



URUGUAY

REPORT ON THE OBSERVANCE OF STANDARDS CODES—DATA MODULE

February 2014

This Report on the Observance of Standards and Codes—Data Module for Uruguay was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on January 23, 2014. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Uruguay or the Executive Board of the IMF.

The Response by the Authorities to this report and the Detailed Assessments Using the Data Quality Assessment Framework (DQAF) are also included.

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International Monetary Fund
Washington, D.C.



URUGUAY

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

January 2014

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

The datasets covered in this report are national accounts and consumer and producer price indices. The agencies that compile the datasets assessed in this report are the Central Bank of Uruguay (CBU) and the National Institute of Statistics (NIS), respectively.

The datasets to which this report pertains can be accessed in print and on the Internet:

CBU (<http://www.bcu.gub.uy>)

NIS (<http://www.ine.gub.uy>)

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 August 20 to August 31, 2012 and publicly available information. The mission team comprised Kimberly Zieschang (Chief), Lisbeth Rivas (National Accounts Advisor for the IMF Central America, Panama, and the Dominican Republic Technical Assistance Center), and Marc Prud'Homme (Expert).

Uruguay is a member of the Mercado Comun del Sur (MERCOSUR) or Common Market of the South, which comprises Argentina, Brazil, Uruguay, and Venezuela.

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Glossary

1993 SNA	<i>System of National Accounts 1993</i>
2008 SNA	<i>System of National Accounts 2008</i>
CBU	Central Bank of Uruguay
CPA	Classification of Products by Activity of the European Union
CPC	Central Product Classification
CPI	Consumer Price Index
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
DQAF	Data Quality Assessment Framework
ESA	Economic Statistics Area, CBU
ISIC	International Standard Classification of All Industrial Activities
MEF	Ministry of Economy and Finance
NIS	National Institute of Statistics
PPI	Producer Price Index
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
STA	IMF Statistics Department

OVERALL ASSESSMENT

1. **This Report on the Observance of Standards and Codes (ROSC)—Data Module is a reassessment of the exercise conducted in 1999–mid-2000, which was based on information collected during a November 1999 mission and used the dimensional structure of the first July 2000 draft version of IMF’s Data Quality Assessment Framework (DQAF).** This reassessment covers national accounts, and consumer (CPI) and producer price indices (PPI). The Uruguayan agencies that compile and disseminate these datasets are: the Central Bank of Uruguay (CBU) for national accounts and the National Institute of Statistics (NIS) for the CPI and PPI. This Report is the first data ROSC based on the 2012 version of the DQAF, which assesses data quality against the relevant statistical standards current in 2012, including the *System of National Accounts 2008 (2008 SNA)*, the *Consumer Price Index Manual 2004 (CPI Manual)*, and the *Producer Price Index Manual 2004 (PPI Manual)*.

2. **The Report contains the following main observations.** Following the 1999 data ROSC mission,¹ Uruguay made significant improvements in statistical compilation and dissemination of the statistics covered by this ROSC—Data Module. The progress achieved allowed Uruguay to subscribe to the Special Data Dissemination Standard (SDDS) on February 12, 2004. Since its SDDS subscription, Uruguay has been in observance of the SDDS, meeting the specifications for coverage, periodicity, timeliness, and the dissemination of advance release calendars. In the last (2011) SDDS annual report on observance, Uruguay met the SDDS requirements for timeliness with episodic exceptions for some data categories. Uruguay exceeds the SDDS timeliness requirements for labor market (employment, unemployment, and wages/earnings), price (consumer prices and producer prices), and international investment position data. Currently, Uruguay is using two regular timeliness flexibility options for general government operations and central government operations; additionally, it is using an “as relevant” timeliness provision for analytical accounts of the banking sector for countries with extensive branch banking systems. No flexibility options are being used regarding real sector statistics. Appendix I provides an overview of Uruguay’s dissemination practices for real sector statistics compared to the SDDS.

3. **In applying the DQAF, the remainder of this section presents the mission’s main conclusions.** The presentation is done at the level of the DQAF’s quality dimensions, by agency for the first two dimensions and across datasets for the remaining four. Uruguay’s macroeconomic statistics are generally of good quality and adequately meet users’ needs. Since 1999, Uruguay has made tangible improvements on the methodological and dissemination aspects of data quality in national accounts and price statistics, as the coverage, weights, and base period of both macroeconomic statistics have been recently revised and updated. One important testament to the improvement of statistics is the subscription to the IMF’s SDDS after the 1999 ROSC mission.

¹ The 1999 assessment was based on a preliminary version of the DQAF, which was updated in 2001, 2003, and most recently 2012, as international standards have evolved. As noted below, the current assessment thus is based on broadly higher accomplishment thresholds than the 1999 ROSC.

4. The legal and institutional basis for Uruguayan statistics is sound and follows international good practice. The Central Bank of Uruguay (CBU) is a government agency endowed with technical, administrative, and financial autonomy. Quality awareness and quality management processes are included in the CBU's 2010–2014 Strategic Plan and 2012 Strategic Initiatives. However, no explicit legal provision provides the responsibility to the CBU for compiling national accounts statistics. Staffing allocated to the Economic Statistics Area (ESA) is also limited. The National Institute of Statistics (NIS) is a public body responsible for the development, monitoring, and coordination of national statistics. Resources are very limited to perform its broad functions, although quality awareness is in place. The NIS is in the process of implementing a quality management system. The process of recruiting economic statistics professionals into the Civil Service has slowed staffing at both the NIS and the CBU, and retention of qualified staff is a challenge for the NIS. A mechanism is not in place to collect feedback from data users. Under maintaining the relevance of statistics, both agencies could conduct more outreach to data users and give them more advance notice of pending methodological changes.

5. Under institutional integrity, based on the mission's meetings with data users, the CBU and NIS possess a high level of "trust capital" to deliver impartially-compiled and technically-sound statistics within their resource envelopes. This said, staff training and support to staff for conducting research could be improved. Neither the CBU nor the NIS comment on erroneous interpretation and misuse of statistics. Both agencies follow sound practices to ensure the transparency of their methodologies as well as compilation and dissemination practices, the bedrock of statistical trust capital. However, both the CBU and NIS could give users more advance notice of changes in methodology. Ethical standards meet international norms and good international practice.

6. Under methodological soundness, the national accounts conform with the *System of National Accounts 1993 (1993 SNA)* and the CPI and PPI broadly conform with international methodological guidance from the *Consumer Price Index Manual (2004)*, the *Practical Guide to Producing Consumer Price Indices (2009)*, and the *Producer Price Index Manual (2004)*. The principal exceptions are that the CPI does not cover either the implicit rent or the net acquisitions of owner-occupied dwellings, and the PPI does not cover services and exported output. The industrial activity classification is the *International Standard Classification of All Industrial Activities, Revision 3 (ISIC, Rev. 3)*. The DQAF 2012 of this ROSC assesses Uruguay's practices against the latest methodological standards; thus for the national accounts there is a need to plan adoption of the *2008 SNA* and *ISIC, Rev. 4*. The product classification follows a national extension of the *ISIC, Rev. 3* rather than the international standard Central Product Classification. The basis for recording follows the *1993* and *2008 SNA* with the exception of components of government revenue and expenditure that are recorded on a cash and obligation basis, respectively, which deviate in degrees from the *SNA* accrual requirement.

7. Under accuracy and reliability, Uruguay's national accounts are built on a good core system, but there are areas for improvement in source data. Business register maintenance could be better in identifying and deleting out of business units and reclassifying units changing

principal industrial activity. Household expenditures are surveyed about once a decade. Coverage of the financial statements of financial corporations, public nonfinancial corporations, and public-private partnerships is robust, but not of private nonfinancial enterprises. About 60 percent of the GDP calculation is based on fixed input-output ratios from 1997. Household consumption is not independently derived and total changes in inventories and changes in inventories for most products are obtained as residuals. Uruguay disseminates annual but not quarterly GDP by the expenditure approach at current prices and does not compile annual integrated economic accounts by institutional sector, in particular, the generation of income account. For the CPI, reselection of the sample of detailed products has not been done for an extended period, and for both the CPI and PPI, statistical outputs/intermediate results are not validated with available information from alternative sources.

8. The CPI and PPI get good marks for source data on the basis of well designed surveys and advanced data capture technologies. The national accounts need improvement in the coverage and validation of source data. Both the CPI and PPI need to strengthen assessment and validation of intermediate data and statistical outputs. The staffing issues noted under prerequisites for quality have had their impact on the ability of the NIS, the principal supplier of source data, to maintain good data validation practices for secondary source data used in the PPI. Major revision studies are made for the national accounts when changing the base year, but regular revisions are not analyzed to detect bias in the series. The impacts of weight updates for the CPI and PPI are not analyzed.

9. Under serviceability, periodicity, and timeliness meet SDDS standards and the national accounts and price statistics get good marks for consistency with one another, the exception being that coverage of the CPI shelter component should cover not only renters, but also owner occupants. Detailed national accounts data are only available up to 2008. Long-time series are not available on the CBU website. There is no regular schedule for updating the base year of the national accounts. The quarterly national accounts get good scores on the elements of revision policy and practice, but the causes of current revisions are not explained to users. A monthly index of economic activity is not disseminated. The CPI and PPI would benefit from a more regular and frequent schedule of weight updates.

10. Both the CBU and the NIS get good scores on user accessibility of data and descriptive information (metadata) on the sources and methods through which real sector statistics are compiled, and both do well in providing assistance to users. The CBU and NIS could also undertake more regular revision studies and both could engage users more fully to improve statistical products and services.

11. Section II provides a summary assessment by agency and dataset based on a four-part scale. This is followed by staff recommendations in Section III. 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

12. Assessment of the quality of three macroeconomic datasets—national accounts, consumer price index, and producer price index—were conducted using the DQAF 2012. In this section, the results are presented at the level of the DQAF elements and using a four-level 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–b. 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–c.

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				
Dimensions/Elements	Datasets	National Accounts	Consumer Price Index	Producer Price Index
0. Prerequisites of quality				
0.1	Legal and institutional environment	LO	O	O
0.2	Resources	LNO	LNO	LNO
0.3	Relevance	LNO	LNO	LNO
0.4	Other quality management	O	LO	LO
1. Assurances of integrity				
1.1	Institutional integrity	LO	LO	LO
1.2	Transparency	LO	LO	LO
1.3	Ethical standards	O	O	O
2. Methodological soundness				
2.1	Concepts and definitions	LO	O	LO
2.2	Scope	LO	LO	LNO
2.3	Classification/sectorization	LO	O	O
2.4	Basis for recording	LO	O	O
3. Accuracy and reliability				
3.1	Source data	LNO	LO	O
3.2	Assessment of source data	LNO	O	LO
3.3	Statistical techniques	LO	O	O
3.4	Assessment and validation of intermediate data and statistical outputs	O	LNO	LNO
3.5	Revision studies	LO	NO	NO
4. Serviceability				
4.1	Periodicity and timeliness	O	O	O
4.2	Consistency	O	O	O
4.3	Revision policy and practice	LO	LNO	LNO
5. Accessibility				
5.1	Data accessibility	LO	O	O
5.2	Metadata accessibility	O	LO	LO
5.3	Assistance to users	LO	O	O
<p>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 a country's circumstances.</p>				

Table 2a. Assessment of Data Quality—Dimensions 0 and 1—Central Bank of Uruguay

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment. The Central Bank of Uruguay’s (CBU) Charter does not clearly establish its responsibility for the compilation of national accounts statistics. The National Statistical System Act (16.616) regulates integration (Article 1), principles (Article 3), and statistical confidentiality (secrecy obligation, obligation to provide information) (Article 3) (Article 14). CBU’s Charter: Law 16,696 (March 1995) and modifications Law 18,401 (October 2008) regulate, among other things, the obligation of secrecy (Article 21) and the power to require information (Article 55). The CBU may request for statistical purposes, of any individual or legal entity, whether public or private, all information needed to duly fulfill its functions and duties. It shall be covered by the administrative secrecy and will be strictly confidential. The CBU may impose fines on any person or entity not supplying the information lawfully required from it, or submitting incomplete or inaccurate information. The amount of the fine will range between 10,000 IU (ten thousand indexed units) and 20,000 IU (twenty thousand indexed units) in the case of legal persons, and will be 4,000 IU (four thousand indexed units) in case of natural persons. Payment of the fine does not exempt from the requirement to submit the requested information. However, fines are not used to reduce nonresponse on national accounts collections owing to their administrative cost for the CBU. In practice, There are coordination and communication issues inside statistical agencies and among them, as well as some duplication of effort in the collection of source data among data producing agencies. So far, the CBU has been excluded from access to individual tax records for statistical purposes under a tributary secrecy provision. However, there is a framework agreement NIS-CBU for access to microdata released by the National Institute of Statistics (NIS). CBU officials are subject to the Rules of Discipline, which sets penalties for noncompliance of the duties including the secrecy of data. The rule of thumb to follow is not to disaggregate groups containing less than three individuals, unless by consent of the informants. The filling of the questionnaires is done online. Respondents are consulted in case of inconsistencies in reported data.</p> <p>Resources. Staff and financing at the bank are not adequate. The Economic Statistics Area (ESA) currently has 10 vacancies, which represent over 50 percent of its analysts. Overall, staff has been retained, but the ESA cannot manage rotation, because it is at the minimum of staff numbers. Recruiting staff into the Civil Service takes a long time and has slowed the recruitment of additional national accounts staff. The information technology is generally adequate. The ESA structure, although recent, could be updated to better reflect the current flow of work.</p> <p>Relevance. Users are not consulted on the relevance of the CBU’s statistics in a regular manner. There is no an advisory group on statistics.</p> <p>Other quality management. The mission and vision of the CBU and the ESA in particular stresses data quality. The institution is in the process of improving the organizational infrastructure to take into account economies of scale and process optimization through the Strategic Planning. Independent assessments from international organizations have been sought to examine the quality of national accounts. The CBU has received technical advice from ECLAC.</p>	<p>Institutional integrity. The CBU, created by the Article 196 of the Constitution of the Republic, is an agency endowed with technical, administrative, and financial autonomy. Staff positions are technical. The promotions are made on a competitive basis taking account of background evaluation and merit. However, staff training and support to staff for conducting research could be improved. The CBU rarely comments on erroneous interpretation and misuse of statistics.</p> <p>Transparency. The administrative rules of the CBU establish transparency as one of the principles in the general rules of administrative actions. Law 18381 from October 17, 2008 seeks to promote transparency of the administrative function of any public body while ensuring the right of people to access to public information. The CBU, by resolution of its Board No. 201 dated June 29, 2011, has developed administrative procedure regulations implementing the Act, which is available on the intranet of the institution. Disclosure outside the CBU is done at the same time for all users. Users are not given advance notice of major methodological changes.</p> <p>Ethical standards. The CBU Bylaws establish ethical standards that are followed by CBU staff regarding hiring, behavior, obligations, and prohibitions. The institution has a code of ethics (Board Resolution No. 485 of December 29, 2010) which is available on the intranet. It also has a Disciplinary Regulation (Board Resolution No. 153 of March 22, 1994) which is also available on the intranet.</p>

Table 2b. Assessment of Data Quality—Dimensions 0 and 1—National Institute of Statistics

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment. The NIS is a public body which aims at the development, monitoring and coordination of national statistics. The Statistics Law No. 16,616 enacted on October 20, 1994, states that the National Statistical System (NSS) is formed by the NIS as the governing body, the Sector Coordinating Units (one for each relevant subject area) and other offices producing statistics. Among NIS functions are compiling statistical, demographic, economic and social information; coordinating and supervising the NSS; disseminating information produced by the NIS, or other bodies of the NSS; promoting statistical research, developing knowledge in the field of statistics and economics; providing training to staff of the Statistical Offices of the system; establishing technical standards to be implemented in the development of official statistics; approving plans and statistical programs of the NSS; and monitoring their implementation. Article 3 of the Statistics Law states that the statistical confidentiality must be observed concerning the individual data provided by the source of information, so as not to reveal the identity of these sources. Article 13 states that a source of information may be any person or entity that is, permanently or temporarily, in the country. Article 14 states that all natural or legal persons, nonstate public persons and public bodies are required to provide data that may be required for statistical purposes by members of the NSS and within the period prescribed. Noncompliance with information request is penalized with a fine. The amount of the fine is determined by the NIS, between a minimum of 20 IU (twenty indexed units) and a maximum of 50 IU (fifty units adjustment). Article 7.D requires that NIS compiles, publishes and disseminates data within the area of its competence, which includes the consumer price index (CPI) and producer price index (PPI).</p> <p>Resources. The NIS's challenge in hiring and retaining qualified specialists in economic statistics that is made more acute under current civil service arrangements.</p> <p>Relevance. Users are not consulted on a regular basis about the relevance of statistics produced by the NIS. Although, feedback is not discouraged, there is no formal process in place for users to express their opinions about their statistical needs.</p> <p>Other quality management. The NIS has in place a quality policy. A System of Quality Management was created a few years ago for which the scope is to improve statistical data. Consequently, the success of this endeavor will require additional staff training about this framework. In 2008, the Construction Cost Index was certified according to the ISO 20252:2006 standard, as a pilot. During the next five years the NIS will implement the system in other areas of the Institute, according to specific work plans that will be defined annually. The quality management system is still at the implementation stage.</p>	<p>Institutional Integrity. Article 3 of the Statistics Law states that the statistical rigor that NIS should observe is the systematic application of the principles, methods and procedures generally accepted in the statistical art and science. Technical autonomy is observed in the development of statistical activities with independence and objectivity, and based exclusively on statistical principles. The CBU does not comment on erroneous interpretation and misuse of statistics.</p> <p>Transparency. Transparency is a valued quality at the NIS. It is the right of the provider of information to know the objectives of the statistical activity for which they are providing data for and to be informed that by law, their information is confidential. No ministerial commentary is added to the data released. Although in theory there is nothing that prevents the NIS to inform users of upcoming methodological changes, the practice has been to inform users of the CPI and PPI of any such changes only at release time.</p> <p>Ethical standards. NIS staff follow established ethical standards in the performance of their duties.</p>

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

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. Follow the <i>System of National Accounts 1993 (1993 SNA)</i>. A program for changing the base year and implementing the <i>2008 SNA</i> is under development, but has not reached the approval stage.</p> <p>Scope. Data published on GDP cover the entire Uruguayan economy. In the base year 2005, efforts were made to cover both recorded and non-recorded activities. No annual integrated economic accounts by institutional sector and quarterly GDP by the expenditure approach at current prices are compiled. Free zones/bonded warehouses/factories operated by offshore enterprises under customs control are included in GDP. Contraband is estimated.</p> <p>Classification/ sectorization. The activity classifier is <i>ISIC Rev.3</i> and a national classifier of products. Central Product Classification (CPC), Classification of Individual Consumption by Purpose (COICOP), and Classification of Functions of Government (COFOG) are not used.</p> <p>Basis for recording. Market prices are used. Transactions and flows are recorded on accrual basis except for government revenues. Government expenditure is on an obligation basis rather than on an accrual basis. Transactions between establishments of the same enterprise are recorded on a net basis because the data are collected at enterprise level, rather than on the recommended gross basis.</p>	<p>Source data. The business register is partially updated. Elimination of enterprises that close or reclassification of enterprises that change activity is not timely. Annual enterprise statistics are collected through a regular survey program that is not always consistent over time or timely. Enterprise data are sometimes not accurate enough to be usable. Household surveys are conducted by the NIS on a regular basis, but only on a 10-year interval. Data for construction, services, and quarterly estimates are limited in scope. Comprehensive government finance statistics are available regularly. Financial statements and supplementary data are available only for public corporations and public-private partnerships. There is no access to financial statements for private nonfinancial corporations. Source data on free zones are incomplete. The coverage of total value added by all data sources is around 56 percent.</p> <p>Assessment of source data. Accuracy of the data from surveys, administrative records, and other sources is not routinely assessed. Data from the economic survey are not properly validated due to lack of resources at the NIS and some collected data are thus only partially used. There is no information on non-sampling errors for most surveys.</p> <p>Statistical techniques. Output estimates are compiled at the group and class level of <i>ISIC, Rev.3</i> and <i>Rev.2</i>, respectively. Fixed ratios from 1997 are used to obtain 60 percent of GDP. Although employment data are used to make adjustments for nonobserved activities, available household data on salaries, and mixed income are not used. GDP estimates by expenditure were derived independently for the base year but quarterly household consumption expenditure is not independently derived. Changes in inventories are residually obtained. Proper techniques are used to compile net acquisitions of owner-occupied dwellings and work in progress, but no inventory valuation adjustment is made. Proper procedures are followed for compiling volume measures of GDP.</p>	<p>Periodicity and timeliness. GDP estimates are compiled quarterly and annually. Quarterly GDP estimates are disseminated 75 days after the end of the reference quarter although sometimes with short delays. The annual GDP estimates are disseminated within three months after the end of the reference year.</p> <p>Consistency. Annual national accounts are internally consistent. Quarterly GDP estimates are consistent with annual estimates. The national accounts statistics are consistent with balance of payments, and government finance statistics. The statistical series are consistent over time.</p> <p>Revision policy and practice. Quarterly data are preliminary when first released. The quarterly revision takes place every quarter during the current year and once annual data are released.</p> <p>Annual preliminary data for the previous year are first released in March of the following year and are preliminary until a supply and use table is compiled. Data for the two previous years are usually revised. There is no regular schedule for updating the base year. Current revisions have a regular schedule. Major revisions are analyzed and published, but specific causes of regular revisions are not disseminated.</p>	<p>Data accessibility. Quarterly and annual data are disseminated for GDP in current and constant 2005 prices in pesos, volume indices, and implicit deflators, broken down by sectors of economic activity. The CBU website disseminates quarterly and annual data with different base periods from 1988. Linked time series are not available on the CBU website. Detailed data are only available up to 2008. Data at 3-digit level are only available for some activities. Aggregated data are available from 2009 onwards. Quarterly GDP by expenditure is disseminated only in constant 2005 pesos and volume indices. The official estimates are published on the CBU website (http://www.bcu.gub.uy) where annual and quarterly reports and tables can be found. Consolidated accounts are annually disseminated. Charts and briefings are disseminated along with the data. An advance release calendar that provides a next quarter precise release date is posted on the CBU website. Statistics are usually released on a preannounced schedule. Data are disseminated simultaneously to all users on CBU website. Statistics not routinely disseminated are made available to users upon request to the Institutional Communication Center: info@bcu.gub.uy.</p> <p>Metadata accessibility. The current methodological basis for the National Accounts is described in the CBU publication <i>“Revisión Integral de las Cuentas Nacionales 1997–2008”</i> (National Accounts Integral Revision, 1997–2008) and is disseminated through the CBU website http://www.bcu.gub.uy/Estadisticas-e-Indicadores/Paginas/Metodologias.aspx. The historical data of 1983 Base (1988 Revision) can also be found at the CBU website. Different levels of data detail are</p>

Table 3a. Assessment of Data Quality—Dimensions 2 to 5—National Accounts (concluded)

	<p>Quarterly data are benchmarked and seasonally adjusted. Chain indices are not used.</p> <p>Assessment and validation of intermediate data and statistical outputs. Intermediate results are validated and checked against other independent data sources. The supply and use framework is used to investigate discrepancies and make the statistical outputs consistent. Last available SUT is from 2008.</p> <p>Revision studies. Major revision studies are made when changing the base year, but regular revisions are not analyzed to detect bias in the series.</p>		<p>made available to meet users' requirements.</p> <p>Assistance to users. There is no established procedure to consult CBU's visitors on their data gathering experience. There is an e-mail address on the CBU website to address consultations. Assistance to users is not monitored and revised periodically.</p>
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Table 3b. Assessment of Data Quality—Dimensions 2 to 5—Consumer Price Index (CPI)

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. The CPI is compiled following the <i>Consumer Price Index Manual 2004</i>. The level of detail of goods and services is sufficient to perform detailed analysis of price changes.</p> <p>Scope. The CPI covers a set of aggregates that are consistent with the final consumption expenditure of households for 375 products. It includes all resident urban households at the national level (urban Montevideo city and other urban areas), families of all sizes and income levels. It excludes the imputed value of owner-occupied housing. Illegal goods are not included in expenditures in view of the difficulties involved in data collection. Purchase/sale prices of used goods are not collected.</p> <p>Classification/sectorization. The COICOP is used to classify CPI data.</p> <p>Basis for recording. Following international best practice, CPI weights are based on consumption expenditure valued at purchasers' prices, including indirect taxes and excluding interest on credit purchases. Prices are those recorded at the time of purchase. The weights are based on net purchases, e.g., for insurance, it is the difference between gross premiums and claims paid.</p>	<p>Source data. The base period for the CPI is December 2010 = 100. Weights are from the 2005–2006 Household Expenditure and Income Survey, supplemented with data from the national accounts. The price survey includes electronic point of sale (scanner) data. Press articles are sometimes used to validate price change for some items such as gasoline, but validation is not extensive across the index. The periodicity and timeliness of the price survey complies with international best practices. The sample of detailed products is not updated to allow new products to enter the index.</p> <p>Assessment of source data. Surveys are audited to monitor the work of enumerators. Outliers are confirmed with respondents.</p> <p>Statistical techniques. The CPI is a Laspeyres price index. Automation of the compilation procedures minimizes processing errors. Following international practice, prices of temporarily missing, seasonal, and new products are imputed using price movement of products in the same group, based on cell sufficiency criteria to determine the level of aggregation of the imputation. Elementary aggregates of individual price movements use the geometric mean formula.</p> <p>Assessment and validation of intermediate data and statistical outputs. Unusual changes in the index resulting from potential problems in price data are investigated and corrected if warranted. Intermediate results and final outputs are not validated against comparable data from other sources.</p> <p>Revision studies. No such studies are carried out by the NIS for the CPI to assess the impact of weight and basket updates.</p>	<p>Periodicity and timeliness. The CPI is produced monthly and released on the second business day of the month following the reference month.</p> <p>Consistency. The statistical series are internally consistent. "Cifras" publishes monthly data for the reference year and for the three previous years. NIS's website disseminates "Cifras" and monthly time series data since March 1997 with similar breakdowns of those published in "Cifras." NIS's database, which can be accessed through the Internet, disseminates monthly time series as follows: (i) by major CPI groups since 1985; and (ii) the general index since July 1937.</p> <p>Revision policy and practice. CPI data are deemed final and are therefore not subject to revision. Weight and basket updates are not on a regular schedule.</p>	<p>Data accessibility. Datasets are published with different levels of detail. E-mail subscription in Uruguay is available on request from difusión@ine.gub.uy or by fax. Data can be viewed on the NIS website at http://www.ine.gub.uy and on Uruguay's National Summary Data Page (NSDP). The CPI release calendar for the year is posted on the NIS website. Statistics are promptly disseminated at 2 p.m. on the posted release dates. Data are released simultaneously to all users in a press release "<i>Indice de Precios al Consumo</i>" and a monthly publication "Cifras." Certain institutional users can access the data up to two hours prior to the official release schedule. At the same time, they are disseminated to the banking system via an interbank computer network, and published in the <i>Diario Oficial de la República</i> (Official Gazette). Data not routinely disseminated are available upon request.</p> <p>Metadata accessibility. A methodological note is published in "<i>Indice de Precios del Consumo, Cambio de Base–Diciembre 2010, Nota Metodológica</i>" This note explains the concepts and methods used, in addition to the changes were introduced during the last update. Deviations from international standards are not noted.</p> <p>Assistance to users. Support is available to users of statistics. The NIS website contains a list of publications and documents available to users. The NIS also has a library where users can search for old publications, not available in electronic format. For special requests of unpublished statistical series, the applicable price changes are calculated upon request.</p>

Table 3c. Assessment of Data Quality—Dimensions 2 to 5—Producer Price Index (PPI)

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. The producer price index (PPI) of Uruguay is compiled by NIS following the <i>Producer Price Index Manual 2004</i>. There are no price indices for intermediate consumption.</p> <p>Scope. The PPI covers the gross output of agriculture, livestock, hunting, forestry, fishing, mining and quarrying, and manufacturing. All resident enterprises in the formal market that produce for the domestic market are considered in scope for the PPI. It would however be desirable to expand the coverage of the PPI to include statistics for other sectors such as utilities, services and construction, as well as exports of goods and services of all types.</p> <p>Classification/sectorization. The classification of institutional units and transactions follows 1993 SNA guidelines. For classes of activities, ISIC Rev.3 is used, but with slight modifications that account for the unique environment of the country. The NIS uses the CPA product classification.</p> <p>Basis for recording. Price is defined as the value per unit of good or service traded in a purchase/sale operation carried out between a seller and a buyer. In light of the objectives of the index, producer prices are collected. The prices collected represent the amount received by the producer, in the case of Agriculture, Livestock, and Forestry, and Manufacturing sections; landed prices for fisheries, and for Mining and Quarrying, the quarry price.</p>	<p>Source data. Information for the index base weights is drawn from the supply-and-use tables compiled from the CBU. Product selection is based on a sample survey of specifications. The data support PPI statistics at the 4-digit level. Annual surveys are conducted on industrial activity. The periodicity and timeliness of price data are adequate. Prices reference the tenth of the month, but should be spread through the month for volatile items.</p> <p>Assessment of source data. Increases of + or – 5 percent over the last reported prices are examined for accuracy. The proportion of output of sections A–D of ISIC Rev.3 the PPI covers is at least 90 percent. Data from secondary sources (government ministries) are not validated.</p> <p>Statistical techniques. The PPI uses a Laspeyres formula with base and reference period March 2010=100. Use of e-forms and automatic data capture minimize data-entry errors. The calculation procedure is standardized. Temporarily missing and seasonal prices are imputed from the price changes of similar products. Product replacements are handled using a previous month price supplied by the producer or targeted imputation.</p> <p>Assessment and validation of intermediate data and statistical outputs. Unusual price relatives are investigated and if erroneous corrected. Checks and validations with external data sources are seldom performed at this stage.</p> <p>Revision studies. The base and weights are updated with no preset timeframe. No revision studies are performed since the index is not revised. There are also no studies that analyze the effects of updating the weights.</p>	<p>Periodicity and timeliness. The PPI is produced monthly and released on the day before the last day of the reference month, exceeding the SDDS timeliness requirement. However, the unusually high degree of timeliness does not allow sufficient time to analyze and validate the results.</p> <p>Consistency. Aggregates are presented at the class, group, division, and industry level of Uruguay's adaptation of ISIC, Rev. 3. The General (all-items) PPI can be obtained by aggregating from any of the levels of the stratification structure. Consistent time series are available over a period longer than five years. Time series are reconstructed, to the extent possible, when there are changes to source data, methodology, or statistical techniques. Methodological changes in indices are announced when there are important discontinuities and interruptions in the time series. Producer price statistics are broadly consistent with other price statistics of a similar nature; otherwise, discrepancies are seldom explored or analyzed.</p> <p>Revision policy and practice. Revisions in weights and baskets do not follow a regular schedule. Methodological changes are sometimes posted on the NIS website but is not common practice to do so.</p>	<p>Data accessibility. PPI data are published with supplementary tables and charts to facilitate analysis. Estimates are presented in detail on the website. http://www.ine.gub.uy. No seasonally-adjusted data are produced. Tables, press releases, and the release calendar are available on the website. Data are disseminated to the public as well as the authorities on the same day. An e-mail is sent to the media with the press releases after they are made publicly available on the website. Certain institutional users can access the data up to two hours prior to the official release schedule. Upon request, special arrangements might be made to meet specific needs, provided that confidentiality conditions are respected.</p> <p>Metadata accessibility. A methodological document, <i>Indice de precios al productor de productos nacionales</i> (IPPN) is available on the NIS's website and is updated at the same time as the basket that includes changes that have occurred with the most recent update. SDDS metadata are sent to the Central Bank as changes occur. Short updates are published on the website.</p> <p>Assistance to users. Contact points are listed in each questionnaire and on the NIS website. In addition to service catalogs, a number of documents prepared by the NIS are available on its website. Information that is not available on the website may be obtained from the institutional library. Special requests are handled by the dissemination unit, where users are informed whether their requests are feasible and referred to the appropriate unit.</p>

STAFF'S RECOMMENDATIONS

13. Based on the review of Uruguay's statistical practices, discussions with the data producing agencies, and responses from data users, the mission has developed a set of recommendations. They are designed to increase further Uruguay's adherence to internationally accepted statistical practices and would, in the mission's view, enhance the analytical usefulness of Uruguay's statistics. Some additional technical suggestions are included in the Detailed Assessments volume.

