# OECD Assessment of the Statistical System and Key Statistics of Colombia

July 2015

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# DETAILED TECHNICAL ASSESSMENT OF THE COLOMBIAN STATISTICAL SYSTEM AND KEY STATISTICS

## Introduction

The review of the statistical system and statistics of the Republic of Colombia by the Committee on Statistics and Statistical Policy (CSSP) is an important component of the process for accession to the OECD. Over the period 2013-2015, the Secretariat conducted a review of statistics covering various subject domains as well as a review of the legal and institutional framework for statistics. The report that follows provides detailed descriptions of OECD data requirements and the capacity of Colombia to meet them and was originally prepared to support the deliberations of CSSP in June 2015. This technical document covers the statistics collected and disseminated by the OECD Statistics Directorate. Other OECD Directorates collect and disseminate specific statistics in many various domains (Education, Health, Environment, Agriculture, Trade, Foreign Direct Investment, etc…). The assessment of these statistics is organised under the umbrella of their specific Committee and is not to be found in the present report.

Experts from OECD Member Countries participated actively in the process. The reviewers made extensive demands for data and documentation on those responsible for official statistics in Colombia, primarily in the DANE (Departamento Administrativo Nacional de Estadística), the National Statistical Authority of Colombia, and the Central Bank (Banco de la Republica, BR). The Colombian officials cooperated fully and professionally throughout the process.

This document reflects the assessment by the OECD Secretariat as well as the two Peer Reviewers who participated in the OECD Peer Review mission of 12-16 May 2014 in Bogota. It has been submitted for comments to the Colombian statistical authorities and their comments are, to the maximum extent possible, reflected in the version at hand.

## Evaluation criteria

The objective of this review was to evaluate whether statistical policies and practices of Colombia compare with OECD best policies and practices. The legal and institutional framework for Colombian official statistics was assessed against the standards established by the *United Nations Fundamental Principles of Official Statistics* developed by the United Nations Statistical Commission. The Secretariat conducted a thorough review of the pertinent laws, regulations, reporting relationships, and policies that govern the statistical activities of all major producers of statistics in the Colombian national statistical system.

Within each domain, data and metadata are evaluated to determine how well they meet OECD policies and practices in terms of coverage, compliance, interpretability, timeliness and data and metadata transmission. These five elements comprise the basic elements of the Secretariat's evaluation. In addition, where feasible, other aspects of the *OECD Quality Framework for Statistical Activities* are also considered, such as coherence, accuracy and credibility. Below are brief, generic descriptions of these evaluation criteria.

- *Coverage* – the extent to which the statistics meet the policies and practices of the OECD in terms of variables, detail, frequency, measurement units, historical coverage and availability.

- *Compliance* – the extent to which the statistics comply with the relevant OECD and other international standards.

- *Interpretability (Availability of Metadata)* – the interpretability of data reflects the ease with which the user may understand and properly use the data. The adequacy of the underlying metadata that is, the definitions of concepts, target populations, variables and terminology, and information describing the limitations of the data, if any – largely determines the degree of interpretability. For the purposes of this assessment, "interpretability" is viewed in a narrow sense as "Availability of Metadata".

- *Timeliness* – the length of time between the reference period and when statistics are made available to the OECD. The OECD normally has established desirable timeliness targets based on needs and on the typical practices of member countries.

- *Data and metadata transmission* – the ability of the country to deliver data and metadata for integration into the OECD databases.

- *Coherence* – the extent to which the statistics are logically connected and mutually consistent within a dataset, across datasets, over time, and across countries.

- *Accuracy* – the extent to which data correctly estimate or describe the quantities or characteristics they are designed to measure.

- *Credibility* – the extent to which users can be confident in using the statistics.

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Furthermore, with regard to the delivery of data for integration into OECD databases, it is extremely important that candidate countries have the ability to transmit up-to-date metadata explaining concepts and methodologies, in one of the official languages of the OECD, English or French.

***Source of information***

The present statistical review of Colombia is based on the following information:

- Colombia's responses to a number of data collection questionnaires sent by the OECD Secretariat.
- Independent research by the OECD Secretariat which was subsequently verified with Colombia.
- An expert peer review mission on 12-16 May 2014 including two experts from OECD Members (the United States Bureau of Labour Statistics and Central Bureau of Statistics Israel) as well as OECD Secretariat officials.

Cooperation with DANE throughout the review process has been excellent. DANE provided extensive documentation (of which much in English) to the Secretariat in all domains of macro-economic, demographic and social statistics. The BR has also co-operated in the review process.

This initial documentation has been enriched by the many additional written responses made by DANE and BR to the questions of the Peer Review mission. All questions have received clear responses that have been used to draft this report. The reviewers also took careful note of two reports emanating from the IMF Statistics Directorate: the 2006 Report on Observance of Standards and Codes (ROSC) and the 2013 Special Expert Mission on Colombian National Accounts.

***Main findings and recommendations***

Colombian statistics are based on a solid statistical system, led by a professional national statistical authority: DANE. In some domains, such as the coordination of the national statistical system and the certification of official statistics, DANE implemented practices that are innovative on an international scale. Official statistics exist in all domains in which the OECD undertakes regular statistical activities. Coverage and compliance is not equally obtained in all domains however and improvements are needed in some areas. The Colombian authorities are taking initiatives to fill these gaps and provide plans for improvement. Among these initiatives, the review welcomed in particular:

- The adoption as part of the National Development Plan 2014-2018 of Article 160, approved by Congress in May 2015 and ratified by the President in June 2015, which has further aligned the Colombian statistical system with international practices by: (1) defining the composition and the statistical operations of the Colombian National Statistical System (NSS) as well as confirming DANE's role of co-ordinator and regulator of the NSS; (2) creating a National Advisory Council for Statistics; (3) providing the legal basis to guarantee DANE's access to administrative sources for the production of official statistics; (4) creating the obligation for DANE to formulate a five year National Statistical Plan agreed by all members of the NSS and approved by the future National Advisory Council for Statistics; and (5) ensuring the exchange of micro-data for statistical purposes between members of the NSS.

- The official confirmation of the launching of the new Census of Population and Housing in 2016, confirmed by Article 161 of the National Development Plan. It is of note that DANE has already received the necessary budgetary allocation.

- The fact that, over the course of the accession review Colombian statistical authorities have demonstrated in concrete terms their commitment to report the statistics requested by the Statistics Directorate of the OECD, through effective and improved transmission of data.

Of the various recommendations outlined throughout the report, three have been judged of particular relevance by the reviewers:

1. After the adoption by Congress, in May 2015, of the Article 160 of the National Development Plan 2014-2018, the subsequent adoption of a set of decrees for the implementation of Article 160, addressing in particular the frequency of Censuses;

2. The establishment, in cooperation between DANE, the Ministry of Finance (MHCP), and the BR of a system allowing DANE to publish annual accounts for the general government sector within six months of the end of the year to which the information pertains;

3. The implementation of the programme for the new base year for national accounts expected for publication in March 2018. Among the many sub-projects, the OECD attached special importance to the publication of quarterly institutional sector accounts, and to the reduction of the delay for the publication of the first estimate of quarterly GDP to Q + 60 days.

## CHAPTER 1. LEGAL AND INSTITUTIONAL FRAMEWORK FOR OFFICIAL STATISTICS IN COLOMBIA

### (i) Executive summary

The assessment examined compliance of the Colombian statistics and statistical system with each of the ten UN Fundamental Principles for Official Statistics. While there is a high degree of compliance, there are also a few areas where improvements could be made and they are described below with the main findings of the assessment.

The National Administrative Department of Statistics (DANE) and the Bank of the Republic (BR) carry out the production of key macro-economic statistics. The Ministry of Finance and Public Credit (MHCP), other Ministries, and Superintendencies, also produce statistics. DANE has the responsibility to co-ordinate the statistical activities of the official statistical agencies in the Colombian statistical system. Its co-ordinating role has been reinforced in 2011 by a decree which empowers DANE to co-ordinate planning and standardisation of statistics and to certify good practices in the statistical production.

There is a tradition of professionalism and high technical standards at DANE which is recognised by outside partners and ensures that official statistics in Colombia comply in practice with UN Principles 1 and 2. The existence of specific laws and decrees on statistics, the high level in the Colombian administration of the Director of DANE, the existence of a four-year Statistical Plan, its coordination by DANE, the existence of a National Code of Good Practices for Official Statistics implemented by all entities belonging to the Colombian statistical system, a sound dissemination and resource affectation processes, a sound methodological policy, all concur to good compliance with the UN Fundamental Principles of Official Statistics.

In order to strengthen legislation in areas where it could further align the Colombian National Statistical System with international good practices, legal improvements are currently discussed and DANE adopted a strategy based on two stages for their implementation. The first was to include two articles (articles 160 and 161 presented in annex 1) in the National Development Plan Law 2014-2018 adopted by the Congress in May 2015. The second stage is the development of implementation decrees to be prepared by DANE for adoption by the Central Government with the aim to specify procedures for each point in these articles.

