exception of agriculture. Any discrepancy that exists between annual rates of change in GDP and the corresponding rate of change in the four-quarter totals is insignificant, no more than a tenth of a percentage point.

Although the original (not seasonally-adjusted) series are all consistent, seasonal adjustment is not done in a way that ensures consistency between all the seasonally-adjusted series. As a result, small inconsistencies can be introduced in the seasonally-adjusted versions of GDP and its components.

In the integrated accounts, a discrepancy between the alternative measures of net lending can be expected because of the use of different source data in the current and capital accounts and the financial accounts. The discrepancies between the alternative estimates of net lending in the integrated accounts are, however, large enough to be a matter of concern.

Recommendations:

Calculate balanced supply and use tables that show uses by industries of inputs produced by other industries on a yearly basis to verify the internal consistency of the accounts.

Investigate inconsistencies between the capital accounts and the financial accounts to spot their specific causes and identify ways to reduce their magnitude.

4.2.2 Statistics are consistent or reconcilable over a reasonable period of time

Mexico's national accounts series are consistent over long periods of time. The current series, with base year 2008, includes estimates from 1993 to the most recent period (2013 in the case of the annual series). When the base year is changed, historical revisions are made to the series to keep them consistent over long-time periods: for example, in the recent change of the base year the quarterly series were recalculated backwards to 1993; for the base year 2003, the series underwent backward extrapolation to 1993 and for the base year 1980, the series were recalculated backwards to 1960. Historical revisions of the series are also undertaken when new data become available from the economic and population censuses, and when revisions are made to the source data or to other statistical systems that provide input for the national accounts. The revisions and their rationale are explained in the publications.

4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks

The national accounts statistics are reconcilable with statistics on the balance of payments, and the net lending/borrowing figure in the national accounts coincides with the current account balance in the balance of payments, plus capital transfers.

Discrepancies exist between data on general government saving and investment in the national accounts and those in the government finance statistics. These discrepancies may be due to the fact that the sector is covered more broadly in the national accounts.

There is no reconciliation/harmonization process of the flow of funds table compiled by INEGI and that on the financial sector compiled by BM. The treatment of the oil stabilization fund is not consistent across data sets. Regular meetings to reconcile across datasets are not undertaken. However, after the IMF Technical Assistance Mission on sectoral accounts of July 2014, an agreement was made between INEGI and BM to work together more closely and evaluate the mechanisms to share with INEGI the financial reports that BM provides to the IMF.

Recommendation:

To provide a specific explanation of the difference between general government saving and investment in the national accounts and the deficit and investment published by the Ministry of Finance, a *reconciliation showing the sources of differences should be prepared jointly by INEGI and the Ministry of Finance.*

4.3 Revision policy and practice

4.3.1 Revisions and/or updates follow a regular and transparent schedule

Mexico follows an established and stable cycle for producing and revising the national accounts, and this is public knowledge. A release calendar is prepared each December for the following year, and is publicized through the media and on the INEGI website. When the annual data-based estimates are published at the end of the year following the reference period, estimates for the preceding two years are generally revised, as are quarterly estimates for those years and for the current period. Quarterly estimates for the current year are also revised when data for a new quarter are published. New publications containing the results of the change in base year have incorporated comments on substantive differences from one series to another, in addition to showing improvements in the estimates. For any extraordinary revision outside of the regular cycle, an explanation is published. The SCNM now has an established cycle of major revisions every five years, which complies with international standards.

4.3.2 Preliminary and/or revised data are clearly identified

The introduction to each publication explains that the data for the last two years are preliminary and subject to revision. The preliminary nature of the figures is indicated in the tables, on the covers of the publications, and in the publicly accessible Economic Information Database of the INEGI.

4.3.3 Studies and analyses of revisions are made public (see also 3.5.1)

Revisions to historical series, as in the case of changes to the base year, are documented and the explanation of differences from previous series is widely publicized. Although revisions are investigated on an ongoing basis during a change of base year, revision studies are generally focused on keeping users informed of key impacts in the calculations for subsequent periods.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts)

The annual national accounts statistics are published in tables containing absolute values, together with supplementary tables that include percentage compositions and percentage changes, volume indices, productivity indices and implicit price indices. In addition to supplementary tables, the short-term statistics offer graphs and seasonally-adjusted or trend-cycle series to facilitate analysis.