Cross-cutting recommendations

High priority

- Ensure that the NIS has adequate financial resources, staff, facilities, and training, and take further steps to increase retention of qualified staff.
- The legal framework to hire/contract staff by the NIS and the CBU need to be more flexible to accelerate filling vacancies with technical qualifications in economic statistics.
- Sign an agreement between the CBU and the Ministry of Economy and Finance (MEF) so that the CBU can have access to income tax records by economic activity in order to improve the coverage of national accounts and compile integrated economic accounts by institutional sector.
- Expedite the filling of the ten vacancies in the CBU Economic Statistics Area. Additional staff will be needed for changing the base of the national accounts and implementing the 2008 SNA.
- Conduct a new household Income and Expenditure Survey every five years to strengthen estimates for household final consumption expenditure and update the CPI weights.

Other recommendations

- Initiate regular consultations with public and private sector users, including through fostering users' groups and an advisory committee to improve the usefulness of statistics and advise on statistical program priorities. The advisory committee should include participation of academics, private sector analysts, and producers' associations and meet on a regular basis (e.g., twice a year).
- Announce in advance any planned changes in concepts and methodology. With major changes, users should be invited to provide feedback before they are implemented.
- Analyze data requests and comments from users periodically in order to improve the service provided to them.

- Initiate an employee rotation program to enhance the versatility of professionals and the redundancy of skills of statistical units and teams in view of limited staff complements.

National Accounts

High Priority

- Update the base year of the national accounts and develop plan for implementing the 2008 SNA as soon as possible with a clear timetable.
- Update the business register regularly.

Other recommendations

- The NIS should review and update the classification by economic activity of the business register obtained from income tax records and provide an improved version to the MEF, so that the MEF and the CBU can use the income tax records data with an updated and improved classification.
- Adapt the functions of the CBU ESA's departments to an integrated organization by institutional sector (non-financial sector, financial sector, public sector, and external sector), so that the supply and use table by economic activity and product by sector and the economic integrated accounts by sector are compiled and analyzed by the same staff with coordinators by type of statistic.
- Apply the standard *ISIC* Rev. 4 and *CPC* Ver. 2 for classifying activities and products, respectively, the *COICOP* for classifying household financial consumption expenditure and the *COFOG* to classify government final consumption expenditure in order to facilitate international comparisons.
- Increase the level of detail of disseminated national accounts data to three digits of the *ISIC*.
- Improve estimates of nonobserved activities by using available income data from the permanent household surveys.
- Consider the use of chain indices for calculating volume measures.
- Reconstruct historical series as far back as reasonably possible when changing the base year. Although linked time series are available only on GDP by the production approach for the period 1997–2011, longer-time series of main national accounts aggregates are not available.
- Apply the economic activity classification of the economic survey (*ISIC*, Rev. 4) to the permanent household survey in order to reduce the volatility of employment data by economic activity which is preventing greater use of the data in the national accounts.

Include an expenditure module every two to three years to monitor changes in consumption patterns and improve estimates on household consumption.

- Improve the coverage of the economic survey, the surveys on construction, domestic trade and services (annual, quarterly, and monthly) to 80 percent of the economic activity in the country.
- Use monthly value-added tax (VAT) data by economic activity to improve the coverage of quarterly national accounts estimates.
- Conduct a quarterly survey on sales of services and on inventories of inputs and finished and resale products.
- Improve the coverage of the monthly index of economic activity in order to disseminate it and use it in all its potential for policy decision making.
- Review the Economic Survey to collect data of inputs and outputs of the establishments that integrate an enterprise at least for the new base year of the national accounts. Apply a standard product coding in the survey, preferably CPC. Conduct an integrated enterprise/establishment survey that includes the information of the establishments that belong to each enterprise when changing the base year of the national accounts.
- Use available data on prices and volume to apply the double deflation/inflation method to main inputs and outputs on a quarterly basis.
- Use data on inventories collected in the economic survey and from income tax records in order to improve the coverage of changes in inventories.
- Explain current data revisions to users.

Consumer Price Index

High priority

- Incorporate owner-occupied housing in the CPI.
- A regular cycle for updating the CPI basket on a timely basis should be established. The advantages of this decision are the following:
 - Improve the relevance of the CPI for current economic conditions.
 - Improve the planning and organization of the resource requirements for updating the basket.

Other recommendations

- A basket update exercise is an opportunity, in addition to updating the weights, for a comprehensive review of the CPI procedures, concepts, and methods. For example, the choice of the sample of representative products should be refreshed when updating the basket.
- The NIS could undertake a study of the difference between the household expenditure survey and comparable components of national accounts household consumption expenditure and consider using the national accounts data as the source of, or as a control for, the weights of the CPI. The advantages of this option are the following:
 - Improved coherence of macroeconomic statistics between the CPI and the national accounts.
 - Weighting information that incorporates not only the most recent household expenditure survey, but also retail sales and other current information that has better coverage of certain components of household expenditure.
 - More timely CPI weights, which reduce the lag between the weight reference year and the price reference month.
 - The possibility of updating the basket weights more often and at lower cost.
- Improve the analytical capacity of the NIS CPI unit.
- Institute more data confrontation-type analysis for validation of results using alternative data sources.

Producer Price Index**High priority**

- A regular calendar for updating the PPI should be established. The calendar should specify an update cycle of no more than five years.
- Add additional economists/statisticians to the staff.
- Institute more data confrontation-type analysis and the analysis of the third-party data used in the PPI.

Other recommendations

- Expand the scope of the PPI to include first utilities, and subsequently services and construction.

- Expand the scope of the PPI to also include products destined for export, which is the international standard.
- Consider delaying the release of the PPI until one or two weeks after the reference month to provide more time to analyze the results and the data sources; this is not currently done given the limited resources.

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

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments 1/
		SDDS	Uruguay	SDDS	Uruguay	
Real Sector						
National accounts	Yes	Q	Q	Q	3M	
Production index/indices	Yes	M	M	6W <i>(1M encouraged)</i>	48D	
<i>Forward-looking indicators</i>	<i>(encouraged data category)</i>	<i>M or Q</i>		<i>M or Q</i>		
Employment	Yes	Q	M	Q	5W	
Unemployment	Yes	Q	M	Q	5W	
Wages/earnings	Yes	Q	M	Q	5W	
Consumer price index	Yes	M	M	M	NLT 5D	
Producer price index	Yes	M	M	M	1D	
Addendum: Population	Yes	A	A	

Note: Periodicity and timeliness: (D) daily; (W) weekly or with a lag of no more than one week from the reference data or the closing of the reference week; (M) monthly or with a lag of no more than one month; (Q) quarterly or with a lag of no more than one quarter; (A) annually; and (...) not applicable.

Italics indicate encouraged categories.

1/ No flexibility options are taken for national accounts, CPI, or PPI. However, Uruguay does take flexibility options for timeliness of central and general government operations releases and an "as relevant" timeliness flexibility option on the analytical accounts of the banking sector for countries with extensive branch banking systems.



URUGUAY

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

January 2014

RESPONSE BY THE AUTHORITIES

This document contains the authorities' response to the IMF's data quality assessment (Volumes I and III).

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Glossary

<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
CBU	Central Bank of Uruguay
COFOG	Classification of the Functions of Government
<i>COICOP</i>	<i>Classification of Individual Consumption According to Purpose</i>
CPI	Consumer Price Index
<i>ISIC</i>	<i>International Standard Industrial Classification of all Economic Activities</i>
MEF	Ministry of Economy and Finance
NIS	National Institute of Statistics
PLAE	Plan for the Adoption of International Standards
PPI	Producer Price Index

The Central Bank of Uruguay (CBU) has coordinated and compiled the responses to recommendations of the institutions whose statistics were evaluated. Responses concerning the cross-cutting recommendations have been jointly prepared by the National Institute of Statistics (NIS) and the CBU. Responses on price statistics were prepared by the NIS and responses on National Accounts were elaborated by the CBU.

CROSS-CUTTING RECOMMENDATIONS

A. High priority

1. Ensure that the NIS has adequate financial resources, staff, facilities, and training, and take further steps to increase retention of qualified staff.

Various measures have been implemented. On the one hand, new staff is being recruited shortly. Complementary, a series of promotions has been implemented which allows for better paying skilled personnel, and six new posts of advisers have been created in order to retain qualified personnel in the institution.

2. The legal framework to hire/contract staff by the NIS and the CBU (e.g., approval from the National Office of Civil Service) need to be more flexible to accelerate filling vacancies with technical qualifications in economic statistics.

This matter is beyond the scope of the NIS's and CBU's authorities but rather needs to be addressed under the legal framework governing civil servants recruitment.

3. Sign an agreement between the CBU and the Ministry of Economy and Finance (MEF) so that the CBU can have access to income tax records by economic activity in order to improve the coverage of national accounts and compile integrated economic accounts by institutional sector.

On November 7, 2012 Law 18.996 was approved establishing that the information captured in tax records can be used for statistical purposes by the directing authority of the National Statistical System. Such information may be used by member agencies of the National Statistical System for conducting official statistics. This new regulation enables the use of tax data for statistical purposes by the NIS and CBU among others.

4. Expedite the filling of the ten vacancies in the CBU Economic Statistics Area. Additional staff will be needed for changing the base of the national accounts and implementing the *System of National Accounts 2008 (2008 SNA)*.

Eight vacancies have been filled in July and August 2013. The remaining two vacancies are expected to be filled by the end of this year. Additional temporary staff is expected to be available for next year.

5. Conduct a new household Income and Expenditure Survey every five years to strengthen estimates for household final consumption expenditure and update the CP weights.

Uruguay is considering moving towards this new recommended standard which is broadly sensible. However it is necessary to assess if it is feasible in the short and medium term. The NIS is just working on raising funds for a new income and expenditure survey. Once this study is carried out, the office should consider the feasibility of doing it again five years later.

B. Other recommendations

6. Initiate regular consultations with public and private sector users, including through fostering users' groups and an advisory group to improve the usefulness of statistics and advise on statistical program priorities. The advisory committee should include participation of academics, private sector analysts, and producers' associations and meet on a regular basis (e.g., twice a year).

CBU has included in its annual planning to regularly consult users on the usefulness of the statistics provided. A users' survey of this type is going to take place for the first time in November 2013.

7. Announce in advance any planned changes in concepts and methodology. With major changes, users should be invited to provide feedback before they are implemented.

On July 10, 2013, CBU's authorities approved by RD 173-2013 a new Plan for the Adoption of International Standards (PLAE) to be developed during 2013–2019. In the context of the PLAE, a set of working papers will be released regularly, so as users will be informed about changes in advance and will be able to provide feedback. The first working paper of this type is already finished and is going to be released shortly.

8. Analyze data requests and comments from users periodically in order to improve the service provided to them.

This initiative will be carried out in response to users' queries in the consultation plan starting this year.

9. Initiate an employee rotation program to enhance the versatility of professionals and the redundancy of skills of statistical units and teams in view of limited staff complements.

In the case of CBU the PLAE calls for a working policy that promotes cross working teams and cross training with the aim of providing more versatility to professionals. This initiative was included in 2013 strategic planning in the context of CBU's 2010–2014 Strategic Plan. It is expected that these actions will strengthen technical capacities of the CBU staff.

RESPONSE BY THE CENTRAL BANK OF URUGUAY

A. High priority

10. Update the base year of the national accounts and develop plan for implementing the 2008 SNA as soon as possible with a clear timetable.

On July 10, 2013, CBU's authorities approved by RD 173-2013 a new PLAE for national accounts and balance of payments statistics to be developed during 2013–2019. The PLAE includes the adoption of the 2008 SNA and the Balance of Payments Manual, Sixth Edition (*BPM6*), with a new base year for national accounts and wider harmonization between balance of payments and national accounts compilations.

11. Update the business register regularly.

The NIS provides the business register to CBU's estimates. The NIS updates the business register every year with data from both social security contributions register and taxes revenues register. Last update was in July 2013 with social security contributions registry and tax registry data from December 2012.

B. Other recommendations

12. The NIS should review and update the classification by economic activity of the business register obtained from income tax records and provide an improved version to the MEF, so that the MEF and the CBU can use the income tax records data with an updated and improved classification.

In 2013 there is an ongoing program which via telephone call allows to confirm or update the activity classification of the majority of the bigger enterprises included in the NIS register. This business register is publicly available. It is delivered at request.

13. Adapt the functions of the CBU ESA's departments to an integrated organization by institutional sector (non-financial sector, financial sector, public sector, and external sector), so that the supply and use table by economic activity and product by sector and the economic integrated accounts by sector are compiled and analyzed by the same staff with coordinators by type of statistic.

In the framework of the PLAE 2013–2019, a restructure of the ESA work is taking place. In the first part of the plan (Phase 0) the team is organized by projects so as to conduct the 29 basic statistics projects included in this phase. Next phase refers to the compilation of SUT by Industry and by Institutional Sectors and the compilation of Integrated Economic Accounts. So the rearrangement of the ESA work towards a better division of labor to deal with institutional sectors is going to be implemented in this second phase.

14. Apply the standard ISIC Rev. 4 and CPC Ver. 2 for classifying activities and products, respectively, the COICOP for classifying household financial consumption expenditure and the COFOG to classify government final consumption expenditure in order to facilitate international comparisons.

In 2013 the first basic statistics project of phase 0 was to evaluate the adoption of the main recommended classifications and to propose adapted versions for the new series. This Working Group, integrated by technicians from CBU and NIS, has finished its work by defining a CPC Ver.2 and ISIC Rev. 4 versions adapted to the compilation of the new reference year.

15. Increase the level of detail of disseminated national accounts data at three digits of the ISIC.

The defined new industry classification for the compilation of the new reference year has taken into account this recommendation.

16. Improve estimates of non-observed activities by using available income data from the permanent household surveys.

One of the 29 basic statistics projects included in Phase 0 of the PLAE 2013–2019 is to develop the Employment Matrix for the base year and ongoing years of the series. These estimates will be based on the permanent household surveys and the 2011 population census.

17. Consider the use of chain indices for calculating volume measures.

This recommendation has been taken into account and the PLAE 2013–2019 will estimate chained volume measures for the series 2012 and ahead.

18. Reconstruct historical series as far back as reasonably possible when changing the base year. The linked series of main national accounts aggregates for 1997–2011 should be disseminated.

This recommendation will be considered, probably by linking new series with previous ones since 2005 or since 1997. The availability of appropriate information is going to be evaluated in the framework of the PLAE 2013-2019.

19. Apply the economic activity classification of the economic survey (ISIC Rev. 4) to the permanent household survey in order to reduce the volatility of employment data by economic activity which is preventing greater use of the data in the national accounts. Include an expenditure module every two to three years to monitor changes in consumption patterns and improve estimates on household consumption.

ISIC Rev. 4 is already in use for the classification of economic activity in the permanent household survey. The inclusion of an expenditure module every three years in this survey is going to be evaluated in the framework of resources availability.

20. Improve the coverage of the economic survey, the surveys on construction, domestic trade and services (annual, quarterly, and monthly) to 80 percent of the economic activity in the country.

This recommendation is currently being implemented. A new Annual Economic Activity Survey is currently being implemented by NIS with partial funding by CBU. This survey has expanded the scope to include mining and manufacturing activities, trade services and the majority of business, social and household services activities. The new survey design will allow updating not only the level of outputs but also intermediate consumption and compensation of employees estimates. A new Big Constructions Survey conducted by NIS has begun in February 2013 with CBU funding. New improvements in construction annual statistics are going to be considered in the near future.

21. Use monthly value-added tax (VAT) data by economic activity to improve the coverage of quarterly national accounts estimates.

This statistic produced by the tax office is currently available. However, the classification of activities and the coverage for some of them are not good enough to use this statistic in all cases. Sometimes indirect indicators are preferable for the sake of coverage. Also in some cases volume measures are difficult to derive from nominal values. Anyway these figures are always used as parameters to monitor results.

22. Conduct a quarterly survey on sales of services and on inventories of inputs and finished and resale products.

This has not been considered a priority in the phase 0 of the PLAE 2013–2019. Notwithstanding, it could be considered in the following phases, once the generation of annual basic statistics is finished.

23. Improve the coverage of the monthly index of economic activity in order to disseminate it and use it in all its potential for policy decision making.

This recommendation will probably be considered in the context of new annual, quarterly (and monthly) series in the second and third phase of the PLAE. It has to be related to the availability of monthly indicators for some activities (previous bullet).

24. Review the Economic Survey to collect data of inputs and outputs of the establishments that integrate an enterprise at least for the new base year of the national accounts. Apply a standard product coding in the survey, preferably CPC.

Both recommendations have been included in the design of the new Annual Economic Activity Survey that is currently being implemented by NIS.

25. Use available data on prices and volume to apply the double deflation/inflation method to main inputs and outputs on a quarterly basis.

This improvement in the methodology used in quarterly accounts is going to be implemented for the new series in the context of the PLAE 2013–2019.

26. Use data on inventories collected in the economic survey and from income tax records in order to improve the coverage of changes in inventories.

This improvement in the methodology used in annual and quarterly accounts is going to be implemented for the new series in the context of the PLAE 2013–2019.

27. Explain current data revisions to users.

CBU has begun a new policy to get in touch with users in a more regularly way. First step of this new policy is to implement a consult to users which is going to take place next November. In the future this vehicle will be useful to explain data revisions to users.

RESPONSE BY THE NATIONAL STATISTICS INSTITUTE

A. Consumer Price Index (CPI)

High priority

28. Incorporate owner-occupied housing in the CPI.

While recognizing the relevance of the recommendation, it should be noted that there is no tradition in the Institute on its inclusion in the basket so it should be analyzed with the CBU and national authorities doing so from the next base index.

29. A regular cycle for updating the CPI basket should be established. The advantages of this decision are the following:

- **Improve the relevance of the CPI for current economic conditions.**
- **Improve the planning and organization of the resource requirements for updating the basket.**

It is recognized by the Institute the relevance of this recommendation. In a future a timeline for a regularly base change should be established. However, it is estimated that under current conditions it is not yet possible, since it is deemed necessary to have the approval of the government of the Republic for the realization of an expenditure survey of household income that allows not only the change of the current basis but also the improvement of the estimation of the consumption component of National Accounts statistics. Data availability does not allow for an alternative procedure, based on national accounts weights, because for various reasons it was not possible to maintain a steady flow of information on the supply and use tables that would allow leading to this action.

Other recommendations

30. A basket update exercise is an opportunity, in addition to updating the weights, for a comprehensive review of the CPI procedures, concepts, and methods. For example, the choice of the sample of representative products should be refreshed when updating the basket.

It is recognized by the Institute the relevance of this recommendation. The basket update will be undertaken when the government of the Republic approves the realization of a new household expenditure survey. This survey will allow not only the change of the current basis but also a comprehensive revision of the CPI procedures and methods.

31. The NIS could undertake a study of the difference between the household expenditure survey and comparable components of national accounts household consumption expenditure and consider using the national accounts data as the source of, or as a control for, the weights of the CPI. The advantages of this option are the following:

- **Improved coherence of macroeconomic statistics between the CPI and the national accounts.**
- **Weighting information that incorporates not only the most recent household expenditure survey, but also retail sales and other current information that has better coverage of certain components of household expenditure.**
- **More timely CPI weights, which reduce the lag between the weight reference year and the price reference month.**
- **The possibility of updating the basket weights more often and at lower cost.**

The last base change followed the recommended procedure, having the weights estimated by arbitration between two sources, the income and expenditure survey of households and national accounts statistics. In future base changes this methodology is expected to be applied again and also to add new databases that could lead to a better balance of sources of consumption information.

32. Improve the analytical capacity of the NIS CPI unit.

The increase in staff that occurred in 2013 and additional staff which is expected in the course of the year will allow strengthening the technical and analytical capacity of the current team.

33. Institute more data confrontation-type analysis for validation of results using alternative data sources.

The last base change followed the recommended procedure, having the weights estimated by arbitration between two sources, the income and expenditure survey of households and national accounts statistics. In future base changes this methodology is expected to be applied again and also to add new databases that could lead to a better balance of sources of consumption information.

B. Producer Price Index (PPI)***High priority*****34. A regular calendar for updating the PPI should be established. The calendar should specify an update cycle of no more than five years.**

It is recognized by the Institute relevance of this recommendation. In a future a timeline for the regularly base change should be established.

35. Add additional economists/statisticians to the staff.

Four advanced students of economics and one advanced student of statistics have joined the NIS team in August 2013 to strengthen analysis and methodology group. It is expected that in October 2013 ten more students of economics will join to work on tasks of critics.

36. Institute more data confrontation-type analysis and the analysis of the third-party data used in the PPI, once more analysts are hired.

The recommendation has merit and it will be taken into account as far as the team is strengthened. New tasks could be incorporated to further analysis and to adopt different and better methods of analysis as suggested.

Other recommendations

- **Expand the coverage of the PPI to include first utilities, and subsequently services and construction.**
- **Expand the coverage of the PPI to also include products destined for export, which is the international standard.**

- **Consider delaying the release of the PPI until one or two weeks after the reference month to provide more time to analyze the results and the data sources; this is not currently done given the limited resources.**

It is expected that in 2014 we can work on changing basis in conjunction with the physical volume indicator in order to set 2015 as the new joint base of both types of indicators. It also seeks to extend coverage to the recommended sectors and destinations and establish the periodicity of future base changes which, ideally, should be done every five years at most. It should be reviewed with the government authorities and the users the possibility of postponing the date of publication of the index as recommended.



INTERNATIONAL MONETARY FUND

URUGUAY

January 2014

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

**DETAILED ASSESSMENTS USING THE DATA QUALITY ASSESSMENT
FRAMEWORK (DQAF)**

Approved By
**Louis Marc Ducharme and
Alejandro Werner**

Prepared By
The Statistics Department

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Uruguay's Report on the Observance of Standards and Codes (ROSC)—Data Module. It also includes as appendices the DQAF generic framework and the results of the users' survey.

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Glossary

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
CBU	Central Bank of Uruguay
COFOG	Classification of the Functions of Government
<i>COICOP</i>	<i>Classification of Individual Consumption According to Purpose</i>
CPI	Consumer price index
CPC	Central Product Classification
DQAF	Data Quality Assessment Framework
GDP	Gross domestic product
GFS	Government finance statistics
<i>GFSM 1986</i>	<i>A Manual of Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HIES	Household Income and Expenditure Survey
ILO	International Labor Organization
<i>ISIC</i>	<i>International Standard Industrial Classification of all Economic Activities</i>
MEF	Ministry of Economy and Finance
NIS	National Institute of Statistics (Instituto Nacional de Estadística)
NSDP	National Summary Data Page
OECD	Organization for Economic Cooperation and Development
PPI	Producer price index
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
<i>SITC</i>	<i>Standard International Trade Classification</i>
SNA	System of National Accounts
UN	United Nations
VAT	Value-added tax

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

The following detailed information on indicators of statistical practices in the areas of the national accounts, prices, government finance, monetary, and balance of payments statistics was gathered from publicly available documents and information provided by the Uruguayan 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 Uruguay'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.

Uruguay's national accounts are compiled and disseminated by the Central Bank of Uruguay (CBU). The CBU, established by Article 196 of the Constitution, is an autonomous public body and has technical, administrative, and financial autonomy in terms of the Constitution and the CBU's Charter.

The Charter of the CBU, approved by Law No. 16.696 of 03/30/1995,¹ stipulates in its Article 3 as primary purposes: (i) price stability that contributes to the objectives of growth and employment, and (ii) the regulation and supervision of the payments operation system and the financial system, promoting their soundness, solvency, efficiency, and development.

The Charter of the CBU does not explicitly stipulate the compilation and dissemination of national accounts statistics as one of the purposes of the CBU, although Article 55 on information for statistical purposes states that the CBU for purposes of compliance of its Charter and for carrying out the functions and duties conferred by it, may require on a mandatory basis and for statistical purposes, to any individual or legal entity, whether public or private, all the information needed to properly enforce their functions and duties.

Article 1 of the Law No. 16.616 of 10/20/1994 established the National Statistical System (NSS), which is integrated by the National Institute of Statistics (NIS), the Statistical Offices of the

¹ Amended by Law No. 18.401 of 10/24/2008, Law No. 18.643 of 02/09/2012 and Law No. 18.670 of 07/20/2010, <http://www3.bcu.gub.uy/a10860.html>

Executive, Legislative, and Judicial powers, the Administrative Court, Electoral Court, the Court of Auditors, autonomous entities, decentralized services, and departmental governments.

Article 5 of the NSS law states that the NIS depends hierarchically on the Planning and Budget Commission notwithstanding the technical autonomy that is granted by the law of the NSS. However, in practice the NIS reports to the Planning and Budget Office under the presidency of the republic.

The main tasks of the NIS, as indicated in Article 6 of the NSS law, are (i) to coordinate and supervise the NSS with powers as advisor, comptroller and evaluator of its development; (ii) establish technical standards to be applied in terms of concepts, definitions, classifications, and methodologies by the statistical offices of the NSS; (iii) prepare the National Statistical Plan; (iv) develop, publish, and disseminate statistics of its jurisdiction; (v) give the character of official statistics to the statistics produced by the members of the NSS; (vi) provide training to staff of the statistics offices; (vii) promote statistical research; (viii) install statistics regional offices in the interior as necessary; and (ix) enter into agreements to conduct research, statistical work, and provide statistical services.

The NIS has the responsibility of conducting censuses and surveys and collecting source data for national accounts purposes. Given the current budgetary and human resource constraints of the NIS, some of the surveys for national accounts are either financed or conducted by the CBU.

The legal framework of Uruguayan statistics broadly follows international standards. Even so, the functions specified for the NIS are rather ambitious and go beyond the current statistical capacity of the Institute. On the other hand, the Uruguayan institutional environment features a highly decentralized statistical system, which includes statistical offices in the ministries, in the centralized and decentralized public entities, and in the regions. Due to this decentralization, duplication of efforts exists, even though the budget for the statistical function is limited.

Recommendation:

- Revise the CBU's Charter to clarify CBU's responsibility for compiling and disseminating national accounts statistics.

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

The major producer of source data for national accounts purposes is the NIS. This involves sectoral economic surveys on production and costs, household surveys, and price surveys. However, the CBU conducts some complementary surveys. The flow of information from the NIS to the CBU is formally regulated by an inter-institutional cooperation agreement signed by the parties on May 13, 2003.

A memorandum of understanding was recently signed among the CBU, the NIS, and the Economic Commission for Latin America and the Caribbean (ECLAC) in order to schedule and

execute in agreement within the scope of their powers, activities to develop preparatory statistical operations for changing the base year of the national accounts of Uruguay and implementing the *System of National Accounts 2008 (2008 SNA)*, among which include conducting a household income and expenditure survey, reviewing the Annual Survey of Economic Activity and the Permanent Household Survey, conducting a trade channels and margins survey, reviewing construction statistics, among others that the parties deemed necessary to meet the stated objectives. To comply with the agreement, the parties will develop concrete actions that will be the subject of specific agreements. The activities developed by the parties to implement the purpose of the agreement shall be executed by the NIS, the Statistics Area of the CBU, and the Economics and Statistics Division of ECLAC. ECLAC will provide technical assistance to the NIS and the CBU. The CBU will assist the NIS, in the framework of its powers, to develop special projects that are appropriate inputs for the national accounts.

The agreements establish the quality and timeliness terms that the products provided by the NIS must satisfy. The CBU finances some products that are used in the compilation of national accounts. In recent years, there have been efforts to improve procedures for processing source data at the NIS. The results have been mixed, allowing for some improvements in timeliness but gradual improvements in data validation and quality of the basic data due to lack of resources at the NIS.

The administrative records used to prepare the national accounts are basically those on foreign trade (customs records) from the National Customs Directorate (NCD) and tax records (income and value-added taxes) from the General Directorate of Taxes (DGI). The CBU has direct access to the customs database. The quality and coverage of customs and tax on products records is good and appropriate filters have been developed for using these records in the various national accounts compilations.

The NSS has the task of disciplining the planning, production, and dissemination of statistics that are compiled by public bodies within it, so that they fit the criteria of integration, coordination, rationality, and reliability. To achieve the objectives set to the NSS and fulfill the obligations imposed on the NSS, the following are matters within its competence: (i) to perform production and dissemination of reliable and timely statistics for a better understanding of the national situation; (ii) guide the development of statistics in accordance to the principles laid down in the NSS law; (iii) train staff of statistical offices, training technicians in statistics, and enlighten the users for a better understanding of the information the NSS provides; and (iv) encourage the development of statistics and their application as instrument of research.

Article 4 stipulates that the NIS is the governing body of the NSS, in accordance to the principle of regulatory centralization and exercising its autonomy in technical matters within its jurisdiction. It will establish the standards on concepts, definitions, classifications, and methodologies on statistics, which the statistical offices that are part of the NSS should follow. The statistical production will be assigned according to the principle of decentralization, to the different operational statistical offices in accordance to the relevant subject areas.