The article 160[1] adopted as part of the National Development Plan 2014-2018 will lead to: (1) legally consolidate the Colombian National Statistical System (NSS) by defining its composition and the statistical operations and confirming DANE's role of co-ordinator and regulator of the NSS; (2) create a National Advisory Council for Statistics; (3) provide legal means to guarantee DANE's access to administrative sources for the production of official statistics; (4) create the obligation for DANE to formulate a five year National Statistical Plan agreed by all members of the NSS and approved by the future National Advisory Council for Statistics; and (5) ensure the exchange of micro-data for statistical purposes between members

[1] Article 161 establishes the obligation to conduct the 2016 Census of Population and Housing Census. Both articles appear in the Annex 1 of this Chapter.

of the NSS. The creation of the NSS was already enforced by Decree 4178 of 2011 in the context of the preceding National Development Plan of 2010-2014. The introduction of Article 160 in the National Development Plan of 2014-2018 – a law rather than a decree - has strengthened the legal basis of the NSS. In addition, application decrees are foreseen by the Presidency on the proposal of DANE, after the adoption of Article 160. These decrees will clearly define the members of the NSS which will go beyond the current composition of the NSS, including autonomous organisations such as the Registration Office, the Central Bank, producers of statistics at subnational level and even private sector organisations.

The OECD recommends the existence of a clear and coherent statistical legislation. The Article 160 of the National Development Plan Law clarifies DANE's responsibilities with respect to the design of instruments for the production and the dissemination of official statistics, provides a sound basis to improve the access to administrative sources, reinforces the quality assurance of official statistics, reinforces the role of the National Statistical Authority in coordinating, regulating, planning, and standardising statistics alongside with the function of providing certificates of goods practices as regards the statistical production.. While some aspects of OECD good practices are not yet explicitly addressed such as the explicit reference in law to the "professional independence" of the statistical authorities, and the frequency of population censuses, actions have been undertaken to address these issue. The National Code of Practice explicitly now includes the Professional Independence principle. The 2016 Census of Population and Housing is now officially confirmed and DANE is confident that, as history has shown, the planning of the next Census after 2016 shall not exceed ten years.

The procedures implemented by DANE as regards metadata are in line with good practices and recognised as such by users. The metadata strategy developed by DANE benefitted from a clear support from DANE's top management over the recent years. DANE developed a statistical metadata system including a metadata framework and playing a key role in the Colombian statistical system. They are part of the tools developed by DANE for the dissemination of quality across the different entities of the statistical system. However, the main documents on this infrastructure are available in Spanish only and the reviewers would encourage DANE to continue to translate methodological information in English in order to ensure equal access to national statistics for international users.

Previously, the Colombian legal system did not include any specific legal mention on the right for DANE to access easily and to use administrative data for the compilation of official statistics. The Article 160 of the National Development Plan addresses this issue and will help to strengthen the statistical framework and improve the access by DANE to administrative data, and further align Colombia with international practices. The expected decrees of application of Article 160 should guarantee the effective implementation of this new legal possibility of access to some important administrative sources such as the ones resulting from the Registry of the Ministry of Health and Social Protection (PILA) program or the Unified Tax Registry of the National Directorate of Taxes and Customs (DIAN), or the National Civil Registry.

As regards quality of statistics, DANE developed a very effective policy that allows a constant improvement of statistical outputs produced either by the organisation or within the national statistical system. DANE demonstrates an efficient and innovative management of statistical quality and compares very favourably with OECD Members in this respect. Moreover, statistical quality is one of the three instruments designed for the coordination of statistics across the national statistical system, together with planning and regulation activities. The certification process as developed by DANE guarantees the official nature of statistics produced by various parts of the statistical system and appears to be in advance compared to many other countries' statistical systems. This programme includes an ambitious research agenda that will foster and improve the statistical quality of Colombian statistics on a regular basis. The perception of users and the media is that the quality of DANE statistical services is of a good standard.

Colombian legislative support and practices as regards management of statistical confidentiality and access to micro-data are in compliance with the UN Fundamental Principles of Official Statistics and with those in number OECD Members. Furthermore, the reviewers note that the protection of statistical confidentiality has been continuously improved over the recent years through improving legislation, procedures and through technological developments. The reviewers also note that the Article 160 of the National Development Plan Law reinforces the importance of the management of statistical confidentiality and micro-data and encourages its implementation in the NSS.

DANE's website is structured and organized properly, in such way that it enables citizens to access relevant information on legal statistical texts. Nevertheless, when this information is available in Spanish only, the reviewers would encourage Colombian statistical authorities to provide more information in English for international users.

DANE is the main producer of official statistics in Colombia and is clearly mandated by legislation for the co-ordination of the Colombian statistical system. Over the recent years, DANE developed and implemented appropriate tools for performing its co-ordination function efficiently. Some of these tools, such as the National Code of Good Practices for Official Statistics, or the certification of statistical processes, appear to be particularly innovative. The Article 160 of the National Development Plan Law consolidates the national statistical system, specifies the members of the system, reinforces the authority of DANE to co-ordinate the statistical activities in Colombia, and creates a National Advisory Council for Statistics with the aim to promote and facilitate the co-ordination and regulation of the future NSS. In addition, the draft new legislation introduces the binding constraint for all producers of statistics to implement all the statistical guidelines and standards set forth by DANE, including the National Code of Good Practices for Official Statistics.

International co-operation is an integral part of the work of DANE. Colombia benefits from extensive bilateral consultations, working groups, expert meetings, and contributes to strengthen international standards by its involvement in international organisations. Over the recent years, the engagement of Colombia in international co-operation contributed to strengthen the Colombian statistical system.

Overall assessment of legal and institutional framework

Overall, the Colombian legal and institutional framework for statistics complies with the UN Fundamental Principles for Official Statistics in most respect, and thus meets the Organisation basic requirements. Nonetheless, there are a number of areas such as the access to administrative data where further strengthening of the statistical framework is desirable. The legislative changes proposed in the National Development Law would indeed help to strengthen the statistical framework and further align the Colombian statistical framework with international practices. It is also noticed that the concrete application of the National Development Plan Law requires further implementation decrees to be issued by the Central government at a later stage. To ensure this process, DANE is encouraged to initiate as soon as possible the drafting of the implementation decrees and to include in them recommendations of the review at hand wherever possible, in particular as regards the frequency of Censuses.

**(ii) Assessments with respect to the UN Fundamental Principles of Official Statistics**

**Box 1. UN Principle 1**

Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on

an impartial basis by official statistical agencies to honour citizen's entitlement to public information.

## 1. Legal and regulatory basis for statistics

Colombia is a unitary constitutional republic administratively decentralised, composed of 32 departments as well as municipalities, special districts, and one capital-district in Bogota. The Government of Colombia functions within the framework of a presidential representative democratic republic, as established by the Constitution of 1991. In accordance with the principle of separation of powers, central government has three branches of government: executive, legislative and judicial. The Colombian government is composed of the President, who is both Head of State and Head of Government, ministers, and the directors of Administrative Departments. DANE is one of the Administrative Departments.

The Colombian State is regulated by a unique Constitution and a set of laws. Regulation is prepared at the national and territorial levels through decrees, acts, and "resolutions". In the domain of statistics, the most relevant legal acts are "decrees", which are government decisions taken under the provisions of a law[2]. DANE, as an Administrative Department, has the power to take "resolutions", which is a way to officialise decisions taken at the level of DANE.

The main actors of the Colombian National Statistical System are the National Administrative Department of Statistics (DANE), the Bank of the Republic of Colombia (BR), Ministry of Finance and Public Credit (MHCP), other Ministries, and Superintendencies[3]. DANE is officially the coordinator of this National Statistical System (NSS).

In Colombia, the current legal and regulatory basis for statistics is based on a large number of legal texts, essentially decrees. There is not yet in Colombia what could be called a single unified "framework statistical" law.

***Administrative status of DANE***

- Article 1 of Decree 2666 of 1993 defines the status of DANE: "the National Statistical Directorate works as an Administrative Department and it will be called National Administrative Department of Statistics." Article 39 of Act 489 of 1998 confirms DANE as one of the seven administrative departments which compose the Colombian public administration with the President, government and ministries.

- Article 59 of Act 489 (1998) entitles DANE to prepare a draft project law, draft decree or draft executive resolution whenever necessary, in accordance with its status of public administrative department.