The presentation, the disaggregation and the classifications of SCNM statistical product series are maintained over time in order to facilitate identification, comparison and consultation by users. The degree of detail in the variables depends on the type of product offered and its periodicity. Although very detailed annual estimates are compiled and published for activities, for products and expenditures the published level of detail is not sufficient for many types of analysis. However, additional details are available by means of an institutional request, if their release would not jeopardize confidentiality.

The results of SCNM statistical products are published with a press release describing the principal results for the period under study.

The timing and level of detail of publications of SCNM statistical output vary. Statistical products are presented in monthly, quarterly and annual series and with national and regional geographic coverage and are supplemented by satellite accounts.

GDP and Total Supply and Demand are published quarterly. Industrial Activity, Gross Fixed Capital Formation (for the national total); Manufacturing Output and Power Generation and Supply for the Federal States and by economic activity are published monthly.

The following are published annually: Goods and Services Accounts; Institutional Sectors Accounts; Gross Domestic Product by Federal State; Macroeconomic Indicators for the Public Sector; Current and Accumulation Accounts; Production Accounts by Purpose for State Governments; System of Economic and Ecological Accounts of Mexico; and satellite accounts for health, tourism, nonmarket work of households, and nonprofit institutions serving households.

INEGI makes available a directory of all SCNM statistical products, listing titles, series, variables, content, and year of publication.

The following national accounts series are also published on a seasonally-adjusted basis: quarterly gross domestic product, industrial activity, global indicator of economic activity, quarterly supply and demand components, and gross fixed capital formation (as a monthly index); and manufacturing output and electricity generation and distribution by federal state and by economic activity.

Recommendation:

Publish more detailed information on products and on expenditures of households as estimated in the framework of the national accounts.

5.1.2 Dissemination media and format are adequate

Statistics are published simultaneously through a press release and at the INEGI website, in full text PDF format. Hardcopy is subsequently released for annual publications.

Statistics can also easily be downloaded from the website as Excel spreadsheets, or in other formats, and key current statistics are displayed both in tables and in charts. However, downloading long time series can be difficult, and users reported frequent difficulty in locating the series that they are looking for. Also, different ways of entering the website in search of the same information can take the user to different places, and some searches bring up only the 2003 base year of the national accounts. There are two places in the website that present data on national accounts and this confuses users. Also, some data, for example the sectoral accounts, are difficult to locate.

Printed publications with annual series for the base years 1970, 1980, 1993, and 2003 are offered for sale at a nominal price. The 2003 base version is currently available and is disseminated in PDF format, accompanied by the Excel version for statistical tables and methodological texts, in Word to make it easier for users to consult data located on the website, and in the Economic Information Bank (BIE).

Special requests from users are also handled. Short-term calculations are available in the Market Statistics Information System (SIEC) and in the BIE, on the INEGI website.

Nonetheless, national accounts series are sometimes hard to locate on the website, and non-expert users may not even be aware of what is available.

Recommendations:

The website functionality should be improved, and an index by keyword of the available SCNM series should be available on the website. Significant newly available data should receive additional publicity.

5.1.3 Statistics are released on a preannounced schedule

A "Market Information Release Calendar" is now published over the Internet, a calendar for the coming year is published each December, and revision is undertaken one month before the beginning of the quarter in question. The calendar is also disseminated in the form of an information bulletin. Release dates for all series of national interest are on the calendar.

All annual statistical products of the SCNM intended for recurrent publication are recorded in the INEGI publications program. In addition, there is a site on the INEGI website known as the "Press Room" (Sala de Prensa) where the release calendar is located, as are the press releases and information notes which the INEGI provides to the entire user community.

Nevertheless, the seasonally adjusted series are not always released on a preannounced schedule.

Recommendation:

Establish and announce a schedule for publishing the seasonally-adjusted data.