Interagency cooperation among statistics producing agencies is established in Article 8 of the NSS law on the main tasks of the Sector Coordinating Units: (i) prepare the Sectoral Statistical Plan in collaboration with the respective Production Offices and propose it to the NIS for consideration under the National Statistical Plan; (ii) coordinate and monitor the implementation of the Sectoral Statistical Plan, with advisory, comptroller and evaluator powers of their development in accordance with the standards issued by the NIS; and (iii) run statistical activities that apply to their industry or entrust its execution to another Statistical Office thereof.

Uruguay prepared a Statistical Master Plan (SMP) during 2006–2007 with the support from the World Bank. The development of a SMP aims to strengthen the NSS, covering the set of all statistics produced by the NIS and the sectoral statistics offices. For this purpose, 15 working groups by subject area (WGSA) were established, with a broad participation of producers and users skilled in the subject group, which ran through meetings and exchange of documents, during the months of October–December 2006, with the objective of translating the development lines in a medium term strategic program of activities for each sector. In this context, discussion on proposed action lines was encouraged in every WGSA to be translated into a proposal document, which included the main content of sectoral statistical development plan.

The following working groups were established in 2006: Housing, Infrastructure and Environment; Demography and Vital Statistics; Agricultural Statistics; Health; Construction; Labor Market and Poverty; Social Protection and Promotion; Education, Culture and Recreation; National Accounts and Balance of Payments; Justice and Public Safety; Tourism; General Government Statistics; Prices and Wages; Nonfinancial Corporations and Small and Medium Enterprises; and Science, Technology and Innovation. However, these working groups are not meeting periodically and the plans have not materialized, except for the one on tourism.

There are coordination and communication issues inside statistical agencies and among them, as well as some duplication of efforts in the collection of source data, in particular, on the data collected by the different surveys conducted by the NIS and on some data collected by the CBU. There is some conflict between the legal authority of the CBU to collect data from any individual or legal entity, whether public or private, and the lack of CBU's access to income tax records owing to the tributary secrecy stated in the Tax Code. Article 47 of the Tax Code stipulates: "The tax authorities and the officials who depend on it, are bound by the confidentiality of the information resulting from their administrative or judicial proceedings. Such information may only be provided to the tax authorities and the criminal, juvenile, or customs courts when those bodies understand that were essential to the performance of their duties and upon application by reasoned decision. The violation of this rule will be rigged responsibility and reason for removal to the unfaithful official."

Income tax records are very useful for completing the coverage of production accounts for private nonfinancial corporations and households as well as for compiling the economic integrated accounts for these sectors.

Recommendations:

- Enhance coordination among statistical agencies through closer contacts and regular meetings of technical staff (sectoral working groups) to discuss specific data requirements at detailed level, reduce respondent burden, improve timeliness of source data, use the collected data in all their potential, and avoid duplication of efforts in the collection of source data.
- Sign an agreement between the CBU and the Ministry of Economy and Finance (MEF) so that the CBU can have access to income tax records by economic activity.

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

The confidentiality of data reported by individuals and entities is guaranteed under Article 55 on information for statistical purposes of the CBU Charter. It indicates that such information is covered by administrative secrecy and will be strictly confidential.

The confidentiality of individual data is also guaranteed by Article 21 of the CBU Charter and by Article 17 of the CBU Bylaws of Civil Servants.² Article 17 on the fundamental duties of CBU officials includes in part d) To keep absolute secrecy and discretion in all matters that come to their knowledge in the exercise of their functions under the corresponding administrative and criminal responsibility, if it were the case.

Article 21 on obligation of secrecy of the CBU Charter stipulates that bank officials have a duty to maintain strict secrecy and strict discretion in each of the bank's matters they become aware of in the course of or in the exercise of their functions under the most severe administrative, civil and criminal responsibility, if were the case (Article 25 "in fine" Decree-Law No. 15.322 of September 17, 1982, and section 163 of the Penal Code).

In addition, the CBU Code of Ethics³ states in part b) of Article 5 "To keep absolute secrecy and reservation on the information obtained through any medium or in connection with the performance of its function, even after the termination of the relationship with the Bank" as one of the principles and values. The CBU Code of Ethics is available to all staff on the CBU intranet.

Also, Article 16 of the NSS Law states that individual data provided for statistical purposes cannot be used for other purposes, or even mediating a specific request of the informant. Article 17 stipulates that the individual data provided to the agencies of the NSS are covered by statistical confidentiality. The secrecy obligation encompasses both statistical agencies and their officials as

² Decree 190/993 of 26 April 1993, Decree 517/994 of 29 November 1994, Decree 22/003 of 21 January 2003, Decree 307/003 of July 30, 2003 and Decree 19/005 of 13 January 2005, <http://www3.bcu.gub.uy/a21879.html>

³ RD/485/2010 of December 29, 2010.

well as third parties who become aware of the data gathered under statistical confidentiality. There are data not covered by statistical confidentiality such as the name, address, registered office, industry, and size indicators piecewise provided by taxpayers, businesses or organizations that develop economic activity or nonprofit. However, the information not covered by statistical confidentiality cannot be determined or required so that it can be induced whose secret information must be preserved by legal mandate.

Article 18 of the NSS Law indicates that the members of the NSS can only disclose (i) the aggregate or summary information corresponding to a set of information sources (macro data); (ii) individual information relating to an information source (micro data) provided the identity of the source is not disclosed; and (iii) the information referred to in the previous paragraph.

Article 19 of the NSS Law also states that all Statistical Offices of the NSS are required to deliver to another member of the Statistical Office System, upon request, micro data collected for statistical purposes, even identified, if they meet the following purposes: (i) the purpose of the application must be purely statistical; and (ii) the office applicant must have adequate means to protect the data. In case of nondelivery of the requested data, the decision of the origin of that refusal will be up to the NIS. The Statistical Office of the NSS that receives the information referred to in the preceding article, should be obliged to (i) statistical confidentiality when the data were collected under the statistical secrecy; and (ii) no microdata transfer without the express consent of the Statistical Office that collected the information.

The NIS's questionnaires and instructions include a section that reads: "The confidentiality of the information provided is guaranteed by Law 16.616 of October 20, 1994. Thank you in collaboration with this important task."

Similarly, the NIS's surveys enclose a letter that informs respondents of the confidentiality of the data provided and that they will be used to calculate sectoral statistical indicators at aggregated level. The NIS's surveys are mainly filled out through the internet by using individual passwords that are only known by respondents.

The NIS and the CBU data processing platform has a hierarchical system of privileges ensuring protected access to information sources and to the processes used by the compilers of source data and of national accounts. The Area of Information Technology of the CBU has implemented a number of security measures to guard against unauthorized access to its statistical databases.

The rule of thumb to follow in the dissemination of national accounts data is not to disaggregate groups containing less than three individuals, or if it is done, it is with the consent of the informants.

All resources of the internal net have to be protected by passwords or established access lists. The CBU intranet can only be accessed with an authorized user's name and password, and different levels of access (user profiles) have been established for the various databases through the Windows XP operating system. There are also an external firewall to prohibit access to the

CBU intranet and databases, an antispam module, and an antivirus. The national accounts databases are administered by the ESA of the CBU.

There is also an encrypted mail sharing system for confidential and/or highly sensitive information. Finally, the CBU has policies on the use of the internet and e-mail, norms for the treatment of confidential and highly sensitive information, and mechanical destruction of hard copy information.

Questionnaires, once processed, are archived in the storeroom of the NIS and are destroyed after several years, if their permanent archive has not been requested.

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

The CBU is authorized under Article 55 of its Charter to obtain information from public institutions for compiling the national accounts. Access to the administrative records of the aforementioned, the NSS, the National Tax Directorate, and the NIS falls within this framework.

Article 55 of the CBU Charter states that the bank may require on a mandatory basis and for statistical purposes, of any individual or legal entity, whether public or private, all information needed to duly fulfill its functions and duties.

The bank may impose fines on any person or entity not meeting the information lawfully required by it, or that has submitted incomplete or inaccurate information. The amount of the fine will range between 10,000 IU (ten thousand indexed units) and 20,000 IU (twenty thousand indexed units) in the case of legal persons, and will be of 4,000 IU (four thousand indexed units) in case of natural persons. Payment of the fine does not exempt from the requirement to submit the requested information. However, in the case of information required for national accounts purposes, fines are not used to reduce nonresponse owing to their administrative cost for the CBU.

Article 13 of the NSS Law also stipulates that any person or entity that is permanently or temporarily in the country is considered a source of information. The data provided by the source of information, directly and indirectly when they have been surveyed, are for statistical purposes only and if they are for other purposes, are mainly administrative.

Article 14 of the NSS Law states that all natural or legal persons, individuals and nonstate public agencies are required to provide data that may be required, for statistical purposes, by members of the NSS and within the time which they stipulates. Article 15 indicates that the data provided by the information sources shall conform to the material truth (Article 30). To verify this, when the statistical office, member of the NSS, so requests, the source of information must present documentation or technical means of reproduction that support the information.

Article 24 of the NSS Law indicates that statistics violations will be punished with a fine. The amount of the fine is determined by the NIS, between a minimum of 20 IU (twenty indexed units) and a maximum of 50 IU (fifty indexed units), reasoned decision. In fixing the amount of the fine the injury and background of the offender will be considered, among other circumstances. When the offender is a public person, the hierarch of the entity will be liable and the fine will be deducted from their pay. Payment of the fine does not affect the administrative responsibility of the chief; the offense will be considered misconduct.

Payment of the fine does not exempt from the obligation to present statistical information requested. This should be provided within the time expressly granted in the resolution that is enforceable. The agency that collects the fine should shed its general revenue produced.

The NIS will create a registry of offenders in order to find recidivism within the system that may publish. To this end, members of the NSS must notify the NSS's payroll of natural or legal persons punished by a fine, within a period of thirty days from the date of the decision imposing the fine.

When instructed that the violations of the NSS Law are fit to generate facts constituting the presumption that the law provides for criminal offenses, the heads of the agencies of the NSS will be required to proceed under Article 177 of the Penal Code.

As can be seen, there is a defined procedure that applies to refusals to complete survey questionnaires. It is systematically applied in both structural and short-term surveys. In general, after the fine is applied, the company provides the data and conducts its disclaimers about the situation that caused the breach. If the company provides convincing reasons and there is no history of default recorded for that company, the NIS usually withdraws the fine. If there are no compelling reasons or the company is still defaulting on its obligations, often the fine remains and the amount charged is turned to the National Treasury. However, the fines are low in the case of large and medium enterprises.

The nonresponse rate of the information requested by the NIS is reasonable, and there are only a few cases where the failure to respond is important (see table on nonresponse rates). This may be a reflection of the high regard that the country's private agents have for the NIS and the CBU.

Table 1. Response Rate to NIS's Surveys

Structural Surveys	Nonresponse
Annual Survey of Economic Activity	20% (*)
Free Zone Census	< 10%
Assets and Liabilities Survey	8%
Triennial Survey of Innovation Activities	10%
Short-Term Surveys	Nonresponse
Manufacturing Volume Index	< 1%
National Producer Price Index	< 1%
Sentiment/Outlook Survey (this survey is voluntary)	30% to 40%
Construction Costs Index	< 1%
Construction Volume Index	0%
Average Wage Index	< 1%
Consumer Price Index	< 1%

(*) There is part of the nonresponse that is related to sampling frame issues or outdated samples that could not be reviewed.

There is part of the nonresponse to the Annual Survey of Economic Activity that is not related to a rejection from the informant, but to sampling frame issues or outdated samples that could not be reviewed by the NIS owing to resource constraints.

Instruments to collect source data were designed in the past to reduce respondent burden, and an attempt is made to take into account the time constraints of the respondent. However, the level of detail of some surveys needs to be adapted to the two types of compilations, base year and annual follow-up compilation. Although the timeliness of some NIS's surveys has recently improved, some surveys are too detailed and the data collected are not used in all their potential due to timeliness or quality/confidence issues. The NIS plans to develop an Integrated Economic Statistics System for making progress in this area, but its implementation has not yet started.

Recommendations:

- Review all NIS's surveys and CBU's data request to reduce respondent burden, make the collected date consistent across the different periodicities and avoid duplication of data requests to informants from the public and private sectors.
- Conduct meetings, breakfasts, and presentations to the presidents and accountants of important private enterprises and other public and private institutions that provide statistical data in order to inform them of the objectives of the different statistical collections, in particular, to track the behavior of the economic activity in the short and medium terms and the usefulness of reliable and timely information for economic policy decision making and financial programming, emphasizing that these data will be also useful to informants' decision making process for investing and producing in the country. It would be important to involve the authorities of the CBU and the NIS in these events.

- Review the NSS fines for nonresponse in order to update them to amounts that are in accordance with the revenues and capital of large and medium-size enterprises.

0.2 Resources

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

Staff numbers at the NIS and at the CBU are not adequate to collect and compile economic statistics in an appropriate and timely fashion. Computing resources at the NIS and CBU are adequate, but physical infrastructure (lighting, heating, phone lines, and furniture) at the NIS needs improvement. The NIS's funding is not adequate for conducting the necessary economic surveys with the quality and timeliness required for compiling national accounts.

The ESA of the CBU has only 16 staff,⁴ including three supervisors and one administrative assistant. So, the number of technical staff is even smaller (12), which creates serious constraints to expand the scope of the accounts and compile new national accounts outputs. The number of staff dedicated to the compilation of national accounts in Uruguay represents only a third of the average staff number dedicated to national accounts in central banks and statistics institutes in Latin America.

Currently, the ESAs of the CBU and of the NIS have 10 and 8 vacancies, respectively. The vacancies at the NIS that have not been filled for more than a year owing to Civil Service regulations, whose procedures have taken considerable time to navigate. The vacancies at the CBU are available since May 2012 for the same reason. The entry process and requirements to become public officials delays the hiring of new personnel since this process requires prior favorable report of the National Civil Service Bureau (ONSC), the Office of Planning and Budget (OPP) and the General Accounting Office (CGN). The ONSC shall inform on whether there are officials to be re-distributed at state-wide, in which case they would have priority in the allocation. Also the ONSC shall inform on the relevance of the call on the basis of need that prompted the request, informing the public entity and the executive power. (Law 16,127 and amendments, including law 17,930 and law 18 719). The OPP and the CGN, within their respective competencies, shall inform on the relevance of the call from the budgetary standpoint.

Only one university in Uruguay includes the statistics program in its programs, and this program has only been functioning during the last 8–10 years. Only 30 statisticians have graduated during this period. Only one sampling specialist works at the NIS and designs the samples of most NIS surveys.

⁴ Plus three freelances on internship that are financed by the Inter-American Development Bank (IADB) for a fixed term.

On average, the staff of the ESA has been compiling national accounts for more than 15 years. More than one-third has been compiling national accounts for thirty or more years, while the rest have been doing so for more than seven years on average. Most of them are professionals, primarily economists. Approximately one-fourth have post-graduate degrees at either the masters or doctoral level.

The ESA sends staff to short-term seminars (for example to ECLAC, the Center for Latin American Monetary Studies (CEMLA), and the International Foundation of Administration and Public Policies for Ibero-America (FIIAPP-Madrid)), and medium-term courses (IMF). However, the major contribution to training has been “on-the-job” training.

This training program has been supplemented by sending professional staff to obtain masters’ degrees in economics (for example, to Argentina and Chile).

Compensation levels and structure at the CBU are competitive with the market (except at the entrance level), particularly if nonmonetary benefits are included. The bank is in the process of reviewing the provision of performance bonuses for achieving goals. However, the compensation levels at the NIS Economic Statistics Division are low and not competitive with the market. Therefore, this is causing high staff mobility inside and outside the NIS.

The CBU’s computing resources available for compiling the national accounts are adequate and updated frequently to maintain the highest technological standards. Staff desktop computers are, in general, HP Intel Core Duo with appropriate data processing capacity networked Windows XP operating system. The ESA has color printers, and black and white printers, and copiers for heavy-duty work, as well as portable computers and overhead projectors, and the number is sufficient for staff numbers. In addition to Microsoft Office software (Excel, Word, PowerPoint, and Access), there are more analytical tools like eViews WORK BENCH, SPSSv20, and Win X-12 ARIMA, and CBU applications on external trade, unit value indices, national accounts consistency, and a database for time series. The databases were developed using ORACLE Procedural Language/Structured Query Language and Centura Java. The bank contracts with private enterprises and has maintenance agreements regarding the development of information technology applications, software purchase, licenses, and equipment.

The platform of national accounts compilation process was developed in ORACLE databases and Excel worksheets. All staff members are connected to the internet, and there is an active intranet for developing the various compilation and communications processes.

Adequate protection is provided for computer resources, including through provision of emergency back-up systems, for retrieval of statistical series and updates in the event of natural disasters, accidents, and other unusual events. Back-ups are daily updated.

Currently, funding for the compilation of national accounts is provided under the budgetary process of the CBU, which is formulated by the CBU Board of Directors and is monitored by the Planning and Budget Office under the Executive Power and the Court of Accounts. Staff from the

Court of Accounts works at the CBU to monitor the budget execution, which is reported twice a year. Short- and medium-term work programs are taken into account in the budgetary process. Requests for funding for special projects such as changing the base year of the national accounts, expanding their coverage, and conducting studies for improving methodology are included as budgetary increases in the normal annual budgetary process. However, the operating budget is less flexible (last year expenditures indexed by the inflation rate and the increase in the exchange for expenses in foreign currency) than the financial budget used to issue coins and bills.

Recommendations:

- Ensure that the NIS has adequate financial resources, staff, facilities, and training, and take further steps to increase retention of qualified staff.
- The legal framework to hire/contract staff by the NIS and the CBU (e.g., approval from the National Civil Service Office) should be more flexible provided that these institutions use a technical profile to fill vacancies.
- Sign an agreement between the CBU and the MEF so that the CBU can have access to income tax records by economic activity in order to improve the coverage of national accounts and compile integrated economic accounts by institutional sector.
- Update the base year of the national accounts and implement the *2008 SNA* as soon as possible.
- Expedite the filling of the ten vacancies in the CBU Economic Statistics Area. Additional staff will be needed for changing the base of the national accounts and implementing the *2008 SNA*.

0.2.2 Measures to ensure efficient use of resources are implemented.

The CBU has a five-year (2010–2014) strategic plan⁵ that serves to increase the quality and timeliness of the compiled statistical series as well as to improve efficiency in the allocation of resources. The five-year strategic plan is further broken down into individual work plans. These plans are administered by each organizational unit of the bank in coordination with the Strategic Development and Budget of the CBU. A committee meets periodically to review progress. The allocation of both financial and human resources is in the process of being discussed.

Staff is evaluated annually based on the criteria of contribution and achievement of pre-established goals through the newly Competency Assessment and Results System. This

⁵ "Plan Estratégico 2010–2104" *Objetivos Estratégicos Institucionales, Específicos y Funcionales.*

evaluation method includes new performance bonus (two-month salary) practices that will be individual.

To increase the effectiveness of working processes, the SCCA for national accounts has been developed based on a specific data model. This has allowed for a high level of consistency between the use of classification, concepts, and systems for reconciling the base year compilation and the annual follow-up compilation of production and goods and services accounts.

The base year compilation, which has been carried out every fourteen to eighteen years, has been consistently reviewed by outside experts to evaluate the statistical methodology and compilation systems. The base year compilation, the most costly compilation in terms of funding, is periodically evaluated and compares very favorably in cost-benefit terms with previous similar exercises conducted in Uruguay and other exercises carried out in the region as only \$350,000 were additionally spent by the CBU. The current strategic plan of the CBU includes the diagnosis of the degree of compliance with international standards, the development of an adequacy plan and the implementation of international standards in the compilation of statistical information as one of the specific objectives of the ESA.

The CBU has an elaborate process for budgetary formulation and monitoring of budgetary execution. This process facilitates the allocation of resources and achievement of results within the context of the strategic planning conducted every five years and updated annually.

The unit compiling the national accounts is the Economic Statistics Area (ESA) under the Economic Consulting (EC) Management of the CBU.⁶ The ESA's organization is flexible and currently consists of four departments that handle procedures related to the compilation of production accounts, goods and services accounts, some institutional accounts, external trade data, and balance of payments statistics: The Supply, Models and Projections Department, the Demand and Prices Department, the External Sector Department, and the Institutional Sectors Department.

The Supply, Models, and Projections Department compiles the production accounts for all time series: base year, annual, and quarterly at current prices and at constant prices, and a Monthly Index of Economic Activity (MIEA) for internal purposes. It is responsible for collecting, integrating and validating its own estimates of agriculture, fishing, manufacturing (activities D15 to D19 of the *International Standard Industrial Classification of all Economic Activities (ISIC) Revision 3*), and domestic trade, and the estimates on other economic activities provided by other departments. It also compiles the supply and use balances for some important agricultural and manufacturing products and regarding exogenous changes in stocks of these products, as well as of gross fixed capital formation in cultivated assets. This department compiles the trade margin rates matrix by product, and employment and wages by processing the data from

⁶ http://www3.bcu.gub.uy/autoriza/adrhdf/estructura_organica.pps

household surveys and population censuses. It also applies univariate models and seasonal adjustment to the various series produced by the ESA, including quarterly GDP, and makes predictions of macroeconomic variables from different models or available data sources.

The Demand and Prices Department is responsible for the design, synthesis, and validation of the goods and services account and GDP by the expenditure approach on annual and quarterly basis. It also compiles production accounts for mining and quarrying, manufacturing from D20 onwards, and construction, making them consistent with their uses, and compiles exports and imports of goods and services at current and at constant prices. It gathers price and wage statistics, necessary for compiling the estimates at constant prices and making the accounts consistent at current and constant prices. It participates in international meetings on relative prices measurement between countries, such as the World Bank's purchasing power parity (PPP) project. It also compiles direct estimates of changes in inventories for some products, tracks the indirect estimation of household consumption expenditure and incorporates exogenous data as well as monitors and evaluates the consistency of the residual estimates of changes in inventories in the preliminary estimates. The Demand and Prices Department is also responsible for operating and updating the database "Information System of Economic Time Series" (SISTE) in coordination with the Institutional Communication Department and the Information Technology Area.

The Institutional Sectors Department is responsible for the synthesis of the activities of the Institutional Sectors, and their consistency with the accounts by industry (Supply, Models and Predictions Department) and goods and services accounts (Demand and Prices Department). It is responsible for the compilation and validation of the consolidated accounts for the total economy, the external sector account, and the accounts of the financial corporation sector, public sector (nonfinancial corporations and administrations), and service sector (all services, except trade). It also provides the Demand and Prices Department with estimates of government final consumption expenditure, to be integrated in GDP estimates by the expenditure approach. It classifies the different types of taxes and fees, compiles, and regularly updates the tax rates matrix by product and prepares supply-and-use balances for electricity, gas, and water, and all services, except for domestic trade. The Institutional Sectors Department manages and administers the Consistency System of Final Annual National Accounts Series (SCCA) and in coordination with the Committee on the Annual Closing of the National Accounts defines control structures, manages phases, and designs new validation forms.

The External Sector Department is responsible for the validation and compilation of the balance of payments, the international investment position (IIP), and the external account of the economy, together with the determination of the current external balance and net lending of the rest of the world for national accounts. It coordinates with the other three departments, the issues in order to make the data consistent in the balance of payments and the external account with those recorded in the accounts of resident units in the system of national accounts. It is also responsible for developing foreign trade statistics of goods (customs data processing), disseminating them according to different classifications and levels of detail, at current dollar

values, and for compiling and disseminating export and import unit value indices. It classifies the foreign trade database and compiles the matrix of imports and exports by economic activity classes and products, required for the goods and services accounts, as well as the terms of trade and the real and nominal effective exchange rates. The External Sector Department is also responsible for managing the Balance of Payments Compilation System (SIRAED). In coordination with the Committee on Closing the Balance of Payments and the IIP, defines improvements, changes in consolidation, and designs new output or analysis forms.

The fact that four departments handle the process is due in part to varying levels of standardization and the numerous sources used in compiling the production and goods and services accounts as compared to the lack of compilation of the complete set of integrated economic accounts by institutional sector. Although the flexibility of the organization makes it possible to handle, with only relatively small organizational changes and few staff, the demands imposed when a new base year is introduced, ESA's limited human resources made necessary an increase in the staff time devoted to compiling the last change in the base year of the national accounts by practically 50 percent in comparison to the normal working schedule, for a seven-year period. In addition, as can be observed in the list of functions of the four departments, although the ESA's structure was recently changed, there are activities that correspond to one of the current departments of the ESA that are spread out across the different departments, such as the compilation of production accounts and the compilation of GDP expenditure components, which complicates coordination of the production of these components of the national accounts.

Recommendation:

- Adapt the functions of the ESA's departments to an integrated organization by institutional sector (nonfinancial private sector, financial sector, nonfinancial public sector, and external sector), so that the supply and use table by economic activity and product by sector and the economic integrated accounts by sector are compiled and analyzed by the same staff with coordinators by type of statistic (annual supply and use table, quarterly accounts, and integrated economic accounts).

0.3 Relevance

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

A qualitative survey on qualified users was conducted in late 2006 in the framework of the preparation of the Statistical Master Plan for Uruguay under the National Statistical Development Strategy with World Bank's support. The survey was answered by 52 qualified users that perform activity in several areas: academic, political, decision makers from the public and private sector, private consultants, social and business organizations. In general, the majority opinion of the respondents stated that NSS institutions are reliable, particularly the two main agencies responsible for economic statistics (NIS and CBU). Moreover, they claimed predominantly an

average degree of satisfaction with the statistics produced by them. Fifty percent of the informants were satisfied with the statistics compiled by the NIS and the CBU.

The CBU website provides an e-mail address (info@bcu.gub.uy) for users to submit feedback on the statistical database and other suggestions. However, no other specific measures such as surveys, informative bulletins, or seminars have been adopted to ensure that statistics meets users' needs.

The ESA has no periodic and direct process for consulting with substantive users of national accounts, academia, the media, and/or the private sector in order to evaluate the usefulness of the national accounts and identify emerging requirements in this area.

Nonetheless, there has been a high degree of sensitivity and response capacity in meeting requests that such agents have made to the CBU, as well as requests made by the CBU's own research and management units in order to more adequately fulfill their mandate. This was the case with the first release of the base year of the national accounts.

The ESA actively participates in statistical meetings and seminars organized by regional organizations (ECLAC and the Common Market of the South (MERCOSUR)).

Data requests are satisfied mainly by e-mail, but they are not periodically analyzed to identify new and emerging data requirements.

The CBU Communication Department changed the design of the CBU website in 2010 to allow the navigation by topics. It conducted a survey to some economic analysts in order to assess the usefulness of the new website. In general, they responded that the service of the new website was better than the previous one, and that the statistics that are most used are the daily exchange rate and quarterly GDP.

Recommendations:

- Initiate regular consultations with public and private sector users, including through fostering users' groups and establishing an advisory committee to improve the usefulness of statistics and advise on statistical program priorities. The advisory committee should include participation of academics, private sector analysts, and producers' associations.
- Analyze data requests and users' comments made through the CBU website periodically in order to improve the service provided to them.

0.4 Other quality management

0.4.1 *Processes are in place to focus on quality.*

The mission and the vision of the CBU and of the ESA underscore the importance of quality. The CBU is in the process of improving its structure in order to take into account economies of scale and optimizing processes.

One of the strategic objectives aligned with the 2010–2014 Strategic Plan is to “4. Generate and disseminate information and knowledge in the economic and financial matters.” The specific strategic objective related to statistics is to “4.1 Generate and disseminate information and knowledge adjusted to best practices and international recommendations in the matter.” The functional objective related to national accounts statistics is to “4.1.2 Generate and disseminate information on monetary, fiscal, real sector, public debt, and international reserves.” In addition, the CBU Strategic Initiatives for 2012 include the following regarding national accounts statistics to “diagnose compliance status with international statistical standards and design a plan for implementing the emerging recommendations.” Both the Strategic Plan and the Strategic Initiatives are posted on the CBU website.

Development of the national accounts program incorporates quality improvements identified in the follow-up and periodic revisions. Decisions are made weighting the various dimensions of quality taking into account the volume of resources available. These issues are resolved by incorporating best level (accuracy/reliability) measurements in less frequent measurements (annual and base year) and seeking the best way to measure changes from best level through more frequent measurements (quarterly and monthly). This method allows the optimization of the cost/benefit relation of the national information system for national accounts purposes.

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

The procedures for monitoring the quality of the national accounts program are as follows:

- The first has been an assessment on national accounts statistics conducted by ECLAC in May 2012 and the memorandum of understanding that was signed among the CBU, the NIS, and ECLAC in order to schedule and execute activities to develop preparatory statistical operations for changing the base year of the national accounts and implementing the 2008 SNA.
- The second procedure to structure the initiatives indicated in 0.4.1 “Generate and disseminate information and knowledge adjusted to the best practices and international recommendations in the matter” based on the IMF focus on gaps between the local situation and best practices in terms of sources, methods, and results or statistical products. The ESA indicated that the recommendations the IMF will make regarding this report will allow for adjusting and prioritizing the components of such initiatives.

The dissemination and revision cycle of the national accounts itself constitutes an adequate procedure for monitoring quality in terms of the factors explaining discrepancies between preliminary and revised estimates. This allows steps to be taken to reduce those discrepancies when feasible. Also, the SCCA permits to assess and improve the quality of the national accounts through the compilation and reconciliation of supply and use tables.

1. Assurances of integrity

1.1 Institutional Integrity

1.1.1 *Statistics are produced on an impartial basis.*

Article 3 of Law No. 16.616 states that the agencies of the NSS must objectively serve the purposes of its creation being fully subject to the law and must act in accordance with the following general principles: statistical confidentiality, relevance, transparency, rigor, technical autonomy, comparability, efficiency, regulatory centralization, operational decentralization, legal objectivity, and motivation grounds for the decision.

The CBU, created by Article 196 of the Constitution of the Republic, is an autonomous agency endowed with technical, administrative and financial autonomy. Staff positions are technical. The promotions are made on a competitive basis with background evaluation, merit, and evidence of opposition. However, staff training and support to staff for conducting research could be improved.

Article 12 of CBU Charter on the composition of the CBU Board indicates that the Board will be composed of three members who shall be appointed under Article 187 of the Constitution, among citizens who, by their personal background, professional and subject knowledge, ensure independent judgment, efficiency, objectivity and impartiality in their performance.

Article 2 of the CBU Bylaws states that the CBU officials are in the service of the nation and not in the service of a political faction. (Article 58 of the Constitution).

Article 17 of the CBU Charter on Ineligibility states that members of the Board may not be appointed and maintained in that position if (i) persons are not citizens of Uruguay or with at least five years of legal citizenship; (ii) persons are under twenty years of age; (iii) persons were under a bankruptcy or insolvency or were directors or directors of companies in bankruptcy, liquidation or insolvency, provided they have been found liable for fraudulent or of information hiding; (iv) persons who have committed or noticeable irregularities found in financial means; (v) persons who have been convicted of crimes that may have connection with the public; and (vi) people at the time of appointment are owners, shareholders, directors, partners, managers or employees of institutions regulated by bank.