- Administrative Departments are technical agencies responsible for directing and coordinating service and providing the Government with appropriate information for decision-making. They are part of the Central Government, with the same hierarchy level as ministries, but without

2 It is to be noted that "decrees" can be changed by government, without having to return to Congress.

3 Superintendencies are specific units responsible for control and supervision, and oversee the implementation of regulations prepared by ministries and regulatory commissions, and might supervise ministries, regulatory commissions, and local authorities.

legislative initiative[4]. Together with the President of the Government, Ministers and Directors of each administrative department, constitute the Executive Branch in Colombia (Article 115 of Constitution of 1991 and Articles 38 and 39 of Law 489 of 1998). Thus one may refer to the head of DANE as being a member of the government. This status is important as this means that the head of DANE has, on one hand, the same ranking as a ministry, but, on the other hand, is nominated directly by the President, similarly to ministries.

***Does the appointment/dismissal of the Head of the national statistical agency fulfil a procedure defined in legislation?***

According to the article 189 of the Constitution of Colombia (1991) relating to Administrative Departments, the appointment and dismissal of the Director of DANE is the sole responsibility of the President of the Republic: "The President of the Republic and Head of State, Head of Government and Supreme Administrative Authority has the faculty to (….) freely appoint and dismiss the Cabinet Ministers and Directors of Administrative Departments".

No administrative documents explicitly mention the status, seniority, and required professional experience for the head of DANE. The Colombian Constitution only refers to the head of administrative departments in articles 207 and 177 as follow:

- Article 207: "To be a minister or head of administrative department required the same qualities as for a representative to the House."

- Article 177: "To be elected representative is required to be an active citizen and have over twenty-five years old on the date of the election."

In practice, while the appointment process complies with the procedure of appointment in any administrative department, the professional experience, the seniority within the national administration and the expertise of the candidates are considered.

The duration and term of the mandate of the head of DANE are not fixed in the law. Appointment and process for removal from office are decided by the President of the Republic and no legislation assigns any reason for its dismissal. Because considered a member of the presidential team, no Director of DANE served any significant time under two different presidents. In the last 18 years, there has been 8 Directors of DANE. The average duration is therefore around two years and a half, less than presidential terms. The Peer review mission informed DANE's management of the very diverse situation among OECD NSOs as regards the process of nomination/dismissal of heads of NSOs but did not make any specific recommendation on this issue. The Secretariat welcomed that the current Director General was confirmed after the re-election of President Santos in summer 2014, thus ensuring stability in the management of DANE.

According to article 8 of the Constitution and to the National Council of economic and social Policy (CONPES), the Director of DANE reports to the Congress of the Republic (including both House and Senate). Article 208 of the Colombian Constitution compels the Director of DANE to report on statistical activities and management of the organisation to the Congress (House and Senate), within the first fifteen days of each term (from July 20 to August 5 of each year).

[4] A draft law initiated by DANE is proposed to the Parliament by the Ministry of Finance and Public Credit (MHCP).

***Functions of DANE***

The Law 79 of 1993 regulates the conduct by DANE of the Population and Housing Censuses and Article 5 establishes a legal obligation to respond to statistical surveys: "Natural persons and legal entities must provide DANE with all required data for the development of census and surveys."

The most important legislation for the collection, production and dissemination of official statistics is the decree 262 of 2004. The provisions for the role of DANE as regards data collection, data production and data dissemination are included in its article 1: "The National Administrative Department of Statistics, DANE, aims at ensuring the production, availability and quality of the strategic statistical information, and directing, planning, implementing, coordinating, standardising, and evaluating the production and dissemination of basic official information."

Article 1 of Decree 262 of 2004 gives DANE with the authority, as the coordinator of the NSS, to ensure the production of strategic statistical information and to direct, plan, implement, coordinate, regulate and evaluate the production and dissemination of official statistics.

Article 5 of Decree 3851 of 2006 enables DANE to issue administrative orders ("Resolutions") that shall determine the rules, standards, protocols, etc. for statistical quality assurance. This competence is given to DANE by the Law 489 of 1998.

DANE is the statistical authority in charge of elaborating and coordinating the National Statistical Plan. This plan is part of the four-year National Development Plan, endorsed by the National Council of Economic and Social Policy (CONPES) and approved by the Colombian Congress.

Article 1 of Decree 3851 of 2006 explicitly gives DANE the authority to define methodological standards applicable to the production of statistics and to the quality assurance system and the organisation of the basic official information.

Decree-law 4178 of 2011 is the central legal text making DANE responsible for the coordination and implementation of statistical planning and standardisation within the National Statistical System, as well as for the certification of good practices in statistical production processes developed by entities from the public administration. This role relates to the mission of DANE as defined by Article 1 of Decree 262 (2004) and by Article 1 of Decree 4168 (2011)[5].

The new Article 160 adopted as part of the National Development Plan will lead to: (1) legally consolidate the Colombian National Statistical System (NSS) by defining its composition and the statistical operations and confirming DANE's role of co-ordinator and regulator of the NSS; (2) create a National Advisory Council for Statistics; (3) provide legal means to guarantee DANE's access to administrative sources for the production of official statistics; (4) create the obligation for DANE to formulate a five year National Statistical Plan agreed by all members of the NSS and approved by the future National Advisory Council for Statistics; and (5) ensure the exchange of micro-data for statistical purposes between members of the NSS. The creation of the NSS was already enforced by Decree 4178 of 2011 in the context of the preceding National Development Plan of 2010-2014. The introduction of Article 160 in the National Development Plan of 2014-2018 – a law rather than a decree - should strengthen the legal basis of the NSS. In addition, application decrees are foreseen by the Presidency on the proposal of DANE, after the adoption of Article 160. These decrees will clearly define the members of the NSS which will go beyond

[5] This article has filled the gap mentioned by the 2006 IMF ROSC as regards the weak coordinating role of the DANE in the National Statistical System.

the current composition of the NSS, including autonomous organisations such as the Registration Office, the Central Bank, producers of statistics at subnational level and even private sector organisations.

In general OECD countries have a statistical legal system based on a limited number of legal texts. The myriad of legal references within the Colombian legal framework departs from general practice in OECD countries. In this context, identifying the legal texts currently in force, as wells as the gaps, duplications, inconsistencies or contradictions in existing legislation, is a challenge.

***The structure of DANE***

The decree 262 of 2004 modifies the structure of DANE and defines the functions of each statistical entity as follows:

- Bureau of Director, subdivided in 5 assistance and supporting offices.
- Bureau of Deputy Director, subdivided in 5 divisions: the Statistical Regulation, Planning, Standardization and Normalisation Division (DIRPEN)[6], the Geo-statistics Division (DIG), the Census and Demography Division (DCD), the National Accounts and Synthesis Division (DSCN) and the Statistical Methodology and Statistical Production Division (DIMPE). DIRPEN plays a key role in the coordination of the National Statistical System.
- Secretary General.
- Six Territorial Directorates and 19 sub-territorial offices.
- Coordinating and Assistance Bodies.

The Colombian statistical system is geographically centralised (but deconcentrated in terms of domains of statistics). The six territorial directorates and the 19 sub-territorial offices are only responsible for the fieldwork. Information issued from territorial and sub-territorial offices is analysed, processed and consolidated in DANE headquarters in Bogota with the purpose of disseminating information available to the general users at national and territorial level.

***Does the National Statistical Office have legal independence on statistical matters?***

While there is a tradition of professionalism, technical independence and high technical standards in DANE that have facilitated its work and earned high credibility for its outputs, no current text explicitly mentions the "professional independence" of DANE and its Director or any other statistical authority within the National Statistical System. The national Code of Good Practice for Official Statistics does not contain such an explicit wording. Nevertheless, Decrees 262 (2004), 3851 (2006) and 4178 (2011) entitle DANE to decide on statistical methods and standards for the production, coordination and dissemination of statistics. In practice, DANE carries out its functions by acting on the basis of technical independence in the production of statistics and the development of statistical standards, and scientific and professional considerations. Professional independence appears to be a strong value within DANE that is generally well respected as a high quality statistical institute. However, the Secretariat notes that a specific mention of the professional independence of the statistical agency from the government in a legal text would contribute to its effective implementation.

The Colombian National Code of Good Practice for Official Statistics also does not mention explicitly the "principle of professional independence" but refers to the principle of impartiality and to the scientific and technical independence of the statistical process: "Entities belonging to the NSS must guarantee that

[6] DIRPEN: La Dirección de Regulación, Planeación, Estandarización y Normalización.

official statistics are generated and disseminated in accordance with statistical standards, methods and procedures, respecting scientific and technical independence of the statistical process" (Principle 4 of the National Code of Practices for Official Statistics). In addition, the indicator 4.5 of the Code states the "guarantee that the statistical process is protected from any external intervention that might influence official statistics."

***Obligation of response to statistical censuses and surveys***

An obligation to respond to the census and to other statistical surveys is a common feature of statistical laws in OECD countries and it helps to guarantee high response rates. Colombian law provides the DANE with the necessary authority to collect and compile the statistics required. The law, in the article 6 of the Act 79 of 1993, imposes a legal obligation to participate in the population census. More generally, in the matter of the right of DANE to compel respondents to comply with data request, the article 2 of the decree 262 of 2004 gives DANE the authority to fine natural or legal persons who infringe the legal obligation of providing the Department with the required statistical information. Accordingly, Colombia has developed a regulation through procedure for the implementation of penalties for the non-fulfilment of this obligation, underlining the legal obligation of the citizens of Colombia and excluding at the same time the simple consideration of this duty as a social obligation.