5.1.4 Statistics are made available to all users at the same time

The data are disclosed at the same time to all users, on the date established in the Market Information Release Calendar, at 8:00 AM.

On publication day, a note is sent at the same time to the Office of the President of Mexico. The data are published in a press bulletin bearing the logo of INEGI, which spells out the main results, including texts explaining the corresponding indicator, user notes, methodological notes, and the main information sources; it is also emphasized that the information provided was prepared by the INEGI itself.

Regular annual publications are also released at the same time to all interested users, at the dates stipulated in the internal release calendar.

5.1.5 Statistics not routinely disseminated are made available upon request

The DGACN has a general policy of providing only published information, to which specific aggregations may be added; upon specific and formal request, data can be provided at greater levels of detail, as long as they do not violate the principle of confidentiality, and the information is prepared in accordance with a specific request made through formal channels. Micro data sets (stripped of identifying information) are also available. Finally, there is a program for researchers with an approved research proposal to visit INEGI and to access its data bases, subject to the requirement that no confidential data can leave the worksite at INEGI.

Data users have many options for contacting INEGI. One is the free serve site—Customer Service—which is to be found on the INEGI's website, where information requests and queries are channeled. There is also a communications media service directory. Additional options for consulting the information produced or disseminated by INEGI are national or international telephone lines (free of charge); some of the data are made available to users for consultation via cell phone.

All services connected with the supply of information and the information thus provided are free of charge. All publications mention that users may receive information on methodological and conceptual issues over and above the published information.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated

The metadata for each of the indicators are available at the INEGI website and in printed publications, where methodological details are shown providing the main information sources and general calculation methods used.

Methodological summaries for the SDDS and OECD metadata for certain economic indicators are prepared in accordance with each agency's specifications, and are updated as changes are introduced.

5.2.2 Levels of detail are adapted to the needs of the intended audience

Brochures and tri-folds have been prepared and published on the national accounts, and a summary table of statistical series is included at the end of the regular annual publications.
Most SCNM publications include a section with information on sources and general methods for the production accounts, supply and use tables, and institutional accounts, which is updated regularly.

A reference is available that has concise descriptions of the principal concepts in the national accounts called the "The ABCs of the System of National Accounts of Mexico." In addition, ABCs for the goods and services account and the institutional sectors accounts are being prepared and are scheduled to be published in 2014.

The documentation in the metadata covers basic concepts well but gives insufficient detail on actual methods of calculation to meet the needs of more sophisticated users of the accounts

Recommendation:

Providing detailed information on calculation procedures, either in the metadata documents or in analytical background papers or working papers will help users to understand and interpret the data.

5.3 Assistance to users

5.3.1 Contact points are publicized

The INEGI website, and also some publications, provides the area, e-mail, telephone number and address of persons responsible for preparing the data presented, and the telephone number and e-mail of the public service section of INEGI. Users receive personalized attention at the INEGI's Consultation and Marketing Centers (CCCINEGI) and in the national accounts office.

Publications include a list of related or supplementary information on their back page. The customer service area records comments and information requests of users of the CCCINEGI, as well as those that arrive by email at atencion.usuarios@inegi.org.mx, and routes users' questions to the relevant area for response. Responses are monitored by customer service to make sure that questions have been addressed in a timely and satisfactory manner. All user enquiries are responded to within 78 hours. Responses to the most common questions on national accounts are not available.

Recommendation:

Post responses to the most common questions on a national accounts "frequently asked questions" (FAQ) page.

5.3.2 Publications, documents, and other services, including information on any charges, are widely available

INEGI publishes a catalog of products and services, and this is updated annually. It is organized by topic, and each title contains a brief description of its contents. Product catalogs are available in hardcopy and online, and the price of each item is indicated clearly for the services rendered and direct sale on line.

Products and services are offered for sale by specialized personnel at the CCCINEGI. Order forms are easy to use and contain user-friendly instructions.

Besides its publications and website, INEGI provides information to users via You Tube, Twitter, Facebook and RSS feeds. There are also 45 Information Centers of INEGI scattered around the country and a toll-free numbers for users to call.