Article 18 of the CBU Charter on declaration of interest also states that Board members should declare before Board meetings, without reservation, all private interests that may have giving

matters be treated or resolved by the Board and shall refrain from speaking or voting on the agreements and resolutions of the Board that relate to those interests. However, if they have declared it to the Board, such interests do not inhibit the effects of the establishment of a quorum. The declaration referred to shall be made at the time of start of the Board meeting that are considered or resolved the issues.

Although the tenure of CBU president is the same as that of the government, in practice, there is no external or internal influence that could have an impact on national accounts results.

Standards set within the CBU establish regard for professional behavior, courtesy toward respondents, integrity, impartiality in hiring, execution of official duties, and the avoidance of influence by third parties. The president of Uruguay, with the approval of the Senate, selects the president of the CBU.

Recruitment and promotion are based on professional aptitude or expertise. Vacant positions are open to all staff. Interested staff members apply for these positions, and the most suitable candidate is selected to assume a position of greater responsibility, in accordance with the technical requirements of each position and the results of his/her evaluation. Contracts and hiring take into account professional profiles for specific jobs.

Staff is encouraged to attend seminars and pursue professional training. The CBU staff attends annual meetings of national accounts experts hosted by ECLAC as well as regional meetings organized by the MERCOSUR. Staff also participates in courses sponsored by CEMLA, the IMF, and the FIIAPP-Madrid, among others.

Some case studies on financial services indirectly measured (FISIM) and on the nonobserved economy were undertaken and presented in the CBU Annual Conference of Economy (*Jornadas Anuales de Economía*). However, time slots are not especially set to conduct research during working hours. Nonetheless, the ESA has a list of research topics to carry out and present during 2012 in order to implement the 2008 SNA, some of which were already completed and presented to the ESA: Changes introduced in ISIC Rev. 4 (12/04/2012); Goods for processing abroad (08/03/2012); Methodology for measuring agricultural work-in-progress (03/10/2012); The treatment of FISIM; the treatment of employment; a review of changes to the measurement of the gross capital formation: first assessment of its potential measurement in Uruguay.

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

The selection of source data and statistical techniques for the compilation of statistical series is based solely on statistical considerations. The national accounts are compiled in accordance with professional criteria, international standards and with complete independence. The choice of source data, whether from surveys or administrative records, and the selection of statistical techniques are based solely on measurement objectives and data requirements. Cost considerations may sometimes determine the selection of sources and methods as well.

Decisions to disseminate data are based on technical, available staff number, timeliness, and cost considerations.

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

The Department of Institutional Communication is in charge of CBU's communication policy. The CBU follows the press very carefully with regard to references to CBU's statistical products. The assistant of the ESA selects the articles that relate to national accounts and external sector statistics and puts them in a binder with access to all staff.

There are four press conferences within a year to present monetary policy decisions to the media. Releases and statistical data are also sent to a list of 200 users that includes economic analysts, consultancy offices, and public institutions.

Comments on GDP trends are included in the bulletin that is distributed to the press by e-mail and is posted on the CBU website. This bulletin identifies the main underlying factors behind unusual figures and movements, in order to improve user understanding and reduce the likelihood of misinterpretation. The president and the manager of the Economic Consulting of the CBU are entitled to respond to public criticism of statistics or instances of misuse of statistics in response to a prior request from the Board, but there have been very few instances where this entitlement was used owing to a conservative approach.

Recommendation:

- The CBU should comment more proactively on erroneous interpretation and misuse of CBU statistics in the media.

1.2 Transparency

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

Law No. 18381 of 17 October 2008 on "Access to Public Information," aims to promote transparency of the administrative role of the public entities and ensure the right of individuals to access public information.

With the inclusion on the CBU website of the new menu item called "Enable Transparency and Access to Information," the CBU completes a long list of measures that it has adopted since the enactment of Law No. 18.381 and Decree No. 232/2010, in order to ensure full compliance with the fundamental right of everyone to access to public information without discrimination on grounds of nationality or status of the applicant, as set out in this rule, and to promote transparency in exercising public functions in his capacity as an autonomous entity, member of the State at large.

In particular, some of the measures taken by the Management Committee, at the request of the Board, are as follows: a Working Group on Transparency of seven members representing managerial and departmental units was established. As a result, all the information produced by the CBU and held by all areas of the CBU was collected and the adoption of the following resolutions of the Board were promoted: (i) Resolution D/201/2011 of 29/06/2011: Process requests for access to public information and delegation to the Superintendent of Financial Services on the same resolution in its purview; (ii) Resolution of 04.12.2011 D/121/2011: Classification and confidential matters reserved (considered by specific topic) and declaration of business secrets by law; (iii) Resolution of 04.12.2011 D/123/2011: Modification of the Administrative Rules, to match the performance of the rules on access to public information; and (iv) Resolution of 04.12.2011 D/122/2011: Active Transparency: designation of responsible by type of publication on the CBU website.

There were three training workshops for officials on access rights and active transparency that were conducted by the Working Group on Transparency. The necessary items to comply with active transparency were activated and available on the website in order to complete the process.

The CBU website includes its Charter, which informs about the CBU's standards of confidentiality and professionalism of its president and Board of Directors. The CBU Bylaws are also posted on the CBU website and the CBU Code of Ethics is posted on the intranet. The CBU website (<http://www.bcu.gub.uy/Paginas/Default.aspx>) contains a directory of key personnel and an e-mail addresses to direct additional requests, suggestions, and contact CBU personnel. The CBU publications contain information on the list of contributors and the CBU website indicates the CBU's address, e-mail address, and phone and fax numbers. In addition, the CBU Library provides information to the public.

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

The national accounts are released simultaneously to all users and no person or institution outside the CBU has access to the data prior to their publication. This principle is strictly observed. This is informed in the metadata for national accounts of the Special Data Dissemination Standards (SDDS) posted on the IMF Dissemination Standards Bulletin Board (DSBB). The CBU website has a link to the SDDS website.

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

All CBU publications include the bank's name and logo. The CBU has a policy of releasing publications on the national accounts in a standard format (including titles, colors, and typography). There are no joint publications with other institutions. Third-party publications indicate the source when reproducing national accounts statistics.

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

Users are not informed in advance either through articles published on the CBU website or news releases, of any major change in methodology, sources data, and statistical techniques, such as the change in base year of the national accounts.

Recommendation:

- Announce in advance any planned changes in concepts and methodology. With major changes, users should be invited to provide feedback before they are implemented.

1.3 Ethical standards

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

The Code of Ethics of the CBU (RD/485/2010 of December 29, 2010) and the CBU Charter establish clear standards describing the procedures that the organization and its staff must follow when potential conflict of interest situations arise. It also includes clear ethical standards on measures to be adopted to prevent the misuse or misinterpretation of statistics. Implementation of Code is facilitated by a solid ethical standards culture that discourages political interference. The Code is available on the CBU intranet and staff is made aware of the Code in orientation courses when they join the organization.

The CBU Charter, its Bylaws, the Disciplinary Regulations,⁷ and Ethics Code include guidelines on staff behavior regarding the discretion that shall be observed on the affairs that due to their character are reserved and the observance of a decorous conduct and respect with peers and the public. These regulations also states incompatibilities and conflict of interest that are prohibited. Obligations of the staff include being efficient in the performance of their duties, updating their knowledge regularly, and using bank's goods properly. The CBU's Bylaws presents the sanctions to apply to staff that do not comply with the prohibitions. These sanctions include verbal and written reprehension and dismissal of the employee.

⁷ D 13/1994 of March 23, 1994.

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 general framework used for compiling the national accounts is guided by the recommendations of the *System of National Accounts 1993 (1993 SNA)*. However, Uruguay is planning to start with the source data developments for the implementation of the *2008 SNA* in the near future. The CBU will have a plan to adjust to international standards that includes adopting the *2008 SNA* at the end of 2012 or the beginning of 2013.

Implementation of the *1993 SNA* has been gradual with the series with 1997 as the base year, and then, with 2005 as the base year.⁸ Currently, the major deviations from concepts and definitions established in the *1993 SNA* involve investment in in-house development of software. This issue is kept under review and is on the agenda for the implementation of the *2008 SNA*.

2.2 Scope

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

Although Uruguay has not implemented the *2008 SNA*, compiles some of the *2008 SNA* tables and accounts that the ISWGNA⁹ determined as minimum requirement¹⁰ for its implementation. As listed below, Uruguay compiles on a regular basis:

- annual value added and GDP at current and constant prices by activity;
- annual expenditures of GDP at current and constant prices;
- annual value added components at current prices by activity, but with a delay of several years; and
- sequence of accounts for the total economy (until net lending) with an annual frequency;

⁸ Published in March 2009. *Integral Revision of the National Accounts 1997–2008 (Revisión Integral de las Cuentas Nacionales 1997–2008)*.

⁹ ISWGNA identified the scope of the implementation of *2008 SNA*—Data sets and details are provided in the document “Guidelines for monitoring the *2008 SNA* implementation” (<http://unstats.un.org/unsd/nationalaccount/docs/guidelines.pdf>).

¹⁰ Minimum requirement indicates an adequate scope of implementation of the *2008 SNA*, when relevant.

- annual rest of the world accounts (until net lending);
- quarterly value added and GDP at current and constant prices by activity; and
- quarterly expenditures of GDP at constant prices.
- Uruguay does not compile the following minimum requirements:
 - annual nonfinancial corporation sector accounts (until net lending);
 - annual financial corporations accounts (until net lending);
 - annual general government sector accounts (until net lending);
 - annual household sector accounts (until net lending);
 - annual nonprofit institutions serving households sector accounts (until net lending);
 - quarterly expenditures of GDP at current prices;
 - quarterly sequence of accounts for the total economy (until net lending); and
 - quarterly rest of the world accounts (until net lending).

Although with a lag, Uruguay does compile annual supply and use tables, one of the *2008 SNA* tables and accounts that the ISWGNA determined as recommended¹¹ for its implementation, and does not compile the following recommended tables and accounts:

- quarterly value-added components by industry at current prices by sector;
- general government final consumption expenditure by purpose in current prices;
- individual final consumption expenditure by purpose in current prices;
- financial accounts for all sectors;
- balance sheets, revaluation and other volume changes in asset accounts for all sectors;
- quarterly nonfinancial corporation sector accounts (until net lending);
- quarterly financial corporation accounts (until net lending);
- quarterly general government sector accounts (until net lending);

¹¹ Recommended data sets for *2008 SNA* implementation.

- quarterly household sector accounts (until net lending); and
- quarterly nonprofit institutions serving households sector accounts (until net lending).

The delimitation of the constituent units of the economy is broadly in accordance with the *2008 SNA*; in particular, territorial enclaves in the rest of the world are included as part of the economy. Free zones/bonded warehouses/factories operated by offshore enterprises under customs control are included in GDP, but there are issues to convert the recording of exports and imports from external data to national accounts criteria regarding inventories kept in the free zone, storage services and other modern services produced in the free zone. Also, workers who work part of the year in another country are recorded subject to data availability and this item is not important in Uruguay.

In the case of goods sent abroad for processing, goods that do not change economic ownership are part of the economy are recorded in exports and imports following the recommendations of the *1993 SNA*.

In particular, the following items are in scope for output measurement:¹²

- own-account production of all goods for own final consumption in agriculture and construction;
- research and development for market and on own account (it is collected in the surveys, but it is not relevant in Uruguay);
- output of goods for own-account fixed capital formation (it is collected in the surveys);
- mineral exploration (it is obtained from the National Directorate of Mining, and it is being investigated);
- production of computer software; and
- illegal output sold to willing buyers (only contraband of fuel, cigarettes, beverages, among other products is included).

Production of entertainment, literary, or artistic originals is not included in the scope of the Uruguayan national accounts.

Some items that are included in the assets boundary are in accordance with the *2008 SNA*. In particular, the following items are in scope for determining the assets boundary.¹³

¹² Irrespective of the coverage that is actually achieved.

¹³ Irrespective of the coverage that is actually achieved.

- agricultural work-in-progress;
- mineral exploration and evaluation (whether successful or not); and
- systems and standard applications computer software and databases (purchased or built in-house) (coverage of databases is low).

The following items are not in the scope of the Uruguayan national accounts:

- defense related assets that could be used for civilian purposes;
- weapons systems such as warships, submarines, tanks, missile carriers and launchers, etc.;
- valuables and historical monuments;
- entertainment, literary or artistic originals;
- research and development products; and
- leases and other transferable contracts (such as purchased goodwill).

Recommendation:

- Compile quarterly GDP by the expenditure approach at current prices and annual integrated accounts by economic activity.

2.3 Classification/sectorization

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

The 1993 SNA is followed to classify institutional units and transactions. Other flows are not compiled.

ISIC Rev. 3 instead of ISIC Rev. 4 is used to classify the principal economic activity (industry) of establishments and enterprises. The product classification is compatible with ISIC Rev. 3, but not fully compatible with the Central Product Classification (CPC). A national classification derived from the ISIC is used to classify products. *Classification of Individual Consumption According to Purpose (COICOP)* is not used to classify household consumption.

Classification of the Functions of Government (COFOG) is not used to classify functions of government.

Recommendation:

- Apply the standard *ISIC* Rev. 4 and *CPC* Ver. 2 for classifying activities and products, respectively, the *COICOP* for classifying household final consumption expenditure and the *COFOG* to classify government final consumption expenditure in order to facilitate international comparisons.

2.4 Basis for recording**2.4.1 Market prices are used to value flows and stocks.**

All transactions are recorded at market prices prevailing at the time they occur in accordance with 1993 *SNA* recommendations.

- Market output is valued at basic prices;
- Output for own use is valued at equivalent market prices;
- Taxes on products are included in the valuation of intermediate consumption;
- Value-added taxes are included in the valuation of intermediate consumption, excluding the deductible part of the value added taxes;
- The deductible part of the value-added taxes is excluded from the valuation of final uses;
- Corrections are made when transfer prices are detected (electric inputs and syrups);
- Information on insurance and freight for merchandise imports is available;
- Total imports and exports are valued on an f.o.b. basis; and
- Transactions in foreign currency are converted using the mid-point exchange rate prevailing in the market at the moment they take place.

Recording is done on an accrual basis.

Transactions and flows are recorded on an accrual basis. Work-in-progress is recorded in the period it is produced. Government revenues are recorded on a cash basis. Government expenses are recorded on an obligation basis, which still might have deviations from an accrual basis. Adjustments are made in some cases, in particular on taxes on products to get to accrual basis.

Recommendation:

- Work with the Ministry of Economy and Finance to get government expenditure data on an accrual basis.

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

Output of different establishments and activities in an enterprise are recorded on a net basis at enterprise level. There are no data on the establishments that integrate an enterprise.

Recommendation:

- Conduct an integrated enterprise/establishment survey that includes the information of the establishments that belong to each enterprise when changing the base year of the national accounts.

3. Accuracy and reliability

3.1 Source data

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

In Uruguay, the source data for the national accounts—censuses, surveys, administrative records—are developed on a decentralized basis independently of the ESA of the CBU. Despite statistics collection efforts in the context of the NSS led by the NSI, the development of source data for national accounts purposes is uneven.

Since the economic census, the business register/sample frame has been partially updated, and this update is not done regularly, owing to budget and staff number constraints as only one staff updates the business register. The business register is updated with the data from income tax records, which are available to the NIS. The enterprises were classified based on their principal activity according to the *ISIC* Rev. 4. The business register has been used as a central framework for collecting and producing statistics within the NIS. Its classification (*ISIC* Rev. 4) is applied when processing tax record data. The update has a lag of approximately six months. New enterprises are somewhat included, but enterprises that go out of business and have changed their economic activity or have merged are not purged from the business register regularly; therefore these enterprises are included in the grossing-up factors applied to get to the population. Also, new enterprises are not included in a timely fashion. The commercial business register is planned to be completed by including the data of local commercial business collected at the time of the 2011 census.

The sample design ensures that the studied population is adequately represented for a breakdown level of the 10 or more employees consistent with the resources allocated for the estimation of these statistics in the NIS. Stratification variables are used for design (size of the unit) and to compile subsidiary estimates (activity class). The NIS is trying to supplement the framework with locals and activities as a way to achieve estimates with some degree of

geographic breakdown. The sample parameters and the weights used in the estimation process are reviewed and updated annually, but the sampling methods have not been assessed.

A pilot test was conducted in the field for only a handful of enterprises before putting into effect the current questionnaire. No observational studies conducted during the design stage of questionnaires. The questionnaires are revised to account for changes in the circumstances, but not regularly. It is rare that the amendments to the questionnaires are subject to tests to ensure their effectiveness.

Efforts have been made to reduce sampling errors and design collection instruments that reduce nonsampling errors and that are more efficient for processing of the data. However, there is no standard to compare whether the reduction was minimal or not, or if it has reached maximum efficiency.

As is usually the case, there has been greater availability of source data for measuring GDP by the production approach than by expenditure, and hence, greater reliability of the GDP estimate by the production approach than by the expenditure approach, as well as greater reliability of the GDP estimate by the expenditure approach than by the income approach. The same uneven development is seen within the source data for measuring GDP by the production approach. While source data on traditional activities such as agriculture and manufacturing are more developed, source data on some service industries is insufficient. The same situation occurs when a shorter periodicity is introduced; there are source data on economic activities by the production approach on a monthly basis, but expenditure data are partially included on a quarterly basis; and income data are incorporated on an annual basis with long lags.

There are issues to convert the recording of exports and imports from external data to national accounts criteria regarding inventories kept in the free zone, storage services and other modern services produced in the free zone. Therefore, the data on the free zone are incomplete.

The ESA has a strategy that considers the following analytical aspects, so that the data collection programs used to compile the national accounts are adequate, take into account the specific conditions of the country, and neutralize some of the weaknesses mentioned above:

- Intense use of the supply and use table (SUT) as a tool for integrating source data.
- Relating the sources among the time series with different periodicity. The statistics collection program is a medium-term program and coincides with Uruguay's national accounts compilation cycle. This begins with the base year compilation and continues with the annual, quarterly, and monthly follow-up compilations.

The major institutional management initiatives for carrying out the strategy described above are:

- Establishing cooperation and technical assistance relationships with information sources outside the ESA by designing forms, processes for validation, and attribution of annual

statistics from enterprises, and household surveys, prices, public finance, and structuring classifications and filters in the case of administrative records.

- In those cases where the above initiatives are insufficient, carrying out directly or through third parties:
 - Periodic data collection activities for the annual, quarterly, and monthly follow-up compilations,
 - Special studies primarily for the base year compilation, and
 - Improving the quality of source data.

The list of sources for the monthly index of economic activity¹⁴ essentially involves production indicators by industry. In the best case, these are direct indicators of production volume or deflated sales such as monthly statistics on manufacturing, for which composition must be reclassified and concepts adjusted. Indirect indicators can be used to build direct indicators when information is not available, as in the case of domestic trade and transportation services. Building permits and square meters built are used for estimating construction. Export indicators help in those cases where the product is primarily sold in foreign markets.

The sources for the quarterly accounts are the exports and imports by type of product, although available on a monthly basis, are used on a quarterly basis. The only sources that become quarterly available are the register of investment projects, the quarterly construction, domestic trade, and services survey which are widely used, and the monthly manufacturing. There is good quarterly data on agriculture, electricity, gas, and water, communications, financial intermediation, private social and health services, and taxes as in the case of the annual estimates. The information on the central government is timely and of good quality, but the data on departmental governments on quarterly frequency are not timely, and their coverage is limited. There is no information on the other services. On the expenditure side, quarterly surveys are conducted on retail sales. Imports are also classified by economic use. The available data for construction, services and quarterly estimates are limited in scope.

Data sources for the annual accounts include more information on products, such as the annual agriculture data on crops and yields. The data on construction of public sector buildings and large private sector works, although the same as for the short term, include a survey conducted by the CBU on the main projects of engineering works.

The records on the production accounts by industry are based on surveys to enterprises and on financial statements. Updated information on mining and fishing is obtained through administrative records. For manufacturing, trade, and some service activities (personal and

¹⁴ *Indicador Mensual de Actividad Económica*

business services), the information is obtained through a regular program of an economic survey conducted by the NIS. They have national coverage, but only of formal enterprises (those that are on the register of economic activities generated from the records of the Internal Revenue Service and the Social Security Bank (Social Security)) and represent the two-digit level of the *ISIC*, Rev 3; a deviation from best practice since the representativeness of the samples should be at the four-digit level of the *ISIC*.

The national survey of manufacturing collects detailed information based on accounting statements and other statistics. It includes operational income and expenditures at a detailed level, data on employment and compensation of employees, production and sales of major products (volume and value), data on the quantity and value of the major inputs used in production, inventories, investment by type of activity, taxes, and depreciation.

The content and structure of the survey of trade and services are similar to those of the manufacturing survey, although the information is not collected in terms of outputs and inputs given the nature of the service activities. The annual surveys conducted by the NIS do not cover all service activities.

Even though the timeliness of the results of NIS's surveys was recently improved to less than two years, the validation process still has some limitations that hinder the timeliness and quality of the source data given NIS's resource constraints. Therefore, the CBU makes a partial use of these important surveys. In addition, some surveys are very detailed, which increases respondent burden and makes surveys' results less timely.

In the case of government finance statistics, there is complete, detailed, and timely information on the budgetary execution of the central government, based on accounting records from the Ministry of Economy and Finance.

Financial statements are obtained from financial institutions and from some subsectors of transportation, communications, electricity, gas, and water. Tax data are processed by branch of economic activity and used to validate estimates as well as grossing-up factors for economic surveys.

The price statistics used to compile estimates at constant prices are partially adequate. For sectors, whose production is determined based on administrative records, values at constant prices are estimated by using the deflation method. The CPI, the PPI for domestic sales, and the index of construction cost are available. Imports and exports are also deflated by unit value indices. By use, primarily exports and imports are obtained through deflation of nominal values mainly by unit value indices. This has a greater effect on imports than on exports, in that for the latter there are reference prices from domestic production. Also, constant price estimates of engineering works are obtained through deflation using indices of construction costs.

The sources for the base year compilation seek to establish the best level for each one of the macroeconomic aggregates in the SUT. This improves the estimates involved in the follow-up

compilations and represents the only instance when the production matrix and the absorption matrix are completely updated. For this reason, the ESA undertakes the most wide-ranging effort to collect data from all available data sources.

The base year compilation benefits from the information on industries. The NIS annual surveys are used in all their potential only during the base year compilation because the CBU allocated more time for data validation and processing. Numerous surveys and case studies were conducted for the base year compilation that take up most of the resources in this area and make it possible to overcome the limitations in the sources for the follow-up compilations, particularly those corresponding to services.

Household Income and Expenditure Surveys (HIES) are conducted every ten years instead of every five years. The last survey was conducted between July 2005 and July 2006 in order to obtain an independent estimate of household consumption expenditure to be used as input in the conciliation framework of the 2005 base year compilation. The HIES rely on the household registration that is performed in the preceding population census. Coverage of the residential units has differed according to the HIES in question. The last conducted (2005–2006) reached full geographic representation although prior constraints on the sample design of the resident population in smaller towns and rural areas had no chance of being sampled since only cities with more than 5,000 inhabitants were surveyed. The survey questionnaires expenditure and household income are usually pilot tested. No observational studies were conducted during the design of the questionnaires. The questionnaires are reviewed every time a new survey is conducted (with an average frequency of every 12 years).

Recommendations:

- Update the business register regularly.
- Use monthly value-added tax (VAT) data by economic activity to improve the coverage of quarterly national accounts estimates.
- Conduct a new Household Income and Expenditure Survey every five years to strengthen estimates for household final consumption expenditure.
- The NIS should review and update the classification by economic activity of the business register obtained from income tax records and provide an improved version to the MEF, so that the MEF and the CBU can use the income tax records data with an updated and improved classification.
- Expand the coverage of the annual surveys on construction and services to cover the private sector.
- Conduct a quarterly survey on sales of services and on inventories of inputs and finished and resale products.

- Review the Economic Survey to collect data of inputs and outputs of the establishments that integrate an enterprise at least for the new base year of the national accounts; and cross-check all economic surveys to avoid duplication of data requests and make collected data consistent through the different periodicities. Apply a standard product coding in the survey, preferably CPC.

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

Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required for compiling national accounts statistics. The national accounts compilers are aware of differences in concepts and definitions used in the source data from those required by national accounts. However, the product classification in the NIS surveys does not follow an international classification and is not consistent among respondents. The economic activity classification of the household survey needs improvement.

Annual data requested to enterprises and nonfinancial enterprises are recorded on accrual basis and disaggregated according to business accounting of the private sector. Likewise, the information on financial enterprises is recorded on accrual basis according to the chart of accounts of financial institutions and insurance companies, respectively. In addition, the government has its own charts of accounts. Government expenditures are recorded on an obligation basis and revenues on cash basis, but allocated to the corresponding period. The available information can be easily reclassified according to the 1993 SNA.

The coverage by economic activities and an assessment of the annual coverage of source data in terms of value added are presented below:

Table 2. Coverage Annual Source Data National Accounts in Terms of Value Added

Industries		ANNUAL			
		Gross Value Added weights		Available source data	
		2005	2008_K	2005	2008_K
A	AGRICULTURE, HUNTING AND FORESTRY	8.5%	6.9%	94.9%	95.2%
B	FISHING	0.2%	0.2%	100.0%	100.0%
C	MINING AND QUARRYING	0.2%	0.3%	100.0%	100.0%
D	MANUFACTURING INDUSTRIES	14.9%	15.3%	54.3%	59.7%
E	ELECTRICITY, GAS AND WATER	3.1%	1.4%	98.9%	99.0%
F	CONSTRUCTION	5.5%	5.6%	20.2%	27.4%
G	WHOLESALE AND RETAIL, REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS	10.4%	11.3%	0.0%	0.0%
H	HOTELS AND RESTAURANTS	2.3%	2.3%	0.0%	0.0%
I.1	TRANSPORT AND STORAGE	5.1%	5.3%	45.7%	45.1%
I.2	COMMUNICATIONS	3.2%	6.4%	86.9%	80.9%
J	FINANCIAL INTERMEDIATION	5.4%	4.8%	85.8%	86.0%
K.1	REAL ESTATE ACTIVITIES	10.2%	8.7%	15.6%	15.6%
K.2	BUSINESS ACTIVITIES	3.5%	3.7%	26.9%	24.9%
L	PUBLIC ADMINISTRATION AND DEFENSE, SOCIAL SECURITY SCHEMES OF COMPULSORY AFFILIATION	4.9%	4.1%	81.0%	81.0%
M.1	EDUCATION - Public	2.3%	2.0%	100.0%	100.0%
M.2	EDUCATION - Private	1.2%	1.1%	56.1%	57.4%
N.1	HEALTH AND SOCIAL SERVICES - Public	0.7%	0.7%	100.0%	100.0%
N.2	HEALTH AND SOCIAL SERVICES - Private	3.9%	3.8%	68.9%	69.4%
O - P	OTHER ACTIVITIES OF COMMUNITY, SOCIAL AND PERSONAL SERVICES; DOMESTIC SERVICE	3.7%	3.7%	3.0%	2.1%
Z	NOMINAL INDUSTRY	-2.5%	-3.3%	100.0%	100.0%
	D.21-D.31 TAXES LESS SUBSIDIES ON PRODUCTS	13.3%	15.5%	100.0%	100.0%
	GDP	100.0%	100.0%	54.2%	54.8%

The coverage of source data for the compilation of annual GDP was 54 percent in 2005 and also 55 percent in 2008 (less than 80 percent), the year for which the last available SUT was compiled.

The coverage by economic activities and an assessment of the quarterly coverage of source data in terms of value added are presented below:

Table 3. Coverage of Quarterly Source Data in Terms of Value Added

Industries		QUARTERLY			
		Gross Value Added weights		Available source data	
		2005	2011_K	2005	2011_K
A	AGRICULTURE, HUNTING AND FORESTRY	8.5%	6.3%	94.9%	95.9%
B	FISHING	0.2%	0.1%	0.0%	0.0%
C	MINING AND QUARRYING	0.2%	0.3%	0.0%	0.0%
D	MANUFACTURING INDUSTRIES	14.9%	13.1%	54.3%	59.0%
E	ELECTRICITY, GAS AND WATER	3.1%	2.0%	98.3%	99.2%
F	CONSTRUCTION	5.5%	5.3%	14.6%	19.9%
G	WHOLESALE AND RETAIL, REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS	10.4%	12.3%	0.0%	0.0%
H	HOTELS AND RESTAURANTS	2.3%	2.3%	0.0%	0.0%
I.1	TRANSPORT AND STORAGE	5.1%	5.1%	48.1%	47.2%
I.2	COMMUNICATIONS	3.2%	9.7%	84.6%	78.6%
J	FINANCIAL INTERMEDIATION	5.4%	5.5%	67.7%	85.0%
K.1	REAL ESTATE ACTIVITIES	10.2%	7.6%	15.6%	15.6%
K.2	BUSINESS ACTIVITIES	3.5%	3.5%	26.9%	21.6%
L	PUBLIC ADMINISTRATION AND DEFENSE, SOCIAL SECURITY SCHEMES OF COMPULSORY AFFILIATION	4.9%	3.7%	64.2%	63.7%
M.1	EDUCATION - Public	2.3%	1.8%	0.0%	0.0%
M.2	EDUCATION - Private	1.2%	1.0%	0.0%	0.0%
N.1	HEALTH AND SOCIAL SERVICES - Public	0.7%	0.7%	0.0%	0.0%
N.2	HEALTH AND SOCIAL SERVICES - Private	3.9%	3.5%	68.9%	69.4%
O - P	OTHER ACTIVITIES OF COMMUNITY, SOCIAL AND PERSONAL SERVICES; DOMESTIC SERVICE	3.7%	3.5%	0.0%	0.0%
Z	NOMINAL INDUSTRY	-2.5%	-4.1%	100.0%	100.0%
	D.21-D.31 TAXES LESS SUBSIDIES ON PRODUCTS	13.3%	16.7%	100.0%	100.0%
	GDP	100.0%	100.0%	47.9%	50.9%

The coverage of source data for quarterly GDP was 48 percent in 2005 (base year) and 51 percent in 2011 (less than 80 percent).