The new Article 161 of the National Development Plan, adopted in May 2015 by Congress, guarantees the organisation of a Census of Population and Housing in 2016 but does not introduce a legal frequency for the development of national population and housing censuses. This would have been a significant step forward in helping these essential statistical processes to take place regularly, and minimising the risk of surprises in budget constraints.

***Do all users have equal access to statistical releases at the same time? Is any privileged pre-release access to any outside user limited, controlled and publicised?***

According to DANE, all users have equal access to statistical releases at the same time and DANE does not provide data to any external person or institution before their official release, *i.e.* there is no privileged access for governmental representatives, except for the President of the Republic who receives a press bulletin ten minutes before its official release, and government approval is not required. This is confirmed in the IMF SDDS information on Colombia. Contrary to many other countries, there is apparently no internal government access to statistics prior to their release, except for the GFS (MHCP access).

Several committees (external committees, expert committees and inter-agency committees) in different statistical areas provide scientific expertise on specific statistics before their public release. Resolution 1154 of 5 June 2014 has strengthened the regulation of the function and rules of procedures of the so-called "External committees", chaired by DANE's management and in which appropriate representatives of public or private entities are invited. The objective of these External Committees is to have external partners of DANE to be presented and discuss the results of statistical indicators in advance of the publication in order for DANE to benefit from the exchange with outside specialists on the context on the results. The external committees cannot intervene on the results themselves. Each external committee meets at least once before each statistical release and, at the latest, one day before the publication of the results. Resolution 1154 defines strict confidentiality rules for participants who have to sign a confidentiality clause. Mobile phones and computers are not allowed in the meeting and no document containing the results can be taken out of the meeting. While the principle of exchanging with outside experts is good practice and should be continued, it is important for DANE to continue to reflect on the timing on this process. For example, organising the committee only a few hours before the release, with

Committee members not allowed to communicate externally before the press release is published would completely eliminate the risk of leaks.

Press releases are posted on DANE's website at the very time when data are freely available in online databases. Data release is also reported through various channels such as social networks and e-mails to subscribers (government, businesses, academia, etc.).

The Law 1712 on Transparency and Access to official information has been passed in 2014 with the aim to improve the transparency of the dissemination processes.

***Are statistical releases and statements made in press conferences objective and non-partisan?***

DANE releases monthly and quarterly Press Bulletin (mostly in Spanish). In addition, DANE carries out press conferences with the aim to explain figures and methodologies and to avoid any misinterpretation. A calendar with the dates of press conferences is available. Exceptionally, if the Director wants to hold a press conference on a statistical topic not programmed, the Director together with the professionals in charge of the statistical domains and of the relations with media will decide on the appropriate date for the release.

DANE has a 12 months a-head release calendar[7] for all statistical operations (except international trade in goods that will be included at a later stage).

***Legal basis that entitles Central Bank and Ministry of Finance (MHCP) to collect information for the purposes of production and dissemination of statistics***

The BR was established as the Central Bank of Colombia by the Law 25 of 1923. On 29 December 1992, the National Congress published the Law 31 on the Bank of the Republic in order to reflect the Constitution of 1991. The Constitution of 1991 (Articles 371, 372 and 373) established the BR as an independent Central Bank. Law 31 of 1992 outlines the functions of the BR as Central Bank and board responsibilities as monetary, exchange and credit authority.

The Law 31 of 1992 defines the functions of the BR as currency issue, draft, deposit and discount. The Decree 2520 of 1993 establishes working arrangements with the Financial Superintendence, the Superintendence of Securities and the Superintendence of Companies. While no law formally assigns the BR with responsibility for the collection, production and dissemination of official statistics, the Law 31 provides the BR with the authority to solicit information that it considers necessary for its mission from financial institutions, including the Financial Superintendence, and from other organisations and public entities. These entities are obliged to provide the BR with required information (as stated by Article 18 for financial institutions). The Law 31 gives professional autonomy to the BR by ratifying the composition of the Board and the constitutional rule that granted the Board with sole authority in designing monetary policy. The Law 31 and the Constitution guarantee the professional independence of the BR. There is no mention however of the special status of statistics within the BR.

While there is no legal mandate for data dissemination, Article 18 provides the Bank with the authority to collect information from other organisations and public entities for its activities. The Bank collects information from the Financial Superintendency and companies. The BR collects all information regarding regulated exchange transactions, as reported by the exchange market intermediaries. The BR is responsible for the foreign investment registry as mandated by Decree 2080 of 2000.

7 http://www.dane.gov.co/index.php/calendar/

The Board of Directors is built up of the Minister of Finance; the Governor of the Central Bank, who is appointed by a board of directors; and five members elected by the President of the Republic for a four-year term renewable up to three times. Appointments of most of the Board members are staggered.

Staff of the BR is high-qualified and the BR released guidelines as regards ethical standards (including a Code of conduct).

Decree 085 of 1995 requires that the General Directorate of Public Credit provides DANE with a general statement of national government domestic and external debt.

Decree 574 of 2012, created the Interinstitutional Committee for Public Finance Statistics, consisting of the Minister of Finance, the Director of the National Planning Department, the Director of DANE, the Accountant General's Office, and whose functions are the following:

- To participate in the coordination of policies, strategies and objectives, those support the harmonization of the public finance statistics so as to improve their quality, coherence and transparency;
- To give an opinion on the state of the production of public finance statistics and to recommend projects and actions for their improvement within the framework of the National Statistical System (NSS);
- To promote interinstitutional collaboration in order to create coordination and management mechanisms that support the unification of sources and harmonization of methodologies and international recommendations used in the production of public finance statistics;
- To propose regulations for the production and dissemination of public finance statistics.
- To recommend the realization of specific studies, revisions and methodological developments as well as the use and interconnection of databases and information systems of the entities involved in the production and management of public finance statistics.
- To be an advisory body for the public sector and to propose technical concepts regarding methodologies, processes and information systems included in the general context of the application of public finance statistics.

## 2. Statistical planning and resource planning for statistics

***The National Statistical System and Statistical planning***

Statistical activities in Colombia are carried out on the basis of quadrennial programs in accordance with the National Development Plan and based on the following legal texts:

- Decree 4178 (2011) identifies those functions pertaining to planning, standardisation and certification of statistics are reassigned to the Administrative Department of Statistics DANE.
- Decree 262 (2004) gives authority to DANE to ensure the production, availability and quality of strategic statistical information and the direction of planning, implementation, co-ordination, regulation, and evaluation of the production and dissemination of basic official information.
- Law 152 of 1994 defines the process whereby the Organic Law of the Development Plan is established.
- Act 1450 of 2011 defines the process whereby the National Development Plan for the period 2010-2014 is issued.

The NSS is an articulated system encompassing Ministries, Administrative Departments, Decentralised Bodies, Autonomous Bodies and Private entities that all have a role in the production of official statistics for Colombia. DANE is responsible for the coordination of the NSS. The process to define and prioritise statistical activities inside the NSS forum allows strengthening their coordination, improving the training of producers and users, disseminating and implementing common rules for all producers, and coordinating the programming of statistical programs.

The previous National Statistical Plan for 2010-2014 contained 220 priority statistical operations, 62 of which are produced by DANE. The National Statistical Plan includes objectives regarding quality and statistical framework. In 2010, 10 operations from the NSS were assessed.

The organisation of the NSS, its coordination by DANE, and the setting of a National Statistical Plan are important elements of the new Article 160 of the National Development Plan.

Processes are in place to ensure that staff, financial, and computing resources are adequate in both magnitude and quality.

DANE follows administrative and staff rules pertaining to all Administrative Departments. As regard budget, and similar to other Administrative Departments, DANE has the FONDANE (Fondo Rotatorio del DANE), the structure in charge of the management of operational resources.

Since 2011, the number of fixed staff has notably increased; nonetheless, DANE still has visible difficulties keeping its staff due to their low salary in comparison to other agencies, such as the Central Bank. As a result, DANE invests part of its budget in training staff with the aim retaining them for the long-term.

With respect to the salary budget, in harmony with the Act 4 of 1992, DANE is not allowed to decide on salary assignation by its own, but it is the National Government who fixes the salary budget and exceptionally, the President of the Republic can delegate to the Head of DANE the faculty for enlarging salaries. This faculty shall be subjected to the limits stipulated by the Government.

***Do procedures exist to assess and justify demands for new statistics against their costs?***

The main part of the budget allocated to statistical activities is sourced from the central national budget.