Table 1. Data Quality Assessment Framework (July 2014): Summary of Results for National Accounts

(Compiling Agency: National Institute of Statistics and Geography)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria

Element	**NA**	**Assessment**				**Comments**
		O	**LO**	**LNO**	**NO**	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources			X			Resources are limited to conduct the Agricultural Census and the National Survey of Micro-Business as well as to compile seasonally-adjusted data for economic series. Thirty-two percent of the staff is on contract, which may affect the continuity of important projects if these contracts are suddenly not renewed.
0.3 Relevance		X				
0.4 Other quality management						
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			Quarterly government transactions are recorded on a cash basis. Annual estimates for agriculture are based on harvested output and work-in-progress is not recorded although some attempt is made to record work-in-progress for permanent crops.
3. Accuracy and reliability						
3.1 Source data			X			State and local government data are incomplete and not timely.
3.2 Assessment of source data		X				

3.3 Statistical techniques			X			Method for estimating volume of taxes on products deviates from international standards; changes in inventories exclude raw materials and trade industries. The average benchmark-to-indicator ratio of the previous year is used to estimate the following year; a deviation from best practice. No treatment of interest subsidies through the development bank is made in the accounts. Imputation methods for all surveys are not standard and the cluster analysis technique is seldom applied.
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			Revision studies are conducted, but findings are not used to improve methods for making preliminary estimates . Studies of major revisions as the change in base year are made.
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency			X			Government statistics do not appear to be reconcilable with government finance data, because of differences of basis of recording and netted terms, and no reconciliation study has been published.
4.3 Revision policy and practice			X			Specific explanations of significant revisions are usually provided but without enough evidences, and revision studies are rarely published, except in the case of the change in the base year.
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility			X			Methods of calculation are explained in general terms, but not at the level of detail needed to understand the specifics of the data sources and procedures.
5.3 Assistance to users		X				

Appendix I. Summary of the Special Data Dissemination Standard (SDDS)

Data dimension (coverage, periodicity, and timeliness)

- The dissemination of 18 data categories, including component detail, covering the four main sectors (real, fiscal, financial, and external) of the economy, with prescribed periodicity and timeliness.

Access dimension

- The dissemination of advance release calendars providing at least a one-quarter advance notice of approximate release dates, and at least a one-week advance notice of the precise release dates; and
- The simultaneous release of data to all users.

Integrity dimension

- The dissemination of the terms and conditions under which official statistics are produced and disseminated;
- The identification of internal government access to data before release;
- The identification of ministerial commentary on the occasion of statistical release; and
- The provision of information about revision and advance notice of major changes in methodology.

Quality dimension

- The dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- The dissemination of component detail and/or additional data series that make possible cross-checks and checks of reasonableness.

- SDDS subscribers are required to:
- Post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the DSBB; and
- Maintain an Internet website, referred to as the National Summary Data Page (NSDP), which contains the actual data described in the metadata and to which the DSBB is electronically linked.

- The IMF staff is monitoring observance of the standard through NSDPs maintained on the Internet. Monitoring is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

- Source: http://dsbb.imf.org.

Appendix II. Data Quality Assessment Framework—Generic Framework (July 2014 Framework)

Quality Dimensions	Elements	Indicators
0. Prerequisites of quality	**0.1 Legal and institutional environment**—*The environment is supportive of statistics.*	0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified. 0.1.2 Data sharing and coordination among data-producing agencies are adequate. 0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only. 0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.
	0.2 Resources—*Resources are commensurate with needs of statistical programs.*	0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs. 0.2.2 Measures to ensure efficient use of resources are implemented.
	0.3 Relevance—*Statistics cover relevant information on the subject field.*	0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.
	0.4 Other quality management—*Quality is a cornerstone of statistical work.*	0.4.1 Processes are in place to focus on quality. 0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program.
1. Assurances of integrity *The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.*	**1.1 Institutional integrity**—*Statistical policies and practices are guided by professional principles.*	1.1.1 Statistics are produced on an impartial basis. 1.1.2 Choices of data sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations. 1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.
	1.2 Transparency—*Statistical policies and practices are transparent.*	1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public. 1.2.2 Internal governmental access to statistics prior to their release is publicly identified. 1.2.3 Products of statistical agencies/units are clearly identified as such. 1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.
	1.3 Ethical standards—*Policies and practices are guided by ethical standards.*	1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