The coverage by economic activities and an assessment of the monthly coverage of the monthly index of economic activity in terms of value added are presented below:

Table 4. Coverage of Monthly Source Data in Terms of Value Added

Industries		MONTHLY			
		Gross Value Added weights		Available source data	
		2005	2011_K	2005	2011_K
A	AGRICULTURE, HUNTING AND FORESTRY	8.5%	6.3%	76.4%	81.6%
B	FISHING	0.2%	0.1%	0.0%	0.0%
C	MINING AND QUARRYING	0.2%	0.3%	0.0%	0.0%
D	MANUFACTURING INDUSTRIES	14.9%	13.1%	48.0%	51.3%
E	ELECTRICITY, GAS AND WATER	3.1%	2.0%	75.2%	73.5%
F	CONSTRUCTION	5.5%	5.3%	6.5%	4.4%
G	WHOLESALE AND RETAIL, REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS	10.4%	12.3%	0.0%	0.0%
H	HOTELS AND RESTAURANTS	2.3%	2.3%	0.0%	0.0%
I.1	TRANSPORT AND STORAGE	5.1%	5.1%	0.0%	0.0%
I.2	COMMUNICATIONS	3.2%	9.7%	82.2%	89.4%
J	FINANCIAL INTERMEDIATION	5.4%	5.5%	0.0%	0.0%
K.1	REAL ESTATE ACTIVITIES	10.2%	7.6%	0.0%	0.0%
K.2	BUSINESS ACTIVITIES	3.5%	3.5%	0.0%	0.0%
L	PUBLIC ADMINISTRATION AND DEFENSE, SOCIAL SECURITY SCHEMES OF COMPULSORY AFFILIATION	4.9%	3.7%	64.0%	64.0%
M.1	EDUCATION - Public	2.3%	1.8%	0.0%	0.0%
M.2	EDUCATION - Private	1.2%	1.0%	0.0%	0.0%
N.1	HEALTH AND SOCIAL SERVICES - Public	0.7%	0.7%	0.0%	0.0%
N.2	HEALTH AND SOCIAL SERVICES - Private	3.9%	3.5%	0.0%	0.0%
O - P	OTHER ACTIVITIES OF COMMUNITY, SOCIAL AND PERSONAL SERVICES; DOMESTIC SERVICE	3.7%	3.5%	0.0%	0.0%
Z	NOMINAL INDUSTRY	-2.5%	-4.1%	0.0%	0.0%
	D.21-D.31 TAXES LESS SUBSIDIES ON PRODUCTS	13.3%	16.7%	0.0%	0.0%
	GDP	100.0%	100.0%	22.0%	24.2%

The coverage of source data for the monthly index of economic activity was 22 percent in 2005 (base year) and 24 percent in 2011 (less than 80 percent).

Recommendations:

- Improve the coverage of the economic survey, the surveys on construction, domestic trade and services (annual, quarterly, and monthly) as to cover 80 percent of the economic activity in the country.
- Apply the economic activity classification of the economic survey (*ISIC Rev. 4*) to the permanent household survey in order to reduce the volatility of employment data by economic activity, which is preventing greater use of the data in the national accounts.
- The NIS should review and update the classification by economic activity of the directory of enterprises obtained from the income tax records and provide it to the MEF, so that the MEF and the CBU could use the data from income tax records with an updated and improved classification by economic activity.

3.1.3 Source data are timely

Data on financial and insurance companies, prices, foreign trade, balance of payments, the general government, and CBU's surveys are timely. However, the timeliness of the economic survey on manufacturing, construction, domestic trade, and some services is not adequate owing to the insufficient resources at the NIS to regularly visit establishments. On the other hand, short-term surveys are timely.

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.

The ESA examines the information received before using it and carries out consultations to the NIS on an informal basis to verify and confirm high value transactions. As is usually the case, the time devoted for evaluating annual data is greater than that devoted for evaluating monthly and quarterly data, owing to the timeliness and limited detail of short-term data. Information is not available about nonsampling errors for all surveys. The NIS and the ESA keeps archives for internal purposes on problems encountered (for example, issues of misclassification or measurement), to avoid similar problems in the future.

Information about imputations made to the source data is available, but imputed price data, for example, are not revised when the data become available. Household surveys and some of the other surveys are audited to verify the accuracy of the individual survey data. Although the ESA of CBU validates routinely the data for temporal consistency, the validation process of NIS's surveys is affected by its resource constraints hindering the quality of source data for manufacturing, domestic trade, and some services. The construction survey had a coverage issue in 2009 owing to the NIS resource constraints and the attention to other survey programs.

Regular monitoring is performed on the sampling errors of the Annual Survey of Economic Activity from 2007 onwards. Partial information is available on some qualitative and sometimes nonsampling errors, including misclassification. Nonresponse is annually calculated. The NIS does not have the practice of reviewing published data unless a significant error is detected.

The NIS uses editing procedures to detect anomalous differences in periodic responses and analyzes some extreme values. They are confirmed with respondents systematically, and e-mail confirmation is requested confirmation of changes to be made. No statistics are kept of interventions of this kind. There is a monitoring process in some surveys to verify the accuracy of the data.

The consistency of the source data in the survey of economic activity is controlled, and the data are compared with other related data sources. The NIS also controls the temporal consistency at

informant level, but does not do it adequately owing to insufficient staff resources. Most establishments are not selected from probabilistic samples due to the lack of an up-to-date business register. Therefore, coverage cannot be accurately assessed. Nonsamples errors are not available for most surveys.

In the phase of the annual reconciliation of the SUTs by the CBU, source data are analyzed to correct deficiencies or errors, in particular, to control the consistency with previous declarations and the consistency with other related source data or exogenous sources. Source data are analyzed in depth in the context of the base year compilations and the effects of changes to questionnaires are evaluated when new surveys/questionnaires are incorporated.

Regarding administrative records, procedures to detect atypical values and the accuracy of the data are used. Also, the exactitude of the statistics of foreign trade, their volume, and particularly of unit value indices is evaluated once a year.

Recommendations:

- Survey data should be internally and temporally validated by the NIS.
- The data collected in other NIS surveys should be used to cross-check and validate the data collected in each NIS individual survey program.

3.3 Statistical techniques

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

The NIS's compilation procedures aim to reduce processing errors. There is, however, a set of applications developed outside of those systems that is subject to a greater margin of error. Other reference information is used in some surveys to cross-check the data. In others, this procedure has not yet been established. There are guidelines to proceed in the absence of coverage or some units of the population. The grossing-up factors are mainly due to the resulting sample design. Imputation procedures and adjustment for nonresponse are mainly sound.

The CBU's compilation procedures are structured in an appropriate data model that has decisively contributed to reduce the processing errors in the reconciliation phase. The implementation of data modeling toward prereconciliation processes of products and industries is being applied. The atypical values are not replaced or modified unless it is clearly warranted. Compilation procedures minimize processing errors such as coding, editing, and tabulation errors. Procedures for imputation and adjustment for nonresponse are soundly based. Income tax records are used widely to grossing-up estimates to the populations in the base year compilation for products and industries, especially for services activities. When source data come from yearbooks and statistical reports, the population is determined by using the "value =

volume × price” framework. This method is applied for agriculture, forestry, livestock, fishing, construction, real estate and housing services, and some branches of the manufacturing industry. In the case that income and financial statements are available from surveys, income tax declarations or accounting statements, the population is calculated by aggregating units: mining, electricity, gas and water, communications, public administration, financial services, and part of the manufacturing industry; or were grossed up by using income tax records in the cases that only sample data were available: business and personal surveys and the rest of the manufacturing industry.

The projects and studies for the base year compilation were broken down into the following two categories:

- *Economic industries.* These focused on the preparation of production accounts, that is, obtaining values for production, intermediate consumption and value added, using economic surveys, administrative records, financial statements and numerous statistics for volumes and prices. These projects also provided destination hypothesis data (intermediate and final consumption, capital formation, and exports) for products included in the industries examined.
- *Cross-Industry.* These focused on meeting one of the following three objectives: (i) compiling information that cuts across several industries, such as investment studies, changes in inventory, household consumption expenditure, rest of the world, small business, and employment and compensation of employees; (ii) build software processing platforms to update the data model used in national accounts, and develop a range of software for industry and cross-industry estimates; and (iii) contribute to the last phase of the 2005 base year compilation program which involves reconcile the SUT of goods and services.

The projects described above helped to determine how products of the industries are produced and used. To turn all this information into national accounts aggregates, primary information underwent several stages of treatment: classification, validation, standardization to conform to national accounts concepts, and preparation of production accounts. At this last stage, data for 109 products and 92 industries were compiled and only disseminated at the level of 43 and 45, respectively.

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

The 2005 base year compilation is the fifth carried out in Uruguay, with previous efforts referring to 1961, 1978, 1983, and 1997. The recent reduction in the compilation cycle from fourteen (1983–1997) to seven years (1997–2005) reflects efforts to strengthen the national accounts revision policy, to improve their accuracy and bring them into line with best international practices. The results of the new base year compilation replace the estimates that, in the context of the 1997 base year, were carried out for 2005. With the new 2005 base year compilation, the previously estimated annual accounts were reviewed, as were quarterly and monthly estimates.

Accounts prepared in these same frequencies for 2006, 2007, and 2008 were also revised in nominal terms and rebased in real terms.

The system used for the compilation of the national accounts is mainly based on an SUT disaggregated by activities and products. To ensure the consistency of a heterogeneous set of figures and sources.

A balance is achieved between supply-and-use data (column labeled supply-use balance, with values of zero in all cells). It is precisely this consistency which makes national accounts estimates more robust than simple economic indicators. In particular, preparation of an SUT ensures that for every one of the 109 products, domestic output and imports supplied at the basic price, plus margins and taxes, equal intermediate and final demand at purchaser prices. Moreover, this ensures that for every one of the 99 industries, gross output at basic prices coincides with intermediate consumption and value added at purchaser prices.

However, to achieve the supply-use balance requires a balancing process, given the differences in coverage, classification, and quality of the information used. This means modifying the variables present in the compromised identity. Thus, for example, if supply exceeds use, some supply components are reduced and/or some use components increased. Similarly, if production exceeds intermediate consumption plus value added, some component of production is reduced and/or some element of intermediate consumption and/or value added is increased. Normally, the component that is most modified is the one coming from the least reliable source. Similarly, the balancing process is simultaneous in the sense that reconciliation of products affects reconciliation of industries, and vice versa.

On a monthly basis, there is a volume index of economic activity. On a quarterly basis, the production and expenditure approaches of GDP are combined in the context of a partial SUT that only considers supply-use identities at product level for some important products in the Uruguayan economy. For the annual follow up, a complete SUT adds to the earlier identity the one of output-intermediate consumption, which is determined simultaneously with GDP by the production, expenditure, and income approaches.

GDP by the production, expenditure, and income approaches are interrelated in such a way that there is no independent estimate of GDP by expenditure. Thus, the commodity flow method is used, which means assigning use (absorption) based on the nature of the good¹⁵ and using the SUT identities for the residual determination of some macroeconomic aggregates. The figures, trends, and implicit price indices of changes in inventory are erratic given that inventories are mainly obtained as residuals.

¹⁵ Just as the commodity flow method can be used to fill the gaps in the SUT by rows (products), the assumption on the flow of industries, meaning a stable relationship between intermediate consumption and the gross value of production can be used to fill in the SUT by columns (industries). In both cases, lesser frequency ratios are applied to higher frequency absolute levels.

The sources are designed to determine the best base year levels and the best follow-up changes. The absence of more frequent (quarterly) data is compensated with assumptions regarding the relationships among less frequent variables (annual, in this case).

Given that there are no direct quarterly sources for intermediate and final absorption by product, the level and composition of final expenditure is determined using the commodity flow method. The result is reconciled with indirect indicators for consumption, investment, and changes in inventory. Thus, quarterly GDP uses a version of the SUT in which industries are limited by the lack of quarterly sources and products only appear for a version of GDP, which is consistent by the production and expenditure approaches.

The base year compilation makes it possible to estimate all variables in the tables, being the sole source for the production matrix and the use matrix. In contrast, given that the availability of information decreases as the frequency of the estimates rises, as it is usually the case, complete information is not available for the production matrix or the use matrix for the quarterly and monthly compilations. In the case of the quarterly compilation, information about value-added components is also lacking. Finally, for the monthly index of economic activity, the coverage is limited and refers mainly to industry production indicators. In general, the estimation of variables not available with greater frequency is done assuming that the relations between them obtained from less frequent compilations (base year/annual) remain constant (single indicator method).

The base year compilation for 1997 includes explicit estimates on nonobserved activities. Between 1997 and 2005, the data on number of jobs and compensation of employees from the Household Survey were used for estimating nonobserved activities allowing a full coverage of GDP. Since 2006, the CBU has not yet been able to integrate the data from the Household Survey in the national accounts compilation framework owing to changes in the coverage of the survey, but the CBU is currently working on it. However, the follow-up annual compilations do not include explicit estimates on nonobserved activities (including informal, hidden, and unrecorded activities). Those are only considered implicitly in the reconciliation process of the SUT by using employment data. Although employment data are used to make adjustments for nonobserved activities, available household data on salaries and mixed income are not used to adjust household output, compensation of employees, and mixed income. This may have the following implications: biased GDP growth rates, misleading information on structure of the economy, misleading information on the level of GDP, biased international comparability, and distortions in the internal consistency of the national accounts. Nonetheless, nonobserved activities although were only quantified for the period 1997–2005, might not be significant in Uruguay.

Recommendations:

- Update the base year of the national accounts supply and use table and develop plan for implementing the *2008 SNA* as soon as possible with a clear timetable.
- Improve estimates of nonobserved activities by using available income data from the permanent household surveys.

Production approach procedures

Output, intermediate consumption and value added estimates are compiled at three-digit level of *ISIC* (99 activities and 109 products). In the total estimate of value added, the use of fixed ratios from 1997 is around 60 percent and fifteen years old. In the case of owner-occupied dwellings, output is valued as the estimated rentals that tenants would pay for similar accommodation.

Work-in-progress is estimated for agriculture, standing timber (forestry), and livestock. The work-in-progress of large construction projects is not calculated.

Partial inventories data are used in the estimates of output and intermediate consumption, but output and intermediate consumption are not adjusted for holding gains/losses on inventories. The perpetual inventory method is not used. The cash data on taxes and subsidies are converted to accrual by allocating them to the period to which they relate.

The double indicator method (double deflation) is used to estimate 40 percent of GDP at constant prices. The single indicator method is used for the remaining 60 percent. Volume measures of taxes/subsidies on products are estimated by applying base-year-tax rates to the volume of transactions subject to a specific tax/subsidy. Similarly, output volume of trade margins are estimated by extrapolating the base-year-trade margins using volume extrapolators of sales.

GDP volume change is not calculated by using annual chain indices. However, the CBU plans to change the base year in the medium-term.

Recommendations:

- Update the base year of the national accounts by production and develop plan for implementing the *2008 SNA* as soon as possible with a clear timetable.
- Use available data on prices and volume to apply the double deflation/inflation method to main inputs and outputs on a quarterly basis.
- Consider the use of chain indices for calculating volume measures.

Expenditure approach procedures

Household final consumption expenditure, gross fixed capital formation, and changes in inventories are not independently estimated. They are calculated by applying the flow of commodities method. Household consumption expenditure was only independently estimated for 2005.

Household final consumption expenditure is compiled at product level, but is not reclassified at least at the one-digit level of the COICOP. Government final consumption expenditure is not

compiled at least at the one-digit level of the COFOG. Gross fixed capital formation is only by type of assets. Changes in inventories are compiled by products and not by activities and by type of inventories.

Government final expenditure excludes incidental sales. Expenses of residents abroad are included in household final consumption expenditure and in imports. Expenses of nonresidents in the economy are excluded from household final consumption expenditure and included in exports. Expenditures on items that are considered stores of wealth (such as jewelry, works of art) are not included in the estimates of valuables.

The PPI, March 2010=100, the CPI 2010=100 and other dedicated price indices are used to deflate GDP components at activity class level of the corresponding classifications. The PPI, which was recently updated, is not widely used because it does not include prices of exported goods. Export and import unit value indices are used to deflate export and import of goods, respectively. Trade partners' CPI data and the dollar exchange rates are used to deflate imports of services.

Household consumption implicit deflator is consistent with the CPI. Government final consumption expenditure is derived by deflating cost components of output for final use. Government value added is extrapolated by employment in the government sector. Values at current and at constant prices of changes in inventory are estimated in the reconciliation process of the SUT. The deflators are implicit price indices.

Specific quarterly compilation techniques

An appropriate benchmarking technique such as the Denton technique (P. Cholette, StatCan) is followed to combine annual estimates with the quarterly indicators. The quarterly compilation system derives quarterly series from seasonally unadjusted source data, thus providing unadjusted quarterly estimates.

Seasonal adjustment of quarterly national accounts estimates uses the X-12 ARIMA; an internationally accepted procedure.

Monthly index of economic activity (IMAE)

The IMAE is a Laspeyres volume index obtained by integrating the monthly production indices of relevant industries by the composition of value added for 2005, base year of this index. Indices for agriculture; fishing; mining; manufacturing; electricity, gas and water; construction; transport and communication services; trade, restaurant and hotel services; financial and business services; social and personal services; and governmental services, are compiled by using monthly indicators. The index covers 60 percent of GDP for the base year. These indices present some deficiencies in coverage, especially concerning the production of personal and business services. Seasonally adjusted data is calculated by using the X-12 ARIMA.

Recommendation:

- Improve the coverage of the monthly index of economic activity in order to disseminate it and use it in all its potential for policy decision making

3.4 Assessment and validation of intermediate data and statistical outputs**3.4.1 Intermediate results are validated against other information, where applicable.**

Data derived from enterprise surveys are crosschecked against data on output derived from administrative sources, as well as against merchandise trade statistics. Basic data are cross-checked with information from other sources, when available (survey of producers' associations such as commerce and services, production data vs. financial statements). Information on foreign trade is validated with data from agriculture, mining, and manufacturing corporations as well as from corporations from the free zone.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Ad hoc assessment of potential discrepancies is done in some cases (rice, syrups, paper pulp, fuel, meat, beverage, cigarettes and textiles), and checks occur after discrepancies are identified in the input-output matrix. When discrepancies in intermediate data are identified, they are evaluated and investigated in order to remove them through the controls and consistency checks of the SCCA. If some information from the business surveys is not clear or presents an irregular behavior, specialists call the NIS or the enterprises' accountants to ask for an explanation in order to reconcile the information. In some cases, respondents are visited to validate data. The changes in inventories obtained as residuals are assessed.

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

The ESA investigates any statistical discrepancies and other potential indicators of problems. The supply-and-use framework is used to make GDP estimates by activity and expenditure components consistent. Changes in inventory are obtained as residuals and include the statistical discrepancy between supply and use components. In general, discrepancies are assumed to be part of expenditures on GDP since sources on the production approach are more reliable. ESA does not undertake an evaluation of data against unofficial estimates (e.g., from government units, universities, nongovernmental organizations, or international organizations). The CBU considers it inappropriate to be possibly influenced by the results of outside agencies. In addition, private and public analysts' projections are usually updated with CBU released data owing to the confidence on CBU statistics. ESA does not carry out studies to ensure that bias in the GDP estimate is negligible and stable over time.

3.5 Revision studies

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

The direction and magnitude of revisions between preliminary data and final data are not analyzed. However, current revisions are investigated. When final GDP figures change with respect to the preliminary estimates owing to coverage improvements, changes in trends are internally explained. These analyses are not published. Adequate documentation on the analysis of major revisions, such as the change in the base year, is well maintained and includes description of causes of revisions, methods used to incorporate new data sources, and the way data are adjusted.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The national accounts statistics meet the SDDS requirement on periodicity. Quarterly national accounts are compiled.

4.1.2 Timeliness follows dissemination standards.

The timeliness of quarterly GDP estimates meets and exceeds SDDS requirements. Quarterly GDP estimates are disseminated 75 days after the end of reference quarter.

The annual GDP estimates are disseminated within three months after the end of reference year, meeting and exceeding international standards.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Sets of GDP estimates are derived by the production and the expenditure approaches. Similar and consistent growth rates are obtained from the series of GDP by activity and GDP by expenditure category. GDP estimates at current prices, volume measures, and implicit deflators are consistent within the “value = volume × price” framework. Discrepancies between supply and expenditures are adjusted as part of changes in inventories since supply sources are considered more reliable than those of the expenditure side.

The concepts, definitions, and classifications that are used to compile quarterly GDP are the same to those used to compile annual GDP. Quarterly GDP estimates are consistent with annual estimates.

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

The latest major revision of GDP estimates, with the adoption of the base year 2005, allows for coherent time series for the period 2005–2011. As for previous years, interpolation work was done to prepare comparable series with 1997 as base year for the period 1997–2005, but these series are only published for GDP by the production approach. Detailed methodological notes to identify and explain breaks and discontinuities in time series, their causes, as well as adjustments made to maintain consistency over time are available. Any unusual changes in economic trends are explained in the analytical text included in the *Quarterly and Annual* publications of the CBU.

Recommendation:

- Reconstruct historical series as far back as reasonably possible, when changes in source data, methodology, and statistical techniques are introduced (e.g., change of benchmark year). Additional linked series on main macroeconomic variables for 1997–2011 should be reviewed and disseminated.

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

National accounts statistics are largely consistent with balance of payments statistics. Monetary statistics and government finance statistics (GFS) are reconcilable with national accounts estimates since the data sources used in their compilation are the same, but GFS statistics are on a cash basis and national accounts are mainly on an accrual basis. The ESA has carried out reconciliation exercises between national accounts statistics and balance of payments and GFS. However, the timelines of the revision processes of the different macroeconomic statistics are not the same.

4.3 Revision policy and practice

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

Quarterly data are preliminary when first released. The quarterly revision takes place every quarter during the current year and once annual data are released. Annual preliminary data for the previous year are first released in March of the following year and are preliminary up to a supply and use table is compiled. Data for the two previous years are usually revised. To the extent that the annual data are also revised more than once, the quarterly data are also revised and consistent with the revisions to the annual data. There is no regular schedule for updating the base year. Current revisions have a regular schedule. Major revisions are analyzed, but specific causes of regular revisions are not analyzed. The revision cycle is predetermined and

reasonably stable from year to year and is made known to the public in advance on the CBU website.¹⁶

4.3.2 Preliminary and/or revised/updated data are clearly identified.

The forecast of the percentage change of GDP at constant prices for the current year is presented in the monetary program posted on the CBU website. The first annual estimate of GDP, which is based on the quarterly estimates, is disseminated with more level of detail at current and at constant prices in March of the following year. Users are informed in a footnote included in each table of the publication that the initially published data are preliminary and subject to revision, and preliminary data are labeled. The revised data are disseminated with more level of detail as previously published for the data being revised. Although current revisions are made, the data are still preliminary until a supply and use table is compiled and disseminated for that year.

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

Analysis and causes of major revisions (e.g., change in the base year) are made public,¹⁷ analysis of current revisions are not quantified. However, the revised and preliminary data are published for major aggregates to allow an assessment of the reliability of the preliminary data. Also, the revised data are more detailed.

Recommendation:

- Taking into account future improvements in source data, increase the level of detail of disseminated annual data at three digits of the *ISIC*.

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 national accounts are readily accessible on the CBU website. Annual and quarterly national accounts estimates are presented in a clear manner, and charts, tables and analysis of recent developments are disseminated with the data. Some economic activities and expenditure components are not published with sufficient detail to facilitate meaningful comparisons.

¹⁶ http://www.bcu.gub.uy/Estadisticas-e-Indicadores/Paginas/Calendario_Publicaciones.aspx.

¹⁷ Integral Revision of the National Accounts 1997–2008.

Recommendation:

- Increase the level of detail of disseminated national accounts data at three digits of the *ISIC*.

5.1.2 Dissemination media and format are adequate.

Quarterly and annual data are disseminated for GDP in current and constant 2005 prices in pesos, volume indices, and implicit deflators, broken down by sectors of economic activity. The CBU website disseminates quarterly and annual data with different base periods from 1983. Linked time series are only available on the CBU website for GDP by the production approach for the period 1997–2011. The SITE database is not made available to users on the CBU website. Detailed data are only available up to 2008. Data at 3-digit level are only available for some activities. Aggregated data are available from 2009 onwards. Quarterly GDP by expenditure is disseminated only in constant 2005 pesos and volume indices. The official estimates are published on the CBU website (<http://www.bcu.gub.uy>) where annual and quarterly reports and tables can be found. Consolidated accounts are annually disseminated. Charts and briefings are disseminated along with the data. Statistics not routinely disseminated are made available to users upon request to the Institutional Communication Center via e-mail to info@bcu.gub.uy.

5.1.3 Statistics are released on a preannounced schedule.

An advance release calendar that provides a precise release date for months in advance is posted on the CBU website. Statistics are usually released on the preannounced schedule.

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

The public is informed of the statistics being released on the CBU website, in CBU publications, and at the CBU Library. The statistics are made available to all interested users simultaneously.

5.1.5 Statistics not routinely disseminated are made available upon request.

Statistics not routinely disseminated are made available to users upon request through the Institutional Communication Center via e-mail at info@bcu.gub.uy.

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 current methodological basis for the national accounts is described in the CBU publication “*Revisión Integral de las Cuentas Nacionales 1997–2008*” (*National Accounts Integral Revision, 1997–2008*) and is disseminated through the CBU website (<http://www.bcu.gub.uy/Estadisticas-e-Indicadores/Paginas/Methodologias.aspx>). The historical data of 1983 Base (1988 Revision) can also be found at the CBU website. Different levels of data detail are made available to meet

users' requirements. The methodology of the SUT 1997, *Cuadro de Oferta y Utilización 1997, Metodología*, is also available to users.

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

More specialized user's information such as working documents are available and made public. Updated methodologies are available to inform general users about the statistical series. The level of detail is also useful for specialized users.

5.3 Assistance to users

5.3.1 Contact points are publicized.

Prompt and knowledgeable service and support is available to users of statistics at the CBU Library regarding publications and the Virtual Library for Economic Research, which includes documents, books and research papers in an electronic database at www.bvrie.gub.uy. Two e-mail address through which users can send their queries and requests on national accounts statistics are available on the CBU website. The following e-mail addresses: ssfda@bcu.gub.uy and info@bcu.gub.uy provide contact points. The first e-mail address was design to request publicly available data on the CBU through a questionnaire under the CBU's active transparency and access to public information initiative. The second was design to request statistical data and provide comments and opinions.

The address, phone, and fax numbers of the CBU is also available on the CBU website. However, contributors in each subject field are publicized in the publications. The CBU Institutional Communication Department receives the electronic queries and forwards the requests to the appropriate contact person. The services provided are publicized on the CBU website and in its publications. However, there is no established procedure to satisfy consultations from CBU's visitors. Assistance to users is not monitored and revised periodically.

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

The publications are updated quarterly and annually. The CBU website includes the list of link to the publications. Publications are free of charge to users.

Table 5. Data Quality Assessment Framework (2012): Summary of Results for National Accounts*(Compiling Agency: Central Bank of Uruguay—CBU)*

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			The CBU's Law does not explicitly state the responsibility of the bank for compiling and disseminating national accounts statistics. The EEA structure although recent could be updated to better reflect the current organization of tasks. Income tax records cannot be used by the CBU to complete national accounts' coverage owing to the tax secrecy. Coordination needs to be enhanced at technical level to reduce respondent burden and use the data collected in all their potential. Some duplication of efforts in the collection of source data (manufacturing survey, annual economic survey, and price surveys). Sectoral committees are not functioning. Fines for noncompliance are set in the CBU's laws, but are not used to reduce no response.
0.2	Resources			X		Both, the NIS and the CBU, have serious human resource constraints and both institutions cannot contract staff without the approval of the Public Civil Service Unit, which takes long time, whose procedures have taken considerable time to navigate.
0.3	Relevance			X		Although there was a survey on the new CBU website, users' feedback not solicited in a structured manner through users' surveys. There is an e-mail address on the CBU website to receive feedback on statistics, but the requests and the feedback are not routinely analyzed. No advisory group on statistics.
0.4	Other quality management		X			
1. Assurances of integrity						
1.1	Institutional integrity		X			The CBU rarely comments on erroneous interpretation and misuse of statistics.
1.2	Transparency		X			Major methodological changes, such as a change in the base year, are not announced in advanced.
1.3	Ethical standards		X			
2. Methodological soundness						
2.1	Concepts and definitions		X			National accounts follow the 1993 SNA, but a program for changing the base year and implementing the 2008 SNA is under development.
2.2	Scope		X			Economic integrated accounts on an annual basis and quarterly GDP by the expenditure approach at current prices are not compiled.

Table 5. Data Quality Assessment Framework (2012): Summary of Results for National Accounts (cont'd.)

(Compiling Agency: Central Bank of Uruguay—CBU)

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	
2.3	Classification/sectorization		X			<i>ISIC</i> Rev. 3 instead of <i>ISIC</i> Rev. 4. Coding of products does not follow the CPC, which hinders international comparisons. COICOP and COFOG are not used.
2.4	Basis for recording		X			Government revenues are recorded on a cash basis. Government expenses are recorded on an obligation basis, which still might have deviations from an accrual basis. Adjustments are made in some cases to get to accrual basis. Output of different establishments and activities in an enterprise is recorded on a net basis at enterprise level. No data on the establishments that integrate an enterprise.
3. Accuracy and reliability						
3.1	Source data			X		Business register is partially updated and the update is not done regularly. The enterprises that close or change of activity are not timely eliminated from the register. Only one NIS staff is in charge of updating it and has additional tasks. The HBS is conducted every 10 years instead of every 5 to 7 years. The available data for construction, services and quarterly estimates are limited in scope. The coverage of total economic activities (in terms of value added) by all data sources is around 55 percent. The product classification in the NIS surveys does not follow an international classification and is not consistent among respondents. The economic activity classification of the household survey needs to be improved. Results from some surveys are not timely due to lack of resources at the NIS. The data on the free zone are incomplete.
3.2	Assessment of source data			X		Data from the economic survey are not properly validated due to lack of resources at the NIS; therefore, some collected data are partially used. No information about nonsampling errors for most surveys.
3.3	Statistical techniques		X			The imputations on price data are not revised when actual data are obtained. The enterprises that close or change of activity are not timely eliminated from the register and are imputed when applying grossing-up procedures. However, the CBU validates the data with other data sources to correct inconsistencies and include the missing coverage. Fixed ratios from 1997 (15 years old) are used to obtain 60 percent of GDP. Explicit estimates on nonobserved activities are only available for the base year.