The guidelines from the National Statistical Plan[8] provide detailed information on the definition of demands for new statistics as well as criteria for prioritising statistical activities. Gaps and required development in statistical information are identified within the whole quality control process and through surveys conducted to collect quality assessment from experts in each statistical domain. Demands for new statistics are prioritized according to the following questions:

- Do the statistics enable the design, development, and evaluation of national public policy (National Development Plan)?
- Do they respond to international agreements?
- Do they respond to national laws, CONPES documents, etc.?
- Is it necessary for the development of macroeconomic aggregates?

[8] http://www.dane.gov.co/files/planificacion/planificacion/metodologia/ingles/NationalStatisticalPlan_Final.pdf

- Do they come from a special demand for DANE of an agreement?

DANE systematically estimates the cost of the production of new statistics under its responsibility. DANE can also advise on cost-efficiency for new statistics developed by other entities within the NSS.

***Do procedures exist to assess the continuing need for statistics to see if any can be discontinued or curtailed to free up resources?***

There are no formal and standard procedures. However these issues are presented by statistical managers at the meetings of the Board of Directors at DANE and the technical committee.

### 3. User consultation processes

***Is there a statistical council of external experts to advise the national agency head on strategic statistical issues?***

There is no standing statistical council which has an advisory role in setting up priorities for statistical production. The Article 160 of the National Development Plan creates a National Advisory Council for Statistics with the aim to promote and facilitate the co-ordination and regulation of the future NSS.

There are external committees, expert committees and inter-agency committees in different statistical areas. Their main role is to deliver scientific expertise on specific statistics but also to provide recommendations to DANE for the implementation of strategic plans.

***What are the processes for consulting in order to meet the needs of other key external users? Also, what are the processes for monitoring the relevance and utility of existing statistics in meeting their needs and for determining their emerging needs and priorities? Are user satisfaction surveys undertaken periodically?***

DANE's Directorate of Dissemination, Marketing and Statistical Culture conducted two annual user satisfaction surveys: i) a permanent survey ensuring a continuous collection of information from users through mailbox, chat, phone, etc. the results of which are presented to the relevant technical directorates within DANE with the aim to implement plans for improvement, and are available in Spanish on the Internet website of DANE;[9] ii) an annual user satisfaction survey of 710 identified key users among several types of institutions and user groups, including government, private sector, education sector, media, international organisations, and civil society, on their use of statistical products from DANE according to a set a criteria (frequency of use, means…) and their appreciation of statistical information (quality, relevance, timeliness, accuracy, coherence, interpretability, accessibility).

The BR has implemented a system named "attention to the citizens centre" by which users send comments, complaints, and suggestions and request information related to BR's functions, services and activities[10].

***Are there processes in place to deal with user enquiries?***

DANE defined processes for the management of external and internal user enquiries as following: a) Response to enquiries for statistical information and/or general advice; b) Response to enquiries for

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[9] Encuesta medición de la satisfacción a usuarios especializados: http://www.dane.gov.co/encuestas/clientes/medicion_usuarios.html

[10] See http://www.banrep.org/es/contenidos/atencion-ciudadano.

specialized statistical information; c) Response to enquiries for obtaining tailored information; d) Response to enquiries for complimentary materials; e) Response to enquiries for DANE product sales; f) Response to enquiries for certifications of statistics.

User consultation service is documented in the Manual *"Procedure for DANE user service: procedures and services".* This document establishes various available channels (in person, by email, by mail, on DANE's website, by phone, by social networks) and guidelines to deal with user's needs, by means of statistical information enquiries, application of information and certificates, as well as, purchase of customised information.

## 4. Dissemination strategy

Articles 1 and 2 of the Decree 262 of 2004, define the authority and obligation of DANE to disseminate basic statistical official information, including the design of the technical rules for this process. The draft new statistics law contains the regulations regarding publication (article 28) and dissemination (article 32) of official statistics: "Bound parties have the duty to publish official statistics on any of the various media that are used for this purpose (…)", as well as, "The dissemination of statistical results will favour media that contributes to their utmost opportunity and democratization (…)."

***Is there a policy with respect of free dissemination of key basic statistics?***

DANE implemented a range of programmes and services to ensure that statistical information is disseminated widely. Most of statistics from DANE and from the BR are available for free. In addition, DANE is responsible for the management of the Colombian Infrastructure of Data (CDI), which provides users with free standardised and certified official statistics. Access to free data is also possible through the web platform Colombiestad[11].

Data exchanges between DANE and other government agencies are managed according to cooperation agreements, direct access to databases, sectorial committees, direct deliveries, data collection via an Internet website, or formal communications that support the exchange and accompany the delivery of the data.

***Does the national statistical office need political approval to publish statistical information?***

Available information does not provide any element that supports the conclusion that DANE would need political approval prior to publish statistical information.

***Does the national statistical office publish an advance release calendar?***

DANE publishes a rolling 12 months in advance release calendar[12].

Regarding the updating of the annual calendar, the procedure for carrying it out is included in the Manual called *"Procedure for Dissemination of Information through Mass Media"* which is regularly updated and reflects recent changes in the publication guidelines of the calendar.

It is not possible to access directly the indicators from the calendar. The Secretariat considers it would be an advantage for users to be able to access databases or press releases directly from the calendar.

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11 http://www.colombiestad.gov.co/

12 http://www.dane.gov.co/index.php/calendar/

***What is the situation with respect to market pricing of goods and services, including cost recovery, commercial policies, use of third parties for dissemination, copyright and royalties?***

The Resolution 255 of 2012 states DANE's policy of dissemination and determines market pricing in Colombian pesos and in US dollars for the various statistical products. The Directorate of Dissemination, Marketing and Statistical Culture is responsible of the pricing policy within DANE, through its sub-directorate "Direct Sales". All users have the same treatment as regards accessing statistics. While all statistics (datasets and on-line publications) are available for free, supplementary statistical services (specific requests involving special tabulations or statistics that are not routinely produced, historical bulletins, printed maps) and statistical publications (books) for which a charge is made follow a clear pricing policy. Subscribers to the Statistical Society also have access to text messaging services (SMS) and e-mails services announcing releases for free.

***What are the policies or strategies on the use of different dissemination media, such as the Internet, online databases, or paper publications?***

DANE uses a range of dissemination media including websites (national, regional, Colombiestad, the CDI), bulletins, statistical reports, press releases, emails, social networks. DANE also manages the public access to anonymised micro-data.

The Dissemination, Marketing and Statistical Culture Division of DANE developed and implemented a strategy for the dissemination of DANE information, based on the Institutional Management Support System (SPGI) and according to the following purposes:

- Promotion of programs with Academia and with key users (User loyalty program)
- Promotion of the statistical culture
- Promotion of statistical quality
- Use of a large range of dissemination medias
- Participation in events, workshops, etc.
- Organisation of workshops with journalists and press conferences

The other entities of the NSS are autonomous in the definition and implementation of dissemination strategies.

Colombian statistical publications from 1825 to 2005 have been scanned and archived in DANE's virtual library[13], where an online search engine allows users to search titles, author names, ISBN or keywords. In addition, links to Internet websites of national and international libraries are also available.

***What are the policies on relations with media and the use of press releases?***

DANE's strategy on relations with media aims at establishing and developing relations and furthering communication with journalists. DANE disseminates official statistics through press releases and bulletins and informs users and journalists of statistical releases via SMS and social networks (Twitter and Facebook). Corporate guidelines for the preparation of information for media are available in the document 'Procedure for dissemination of information through Mass Media' (CODE: DIE-020-PD-01).

[13] http://www.dane.gov.co/index.php/biblioteca-virtual

Following errors in interpretation in the past, DANE also organises regular seminars and press conferences with journalists with the aim to prevent any misuse of official statistics (see principle 4 of Code of Good Practice) and to increase the coverage by the media of statistics related topics. DANE's press office regularly monitors information released by news media to avoid any misinterpretation. In case of misuse of statistics, DANE officially asks for the publication of an official statement with appropriate clarification.

DANE regularly monitors user satisfaction as regards the dissemination of official statistics (by phone, email, web and interview).

***What are the policies with respect to supplementing statistical data with analyses? What are the organisation's analytical functions and what analysis are carried out?***

Colombian statistical authorities do not have mandate for the publication of analysis alongside with data.

***Are there corporate guidelines for the preparation of statistical publications (paper and electronic)?***

DANE produces guidelines for the preparation of statistical publications and the presentation of statistics in on-line databases.

## 5. Data and metadata transmission to the OECD

Data and metadata collection at the OECD is implemented through various mechanisms (transmission of Excel files, direct extraction from online database, extraction from website using web-queries, etc.), with a strong preference for SDMX[14], wherever possible.

The capacity of Colombia to regularly transmit data and metadata to the Secretariat as well as the integration of this information into OECD databases is an important dimension of the statistical review. Data collections should be repeated, and made regular and timely according to the OECD publications timetable (the OECD is updating statistics on a real-time basis as far as possible).