Quality Dimensions	Elements	Indicators
2. Methodological soundness *The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.*	**2.1 Concepts and definitions**—*Concepts and definitions used are in accord with internationally accepted statistical frameworks.*	2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.
	2.2 Scope—*The scope is in accord with internationally accepted standards, guidelines, or good practices.*	2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.
	2.3 Classification/ sectorization—*Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.*	2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.
	2.4 Basis for recording—*Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices*	2.4.1 Market prices are used to value flows and stocks. 2.4.2 Recording is done on an accrual basis. 2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.
3. Accuracy and reliability *Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.*	**3.1 Source data**—*Source data available provide an adequate basis to compile statistics.*	3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions. 3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required. 3.1.3 Source data are timely.
	3.2 Assessment of source data—*Source data are regularly assessed.*	3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.
	3.3 Statistical techniques—*Statistical techniques employed conform to sound statistical procedures.*	3.3.1 Data compilation employs sound statistical techniques to deal with data sources. 3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.
	3.4 Assessment and validation of intermediate data and statistical outputs—*Intermediate results and statistical outputs are regularly assessed*	3.4.1 Intermediate results are validated against other information where applicable. 3.4.2 Statistical discrepancies in intermediate data are assessed and investigated. 3.4.3 Statistical discrepancies and other potential

Quality Dimensions	Elements	Indicators
	and validated.	indicators or problems in statistical outputs are investigated.
	3.5 Revision studies—*Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.*	3.5.1 Studies and analyses of revisions/and or updates are carried out routinely and used internally to inform statistical processes (see also 4.3.3).
4. Serviceability *Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.*	**4.1 Periodicity and timeliness**—*Periodicity and timeliness follow internationally accepted dissemination standards.*	4.1.1 Periodicity follows dissemination standards. 4.1.2 Timeliness follows dissemination standards.
	4.2 Consistency—*Statistics are consistent within the dataset, over time, and with major datasets.*	4.2.1 Statistics are consistent within the dataset. 4.2.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.
	4.3 Revision policy and practice—*Data revisions follow a regular and publicized procedure.*	4.3.1 Revisions and/or updates follow a regular and transparent schedule. 4.3.2 Preliminary and/or revised/updated data are clearly identified. 4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).
5. Accessibility *Data and metadata are easily available and assistance to users is adequate.*	**5.1 Data accessibility**—*Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.*	5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and format are adequate. 5.1.3 Statistics are released on a preannounced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Statistics not routinely disseminated are made available upon request.
	5.2 Metadata accessibility—*Up-to-date and pertinent metadata are made available.*	5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience.
	5.3 Assistance to users—*Prompt and knowledgeable support service is available.*	5.3.1 Contact points are publicized. 5.3.2 Publications, documents, and other services, including information on any charges, are widely available.

Appendix III. User's Survey

Summary of results of survey of data users

- To enrich the basis for the assessment, the mission elicited the views of selected users of national accounts statistics. With the assistance of INEGI, a users' survey was conducted (with 26 respondents), and meetings were held with selected users. Most users were satisfied with the coverage, methodological soundness, accessibility, and frequency of national accounts statistics. Most respondent found it easy to access data. However, they identified some areas where there is scope for improvement. It appears that the data on local and state governments are incomplete and present long lags. There are also long lags in the release of the seasonally-adjusted data on quarterly GDP and there are inconsistencies in these data (monthly, quarterly and annual), and there is lack of availability of sufficient long time series data, lack of timeliness of the indicator of quarterly regional gross domestic product in some instances, insufficient information about significant revisions, and lack of quarterly levels of regional gross domestic product and regional fixed capital formation as well as on stock of fixed capital.

- In addition, on website design some users expressed difficulty in finding primary sources and specific information on metadata. Also, there are two sites with data on national accounts. Some users expressed an interest in more detail and in longer time series on national accounts, in explanations on significant data revisions, and emphasized the need for data on regional GDP.