Table 5. Data Quality Assessment Framework (2012): Summary of Results for National Accounts (concluded)*(Compiling Agency: Central Bank of Uruguay—CBU)***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	
						Although employment data are used to make adjustments for nonobserved activities, available household data on salaries and mixed income are not used. Household consumption expenditure is not independently derived. Most changes in inventories for most products are obtained as residuals. Chain indices are not used.
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			Major revision studies are made when changing the base year, but regular revisions are not analyzed to detect bias in the series.
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice			X			No regular schedule for updating the base year. Current revisions have a regular schedule. Major revisions are analyzed and published, but specific causes of regular revisions are not disseminated.
5. Accessibility						
5.1 Data accessibility			X			More detailed data are only available up to 2008. Data at 3-digit level only available for some activities. Aggregated data are available from 2009 onwards. Linked time series are only available on the CBU website for GDP by the production approach only for the period 1997–2011. Long-time series are not available on the CBU website. The SITE database is not made available to users on the CBU website.
5.2 Metadata accessibility		X				
5.3 Assistance to users			X			No established procedure to satisfy consultations from CBU's visitors. However, there is an e-mail address on the CBU website to address consultations. Assistance to users is not monitored and revised periodically.

PRICE STATISTICS (CONSUMER PRICE INDEX)

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.*

National Institute of Statistics (NIS)

Law 16 616, of October 20, 1994, which defines the components of the National Statistics System (NSS), the mission of the National Institute of Statistics (NIS), the statistical secrecy requirements, and the mandatory provision of information by respondents, inter alia, governs the NSS.

“Article 1 – The National Statistics System is hereby created, which shall comprise the National Institute of Statistics and the statistics offices of the Executive, Legislative, and Judiciary Branches; Court of Administrative Litigation, Electoral Court, Audit Office, Autonomous Agencies, Decentralized Agencies, and Departmental Governments.”

“Article 4 – The National Institute of Statistics is the governing body of the National Statistics System. Pursuant to the regulatory centralization principle and the technical independence on matters within its jurisdiction, the NIS shall issue regulations on statistical concepts, definitions, classifications, and methodologies, which shall be adopted by the statistics offices comprising the National Statistics System, with due regard to the constitutional and legal order.”

Pursuant to the operational decentralization principle, statistical production shall be assigned to each statistics office according to their corresponding areas of expertise.”

The NSS is a mechanism that was created to promote consistency of methods and results. More specifically in the field of economic statistics a committee has been created which comprises the Director General (DG) of NIS and the Economic Statistics Manager of the CBU.

There is no oversight of the NIS in order to ensure that statistical work is carried out in accordance with the laws governing the collection, reporting, and dissemination of statistics. The DG may however, be called in front of parliament, if deemed necessary to answer questions pertaining to the mandate of the NIS and/or related matters.

Price index: Consumer prices

Article 1 – Annex I of Decree 430/008 stipulates that Economic Statistics Division of the NIS is responsible for (i) producing economic statistics of economic activities; (ii) conducting studies and research in the area of economics; (iii) evaluating the quality of the information processed by the Division, prior to its publication; (iv) performing periodic reports, fulfilling requests, and

produce research in the area of economics for the various members of the National Statistical System; and (v) coordination with the different areas of the Agency all aspects of economic statistics;

This Division is composed of the following two departments: (i) Consumer Prices; and (ii) Labour Statistics. The former is responsible for developing indicators of consumer prices while the latter is responsible for producing data on wages. Furthermore, the Consumer Prices Department is mandated to publish and disseminate data on consumer prices, and to publish reports and conduct research for the Directorate and other users.

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

Law 16 616 determines the need and the duty of the National Statistics System (NSS) to share data and coordinate its operations.

“Article 2 – It shall discipline the planning, preparation and dissemination of statistics gathered by the public agencies comprising the NSS to ensure that those agencies will comply with integration, coordination, rationality and accuracy criteria.”

“Article 19 – Upon request, each Statistics Office comprising the National Statistics System must provide to other statistics offices within the System, the microdata received for statistical purposes, duly identified as such, provided that the following criteria are met:

- A) The requested data will be used solely for statistical purposes.
- B) The requesting office has the required infrastructure to secure the data.

Should the data request be denied, the National Institute of Statistics should judge the validity of the grounds for denial.”

Infrequent coordination meetings between the NIS and the individual members of the NSS are held. The purpose of these meetings is to promote a proper understanding of data requirements and needs, to avoid duplication of effort and to reduce as much as possible the reporting burden to respondents.

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

National Institute of Statistics (NIS)

Law 16 616, of October 20, 1994, establishes the statistical secrecy rule as well as the obligation to comply with said rule and use data solely for statistical purposes. This is disclosed both in the questionnaires and in the cover letters that accompany surveys.

NIS officials must comply with statistical secrecy requirements. Access to survey data is limited to personnel directly involved in this work and their superiors.

“Article 3 –...Statistical secrecy requires that individual data provided by data sources should be treated with strict confidentiality to ensure that the identity of those sources will not be disclosed...”

“Article 16 – Individual data provided for statistical purposes shall not be used for any other purposes, not even at the express request of the respondent.”

“Article 17 – Individual data provided by data sources to the National Statistics System are covered by statistical secrecy. The statistical secrecy duty applies both to the agencies and their employees, as well as to third parties that become aware of the data covered by statistical secrecy. The statistical secrecy duty does not apply to such general data as corporate name, domicile, economic sector, and size, provided by taxpayers, enterprises, or establishments involved in for-profit or not-for profit economic activities.

However, data not covered by statistical secrecy shall not be identified or requested in such a way as to permit the uncovering of data whose confidentiality is legally protected.”

“Article 18 – The Offices comprising the National Statistics System may disclose only:

1. Aggregate or summary data corresponding to a group of data sources (macrodata).
2. Individual data relating to a single data source (microdata), provided that it does not disclose the identity of the source.
3. The data mentioned in the second paragraph of the foregoing article.”

“Article 30 – Failure to maintain statistical secrecy, or the use of individual data for one’s own or somebody else’s benefit, constitute a criminal offense as defined by article 301 of the Criminal Code (“Disclosure of confidential documents”), without prejudice to relevant civil redress.”

When the small size of the sample or of the overall group prevents the disclosure of data at a certain level because of the statistical secrecy rule, this is indicated by an “(s)”. Data that cannot be reported are included in the computation of more aggregated levels; however, if data can be derived through other means (e.g., using weights), some data can be reported at the same disaggregation level; the confidentiality of the data reporting entity is nevertheless guaranteed.

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

National Institute of Statistics (NIS)

Law 16 616, of October 20, 1994, establishes the statistical secrecy rule as well as the penalties to be applied for noncompliance.

“Article 14 – All natural or legal persons, nongovernmental public entities, and public sector agencies must provide the data requested for statistical purposes by the members of the National Statistics System, within the timeframe specified.”

“Article 15 – The data reported by the data sources shall be objectively verifiable (article 30). In order to meet this criterion, the reporting agency shall, whenever so requested by a Statistics Office from the National Statistics System, submit supporting documentation or electronic data.”

Work has been initiated to limit respondent burden, with an attempt not to resend data requests that can be used in two surveys. A report has been produced that addresses this issue. A strategy is in place to remedy such cases. Some progress has been made but there are still areas for improvement.

0.2 Resources

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

National Institute of Statistics (NIS)

The management is of the opinion that the current staff levels and skill level is adequate to meet the demands of the existing workload. Given the reliance on contractual staff, however, it is felt that staff turnover is higher than ideal, and that wages are not adequate to retain experienced staff. Strategies are currently being implemented to remedy both issues. A restructuring process has been initiated to improve compensation, job security, and for which staff members would have the option of exercising (temporarily or permanently) new duties and tasks.

According to discussions with various staff members, the current computer hardware system, as well as the processing software for the CPI and related support, is capable of meeting the immediate survey requirements of the program.

Visibly, the physical infrastructure and environment where the price statistics are processed and the indices are produced (lighting, heating, phone lines, and furniture) is in urgent need of improvement.

At the NIS, the hiring of new staff can be a long process. For example, 18 months ago the economic statistics unit of the NIS had expressed a need for 10 new staff members, but as of

August, these persons have yet to be hired. According to a manager at the NIS, new staff are hired through the Uruguayan public service system and this largely explains the slow pace of process.

Another issue affecting the retention of qualified staff is that the NIS is limited in the wages it can set for its employees which are set by the Uruguayan public service authorities. There is evidence that the salary scales of the public service are not set at a competitive rate. This is especially true in the case in the fields of IT, statistics, and economics. Consequently, the NIS has had issues with attracting new qualified employees and retaining higher performers. The latter have left for more lucrative positions in the private sector or quasi-government departments for which the salary scales are set independently from those of the public sector.

There is a general consensus that for most statistical programs at the NIS, the hardware and software are distributed in a way that facilitates the efficient collection and processing of the data. A computer backup system does exist and is adequate for the immediate needs of the organization.

Price index: Consumer prices

The survey is conducted with 12 full-time people who are in charge of compiling, administrating, and managing the CPI survey. There appears to be a sufficient number of staff to process and maintain the current CPI program in its current state. However, there are no dedicated personnel for conducting research, doing more in depth and sophisticated analysis, or to work on developmental issues and projects. The current CPI environment can be qualified as one of pure operations where little analysis and development work is conducted.

Most of the current staff is relatively new to the CPI. Consequently, these staff members have little experience in the area of price indices in general and the CPI in particular. The manager has observed, and it is generally accepted, that the training and qualifications of the current staff can be improved in the areas of price indices in general and consumer price statistics in particular. Given the small number of people involved in the production of the CPI, turnover is a risk that is always present and a potential source of problems and challenges. It has been pointed out, however, that there are at least two people that are sufficiently familiar with the program that the loss of a key staff member would not in the short run compromise the timely release of the index.

Another concern is that with the current workload, the staff do not have sufficient time to work towards improving their skills and expand their knowledge about recent methodological developments in the ever-evolving area of consumer prices.

With regards to salaries, the manager has stated that those of the administrative staff or clerical workers, who have reached their current level based on work experience, have the appropriate skill set for the nature of the work they do; their salaries are competitive when compared to those working doing similar work in most other government departments. This is not, however,

the case for more skilled and specialized staff members that have more specialized training and who are usually more educated; the current feeling is that these employees are underpaid compared to their counterparts in other departments that do comparable work and who share the same level of responsibility. The uncompetitive wages for more highly skilled staff members has resulted in higher than desired turnover, recruitment issues, and to a certain extent has contributed to lower moral.

There are sufficient resources for efficiently conducting the data collection exercise, with 17 price collectors for the country (10 in the capital of Montevideo and 7 in the other urban areas). In total, these individuals collect over 40,000 prices a month.

It should be noted, however, that given more resources, the CPI basket could be updated more frequently and under a more structured and tighter schedule. More analysis could also be conducted to ensure a proper validation exercise of the weights data.

For the CPI, the manager has expressed that the computer processing software is often inadequate for the purpose of updating the expenditure weights. For example, with reference year changes, the software is not sufficiently flexible or upgradable to efficiently integrate all of the changes and make the necessary modifications during a basket update exercise without human intervention. Upgrades to the processing system are done by CPI staff which most here agree does not always lead to the optimal solution or the most efficient implementation of the latest weights. The preferred option would be to have more specialized resources (IT-type resources) to accomplish this task, which the CPI program and the NIS have a difficulty securing for reasons previously mentioned.

With regards to financial resources, the manner in which the budget is allocated at the NIS, does not allow an allocation for which the manager believes will provide the greatest benefits to his or her program.

No information is available on the program's funding and therefore resource allocation decisions are not necessarily driven by budget considerations. Not included in the budget is the automatic or planned renewal of the CPI basket updates and it is therefore difficult to develop and implement a strategy to improve the CPI due to the uncertainty of whether or not the required funding will be available in the future or even if it will be made available.

Recommendations:

- Ensure that the NIS has adequate financial resources, staff, facilities, and training, and take further steps to increase retention of qualified staff.
- The legal framework to hire/contract staff by the NIS needs to be more flexible to accelerate filling vacancies with technical qualifications in economic statistics.
- Initiate an employee rotation program to enhance the versatility of professionals and the versatility of skills of statistical units and teams in view of limited staff complements.

- Improve the analytical capacity of the NIS CPI unit.

0.2.2 Measures to ensure efficient use of resources are implemented.

Price index: Consumer prices

Annual staff performance reviews are conducted according to the directives of the civil service authorities. However, it has been observed that they are not always effective for improving efficiency and performance.

Efficiency monitoring through periodic reviews of work processes are not conducted for the CPI. There is no regular assessment of the cost of conducting the CPI survey, nor are conducted regular audits of staff levels to ensure and their level of competence.

It is worth mentioning that given the relatively small number of staff that are involve with producing the CPI, that the survey is clearly running efficiently, at least on a certain dimension (i.e., timetables are met). The view is that when compared to other programs at the NIS, the CPI program scores very well on the efficiency scale: they accomplish much with little. However, beyond maintaining the quality of the CPI at its current level and ensuring its prompt release, very little analysis, validation and development work are done.

Rarely will outside assistance or guidance be consulted to evaluate the current state of the CPI methodology, its respect of international standards and the efficiency of its compilation. No outside panel of experts is consulted to provide regular and on-going feedback on the CPI program. Recently, when the weights were last updated, outside specialists were exceptionally invited to provide expert advice when attempting to reconcile the national accounts data with the results of the household budget survey.

Costs comparisons of the CPI program against those of other programs are not carried out.

0.3 Relevance

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

National Institute of Statistics (NIS)

The release calendar of all indicators, which are released at 2:00 p.m., is posted on the NIS website, which also lists an e-mail address for users to voice their concerns, make comments, or request further information.

In late 2005, the NIS held consultations with the main users of its statistics to gather their views for the purpose of formulating a National Statistical Plan (see 0.1.2). No such meetings have been held since then, which leads to believe that this initiative has stalled.

There is no formal process in place to consult users or inform them about specific aspects of the current data (e.g., usefulness in terms of detail, periodicity, and timeliness) either through client surveys, newsletters, or seminars.

Although their feedback is not discouraged, there is no formal process in place to actively entertain comments or views from users. Various contacts such as the person responsible for the survey are reachable either by phone or e-mail if one should need more information about the survey.

The NIS regularly participates in statistical meetings and seminars organized by international and regional statistical and economic organizations (e.g., ECLAC). Because of resource limitations, any emerging new issues that transpire from these meetings are usually not implemented or if they are it is with a long lag.

Price index: Consumer prices

Most of the staff of the CPI do participate in various training courses, conferences, and workshops sponsored by the IMF and ECLAC on a regular basis.

As for responding to users requests, the senior economist responsible for the CPI is the point person for CPI-related questions. He promptly responds to all outside questions from the CBU and the many other users.

The NIS regularly participates in statistical meetings and seminars organized by international and regional statistical and economic organizations (e.g., ECLAC). In the case of the CPI, due to resource limitations, any new initiatives or methodologies that transpire from these meetings are seldom implemented or if they are it is with a long lag. Furthermore, no studies are conducted to identify emerging data needs for the CPI program.

There is no structured and periodic process of consultation (e.g., users' advisory committee or working groups) that takes place with policy departments/ministries and other principal users of CPI data; these include academia, the press and general media, and/or other private sector representatives, to review the usefulness of existing statistics and to identify emerging data needs or trends. The CPI area does not undertake studies that aim at identifying new and emerging data requirements.

Recommendation:

- Initiate regular consultations with public and private sector users, including through fostering users' groups and establishing an advisory committee to improve the usefulness of statistics and advise on statistical program priorities. The advisory committee should include participation of academics, private sector analysts, and producers' associations and meet on a regular basis (e.g., twice a year).

0.4 Other quality management

When the director general sets the annual objectives, it is always stated how important quality is for the reputation of the organization and for the users. However, there are no tools in place to assess how the NIS in general and the CPI specifically have succeeded in achieving their quality goals.

Staff training programs do put some emphasis on the importance of quality and how to achieve it the general for the NIS and also for the CPI. For example, about two years ago, a quality control questionnaire was circulated to managers across the office for which the purpose was to receive their feedback about their perception of the state of the quality of their own program, including the IPPN.

The organization has implemented externally recognized processes or activities that focus on quality (e.g., Total Quality Management, ISO 9000, quality initiatives within the European Statistical System, and independent evaluations). Some statistical programs have applied ISO 2008, such as the program on construction statistics. However, these processes have yet to be applied to the CPI.

The NIS website includes a reference about the organization's commitment to quality; the relevant document is the NIS's so-called Quality Policy. The content includes, for instance, the organization's mission statement and its quality management processes and practices. As of today however, a lack of resources has slowed the full implementation of the program. However, there are some gaps and delays for the full implementation of the program because of resource constraints.

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

In the case of the CPI, there are no periodic or systematic reviews that are undertaken to identify the required steps to ensure that the quality and standards of the program are maintained at minimum acceptable levels.

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.

Staff capacity building is encouraged but in a limited way in the NIS through access to internal and external training and seminars, as well as through attendance in international workshops and seminars (e.g., the International and Ibero-American Foundation of Public Administration and Policies (FIIAPP)). However, there is no formal and continuous training program or strategy in place.

Law 16 616 addresses the general need for the professional independence of the NIS.

“Article 3 – The organizations comprising the National Statistics System shall fulfill in an objective fashion the purposes they have been created for, in full accordance with the law, and shall adhere to the following general principles: statistical secrecy, relevance, transparency, strictness, technical autonomy, comparability, efficiency, regulatory centralization, operating decentralization, legal objectivity, and sound decision-making...”

Technical autonomy refers to conducting statistical activities with independence and objectivity, based exclusively on statistical principles ...”

The Director General of the NIS is a political nomination. Typically, the appointee is a person from outside the NIS who has proven credentials and experience in a field related to statistics, economics, social science, or business.

Efforts are made to train staff through their participation in regional workshops and courses as long as the costs are financed by the sponsoring organization. No budget from the NIS is set aside for these types of activities. There is no internal training plan or systematic and organized workshops, most of the staff gain their knowledge through on-the-job training. Recently, staff has been provided access to the Timbó portal, which contains a broad collection of professional publications that they can consult directly from their desktop. This has helped somewhat in expanding the staffs knowledge base on topics related to their functions.

The legal framework of the public service at large dictates both the recruitment and promotion of staff. Potential candidates must pass entry-level examinations to be hired and existing staff is promoted on the basis of merit.

According to the discussion with some staff members, there are no activities in the workplace to promote a culture of professionalism. Accreditations, peer reviewed work, authoring of methodological papers, and the organization of conferences and lectures are not recurring activities at the NIS.

The NIS does not discourage employees from engaging in research and analysis. However, the current environment and work culture is not conducive for the promotion and execution of research and analysis. In order for such work to move forward, some form of incentive mechanism would have to be in place which is not currently the case. No programs exist to stimulate and support such activities.

1.1.2 Choice of data sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.

The selection of the price sample and the weights for the CPI is based on internationally recognized sampling techniques typically used in most CPIs. For instance, the selection of the item in the CPI sample is based on the principle of the high volume seller, a common practice in the sampling of prices in a CPI. The sample of households for the budget survey is drawn using sound sampling principles. The sample frame does not exclude a good or a service that is considered within the scope of the CPI. This also applies to the household in the budget survey, whereby all households living in urban areas are included in the sample frame for the purpose of estimating the expenditures used as the basis for the weights in the CPI.

At the NIS, decisions to how the data should be disseminated, the timing of the dissemination, and the media format that is used are strictly based on statistical considerations. No other factors affect the dissemination of the CPI.

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

The NIS regularly tracks and monitors media coverage of its statistics. However, it will typically not initiate rebuttals, provide comment or attempt to correct erroneous interpretations or misuse of the CPI data.

1.2 Transparency

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

National Institute of Statistics (NIS)

The full text of Law 16 616, the survey methodology, and the release calendar of all indices, as well as a contact telephone number and e-mail address, are available on the NIS website (<http://www.ine.gub.uy>).

When accessing electronic surveys, the user is presented with the main articles of the Law referring to statistical secrecy and the legal obligations to comply with the survey, as well as to its reporting requirements and the consequences of misreporting of information. Such caveats are also included in the survey questionnaires that are sent by e-mail to the participants.

Law 16 616 requires the provision of information on the criteria and methodologies adopted.

“Article 22 – All entities, whether public or private, have the right to receive the data produced by the National Statistics System, as well as information on classifications, criteria, definitions and methodology adopted in producing such data. (Transparency Principle, Article 3).”

In public meetings and speeches, the agency makes a point to actively promote and inform users about the conditions and terms under which it operates.

The NIS includes its web address on all its releases and publications where users can find more detailed information about the organization and its statistical products.

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

National Institute of Statistics (NIS)

Data are disseminated to the public as well as the authorities on the same day. Some series are sent earlier to the authorities but the public is not aware of these pre-release practices, either from the NIS website or from their documentation. This practice is however mentioned in passing on the IMF website under the Special Data Dissemination Standard (SDDS) protocol.

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

National Institute of Statistics (NIS)

Data are disseminated through the NIS website and are clearly associated with the relevant survey; the NIS is responsible for the all information contained therein as well as for its production. Reports prepared by the NIS are identified by the organization's logo which is located on the title page, and the names of the authors and staff responsible are credited in the case of methodological reports.

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

National Institute of Statistics (NIS)

When possible users are informed of methodological changes prior to the release of a series where these changes have occurred. When this is not a practical option, then efforts are made to shorten the lag between the publication of the data and time of the notice of a methodological change.

Price index: Consumer prices

Typically, most users are informed of the changes at the moment of the first release when the changes have been incorporated in the series. Under certain exceptional circumstances, some users are informed of the change prior to the release, but this is not normal practice except perhaps when the notified party is the CBU.

Recommendation:

- Announce in advance any planned changes in concepts and methodology. With major changes, users should be invited to provide feedback before they are implemented.

1.3 Ethical standards**1.3.1 Guidelines for staff behavior are in place and are well known to the staff.**

Every person working at or for the NIS is made aware of the statistical secrecy requirement, and they must comply with it at all times during their professional careers.

Government-wide conflict of interest guidelines exist for all civil servants. The guidelines are part of the contract agreement that all civil servants must abide to when hired.

Law 16 616, which is available on the NIS website stipulates sanctions for noncompliance.

“Article 30 – Failure to maintain statistical secrecy, or the use of individual data for one’s own or somebody else’s benefit, constitute a criminal offense as defined by article 301 of the Criminal Code (“Disclosure of confidential documents”), without prejudice to relevant civil redress.”

As for political interference, according to testimonials from managers there are no recorded instances or recollection of political interference or influence in the production of statistics and the resulting estimates at the NIS.

Ethical standards are discussed during the mandatory introductory course about the organization that all new staff is required to take upon being hired by the NIS.

It is not in the habit of the NIS of regularly reminding staff of the ethical standards that they must respect and adhere to in their day-to-day work. It should not be considered as given that most staff are aware or remember these standards after a certain amount of time has passed.

2. Methodological Soundness

The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.

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 CPI concepts and definitions are based on international standards and recommendations, and good practices.

The concepts and definitions for household consumption expenditures from the 1993 SNA are followed regarding determination of the index weights for the CPI. The weights are based on expenditure information derived from the 2005–2006 survey of household incomes and expenditures and from national accounts information.

The specifications of the goods and services in the basket are compatible with those of the CPI manual.

There are 375 product categories associated with the CPI, and they are all publically available. The level of detail of the product categories make possible a thorough and in depth analysis of the causes of inflation in any given month.

2.2 Scope

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

The household consumption expenditure data that are used in the CPI relate to urban households of all sizes and income levels. Excluded are households living in rural areas.

The transactions undertaken by the household sector that are included in the CPI comprise final consumption expenditure as stipulated in the 1993 SNA definition.

Purchases of market goods and services for consumption are the basis of the CPI of Uruguay. Other transactions such as sales of illegal market goods and services to willing buyers, and own-account production of market goods for own final consumption are excluded from the scope of the index.

The expenditures on housing of owner occupants are not represented in the CPI.

Recommendation:

- Incorporate owner-occupied housing in the CPI.

2.3 Classification/sectorization

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

The classification and sectorization used in the compilation of the CPI is in broad conformity with internationally accepted systems and is based on the 1993 SNA topology.

Since the last basket update in 2007, COICOP is used to classify consumption activities. However, at the lower levels of detail none of the internationally recognized product classification systems is used.

2.4 Basis for recording

2.4.1 *Market prices are used to value flows and stocks.*

i. The valuation rules used for recording flows and stocks are in accordance with the 2008 SNA.

The weights in the CPI are valued on consumption expenditures that are valued at purchasers' prices, including all VAT taxes and also includes trade and transportation margins and applicable taxes less subsidies on products.

The product specifications used in the CPI include price-determining characteristics of the item such as the type of outlet, the size (weight and dimension), the type of material (clothing), the brand, etc., last month's price and the current price, the change from last month, the currency (pesos or dollars), etc.

Discriminatory discounts are not typically accounted for in the CPI.

2.4.2 *Recording is done on an accrual basis.*

Prices of goods and services are recorded in the period they are purchased or posted.

Prices for perishable items are collected more often. This is included in the detailed item specification. In addition, the price collection of fresh fruit and vegetables are conducted in mid-morning in order to capture the most representative price that the consumers will pay for these products.

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

The weights are based on net purchases, e.g., for insurance, it is the difference between gross premiums and claims paid. For vehicles, it is the price of new vehicle minus the price received for the sale of the used vehicle by the household.

3. Accuracy and Reliability

3.1 Source data

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

Price collectors are responsible for ensuring that the CPI sample (the source of price data) remains adequate. They add new items to the sample when an old one disappears, and they monitor for changes in the marketplace.

Every month the CPI collects over 40 000 prices, which provides a statistically robust sample size of prices for the compilation of the CPI.

The CPI receives point-of-sale data from six retailers (many more outlets) from which a sub-sample is used to compile the index. Other sources of information such as Internet collection and administrative records also supplement the core collection exercise of the CPI.

The household expenditure and income survey, which is partly used for weights in the CPI, is conducted infrequently. Prior to the 2005–2006 survey, the last survey was conducted in 1997. There are no scheduled dates for the survey. It is conducted on an ad hoc basis and when the data become available.

The frame for the household expenditure and income survey is based on the most recent census results. The census is conducted on a five-year cycle. Probabilistic sampling techniques are used for choosing the household to be surveyed for the expenditure and income survey with a probability of selection, which is known.

The household survey covers expenditures for the entire year, so seasonal spending patterns are accounted for but cannot be isolated with infra-annual data.

All resident households are covered by the survey of household expenditure and income except for those living, for example, in institutions or on a military base. It is estimated that the excluded population accounts for approximately one percent of the total population. Excluded also are those living in rural areas, which account for approximately 10 percent of the population. The exclusions do not significantly compromise, if at all, the representativeness and credibility of the Uruguayan CPI.

Survey questionnaires are constructed according to sound design principles whereby questionnaires are subject to field/pilot testing. The survey is conducted only sporadically. Consequently, the survey undergoes a number of changes each time it is conducted.

All goods and services that are within the scope of the CPI are covered.

Sample and estimation procedures are sound and are designed to represent the survey universe. Scientific random sampling techniques and/or cutoff sampling are used to select geographic areas, items, outlets, and product varieties. Where sampling frames are not adequate to support statistical sampling, judgmental sampling is used as a second-best procedure with well-defined, and published, criteria for selection.

In most cases the price data collected are well defined and use sufficiently detailed product specifications to ensure that period to period price comparisons within the selected outlets refer to the same variety. It has been noted, however, that for some products, the specifications may be too broad. This has led some price collectors to select items that are not necessarily perfectly comparable from one month to the next, thus somewhat compromising the matched sample principle.

It is normal practice at the NIS to collect comparable prices from outlets that are of the same type in order to ensure that this dimension of product quality is also controlled for.

Ad hoc surveys are typically not conducted by the NIS for the CPI.

The CPI uses point-of-sale data from six retailer chains (larger number of outlets) where a subset of the data is used for the compilation of the CPI. Typically the number of price observations per store does not exceed three. Furthermore, rent information is obtained directly from the landlords or the regulatory body responsible for rent controls in the country.

Sometimes, as an added source of validation, information from newspapers and other media is used to reinforce the quality and accuracy of the collected price data. This information is however never used directly in estimating the CPI.

The NIS does not organize periodic meetings with consumer groups and the business community to identify new product/market developments for the CPI.

International standards are monitored for changes that need to be taken into account in the consumer price index compilation system.

Recommendation:

- Conduct a new household Income and Expenditure Survey every five years to update the CPI weights.

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

The price data are collected on a monthly basis, which agrees with the publication frequency of the CPI. The prices are collected during the first 18 days of the reference month. The source data are consistent with the definitions, scope and classifications of CPI estimates and are consistent with the time of recording and valuation of CPI estimates.

3.1.3 Source data are timely.

The prices are collected during the first 18 days of the month, which provides sufficient time for comfortably processing the information and ensure that the CPI is released two days after the reference.

The providers of the point-of-sale data have so far been quite cooperative with regards to respecting the timetables for submitting their price data. In the few instances where this has not occurred, a reminder is sent, which so far has been sufficient for remedying the situation.

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.

The CPI has an integrated quality assurance algorithm. This tool provides to the production staff a monthly report on nonresponse rates, average price changes, and editing/imputation rates.

The organization has a quality management unit, however the CPI has seldom called on this resource for methodological guidance. Most of its activities have so far focused mainly on census-related issues.

The NIS does not provide on their website or publish estimates of the extent of sampling errors, nonsampling errors, biases, over/under-coverage, misclassification, and nonresponse for the expenditure surveys,

The NIS does audit their surveys/censuses to verify the accuracy of the individual survey data.

The NIS uses an algorithm that produces monthly reports on the incidence of deletions, replacements, and imputations in the price sample used to compile the CPI. Outliers are also identified and validated.

Price collectors use handheld devices when performing field collection. The software is designed so that the collectors can easily view the last collected price. Agents can therefore evaluate if the current price is legitimate or if additional probing is required. Typically, the threshold used by most field agents is based on the five percent rule. If the current price is + / – five percent over the previously collected price, the agent will report it to the field supervisor for review. A decision will then be made about the legitimacy of the price change.

It is common practice for the NIS to evaluate the accuracy of administrative data received from government agencies, trade associations, regulatory authorities, etc., is routinely assessed.

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.

The NIS uses handheld computers for collecting prices. These devices coupled with the outlier detection algorithm, which is part of the processing software, play an important role in minimizing processing errors.

Adjustments to unit records are made only when clearly warranted and can be identified in datasets.

Procedures for imputation and adjustment for nonresponse are in our view considered sound.

If need be, the NIS will sometimes draw some of the expenditure weights for the CPI from national accounts estimates for similar products when it is felt that those results provide more robust and realistic information about household expenditures.

Appropriate statistical methods are used to handle missing prices and the introduction of new products that are within the scope of the CPI.

In the Uruguayan CPI, missing prices are qualified either as temporary or permanent.

Prices for temporarily missing products are appropriately handled (e.g., impute the price based on the month-on-month price changes from a higher group of related products, or a more targeted subgroup when judged (and prior data show) that this strategy is more appropriate (sample sizes permitting). The imputed price is posted in the database. A limit as to how long (say three months) prices are “temporarily” missing is established and adhered to. The two-stage (modified) Laspeyres formula used in compiling the CPI facilitates the month-on-month imputation and is the recommended formula to use.