In parallel with this baseline collection mechanism put in place, SDMX capacity should be added gradually for various statistical subjects. During this implementation, a pilot is tested. Once the SDMX collections are validated by the Secretariat (by each domain separately) the Colombian statistical authorities can stop the related baseline data provision flows, given that the data obtainable via the SDMX web-service is as timely and reliable as the alternative modes.

***The current situation of SDMX in Colombia***

In Colombia, DANE already started to invest in the development of SDMX for data and metadata transmission. A pilot environment has been set up at DANE to enable SDMX based data exchanges (data provision to OECD). The pilot consisted of putting in place an SDMX web-service and exposing Consumer Price Indices (CPIs) data that OECD can access via a pull mechanism. However, the metadata structure definitions are not internationally agreed at this stage and metadata transmission can only be made via more traditional ways.

[14] SDMX (Statistical Data and Metadata eXchange) is an initiative to foster standards for the exchange of statistical information sponsored by the Bank for International Settlements (BIS), the European Central Bank (ECB), the Statistical Office of the European Union (Eurostat), the International Monetary Fund (IMF), the OECD, the United Nations (UN) and the World Bank.

While minor data issues were found and fixed in testing the web-service, it can be said that the web-service is functional, and a first transmission of CPI data in SDMX was successful. Regular data transmission of CPIs and PPIs is currently functioning.

A table summarising the format of transmission for various domains of statistics has been agreed with DANE and the BR during the Peer Review (see Annex 2 at end of Chapter 1). After the CPI, the PPI was the next domain to be transmitted via SDMX. Other priorities have been agreed between DANE, the BR and the Secretariat for the pilot transmission of the following short-term economic statistics via SDMX as soon as possible: BoP, monetary aggregates, interest rates, share price index, international trade in goods and services, infra-annual labour statistics, infra-annual labour compensation statistics. At this stage, data transmission via SDMX has been implemented with DANE only.

In the case of National Accounts, the DSDs were primarily designed to exchange data in line with SNA 2008, and wherever industrial sector details are provided, assuming ISIC Rev.4. Pending developments at the NSOs adherence by DANE to these most recent standards or the capability extension of the internationally agreed DSDs, the transmission of data via SDMX in these domains is delayed to 2018. Similarly, DANE should use Excel based transmission until further notice in the domains of financial data, business statistics, annual LFS, well-being indicators and business and consumer opinion surveys, as there is no DSD in these domains.

In the case of BoP statistics, the DSDs have been designed by several international organisations in line with BPM6. While the BR publish data according to BPM6 since July 2014, it has not been possible to test the delivery of quarterly BOP statistics via SDMX. However, BOP data are already accessible on the BR website in an Excel file adapted to OECD needs.

**Box 2. UN Principle 2**

To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistics.

## 6. Organisation of statistical methodology

***What is done to develop and maintain methodological skills and expertise within the organisation, to promote the use of the latest technical IT tools, to review and control questionnaires and to use standard concepts and classifications? Is a centralized or decentralized approach used?***

Decree 262 of 2004 endorses the responsibility of DANE "to ensure the production, availability, and quality of strategic statistical information, and the direction, planning, implementation, co-ordination, regulation and evaluation of the production and dissemination of basic official information". Key functions of DANE, as defined by the Decree 262, include the establishment and approval of the technical rules; the development of appropriate methodologies and strategic statistical information for the production, compilation and dissemination of basic official information[15], and the promotion of the implementation of nomenclature and classifications in compliance with international standards. In addition, the Decree 262 modifies DANE's structure accordingly by giving authority on the implementation of statistical standards concepts in the National Statistical System to the Deputy Director's Office and the Division of Regulation,

[15] Basic official information is understood as that useful statistical or geographic information for the Government, which come from database set up by records, census, surveys and remarks.

Planning and Standardization (DIRPEN), in collaboration with the Division of Statistical Methodology and Production (DIMPE).

DIRPEN coordinates the introduction of new methodologies and their revisions. Once new standards have been defined by DIRPEN three different types of advisory committees are consulted by the experts in statistical operations: internal committees, external committees and expert committees (this has been a widespread practice since the late 90's and beginning of the decade of the 2000s). This process has become a formal procedure in DANE.

- Internal committees: they consist of technical staff from the different work teams of the Technical Division of DANE, including the Technical Director and the advisers of the General Directorate and of the Deputy Director's Office of DANE, as well as technical staff of the other technical divisions of DANE. For all the investigations, these committees are consulted well in advance of the day of publication, for the review of results and context; and to provide remarks, comments and suggestions or questions pertaining to the results.
- External committees: they are composed of technical experts from different public and governmental institutions, associations, private sector, academia and research centres. Their membership also includes DANE's technical Director, the advisers of the DANE's General Directorate and the DANE's General Deputy Director's office, as well as technical staff of the other technical divisions of DANE. External committee meetings are carried out one day or one hour ahead of publication to present the results and interact with the various institutions, organizations and/or associations for technical feedback, with due regard to confidentiality. In these committees, the results of investigations are presented in general terms so as to receive feedback, comments and suggestions or questions pertaining to the results. Examples of the statistics on which these committees work are: labour market, industry, trade, GDP, investment indicator of civil works. While these exchanges with outside experts are good practice, the timing of these committees should be reconsidered (see above).
- Expert committees: they aim to advise DANE in the design or redesign processes of statistical operations and to review methodologies and strengthen their effectiveness. They are composed of thematic experts, experts in statistical design, which is based on the experience that they demonstrate when working on the matters for which they were summoned. Expert committees have been involved in the design of the consumer price index, poverty measurements, measurement of the labour market, among others. International consultants participate occasionally in these committees.

The Planning Office is responsible for supervising the implementation of new or revised statistical programs while DIRPEN is in charge of their evaluation through a process of quality assurance in which the IT, statistical, logistical and thematic components are reviewed. Monitoring activities are based on the guidelines for quality of statistics. Indicators on coverage and innovation processes (ex. non-response rate, adjustment factors, outliers and sampling errors) have been developed to monitor different stages in the data collection process for all statistical operations in DANE.

Methodological guidelines, methodological specifications and international standard classifications, are available in Spanish on DANE's website and a large part of this information is also available in English. In addition, DANE publishes a guideline for the standardisation of the methodological statistical documentation in relation with the standardisation of the statistical operations (collection, compilation and dissemination) performed by the different entities of the National Statistical System.

Users are informed of methodological changes in advance through announcements included in regular publications (ex. bulletins) along with the release of preliminary results. Moreover, users are informed of

changes in classifications that are subject to Resolutions that set forth their dates of implementation, for instance, Resolution 636, 2012 regulates the move to the version 4 of the International Standard Classification of Economic Activities, ISIC Rev.4.

### 7. Staff recruitment training and development strategy

The Civil Servant and Administrative Career Law and the Code of Discipline regulate the recruitment, wages and remunerations, and working conditions for civil servants in Colombia, and apply to DANE's staff. The National Civil Service Commission, as stated in law 909 of 2004, establishes regulations for the recruitment of civil servants and monitors their implementation. In addition, DANE informs on temporary vacant position on its website. The recruitment is under the responsibility of the technical divisions for the selection of operational staff in the Territorial Branches and Sub-headquarters. A public merit-based selection process, where "Minimum requirements Studies" and "Studies of Suitability and Timeliness" are carried out for each candidate before they are hired, always under the request of the technical and support area at the level of DANE Central.

The Human Resources Division at DANE ensures a policy that allows transparency of staff recruitment and selection processes by making documents available, including guides and processes in order to manage recruitment, development and removal of the Entity's officials, through the formulation and implementation of plans, programs and projects that contribute to their comprehensive development, to the strengthening of organizational culture and work performance. Examples of such guidelines are "*Hiring of Personal Services", "Manual to Develop Summons of the Operating Staff, "Management Process of the Human Talent", and "Guideline for the verification of compliance with Minimum Requirement to Hire Personal Service".*

Investment in human resources development in DANE is significant. While the average duration at work in DANE is almost 15 years, it is only 2 years for young workers.

Wages and salaries at DANE are in accordance with those of similar positions of civil servants in the Colombian public sector but remain uncompetitive in comparison with institutions such as the Central Bank, as observed in most of the OECD member countries.

The structure between temporary (contractual) staff and fixed long-term contracts was also a challenge as contracts were for a large part temporary in 2011 with a high turnover. Since 2011, this situation has been turned on its head and now most of the contracts are fixed long-term contracts.

As regards gender, almost 60% of DANE's staff is women. However, the proportion of women in top positions seems low, suggesting that the relative chance for women to reach high positions remains low, compared with men.

The number of administrative posts at DANE has significantly increased over the recent years, along with the rise in number of statistical operations requiring administrative staff to support their management.