In cases of a temporarily missing item, the price movement is imputed from the price movements of similar items found within the same product grouping.

The CPI recognizes two broad categories of items: (i) homogenous items such as most food items; and (ii) heterogeneous items such as clothing. How an item is qualified is determined at the moment the basket is updated and the item list is renewed. When a new item replaces an old one there is a quality change and how it is handled will depend if the item is homogeneous or not.

In cases where the item is homogeneous, then one of two options is applied.

- (i) If the field collector, after consulting with his or her supervisor, determines that the item is comparable to the old item, the “direct comparison” method to quality change is applied. In other words, all of the price difference between the old and new item is deemed as “pure” price change (or inflation).
- (ii) Alternatively, if the items (still in the homogeneous category) are not perceived as being comparable, then a quality adjustment factor is applied to the price of the new item resulting in a “link-to-show-no-price-change.”

For heterogeneous products one of the two following imputation techniques can be used:

- (i) Obtain the previous month's ($t - 1$) price for the new item and construct the price relative in time t using the change in price of the new item between these two periods; or
- (ii) Use targeted imputation for the month for which the new item is introduced and where subsequent price relative are based on the price movements of the new item only.

With regards to method (ii), the targeted imputation requires at least 33 percent (and at least two observations) of real (nonimputed) prices be used from within the product group for the item, which is being imputed. When the proportion of real prices falls below the 33 percent (or less than two prices) threshold then the imputation source for the missing price (or prices) becomes the price index one level up in the aggregation structure of the CPI.

Seasonal products apply the same approach as that of method (ii) above except that the sample of real prices must account for at least 50 percent of prices (and at least two prices) within the product group. If this condition is not satisfied for seasonal products, than the last observed price is used as the imputation source. In other words, the carry-forward method is applied.

New products are sometimes introduced into the sample when it is deemed that they have gained sufficient market share.

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

Household consumption expenditure, as defined in 1993 SNA, is the conceptual basis for the weights used for the CPI.

The geometric mean of price relatives is the formula used to aggregate individual unweighted price observations.

The CPI uses the short-term link relative approach in its compilation.

The weight reference period of the CPI is 2005–2006, while the link month is March 2010.

As a result, the formula for calculating the CPI can best be qualified as a Lowe index.

The current weights in the CPI relate to 2005–2006 expenditure patterns. However, by delaying the introduction of the new basket to March 2010, the time lag is considered suboptimally long.

The new weights were linked to the old index using internationally accepted practices and procedures.

Recommendations:

- Conduct a new household Income and Expenditure Survey every five years to improve the relevance of the CPI weights.
- A regular cycle for updating the CPI basket on a timely basis should be established. The advantages of this decision are the following:
- Improve the relevance of the CPI for current economic conditions.
- Improve the planning and organization of the resource requirements for updating the basket.

3.4 Assessment and validation of intermediate data and statistical outputs.**3.4.1 Intermediate results are validated against other information where applicable.**

The CPI is never compared at a detailed level with estimates from other major price indices such as the PPI, export price indices, and import price indices.

Recommendation:

- Institute more data confrontation-type analysis for validation of results using alternative data sources.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

The threshold for monthly price variations of individual items is + / - five percent. Price fluctuations that exceed this range are noted and investigated for accuracy

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

Discrepancies arising from inconsistent imputation for missing data, and other possible sources of aggregation inconsistency are assessed using the screening and processing tool which reports any issues with the data prior to finalizing the index. Appropriate adjustments are then made to remove any discrepancies that may arise.

3.5 Revision studies**3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).**

No studies are conducted that analyze the effects of weight revisions and updates to determine the extent of the substitution bias on the CPI.

The NIS does conduct studies of long-term trends in the revision patterns of the data.

No studies to investigate other sources of errors/bias in the CPI are undertaken.

Documentations as to the revisions to the weights exist and can be found in the methodological document that was released with the weights. Given that the index series is never revised, no documentation is prepared on that subject.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The CPI is compiled monthly (SDDS).

4.1.2 Timeliness follows dissemination standards.

The monthly estimates are disseminated two days after the end of reference month (SDDS).

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Estimates produced for all classification typologies of the CPI are consistent in the sense that the all-items aggregate is invariant to the typology of aggregation.

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

Consistent time series data for the CPI are available for a period of at least five years. The series are consistent over this period for the purpose of 12-month comparisons. It should also be added that past estimates are also never revised or reconstructed even when new weights are introduced.

No methodological notes are produced that identify and explain the main breaks and discontinuities in time series, their causes, as well as adjustments made to maintain consistency over time when they do occur.

The text included with the release only covers a basic description of the month-over-month and 12-month changes to the index. It never includes explanations or any analysis that pertains to changes in the trends in the series or the short-term behavior of the index. This is also true for the online database that is accessible to the users.

Recommendation:

- Reconstruct historical series as far back as reasonably possible when changing the base year. Although linked time series are available only on GDP by the production approach for the period 1997–2011, longer-time series of main national accounts aggregates are not available.

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

The structure of the CPI of Uruguay is generally consistent with the implicit consumption deflator of the national accounts. The NIS do not however invest any time in exploring and analyzing any divergence that may occur between both series. The same applies with the IPPN.

4.3 Revision policy and practice**4.3.1 Revisions and/or updates follow a regular and transparent schedule.**

The practice of revisions and/or updates (e.g., from provisional estimates, for weight updates, for changes in methodology) follows a predictable pattern of which users of statistics are informed.

The monthly estimates of the CPI of Uruguay are never revised. The weights are updated from time to time, but this exercise does not follow a predictable pattern. It is done when there is an apparent need for the weights to be refreshed and the resources are made available. Changes in methodology are mainly introduced during basket updates. Users are rarely if ever informed of upcoming methodological changes or informed in advance of a new basket.

Recommendations:

- A basket update exercise is an opportunity, in addition to updating the weights, for a comprehensive review of the CPI procedures, concepts, and methods. For example, the choice of the sample of representative products should be refreshed when updating the basket.
- The NIS could undertake a study of the difference between the household expenditure survey and comparable components of national accounts household consumption expenditure and consider using the national accounts data as the source of, or as a control for, the weights of the CPI. The advantages of this option are the following:
- Improved coherence of macroeconomic statistics between the CPI and the national accounts.
- Weighting information that incorporates not only the most recent household expenditure survey, but also retail sales and other current information that has better coverage of certain components of household expenditure.

- More timely CPI weights, which reduce the lag between the weight reference year and the price reference month.
- The possibility of updating the basket weights more often and at lower cost.

The agency has adopted a clear and consistent revision policy.

There is no explicit revision policy at the NIS. If an error occurs or a new data are discovered, then the series will be corrected. Update of CPI weights and of the CPI basket of items are on an as-needed basis that may allow the weights to go unrevised for more than five years.

4.3.2 Preliminary and/or revised/updated data are clearly identified.

The CPI is always is considered final and thus nonrevisable. This is clearly stated to the users.

4.3.3 Studies and analyses of revisions and/or updates are made public (see also 3.5.1).

Weight updates are not measured, assessed, nor explained neither in the statistical publication nor in the NIS publically accessible database.

As is common practice with CPIs, the monthly index is never revised by the NIS.

Since the monthly CPI, once released, is never revised, no analysis is conducted that analyzes the quantitative differences between the revised and the preliminary estimates. It should be added that the weights of CPI are subject to periodic updating and revision; however even in this case, no empirical studies or analysis is conducted that compares and quantifies the effect on the CPI following the introduction of new basket weights.

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 CPI statistics are disseminated in a very straightforward table with a brief text highlighting the most recent changes, which facilitates re-dissemination by the various media outlets.

More comprehensive and detailed statistics are easily accessible on the day of release from a database maintained on the NIS website. The data are available at <http://www.ine.gub.uy>.

5.1.2 Dissemination media and format are adequate.

Statistics are disseminated in formats to suit users' needs, on electronic as well as paper media, allowing easy re-dissemination by the media (e.g., information release). In addition to releases,

detailed statistics are disseminated electronically and can be easily accessed in electronic form on the NIS website, or through an electronic database maintained by, or on behalf of, the data producing agency.

5.1.3 Statistics are released on a preannounced schedule.

A schedule announces in advance the dates the CPI estimates are to be released to the public.

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

The public is informed of the statistics being released, and how they can be accessed.

The statistics are made simultaneously available to most interested users. The only exception to this rule is the Central Bank of Uruguay, which receives the data about two hours prior to the official release.

The press is not briefed in advance about the results.

5.1.5 Statistics not routinely disseminated are made available upon request.

Upon request, special arrangements can sometimes be made to meet specific needs, provided that statistical secrecy requirements are complied with. Special and custom tabulations are available upon request and are usually done free of charge unless an extraordinary amount of time and resources are needed to generate these data.

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 methodology of the CPI and its conceptual basis are available from the NIS website. The website also includes the latest downloadable documentation on the methods and concepts that guide the compilation of the Uruguayan CPI: *Índice de Precios Del Consumo Cambio de Base–Diciembre 2010 Nota Metodológica*. The document highlights and explains most of the more important modifications that have been implemented since the last CPI revision in 1997. The supporting document: *Metodológica Índice de los Precios del Consumo Base Marzo 1997*, is a more comprehensive and technical source of information for understanding the concepts and methods of the Uruguayan CPI.

These publications include information on concepts, definitions, classifications, data sources, compilation methods, statistical techniques, and other methodological aspects and relevant procedures. The NIS does not make a practice of documenting deviations that may occur with the CPI when compared to internationally accepted standards.

The SDDS metadata are sent to the central bank as the changes occur and then posted on the IMF website.

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

The NIS does not provide general use information such as brochures or a FAQ page about the CPI.

The NIS does not typically produce specialized use information (e.g., background papers, working documents) for the CPI. Hence such information is not available to outside users.

5.3 Assistance to users

5.3.1 Contact points are publicized.

Prompt and knowledgeable service and support are available to users of statistics.

Contact points are listed in each questionnaire and on the home page of the NIS website.

Materials are available for educational purposes for schools from the NIS website. No special information is however available for researchers.

There is no monitoring of quality with regards to turnover time of requests that are sent to the NIS either by e-mail or phone. There is also no explicit policy or guideline for response time.

It is generally assumed that if the information is readily available, the requesting clients will receive swift and prompt action.

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

The NIS publishes a catalogue of its publications and a collection of its statistics. This catalogue is updated every year.

The publications are easily accessible on the agency website. In fact, the NIS, as a matter of practice, did away with paper publications more than 10 years ago. All documentation is strictly available on-line.

All statistical information including the data and the publications are available without charge to the public.

Table 6. Data Quality Assessment Framework (2012): Summary of Results for Consumer Price Index*(Compiling Agency: National Institute of Statistics—NIS)*

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		Given more resources, the CPI basket could be updated more frequently and under a more structured and tighter schedule. More analysis could also be conducted to ensure a proper validation exercise of the weights data.
0.3	Relevance			X		There is no formal process in place to consult users or inform them about specific aspects of the current data (e.g., usefulness in terms of detail, periodicity, and timeliness) either through client surveys, newsletters, or seminars.
0.4	Other quality management		X			There are no tools in place to assess how the NIS in general and the CPI specifically have succeeded in achieving their quality goals. There are some gaps and delays for the full implementation of the program because of resource constraints.
1. Assurances of integrity						
1.1	Institutional Integrity			X		There is no formal and continuous training program or strategy in place. No budget from the NIS is set aside for these types of activities. There is no internal training plan or systematic and organized workshop series, most of the staff gain their knowledge through on-the-job training. There are no activities in the workplace to promote a culture of professionalism. Accreditations, peer reviewed work, authoring of methodological papers, and the organization of conferences and lectures are not recurring activities at the NIS. The current environment and work culture is not conducive for the promotion and execution of research and analysis. No programs exist to stimulate and support such activities.
1.2	Transparency			X		Under exceptional circumstances, some users are informed of methodological changes prior to the release, but this is not normal practice except perhaps when the notified party is the CBU.
1.3	Ethical standards		X			

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
2. Methodological soundness						
2.1	Concepts and definitions		X			
2.2	Scope			X		The expenditures on housing of owner occupants are not represented in the CPI.
2.3	Classification/sectorization		X			
2.4	Basis for recording		X			
3. Accuracy and reliability						
3.1	Source data			X		It has been noted, however, that for some products, the specifications may be too broad. This has led some price collectors to select items that are not necessarily perfectly comparable from one month to the next, thus somewhat compromising the matched sample principle. Ad hoc surveys are typically not conducted by the NIS for the CPI. The NIS does not organize periodic meetings with consumer groups and the business community to identify new product/market developments for the CPI.
3.2	Assessment of source data		X			
3.3	Statistical techniques		X			
3.4	Assessment and validation of intermediate data and statistical outputs				X	The CPI is never compared at a detailed level with estimates from other major price indices such as the PPI, export price indices, and import price indices.
3.5	Revision studies					X No studies are conducted that analyze the effects of weight revisions and updates to determine the extent of the substitution bias on the CPI. The NIS does conduct studies of long-term trends in the revision patterns of the data. No studies to investigate other sources of errors/bias in the CPI are undertaken.

Table 6. Data Quality Assessment Framework (2012): Summary of Results for Consumer Price Index*(Compiling Agency: National Institute of Statistics—NIS)*

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	
4. Serviceability						
4.1	Periodicity and timeliness		X			
4.2	Consistency		X			
4.3	Revision policy and practice			X		There is no explicit revision policy at the NIS. If an error occurs or a new data are discovered, then the series will be corrected. Update of CPI weights and of the CPI basket of items are on an as-needed basis that may allow the weights to go unrevised for more than five years. No empirical study or analysis is conducted comparing and quantifying the effect on the CPI following the introduction of new basket weights.
5. Accessibility						
5.1	Data accessibility		X			
5.2	Metadata accessibility			X		The NIS does not provide general use information such as brochures or a FAQ page about the CPI. The NIS does not typically produce specialized use information (e.g., background papers, working documents) for the CPI. Hence such information is not available to outside users.
5.3	Assistance to users		X			

PRICE STATISTICS (PRODUCER PRICE INDEX)

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.*

National Institute of Statistics (NIS)

Law 16 616, of October 20, 1994, which defines the components of the National Statistics System (NSS), the mission of the National Institute of Statistics (NIS), the statistical secrecy requirements, and the mandatory provision of information by respondents, inter alia, governs the NSS.

“Article 1 – The National Statistics System is hereby created, which shall comprise the National Institute of Statistics and the statistics offices of the Executive, Legislative, and Judiciary Branches; Court of Administrative Litigation, Electoral Court, Audit Office, Autonomous Agencies, Decentralized Agencies, and Departmental Governments.”

“Article 4 – The National Institute of Statistics is the governing body of the National Statistics System. Pursuant to the regulatory centralization principle and the technical independence on matters within its jurisdiction, the NIS shall issue regulations on statistical concepts, definitions, classifications, and methodologies, which shall be adopted by the statistics offices comprising the National Statistics System, with due regard to the constitutional and legal order.

Pursuant to the operational decentralization principle, statistical production shall be assigned to each statistics office according to their corresponding areas of expertise.”

The National Statistical System is a mechanism that was created to promote consistency of methods and results. More specifically in the field of economic statistics a committee has been created which comprises the Director General of NIS and the Economic Statistics Manager of the Central Bank of Uruguay (CBU).

There is no oversight of the NIS in order to ensure that statistical work accords with the laws governing the collection, reporting, and dissemination of statistics. However the Director General may be called to parliament if required to answer questions with regards to the mission of the NIS and related matters.

Price index: Producer prices

Article 64 of the Law requires that NIS publish and disseminate on NIS's web page data on producer prices to the public.

In 1997 the responsibility of producing the *Indice de precios al productor de productos nacionales* (IPPN) was transferred to the NIS from the CBU.

In 2001, the title of the index was changed to IPPN from the wholesale price index. This was done following recommendations from the last IMF ROSC in order to more accurately reflect what the index was truly measuring.

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

National Institute of Statistics (NIS)

Law 16 616 determines the need and the duty of the NSS to share data and coordinate its operations.

“Article 2 – It shall discipline the planning, preparation and dissemination of statistics gathered by the public agencies comprising the NSS to ensure that those agencies will comply with integration, coordination, rationality and accuracy criteria.”

“Article 19 – Upon request, each Statistics Office comprising the National Statistics System must provide to other statistics offices within the System, the microdata received for statistical purposes, duly identified as such, provided that the following criteria are met:

- A) The requested data will be used solely for statistical purposes.
- B) The requesting office has the required infrastructure to secure the data.

Should the data request be denied, the National Institute of Statistics should judge the validity of the grounds for denial.”

Infrequent coordination meetings between the NIS and the individual members of the NSS are held. The purpose of these meetings is to promote a proper understanding of data requirements and needs, to avoid duplication of effort, and to reduce as much as possible the reporting burden to respondents.

Price index: Producer prices

In the particular case of the IPPN, its principal data sharing partner is the CBU. Although no meetings are scheduled at pre-determined intervals, meetings are held according to need.

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

National Institute of Statistics (NIS)

Law 16 616, of October 20, 1994, establishes the statistical secrecy rule as well as the obligation to comply with said rule and use data solely for statistical purposes. This is disclosed both in the questionnaires and in the cover letters that accompany surveys.

The NIS officials must comply with statistical secrecy requirements. Access to survey data is limited to personnel directly involved in this work and their superiors.

"Article 3 –...Statistical secrecy requires that individual data provided by data sources should be treated with strict confidentiality to ensure that the identity of those sources will not be disclosed..."

"Article 16 – Individual data provided for statistical purposes shall not be used for any other purposes, not even at the express request of the respondent."

"Article 17 – Individual data provided by data sources to the National Statistics System are covered by statistical secrecy. The statistical secrecy duty applies both to the agencies and their employees, as well as to third parties that become aware of the data covered by statistical secrecy. The statistical secrecy duty does not apply to such general data as corporate name, domicile, economic sector, and size, provided by taxpayers, enterprises, or establishments involved in for-profit or not-for profit economic activities.

However, data not covered by statistical secrecy shall not be identified or requested in such a way as to permit the uncovering of data whose confidentiality is legally protected."

"Article 18 – The Offices comprising the National Statistics System may disclose only:

- Aggregate or summary data corresponding to a group of data sources (macrodata).
- Individual data relating to a single data source (microdata), provided that it does not disclose the identity of the source.
- The data mentioned in the second paragraph of the foregoing article."

"Article 30 – Failure to maintain statistical secrecy, or the use of individual data for one's own or somebody else's benefit, constitute a criminal offense as defined by article 301 of the Criminal Code ("Disclosure of confidential documents"), without prejudice to relevant civil redress."

When the small size of the sample or of the overall group prevents the disclosure of data at a certain level because of the statistical secrecy rule, this is indicated by an "(s)". Data that cannot be reported are included in the computation of more aggregated levels; however, if data can be

derived through other means (e.g., using weights), some data can be reported at the same disaggregation level; the confidentiality of the data reporting entity is nevertheless guaranteed.

Price index: Producer prices

Typically in the case of the IPPN, the NIS will not publish an index if there are fewer than two producers in the sample. The exception being state-owned monopolies where price indices for their output are published.

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

National Institute of Statistics (NIS)

Law 16 616, of October 20, 1994, establishes the statistical secrecy rule as well as the penalties to be applied for noncompliance.

“Article 14 – All natural or legal persons, nongovernmental public entities, and public sector agencies must provide the data requested for statistical purposes by the members of the National Statistics System, within the timeframe specified.”

“Article 15 – The data reported by the data sources shall be objectively verifiable (article 30). In order to meet this criterion, the reporting agency shall, whenever so requested by a Statistics Office from the National Statistics System, submit supporting documentation or electronic data.”

Work has been initiated to address the overload issue, with an attempt not to resend data requests that can be used in two surveys. A report has been produced that addresses this issue. A strategy is in place to remedy such cases. Some progress has been made, but there are still areas for improvement. More resources are needed so that more progress can be achieved (e.g., more staff with the needed computer skills such as developers and programmers).

0.2 Resources

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

National Institute of Statistics (NIS)

The current number and skill level of staff is adequate to meet the existing workload. Given the reliance on contractual staff, turnover is higher than desired, and wages are not adequate. Strategies are under way to solve both issues. A restructuring process has been initiated to improve compensation, job security, and enable the possibility of assuming new tasks.

Computer hardware, software, and related support meet immediate survey requirements.

Visibly, the physical infrastructure in the areas where the price indices are produced (lighting, heating, phone lines, and furniture) needs improvement.

However, hiring new staff can be a long process. For example, the economic statistics unit of the NIS expressed a need for 10 new staff members 18 months ago, but they have not been hired yet. This is due to the centralized nature of the Uruguayan public service's hiring process.

Another issue is that the NIS is limited in the wages it can set for its employees. Wage levels are set by the Uruguayan public service authorities and appear not to be competitive with certain specialties, such as IT specialists, statistics, and economics. Consequently, the NIS has had issues with attracting new qualified employees and retaining higher performers.

There is general agreement that for most statistical programs at the NIS, that the hardware and software are distributed in a way that facilitates the efficient collection and processing of the data. A backup system does exist and is adequate for the immediate needs of the organization.

Price index: Producer prices

The survey is conducted with one full-time person who is in charge of administration and another part-time person responsible for analyzing the results. There is also a part-time supervisor whose role is to compile and publish and disseminate the IPPN. There appears to be a sufficient number of staff to process the current IPPN survey. However, there are no dedicated personnel for conducting research, doing more sophisticated analysis, or to work on developmental issues. The current environment for the IPPN can be qualified as one of pure operations with little time or resources left for doing analysis and development work.

Most of the current staff members are fairly new to the IPPN. Consequently, they have little experience and knowledge in the area of price indices in general and the IPPN in particular. The manager has observed, and this is a generally accepted view even from the manager's superiors, that the training and qualifications of the current staff can certainly be enhanced in the area of producer price statistics. Given the small number of persons involved in the production of the index, turnover is always a risk with its corresponding source of potential problems and challenges. It has been pointed out, however, that as it currently stands, at least two staff members are sufficiently familiar with the program that the loss of a key specialist would not, in the short run at least, handicap the timely production of the index.

Another concern that has been voiced by management is that the current workload is such, that the staff does not have sufficient time to invest at improving their skill level and expand their knowledge about recent methodological developments in the ever-evolving area of producer prices. Consequently, recent conceptual and methodological advances from the international community on producer prices may take some time before filtering into the index.

With regard to salaries, the manager has stated that those of the administrative staff or clerical workers, who have reached their current level based on work experience, are appropriate for the levels and complexity of the work performed; their salaries are competitive when compared to

most other employees in other government departments who are doing similar work. In contrast, this is not the case for more skilled and specialized staff members with more education (i.e., professional staff); the general feeling among managers working on the IPPN at the NIS and the professional staff is that their remuneration falls short of that of their peers from other departments that do work that could be qualified of a similar nature and complexity. The uncompetitive wages for more highly skilled staff members has resulted in higher than average employee turnover, recruitment challenges, and, to a certain extent, problems with moral.

There are sufficient resources for efficiently conducting the data collection exercise. This is especially true in the case of the IPPN, given that they have moved to electronic data capture forms which has reduced the collection costs to the organization by reducing the number of collection and data processing agents.

It should be noted, however, that given more resources, the IPPN basket could be updated more frequently.

For the IPPN, there is a general feeling by the manager that the computer processing software is often inadequate. For example, with reference year changes, the software is not sufficiently flexible or upgradable to efficiently integrate all of the changes associated with a basket update exercise. Upgrades to the system are done by IPPN staff that most here agree is not the optimal solution. The preferred option would be to have more specialized resources (IT-type resources) to accomplish this task, which they have a difficulty securing given their shortage.

With regards to financial resources, the manner in which the budget is allocated at the NIS, does not allow an allocation for which the manager believes will provide the greatest benefits to his or her program.

No information is available on the program's funding and therefore resource allocation decisions are often not motivated by budget considerations. Not included in the budget is the automatic or planned renewal of the IPPN basket updates, and it is therefore difficult to develop and implement a strategy or calendar to improve the IPPN due to the uncertainty of whether or not the required financial resources will be available in the future.

Recommendations:

- Ensure that the NIS has adequate financial resources, staff, facilities, and training, and take further steps to increase retention of qualified staff.
- The legal framework to hire/contract staff by the NIS needs to be more flexible to accelerate filling vacancies with technical qualifications in economic statistics.
- Initiate an employee rotation program to enhance the versatility of professionals and the redundancy of skills of statistical units and teams in view of limited staff complements.

0.2.2 Measures to ensure efficient use of resources are implemented.

Price index: Producer prices

Staff performance reviews are conducted annually according to the directives of the civil service authorities. However, it has been observed that they are not always effective for improving efficiency and performance.

Based on an assessment of processing costs, an electronic survey was implemented with a view to reducing material and personnel costs by discontinuing the use of paper surveys. E-mail forms were introduced in 2007 for convenience and improved efficiency. New technologies will be implemented to enable savings on paper and reduce the number of staff needed to perform each task. Electronic data collection will allow the work to focus on data analysis instead of data entry.

A coordinated effort is being made with other public agencies such as the tax department to take advantage of their administrative records to update the Permanent Register of Economic Activities (PRAE).

It should be mentioned that given the relatively small number of staff involved in producing the IPPN that the survey is running quite efficiently. It is therefore believed that when compared to other programs at the NIS, the IPPN program scores very well on the efficiency scale: they accomplish much with little. However, beyond maintaining the quality of the IPPN at its current level and ensuring its prompt release, very little analysis, validation, and development work are done.

Very rarely is outside assistance sought to evaluate the current state of the methodology and compilation. There is no program in place for this to occur on a regular basis. The last time outside help was called upon to provide feedback on the IPPN was about five years ago.

Efforts have been made to make the IPPN consistent with the national accounts framework. For example, one can look at the harmonization of the classification system done in 2005. However, attempts to modernize from *ISIC* Rev. 3 to *ISIC* Rev. 4 have not progressed because of systems limitations.

Another example of where efficiencies could be gained in the area of the IPPN is with regard to the data collection exercise. This survey and the survey for the industrial production index often consult the same respondents, but at two different periods in the same month. Moreover, similar information is collected from these respondents. Once again, systems limitations are preventing progress towards a better harmonization between both surveys, which would ultimately lead to lower respondent burden and perhaps even better data.

Outside expert assistance is sought only very sporadically, and it usually occurs when more serious issues with regards to statistical methodology are involved.

The financial costs of resource use involved with the compilation the IPPN are never estimated nor compared to the cost of running the other statistical programs of the organization. Furthermore, there are no budgeting exercises to help in the decision and planning phases of the allocation of resources.

0.3 Relevance

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

National Institute of Statistics (NIS)

The release calendar of all indicators, which are released to the public at 2:00 p.m., is posted on the NIS website, which also lists an e-mail address for users to voice their concerns, make comments, or request further information.

In late 2005, the NIS held meetings with the main users of its statistics to gather their views as an input towards the formulation of the National Statistical Plan (see 0.1.2). But no similar meetings have been held since then.

There is no formal process presently in place to consult users or inform them about specific aspects of the current data (e.g., usefulness in terms of detail, periodicity, and timeliness) either through surveys, newsletters, seminars, or workshops. Although their feedback is not discouraged, there is no process to actively entertain feedback about the program from users. Various contact persons, usually the person responsible for the survey, are available either by phone or e-mail if users have queries or want to provide comments about the data.

Users' concerns are noted and to the extent possible addressed by the NIS.

Price index: Producer prices

Most of the staff of the IPPN participate in various training courses, conferences, and workshops sponsored by the IMF and ECLAC on a regular basis.

As for responding to users requests, the senior economist responsible for the IPPN is the dedicated person to whom questions are directed to for the IPPN. He promptly responds to all outside questions from the BCU and the other many users.

The NIS regularly participates in statistical meetings and seminars organized by international and regional statistical and economic organizations (e.g., ECLAC). In the case of the IPPN, due to resources limitations, any new initiatives or methodologies that transpire from these meetings are seldom implemented in a timely way. Furthermore, the NIS does not actively conduct any studies or produces research that can be used to identify emerging data needs for the IPPN program.

- Initiate regular consultations with public and private sector users, including through fostering users' groups and an advisory group to improve the usefulness of statistics and advise on statistical program priorities. The advisory committee should include participation of academics, private sector analysts, and producers' associations and meet on a regular basis (e.g., twice a year).

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

At the beginning of the year, the Director General (DG) presents to the organization the goals and objectives for the coming year. During this exercise, the DG stresses the value and importance of the quality dimension of the institute's statistical products for its users and for the NIS's reputation. However, there is no mechanism to assess how the NIS in general and the IPPN specifically have succeeded in achieving the goal of sustaining the quality of its products or even improving them.

Staff training programs emphasize the importance of quality and how to achieve it in general for the NIS and also for the IPPN. For example, about two years ago, a quality control questionnaire was circulated to managers across the office for which the aim was to solicit their feedback regarding their perception of the state of the quality of their own program, including the IPPN.

The organization has implemented externally recognized processes or activities that focus on quality (e.g., Total Quality Management, ISO 9000, quality initiatives within the European Statistical System, and independent evaluations). Some statistical programs have applied ISO 2008, e.g., in the area of construction statistics. But these processes have not yet been applied or implemented in the case of the IPPN.

The NIS website includes a statement articulating the organization's commitment to quality, i.e., The Quality Policy. It includes, for instance, the mission statement of the organization and the quality management system, which is in place.

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

Quality controls are applied with a view to controlling the number and quality of nonreporting units, and this serves as a basis for monitoring and evaluating the quality of the indices. The determinants of changes in the index are detected and analyzed, in order to uncover any inconsistencies. The processes at NIS observe the main total quality management principles: periodicity, timeliness, accessibility, completeness, and transparency.

1. Assurances of Integrity

1.1 Institutional Integrity

1.1.1 *Statistics are produced on an impartial basis.*

National Institute of Statistics (NIS)

At the NIS, it is recognized that professional independence is necessary, and that technical autonomy is essential to ensure the credibility of statistical outputs.

Staff capacity building is encouraged, but in a limited way in the NIS through access to internal and external training and seminars, as well as through attendance in international workshops and seminars (e.g., the International and Ibero-American Foundation of Public Administration and Policies (FIIAPP)). However, there is no formal and continuous training program or strategy that are in place.

Law 16 616 addresses the general need for the professional independence of the NIS.

“Article 3 – The organizations comprising the National Statistics System shall fulfill in an objective fashion the purposes they have been created for, in full accordance with the law, and shall adhere to the following general principles: statistical secrecy, relevance, transparency, strictness, technical autonomy, comparability, efficiency, regulatory centralization, operating decentralization, legal objectivity, and sound decision-making....”

Technical autonomy refers to conducting statistical activities with independence and objectivity, based exclusively on statistical principles...”

The Director General of the NIS is a political nominee. Typically, the appointee is a person from outside the NIS who has proven credentials and experience in a related and relevant field of activity.

Efforts are made to train staff through their participation in regional workshops and courses as long as no costs are incurred by the organization since there is no formal budget dedicated to training. Although there is no internal training plan or systematic and organized workshops, most of the knowledge is gained through on-the-job training. Recently, staff has been provided access to the Timbó portal, which contains a broad collection of professional publications that they can easily access from their desktop. This has helped somewhat in expanding their knowledge base about job-related issues.

The legal framework of the public service at large dictates both the recruitment and promotion of staff. Potential candidates must pass entry-level examinations to be hired and existing staff is promoted on the basis of merit.

According to discussions with some staff members, there are no explicit activities or mechanisms that promote a culture of professionalism in the workplace. Accreditations, peer-reviewed work, authoring methodological papers, and the organization of conferences and lectures are not part of the work environment or culture at the NIS.

The NIS does not discourage employees from engaging in research and analysis. However, the infrastructure and culture is not geared towards the promotion of such endeavors. In order for work of this nature to materialize, the physical as well as working environment needs to be in such a state to promote such activities. This is not currently the case at the NIS.

1.1.2 Choice of data sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.

The selection of the price sample and the weights for the IPPN are based on internationally recognized sampling techniques typically used for the compilation of most PPIs produced by national statistical agencies. For instance, the selection of items in the PPI sample is based on a cut-off sample where the most important firms (they must account for more than two percent of the market) will be chosen; they are then asked to provide a certain number of price observations based on the list of products they produce. The weights for the IPPN are drawn from the supply and use table of the national accounts and are a statistically and internationally recognized method for deriving such information.

At the NIS, decisions to disseminate data, the timing of the dissemination, and the nature of the media that is used are strictly based on statistical considerations. No other factors affect the dissemination strategy of the IPPN.

National Institute of Statistics (NIS)

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

The NIS makes it a practice to track and monitor media coverage of its statistics. However, it will typically not initiate a reply or provide other feedback such as corrections, at least for the CPI and IPPN, in cases where their data have been misinterpreted or misused.

1.2 Transparency

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

National Institute of Statistics (NIS)

The full text of Law 16 616, the survey methodology, and the release calendar of all indices, as well as a contact telephone number and e-mail address, are available on the NIS website (<http://www.ine.gub.uy>).

When accessing electronic surveys, the user is presented with the main articles of the Law referring to statistical secrecy and the requirement to comply with it, as well as to the reporting requirement and the penalties applied in case of misreporting. This information is also included in the surveys sent to enterprises by e-mail.

Law 16 616 requires the provision of information on the criteria and methodologies adopted.

“Article 22 – All entities, whether public or private, have the right to receive the data produced by the National Statistics System, as well as information on classifications, criteria, definitions and methodology adopted in producing such data. (Transparency Principle, Article 3).”

In public meetings and speeches, the agency makes a point to actively promote and inform users about the conditions and terms under which it operates.

The NIS includes its web address on all its releases and publications where users can find more information about the organization and its products.

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

National Institute of Statistics (NIS)

Data are disseminated to the public as well as to government and quasi-government (e.g., BCU) authorities on the same day. Some series are sent earlier to certain authorities, but the public is not made aware of this pre-release practice; it is not advertised on the NIS website or in any of its documentation. The pre-release practice is however mentioned in passing on the IMF website under the Special Data Dissemination System (SDDS) protocol.

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

National Institute of Statistics (NIS)

Data are disseminated through the NIS website and are clearly associated with the relevant survey; the NIS is responsible for all information contained therein as well as for its production. Reports prepared by the NIS are identified by a logo placed on the title page, and the names of the authors and staff responsible are credited in the case of methodological reports.

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

National Institute of Statistics (NIS)

Users are informed of any changes to the methodology before the data incorporating these changes are released to the public. When this practice is not practical for whatever reason, an attempt is made to at least shorten the lag between the publication date of the data and the release of information related to the change in methodology.

Price index: Producer prices

Typically, most users are informed of the methodological changes at the time of the first release of the data using the new methodology. Under certain exceptional circumstances, some users are informed of the change prior to the release, but this is not normal practice except in the case of the CBU, who is typically informed early of any methodological changes.

Recommendation:

- Announce in advance any planned changes in concepts and methodology. With major changes, users should be invited to provide feedback before they are implemented.

1.3 Ethical standards**1.3.1 Guidelines for staff behavior are in place and are well known to the staff.****National Institute of Statistics (NIS)**

Every person working at or for the NIS is aware of the statistical secrecy requirement and must comply with it at all times.

Government-wide conflict of interest guidelines exist for all civil servants. The guidelines are part of the contract agreement that all civil servants must abide to when hired.

Law 16 616, which is available on the NIS website stipulates sanctions for noncompliance.

“Article 30 – Failure to maintain statistical secrecy, or the use of individual data for one’s own or somebody else’s benefit, constitute a criminal offense as defined by article 301 of the Criminal Code (“Disclosure of confidential documents”), without prejudice to relevant civil redress.”

As for political interference, according to testimonials there are no recorded instances of political interference in the production of statistics.

Ethical standards are discussed when new staff take the introductory course to the organization.

Staff members are not formally reminded of the ethical standards that they must follow. It is a given that they are aware of them at all times.

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 IPPN of Uruguay is compiled by the NIS and adheres as closely as possible to the methodological and conceptual guidelines prescribed in the *PPI Manual: Theory and Practice 2004* (ILO, IMF, OECD, Eurostat, United Nations, and the World Bank). The IPPN is an output price index for which the underlying conceptual basis for the weights follows the 1993 SNA framework.

Information for the index base weights is drawn from the supply and use tables compiled from the CBU. The sources of the background information used for the calculation of weights from the CBU were as follows:

- (i) Agriculture, livestock, hunting, forestry, and related activities: 2005 National Accounts, Central Bank of Uruguay, and 2005 agricultural statistics from the Directorate of Agricultural Statistics (DIEA) and the Directorate of Forestry, Ministry of Livestock, Agriculture and Fishing.
- (ii) Fishing: Catch and exports, 2007 Statistic Bulletin, National Directorate of Aquatic Resources. Since there were no estimates for the value of fish production destined for the domestic market in 2005, estimates for 2007 were used instead.
- (iii) Mining and quarrying: 2005 Annual Survey of Economic Activity, National Institute of Statistics, and Extractive Industries Bulletin, of the National Directorate of Mining and Geology, Ministry of Industry, Energy and Mining.
- (iv) Manufacturing: 2005 Annual Survey of Economic Activity, National Institute of Statistics.

The variables defined for the surveys meet internationally established criteria, and the classification is at the 4-digit *ISIC* Rev. 3 level, adapted for Uruguay.

The output estimates of the IPPN are only compiled in the commodity dimension. The NIS does not break down PPI data by industry.

2.2 Scope

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

Scope of the data

The IPPN (producer price index for national products) covers agriculture, forestry, mining and fisheries, and manufacturing i.e., sections A, B, C and D of *ISIC Rev. 3*. The production from utilities (Section E in the *ISIC Rev. 3*) is not however covered in the IPPN.

The index covers 209 products and the sample size is of 1,129 distinct price observations. No plans exist to increase the coverage at least until the next basket update.

Exceptions to coverage

Currently, the IPPN does not cover output prices for utilities, construction, business services or other services. There are no immediate or firm plans to expand the IPPN to cover these areas given resource limitations

Production destined for export is not included in the IPPN. Consequently, production in free zones is also not included in the IPPN.

Unrecorded activity

All resident enterprises in the formal market are included in the Permanent Register of Economic Activities (PREA) from which the IPPN sample of production units is selected.

Own account production of any kind is not included in the IPPN as are the production and sale of illegal goods.

Recommendations:

- Expand the scope of the PPI to include first utilities, and subsequently services and construction.
- Expand the scope of the PPI to also include products destined for export, which is the international standard.

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 and transactions follows the *1993 SNA* guidelines.

For classes of activities, *ISIC Rev. 3* is used, adapted for Uruguay. The NIS uses its own product classification, which is largely CPA inspired.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Price is defined as the value per unit of good or service traded in a purchase/sale operation carried out between a seller and a buyer. Since the state intervenes through taxes and subsidies, the price received by the seller is not equal to the price paid by the purchaser.

In the national accounts, on the other hand, output can be valued at basic prices or producer prices. Valuation at basic prices excludes taxes and subsidies, while valuation at producer prices excludes VAT and IMESI (excise tax). In light of the objectives set for this index, a decision was made by the NIS to use producer prices to monitor changes in producer prices for the IPPN.

The prices collected represent the amount received by the producer, in the case of Agriculture, Livestock, and Forestry, and Manufacturing sections; landed prices for Fisheries, and for Mining and Quarrying, the quarry price.

2.4.2 Recording is done on an accrual basis.

Prices are recorded as they are incurred, i.e., at the moment of transaction.

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

Given that the IPPN is an output price index, the weights are calculated using the gross value-added estimates generated from the supply and use tables of 2005.

3. Accuracy and Reliability

3.1 Source data

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

Data collection is adequate to meet the needs of the index, and when not surveyed directly by the NIS, external sources are available.

Appropriate frameworks were used for selection of the sample of reporting units, as indicated below:

- (i) For agriculture, livestock, and forestry, the selection encompasses producers' associations, chambers, and price-reporting agencies representative of the sector. It also includes a number of industrial enterprises owing to their relevance in

determining the prices received by agricultural producers for rice and barley. For forestry, it includes purchasers of lumber extracted from forested areas (excluding lumber from native forests) and used for sawing, producing wood pulp, or exporting without processing.

- (ii) For fisheries, it includes enterprises that own their fishing vessels that sold all or part of their catch on the domestic market.
- (iii) The sample for the mining and quarrying sector includes enterprises involved in extraction, and leading producers of selected minerals.
- (iv) The framework for manufacturing was Economic Activity Census 97, adjusted to reflect entries and deletions in the Permanent Register of Economic Activities (RPAE) and the sample of the 2005 Annual Survey of Economic Activity.

Sample design ensures that the population under consideration is represented properly. After defining the sectors to be surveyed, activities are selected at the *ISIC* Rev.3 4-digit class. The selection for Section A included the classes of activities with an importance greater than one percent in the value of finished products, resulting in the inclusion of seven classes that represent 99 percent of the gross production value of this section. The Fisheries sector (Section B) was left represented by its sole activity class, whereas in the case of Mining and Quarrying (Section C) three classes were selected which cover 98 percent of the section. In the case of Manufacturing Industry, those activity classes were selected that have an importance exceeding one percent in market sales for total industry. 34 classes were thus selected, covering 89 percent of the value of market sales.

Once the activities at the 4-digit level were selected, the major lines of production were selected. The Agriculture, Hunting, and Forestry section includes those lines, which in year 2005 represented at least 2 percent of the total value of production net of exports. In the case of manufacturing industries the same selection criterion was used.

In the Fisheries sector, three major production lines were selected, reflecting their importance within the value of the catch intended for the domestic market. The two main traditional species were included, which had already been surveyed by the previous index, incorporating a third species, representative of nontraditional species, which have been steadily gaining ground within the sector. In the extractive sector, the four minerals of greatest importance were selected in accordance with their relative weight within the value of minerals extracted for domestic activity.

The questionnaires are seldom revised since any changes require modifications to the processing system, and this is not undertaken due to resource limitations.

The data gathered are sufficiently detailed to derive the IPPN at the 4-digit level for all the covered sectors. The data sources are sufficient to compile price statistics for the sectors covered by the index, although it would be desirable to have statistics for other sectors such as utilities,

services, and construction. Prices received by producers for their exports should also be included in a subsequent version of the PPI.

Annual surveys are carried out on the industrial activity of enterprises and establishments, and the sample design of these surveys adequately reflects the overall group.

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

Source data meet the definitions, classifications, valuation, and time of recording criteria.

The source data are consistent with the valuation and time of recording of the statistics.

3.1.3 Source data are timely.

i. The data collection system provides for timely receipt of data.

The periodicity and timeliness of the price data collection survey are adequate for the dissemination of producer price statistics. The same form indicates the deadline for delivering information which is approximately five days before publication of the index, which allows for compilation and review to be conducted in a timely, substantive fashion before the data are released. The respondent is informed of the reporting deadline at the time the questionnaires are sent.

Administrative data, which are used for certain agricultural products such as fresh fruit and vegetables, are sent to the NIS in a timely fashion.

When data are late in arriving at the NIS, the NIS will follow up with the respondent in order to ensure delivery of the data. Typically, this second reminder ensures delivery of the data.

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.

No estimates for sampling and nonsampling errors are offered to users either for the weight estimates or the price data.

None of the IPPN surveys (prices or weights) are audited to verify the accuracy of the individual survey data. The proportion of output of sections A, B, C, and D of *ISIC*, Rev. 3 not comprised in the IPPN is less than 10 percent. Surveys/censuses are audited to verify the accuracy of the individual survey data (e.g., supervised field collection; random post-enumeration checks; independent reviews).

Outlying price observations are identified and confirmed with respondents. There is no automatic deletion of outliers.

Data on the number/rate of types of missing values (temporarily, permanent, seasonal) by major product group and their treatment are regularly monitored and drilled down when excessive.

The accuracy of administrative data received from government agencies, trade associations, regulatory authorities, etc., are not routinely monitored or assessed for quality assurance.

No routine analysis of components or the overall IPPN are done to ensure that the results are consistent with other data sources. Temporal consistency is however monitored as a means for quality assurance.

The IPPN has an integrated quality assurance algorithm. This tool provides to the production staff a monthly report on response rates, and editing/imputation rates.

The organization has quality management unit, however the IPPN has seldom called on this resource for guidance.

In the case of the IPPN there are no periodic reviews that are undertaken to identify steps necessary to maintain quality requirements.

Recommendation:

- Institute more data confrontation-type analysis and the analysis of the third-party data used in the PPI.

3.3 Statistical techniques

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

The procedures minimize errors such as coding, data entry errors, etc. Fundamentally, the use of digital forms and automatic data capture significantly reduces data-entry errors. The calculation procedure is standardized, which guarantees that it is always carried out in a systematic way.

Adjustments to the records for the units are made only if absolutely necessary and when clearly justified.

Imputation procedures are based on sound principles.

The weights used to calculate the IPPN are derived from the gross production values for each commodity.

In the IPPN, except for seasonal items, temporarily missing prices are imputed from the price movements of the items found with the same commodity class. When there are fewer than two observations within the commodity class, then the imputation source is drawn from the movement of the index immediately above that commodity class in the classification structure. When a product is deemed to have disappeared permanently, then it is replaced with a similar item and linked into the index.

Seasonal products are products that are not traded in particular months of the year, and for that reason, no prices are reported at that time. In the case of the Uruguayan IPPN, there are relatively few products that are qualified as seasonally disappearing. For those that are, there are two approaches used to treat these. In the first case, and this applies only to barley and rice, the last recorded price is carried forward until the item reappears in the market. This approach is justified on the basis that for these two products, are characterized by negotiated prices. Once their price is set, it is so for the remainder of the year. Consequently, when the product reappears on the market, it reappears at the same price it left the market. With the other approach, when a product disappears, its price movement is imputed from the price movement of the other prices available in the same commodity class.

A special case is made for barley and rice, which sell at contractual prices that are set for a year. Therefore, in months where these items are not transacted, the contractual price is used in the calculation of the IPPN.

Quality changes are increasingly frequent due to constant technological progress, which means that in some cases it is impossible to find prices for the same specific product during two consecutive months. In such an index, quality change is treated similarly to the treatment of the introduction of a new specific product since the quality change entails a change in the specific product. When it is believed that the quality change hides a change in prices between the outgoing specific product and the incoming replacement product, compilers apply a factor to the preceding month's prices for the new specific product, so it can reflect the change in the quality adjusted (pure) price between the old and the new specific product. Otherwise, when it is considered that the change in price is accounted for by the change in quality, compilers apply an adjustment factor equal to one to the preceding month's price for the specific substitute.

When new firms are added to the IPPN sample, then the sampled prices from the introduction month are compared to its prices from the previous month.

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

The reference period for the weights was updated in March 2010 taking values for 2005. There is no planned future update at the present time. The weights are based on 1993 SNA concepts and use gross value added estimates for the divisions.

The index for the commodity for period t against the base period is calculated as the index for the line through the period $t-1$ multiplied by the geometric mean of the price relatives reported on the line in question.

The method for aggregating the core price indices to attain higher levels is based on the Laspeyres-type calculation formula (the weights are price-updated from their reference period to the link month. Given that the weights are price-updated in this manner, the IPPN is can more precisely be defined as a Lowe index)

At the microindex level, the estimator of price change is based on the short-term (month-to-month) relative approach (short-term links). The geometric mean formula is used to aggregate unweighted individual price relatives within the commodity group.

The method used for introducing the new weights is based on internationally accepted techniques found in the *PPI Manual*.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable.

The IPPN data are rarely compared with external sources for the purpose of validation. This practice is not an integral part of the validation and production process. A shortage of resources largely explains the reason for this. However, the IPPN is the first to disseminate and as a result, there are no other reliable sources that are available for making such comparisons on a current basis.

Recommendation:

- Consider delaying the release of the PPI until one or two weeks after the reference month to provide more time to analyze the results and the data sources; this is not currently done given the limited resources.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Unusual changes either from certain sectors or from particular reporters are rarely if ever investigated. If and when such cases do occur, the NIS will not typically release comments to the public about the causes or source of the atypical movement.

Typically, the monthly press release follows a standard half-page format that is repeated every month. Included is a basic summary of the month-on-month and 12-month changes for the total IPPN (Indice General) and for two of its major components (section level): Manufacturing, and Agriculture; in addition, the press release includes information for each component's accumulated change for the year (from January to the current month) for the year and the contribution of the monthly change of the four major component indices.

3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are assessed and investigated.

Discrepancies arising from inconsistent imputation for missing data and other possible sources of aggregation inconsistencies are seldom assessed. This is mainly because missing data is not a major concern for the IPPN and when it does occur, the method of imputation applied is almost always the same.

3.5 Revision studies

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

There is no analysis relating to the update of weights to determine the effects of the magnitude of the substitution effect on the PPI.

No studies are conducted on the long-term trends in the revision patterns to identify if some of the revisions may reveal any systematic bias in the revisions.

No studies are conducted to investigate and explain other sources of errors or bias in PPI.

Given that no such studies are conducted by on the IPPN at the NIS, then the issue of incorporating findings from these studies does not apply here.

It should be noted that the IPPN follows a nonrevision policy because it is used as an escalator in a number of binding legal contracts. The contracts are written in a way that it is impractical for the IPPN to be revisable.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The PPI is compiled monthly. The prices are collected on (and related to) the tenth (or thereabouts) of every month but are representative of the entire month.

4.1.2 Timeliness follows dissemination standards.

The IPPN is disseminated two days before the end of the reference month. Data are received on the tenth of the month and processed in the week (or so) that follows. Therefore, they are ready for release before the end of the reference period.

4.2 Consistency

4.2.1 *Statistics are consistent within the dataset.*

i. The statistical series is internally consistent

The series are consistent in a sense that you can compute the General IPPN as a weighted average of any of the aggregation levels of index. For example, the General IPPN can be calculated as a weighted average of the industry level indices or as a weighted average of the class level indices; the result for the General index will be the same.

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

Consistent time series data for the IPPN are available for a period of at least five years. The series are consistent over this period for the purpose of 12-month comparisons. It should also be added that past estimates are also never revised or reconstructed even when new weights are introduced.

No methodological notes are produced that identify and explain the main breaks and discontinuities in time series, their causes, as well as adjustments made to maintain consistency over time when they do occur.

The analytical note included with the monthly release only covers a basic description of the month-over-month and 12-month changes (current month compared to corresponding month of the previous calendar year) to the index. It never includes explanations or any analysis that pertains to changes in the trends in the series or the short-term behavior of the index. This is also true for the IPPN online database that is freely and easily accessible to the users.

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

While statistics are conceptually and methodologically consistent, qualified users (particularly the CBU) have expressed doubts about the validity of certain PPI estimates. These concerns by the CBU have been transmitted to the NIS.

4.3 Revision policy and practice

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

The weights of the IPPN are updated infrequently. There is no pre-determined schedule for the weight updating cycle since there is no pre-approved budget or budgetary process for updating the weights. When the weights are updated, the NIS does not normally make it a practice to provide users with advance notice of the change. When new weights are introduced, the users are informed of this by way of a note, which is included with the regular note that accompanies the monthly release of the IPPN.

As a matter of policy at the NIS, the IPPN is never revised and as a result no provisional estimates are available or released.

On those rare occasions when errors are discovered or new source data become available after the deadline for submission has passed, no corrections to the index are made. However, there was one exception that occurred in 2001 when an error, which had persisted for four months, was discovered. In this exceptional case, the index was revised back four months.

The NIS continues to produce, in parallel with the new base, the IPPN using the old base dating back to 2001. This series is not advertised in the publication or on the NIS website. It is, however, available for those users who should need it. Under the 2001 base, the IPPN uses the same methodology, conceptual framework, and the same sample as in 2001. Some more specialized users have expressed an interest and a need for such a series, which explains why the NIS has continued to support it.

4.3.2 Preliminary and/or revised/updated data are clearly identified.

At the present time, the IPPN is not subject to revision in practice, but can be revised in theory. The latest IPPN estimates are qualified with an *, meaning that these data are preliminary for one month after their release.

4.3.3 Studies and analyses of revisions and/or updates are made public (see also 3.5.1).

Weight updates are not measured, assessed, explained in the statistical publication, or in the NIS publically accessible database.

The monthly index is never revised.

Since the IPPN is never revised, there can be no analysis carried out that would analyze the differences between the revised and preliminary series'.

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).

IPPN data are published in a clear manner: supplementary tables and charts are presented to facilitate analysis.

Data series are published with different levels of detail. The monthly release news bulletin includes the following at the section and division level (in addition to the general level): the monthly index, the month-over-month change, the 12-month change, the accumulated change

for the year, and the contributions to the total change of the four sections. Longer time series with finer breakdowns are available and easily accessible from the NIS website.

No seasonally-adjusted IPPN series are produced or published by the NIS.

5.1.2 Dissemination media and format are adequate.

The IPPN statistics are disseminated in a very straight-forward table with a brief text highlighting the most recent changes, which facilitates re-dissemination by the various media outlets.

More comprehensive and detailed statistics are available easily accessible on the day of release from a database maintained on the NIS website. The data are available at <http://www.ine.gub.uy>.

5.1.3 Statistics are released on a preannounced schedule.

A schedule announces in advance the dates the IPPN data are to be released and are released according to the preannounced schedule.

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

The public is informed of the statistics being released, and how to access them.

The statistics are made available to most interested users simultaneously. The exception is the CBU, which has access to the data about two hours prior to the official release.

The press is not briefed in advance about the latest results.

5.1.5 Statistics not routinely disseminated are made available upon request.

Upon request, special arrangements might be made to meet specific needs, provided that statistical secrecy requirements are complied with. Special tabulations are available upon request and are usually done free of charge.

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 methodology is published on the website. The website also includes the latest methodological document: *IPPN Base marzo de 2010=100*.

This publication includes information on concepts, definitions, classifications, data sources, compilation methods, statistical techniques, and other methodological aspects and relevant procedures. The NIS does not document deviations that may occur from internationally accepted standards.

The SDDS metadata are sent to the central bank as the changes occur and then forwarded to the IMF.

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

i. Different levels of metadata detail are made available to meet users' requirements.

The NIS does not provide general use information such as brochures or a FAQ page about the IPPN.

The NIS does not typically produce specialized use information (e.g., background papers, working documents) for the IPPN.

5.3 Assistance to users

5.3.1 Contact points are publicized.

Prompt and knowledgeable service and support are available to users of statistics.

Contact points are listed in each questionnaire and on the home page of the NIS website.

Material is available for educational purposes for schools from the NIS website. No special information is however available for researchers.

There is no monitoring of quality with regards to turnover time of requests that are sent to the NIS either by e-mail or phone. There is also no explicit policy or guideline for response time.

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

The NIS publishes a catalogue of its publication and a collection of statistics that it produces. This catalogue is updated every year.

The publications are readily available on the agency website. In fact, the NIS did away with paper publications more than 10 years ago. Everything is now available online.

All information is available without charge to the public.

Table 7. Data Quality Assessment Framework (2012): Summary of Results for Producer Price Index (PPI)*(Compiling Agency: National Institute of Statistics—NIS)*

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	Given more resources, the PPI basket could be updated more frequently and under a more structured and tighter schedule. More analysis could also be conducted to ensure a proper validation exercise of the weights data.
0.3	Relevance				X	There is no formal process in place to consult users or inform them about specific aspects of the current data (e.g., usefulness in terms of detail, periodicity, and timeliness) either through client surveys, newsletters, or seminars.
0.4	Other quality management			X		There are no tools in place to assess how the NIS in general and the PPI specifically have succeeded in achieving their quality goals. There are some gaps and delays for the full implementation of the program because of resource constraints.
1. Assurances of integrity						
1.1	Institutional Integrity			X		There is no formal and continuous training program or strategy in place. No budget from the NIS is set aside for these types of activities. There is no internal training plan or systematic and organized workshop series, most of the staff gain their knowledge through on-the-job training. There are no activities in the workplace to promote a culture of professionalism. Accreditations, peer reviewed work, authoring of methodological papers, and the organization of conferences and lectures are not recurring activities at the NIS. The current environment and work culture is not conducive for the promotion and execution of research and analysis. No programs exist to stimulate and support such activities.
1.2	Transparency			X		Under exceptional circumstances, some users are informed of methodological changes prior to the release, but this is not normal practice except perhaps when the notified party is the CBU.
1.3	Ethical standards		X			

Table 7. Data Quality Assessment Framework (2012): Summary of Results for Producer Price Index (PPI) (cont'd.)*(Compiling Agency: National Institute of Statistics—NIS)***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	
2. Methodological soundness						
2.1	Concepts and definitions			X		The output estimates of the IPPN are only broken down in the commodity dimension. The NIS does not produce PPIs by industry.
2.2	Scope				X	The IPPN does not cover output prices for utilities, construction, business services or other services. There are no immediate or firm plans to expand the IPPN to cover these areas given resource limitations. Production destined for export is not included in the IPPN. Consequently, production in free zones is also not included in the IPPN.
2.3	Classification/sectorization		X			
2.4	Basis for recording		X			
3. Accuracy and reliability						
3.1	Source data		X			
3.2	Assessment of source data			X		No estimates for sampling and nonsampling errors are offered to users either for the weight estimates or the price data. None of the IPPN surveys (prices or weights) are audited to verify the accuracy of the individual survey data. The accuracy of administrative data received from government agencies, trade associations, regulatory authorities, etc., are not routinely monitored or assessed for quality assurance. No routine analysis of components or the overall IPPN are done to ensure that the results are consistent with other data sources. Temporal consistency is however monitored as a means for quality assurance. The organization has quality management unit, however the IPPN has seldom called on this resource for guidance. In the case of the IPPN there are no periodic reviews that are undertaken to identify steps necessary to maintain quality requirements.
3.3	Statistical techniques		X			
3.4	Assessment and validation of intermediate data and statistical outputs				X	Unusual changes either from certain sectors or from particular reporters are rarely if ever investigated. If and when such cases do occur, the NIS will not typically release comments to the public about the causes or source of the atypical movement.

Table 7. Data Quality Assessment Framework (2012): Summary of Results for Producer Price Index (PPI) (concluded)*(Compiling Agency: National Institute of Statistics—NIS)*

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	
3.5 Revision studies					X	There is no analysis relating to the update of weights to determine the effects of the magnitude of the substitution effect on the PPI. No studies are conducted on the long-term trends in the revision patterns to identify if some of the revisions may reveal any systematic bias in the revisions. No studies are conducted to investigate and explain other sources of errors or bias in PPI.
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice				X		The weights of the IPPN are updated infrequently. There is no pre-determined schedule for the weight updating cycle since there is no pre-approved budget or budgetary process for updating the weights. When the weights are updated, the NIS does not normally make it a practice to provide users with advance notice of the change.
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility			X			The NIS does not document deviations in PPI methodology that may occur from internationally accepted standards. The NIS does not provide general use information such as brochures or a Frequently Asked Questions page about the IPPN. The NIS does not typically produce specialized use information (e.g., background papers, working documents) for the IPPN.
5.3 Assistance to users		X				

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

The SDDS prescribes the following practices under each of the identified dimensions:

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 2012 Framework)

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

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

Quality Dimensions	Elements	Indicators
<p>4. Serviceability <i>Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.</i></p>	<p>3.5 Revision studies—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p> <p>4.1 Periodicity and timeliness—<i>Periodicity and timeliness follow internationally accepted dissemination standards.</i></p> <p>4.2 Consistency—<i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p>4.3 Revision policy and practice—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).</p> <p>4.1.1 Periodicity follows dissemination standards. 4.1.2 Timeliness follows dissemination standards.</p> <p>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.</p> <p>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).</p>
<p>5. Accessibility <i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p>5.1 Data accessibility—<i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p>5.2 Metadata accessibility—<i>Up-to-date and pertinent metadata are made available.</i></p> <p>5.3 Assistance to users—<i>Prompt and knowledgeable support service is available.</i></p>	<p>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.</p> <p>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.</p> <p>5.3.1 Contact points are publicized. 5.3.2 Publications, documents, and other services, including information on any charges, are widely available.</p>

Appendix III. Users' 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 macroeconomic statistics. With the assistance of the Central Bank of Uruguay, a users' survey was conducted (with 14 respondents), and meetings were held with selected users. Most users were satisfied with the methodological soundness, accessibility, and frequency of national accounts and price statistics. They mentioned that the level of detail of the consumer price index was very good. However, they identified some areas where there is scope for improvement. It appears that GDP data by economic activity are too aggregated, in particular, on domestic trade and services. Fixed capital formation by economic activity is not compiled, a monthly index of economic activity is not disseminated, and quarterly seasonally-adjusted GDP does not include the calendar effect. The quality and breakdown of prices of citric fruits and other fruits, exports of services, foreign direct investment, and exports and imports of the free zone need improvement. A number of users indicated that the series on national accounts, price indices for external trade and terms of trade were not timely, and the information on public corporations was scarce and not timely. They also found somewhat difficult the access to data and metadata on the new version of the Central Bank of Uruguay website. Some users expressed an interest in more detail on national accounts and the producer price index and in longer time series on national accounts, in explanations on significant data revisions and important price changes, and emphasized the need for data on regional GDP and on income generation and distribution.