***What is the policy on the recruitment of graduates in relevant academic disciplines?***

The proportion of PhDs in DANE staff is low and the organisation is tackling this challenge by offering opportunities to young graduates and to retain this young high-educated workforce. DANE developed a recruitment policy to engage young professionals to enter job positions, in relation with its staff development strategy (see principle 1 of Code), with the aim of enhancing its reputation among university students and recruiting employees with advanced university degrees in statistics. DANE also initiated a number of programmes for staff in specialised position, such as grants for postgraduate degrees. However, despite increasing efforts to develop links with universities, retaining young professionals

continues to be challenging for DANE mainly because of the low salaries offered by the institute compared with other Colombian public entities.

DANE has developed customised academic programmes with the aim of improving technical skills of staff and extending scientific exchanges with academic institutions: "DANE in Academia" for universities, where the investigations developed by the entity are presented and the mechanisms for dissemination of information are displayed. In 2012, 20 914 school and university students participated to these programmes, including school children participating in the DANE program "Pin Uno Pin Dos Pin DANE program" for the promotion of a statistical culture.

***What are the processes for on-going technical and managerial developments of existing staff through training, job rotation, or secondments to and from other statistical authorities, international organisations and business?***

Resolution 696 (2011) implements an 'Institutional Training Plan and Incentive System through the Welfare Program in DANE". Training and on-going technical and managerial development of DANE's staff are ensured by "CANDANE"[16], created in 2006 as a division of "the National Centre of Statistical Training". This academic program, in line with the statistical training centres of the Community of Andean Nations, is designed to reinforce the knowledge of producers of official statistics. In addition, CANDANE offers face-to-face or e-learning sessions focused on statistical methodology; economics, social, demographics and environmental statistics.

Resolution 521 (2012) sets forth that the Institutional Training Plan provide information on short-term training programmes, methodologies, training strategies and evaluation indicators. English courses are proposed to permanent staff only, the costs of which are partially borne by DANE.

***What are the processes for co-operation with academic institutions to improve methodology and promote the use of latest statistical techniques?***

A number of agreements have been signed between DANE and Colombian universities, such as Universidad Externado de Colombia (2000), the Pontificia Universidad Javeriana (2005), Universidad de La Salle (2003), Universidad Militar Nueva Granada (2005), Universidad de los Andes (2008), and Universidad Nacional (2011). Agreements include a regular scientific co-operation on methodological issues and the possibility for staff to prepare diplomas and to follow in service training as provided by CANDANE. DANE also developed co-operation with universities abroad, such as the University of Maastricht, Columbia University (USA) or University La Sorbonne (France), and with national and international public institutions, for instance, the Central Bank of Colombia or the United Nations Statistical Commission.

Another key area of the co-operation with academic institutions is the scientific councils in various domains which deal with methodological and other statistics-related issues and include a number of technical experts from universities, as described above.

***Are guidelines for staff behaviour in place and are they well known to staff?***

Employee positions at DANE are governed by the Civil Servant and Administrative Career Law and every employee of public entities is obliged to respect the Code of Discipline.

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16 "Centro Aldino de Altos Estudios" in Spanish: http://www.dane.gov.co/candane/index.php?option=com_frontpage&Itemid=1

In addition, the Best Practice 4.2 in the National Code of Practice for Official Statistics explicitly expresses that staff involved in statistical activities has to act in accordance with standard and ethical values. DANE has extended guidance on ethical behaviour that strengthens its credibility among users of statistical outputs. For instance, the document 'ethic and values at the DANE" informs DANE's staff on ethical standards to be observed.

### 8. Guidelines and processes concerning the consistency and coherence of statistics

***Are procedures in place to ensure that standard concepts, definitions and classifications are constantly applied throughout the statistical authority?***

The DIRPEN division at DANE is in charge of disseminating ideas on the quality of statistics across producers of official statistics. Besides centralization of infrastructural functions, there are many internal rules and protocols describing how to proceed in different situations (*e.g.* how to communicate on sampling errors, calendar rules, etc.). These rules are designed, published and regularly updated by DANE. They refer, among other references, to the National Statistical Plan and to the Statistical Quality Assurance. DIRPEN is also responsible for the certification and monitoring process.

While developing the methodology for new statistical surveys, authorized producers always seek advice from DIRPEN and most new methodological work is done in co-operation.

DIRPEN also prepares methodological textbooks, handbooks, presentations, etc., with examples from everyday practice for key areas of the statistical process (*e.g.* sampling, dissemination, etc.) aimed at improving the knowledge of employees about statistical methodology.

Within the framework of co-operation with the authorised producers, DIRPEN has been planning further promotion of the National Code of Good Practices for Official Statistics and carrying out special training in connection with this topic in future years. DIRPEN ensures that all the producers of statistics implement the National Code of Good Practices for Official Statistics through quality assessments of statistical operations and questionnaires assessing their compliance with the Code.

***Are guidelines and processes in place to ensure that corporate guidelines with respect to quality, consistency, etc., are adhered to by regional offices of the statistical authority?***

The six DANE regional offices follow the instructions guidelines, methodologies, and standardized procedures set out by DANE head office, regarding data collection, dissemination, methodology and statistical quality. In addition, final products go through the review of the Planning Office which is responsible for the statistical quality of the products under the Quality Management System.

***Overall assessment of Principles 1 and 2***

The re is a tradition of professionalism and high technical standards at DANE which is recognised by outside partners and ensures that official statistics comply in practice with UN Principles 1 and 2 in Colombia. The existence of specific laws and decrees on statistics, the high level in the Colombian administration of the Director of DANE, the organisation of the National Statistical System, the existence of a multi-annual Statistical Plan, its coordination by DANE, the existence of a national Code of Good Practices for Official Statistics, sound dissemination and resource affectation processes, sound methodological policy, all concur to good compliance.

**Box 3. UN Principle 3**

To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

## 9. Corporate metadata strategy

***Are there a corporate strategy and guidelines for the preparation and dissemination of metadata on concepts, scope, classifications, basis of recording, data sources, statistical techniques, differences from internationally accepted standards, annotation of good practices, etc.?***

DANE has articulated a set of broad principles outlining its approach to metadata. These principles are linked to the quality management, as described in principle 5. The DIRPEN division at DANE released the following guidelines for the preparation and dissemination of methodological information:

- A guide for the preparation of methodological information[17] (in Spanish),
- A guide for the standardisation of documents on methodological information[18] (in Spanish),
- The National Code of Best Practices for Official Statistics.

These guidelines provide an extensive description of content (coverage, sources, sampling, data collection, data processing, measurement units, definitions, periodicity, and dissemination methods) as well as recommendations for managing metadata, facilitating design, implementation, use and maintenance of metadata.

The Internet has become the main channel for dissemination of statistics and metadata. A webpage is dedicated to each statistical subject domain and provides access to data through downloadable Excel tables and to methodological documents and to corresponding survey in PDF format. In addition, links to international standards are also available. DANE has also developed an online catalogue for the dissemination of statistical data and metadata: the National Data Archive[19] (ANDA) which enables deploying statistical information on the statistical operation according to users' needs.

While Excel tables include footnotes, measurement units, etc., metadata are not directly attached at the variable or data point level but refer to Methodological documents presented on the subject's webpage (under the heading "Methodology"). Data tables and some of the methodological documents are only available in Spanish. However, metadata are documented at the level of variable in the ANDA.

DANE has developed methodological guidelines in English and in Spanish for the presentation of national classifications and their compliance with international standards.

***Is there a corporate database and glossaries to promote the use of standard concepts and definitions?***

The website Colombiestad[20] provide a glossary of main statistical terms with succinct definitions. The glossary is freely accessible under the section 'basic concepts' and aims at providing basic information on statistical terms and at improving the statistical culture of Colombians. In addition, DANE's website

[17] http://192.168.1.200/sen/files/sen/regulacion/guias/GEDMOE.pdf

[18] http://192.168.1.200/sen/files/sen/regulacion/guias/GEDMEIPE.pdf

[19] http://190.25.231.249/metadatos/index.php/catalog

[20] http://www.colombiestad.gov.co/index.php?option=com_glossary&Itemid=25

provides a link[21] to definitions of harmonised concepts used by the producers of official statistics within the NSS.

All DANE methodological publications have glossaries of key concepts applied to the respective study, released by the Division of Statistical Production and Methodology (DIMPE).

DANE publications are of a high standard and the website presents a wide range of statistical information (at least in Spanish).

***Are there processes to ensure that sampling and non-sampling errors are measured and systematically documented and that information is made available to users for all key statistical outputs?***

As part of the statistical quality management implemented by DANE, data sources are regularly reviewed and evaluated to ensure that sampling and non-sampling errors are measured. Information is made available to users in methodological notes available on the website.

***Are Metadata documented according to standardised metadata systems?***

Colombia is engaged in the "Data Documentation Initiative"[22] (DDI), whose purpose is to strengthen the production of standardized methodological documentation on statistical operations. Metadata cover information on statistical operations according to the level of detail of DDI - DUBLIN CORE[23] international standards: identification, overview, thematic coverage, time coverage, variable coverage, producers and sponsors, sampling, data collection, data processing, access to results, legal notes and copyrights, databases and external reference material.

***What are the recommendations and guidelines for the treatment of time series breaks?***

There are no guidelines publicly available for the treatment and presentation of time series breaks in Excel tables. During the Peer Review, DANE recognised the importance of such guidelines.

***What are the recommendations and guidelines for the presentation of time series – including seasonally adjusted data?***

DANE calculates seasonal adjusted economic and social series using the X12-ARIMA procedure in most cases but not for all important macro-economic variables. Also the BR does not have a systematic policy of seasonally adjust some main indicators (BoP, monetary aggregates, …). During the Peer review mission, DANE committed to extend the principle of seasonal adjustment to all important macro-economic variables and has transmitted to the Secretariat a convincing work plan that will ensure that all main indicators will be published seasonally adjusted by DANE by March 2016.

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21 http://190.25.231.251:8080/senApp/module/conceptosModule/index.html

22 http://www.ddialliance.org/what

23 The Dublin Core Metadata Initiative, or "DCMI", is a metadata standard developed in 1995 to "provide simple standards to facilitate the finding, sharing and management of information." See Dublin Core Metadata Initiative, "Missions and principles", webpage, http://dublincore.org/

## 10. Data presentation guidelines

***Are there guidelines to ensure that statistics are presented in a way that facilitates proper interpretation and meaningful comparisons? (Guidelines might address things such as layout and clarity of text, tables, and charts)***

The Colombian producers of official statistics use modern methods of data dissemination. Releases are made public on the web and there are few traditional hard copy publications. Most producers have a methodology section on their website. Access to micro-data and special analyses is possible on request, but usually not specially made available on the website.

In addition, the aim of DANE's policy on the promotion of the statistical culture of users on a regular basis is to define and implement strategies for improving proper interpretation and use of official statistics.

## 11. Revision policy

The aim of DANE's revision policy is to provide data users, in a standard and transparent way, with the information they need for the appropriate use of data that have been revised or will be revised in the future. DANE does not have an official paper called "the revision policy", but revision procedures are regulated by the DANE policy on statistical quality and well implemented in methodologies at the subject level, such as the revisions in national accounts.

***Do revisions follow standard, well-established and transparent procedures with respect to regularity, presentation of preliminary vs. final data?***

Most datasets under the responsibility of DANE follow recommended international practices on providing public with a clear statement of the revision schedule and of identifying provisional estimates. This complies with DANE's statistical quality management requiring: "to update in a systematic and permanent manner the theoretical, methodological and operational frameworks of the statistical investigations and to develop methodologies to generate the new information." In addition, the continuous process of assessment of statistical quality includes the regular review and audit and documentation on statistical operations.

***Are studies and analyses of revisions carried out routinely and used internally to improve statistical processes?***

For national accounts data on the scale, direction, and magnitude of revisions are examined, and they are discussed in the national accounts publications. However, studies of long-term trends in the revision patterns are not undertaken on a regular basis.

***Overall summary on UN principle 3***

Colombia complies with UN Principle 3. The procedures implemented by DANE as regards metadata are in line with good practices and recognised as such by users. The metadata strategy developed by DANE benefitted from a clear support from DANE's top management over the recent years. DANE developed a statistical metadata system including a metadata framework and playing a key role in the Colombian statistical system. They are part of the tools developed by DANE for the dissemination of quality across the different entities of the statistical system. However, the main documents on this infrastructure are available in Spanish only.

**Box 4. UN Principle 4**

The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

### 12. The statistical authority, when appropriate, comments publicly on statistical issues, including criticisms and misuses of official statistics

Erroneous interpretations and misuses of official statistics are an important issue for national statistical authorities, especially because they are linked to trust and credibility in official statistics. According to this principle, statistical agencies should design and implement documentation and guidelines that clearly explain how to interpret statistics, and provide training to users with the purpose of avoiding misuses and misinterpretations. This principle is outlined to ensure that the statistical authority, when appropriate, has the right and competence to comments publicly on statistical issues, including criticisms and misuses of official statistics and to develop strategies to prevent errors in published statistics.

While the current Colombian legislation does not give DANE, and other producers of official statistics, an obligation to ensure that the conditions for regular interpretation by users of statistical outputs are fulfilled, or to provide comments and clarification when official statistics are erroneously interpreted, the indicator 4.11 of the National Code of Good Practices for Official Statistics recommends, in case of misinterpretations of official statistics, to formulate clarifications. In practice, DANE responds to erroneous interpretations through press releases, public appearances, and briefings to the media.

Colombia is currently preparing a document titled: “Disclosure of official statistics protocol”. This document mentions that DANE has to provide the following official statement in the event of misinterpretation of statistics: "Comments need to be made with respect to the misinterpretation and misuse of official statistics. In cases where an organization or individual makes judgments about the methodology and the results of the statistics, it is suggested that they prepare comments thereon in order to clarify the misinterpretations that can be given with respect to the statistical information produced by the entity".

The DANE’s Press office continuously monitors information released by press clipping. If misinterpretations of statistics are detected, DANE will contact the editor responsible for misusing official statistics and will provide an official statement with the required clarifications. Misuse of data mostly due to lack of statistical literacy seems to be rare and reactions from DANE are rare as well.

### 13. Errors discovered in published statistics are corrected at the earliest possible date and publicised

The quality assurance management, as described in principle 5 of the Code establishes collection, verification and validation procedures during the production process thereby reducing the errors that can occur in data production. Moreover, indicator 4.10 of the National Code of Good Practices for Official Statistics recommends to: “correct and communicate the errors discovered in published statistics in a timely manner”. This recommendation complies with the fourth UN Fundamental Principle.

**14. Does the statistical authority carry out activities to promote statistical culture or to educate users including media?**

DANE provides activities for strengthening the statistical culture intensively through its Division of Diffusion, Marketing and Statistical Culture. Main programs aim to implement strategies to improve the statistical literacy of both producers and the following key users of statistical information:

- Mass media and social networks, to prevent misinterpretation of statistics and to disseminate the statistical culture;
- Users of micro-data (see principle 6 of the Code) receive specific training with the aim to deepen their understanding of statistical confidentiality issues;
- Data providers, to raise importance of providing truthful information;
- Users, to encourage them to make a correct interpretation and use of official statistics;
- Academics, associations, businesses and industry organisations, to encourage their participation in statistical activities.

Important elements of the strategy for the promotion of statistical literacy include the *"loyalty program,"* which encourages long term relationships and mutual benefit between DANE and key users of official statistics. For this purpose, DANE organises special events such as seminars, workshops and lectures; offers discount rates on the price of publications and free subscriptions to a quarterly newsletter and to selected publications; provides information on the Colombian statistical infrastructure.

While such activities for strengthening the statistical culture are often carried out by national statistical offices in OECD member countries, programs for youngsters are less common. DANE implemented two programs for young people: the program 'DANE in Academia' is designed for college students, guilds, civil servants etc., while the program "Pin Uno, Pin Dos, Pin DANE' has been conceived for children between 8 and 12 years old.

DANE also provides such activities intensively before large census and surveys or when major change in methodology occurred (see principle 2 of the Code).

The promotion of the statistical culture aims to deepen the general public's understanding of the importance of statistics and to continuously improve statistical activities but it is also part of a broad public relations strategy (see principle 1 of the Code on dissemination strategy). Indeed, the fifteenth principle of the National Code of Good Practices for Official Statistics recommends that "the entities belonging to the National Statistical System must create, promote and implement strategies for the strengthening of statistical culture".

Finally, this promotion of the statistical culture is also linked to seeking feedback of user satisfaction (see principle 1).

***Overall assessment UN principle 4***

The Colombian statistical authorities comply in practice with the fourth UN Fundamental Principle, in particular with the recommendations from the document "Disclosure of official statistics protocol".

**Box 5. UN Principle 5**

Data for statistical purposes may be drawn from all types of sources, be they statistical surveys, or administrative

records. Statistical agencies are to choose the source of data with regard to quality, timeliness, costs and the burden on respondents.

Quality is fundamental to enhance confidence in and credibility of public and official statistics through the implementation of principles and appropriate methodologies and best practices. Statistical agencies should be independent in the design of policies as regards statistical quality, including the implementation of a quality management programme, the choice of the sources of data, the improvement of timeliness, the cost efficiency of statistical production, and the reduction of the burden on respondents. Administrative records are more and more a relevant source of data, and the right of the national statistical authority to have access to all administrative data without constraints on confidentiality should be ensured in the law.

### 15. Policy on the use of administrative records

***Is the statistical authority allowed by national legislation to use administrative records for statistical purposes?***

By signing the Cartagena Agreement in 1969, Colombia adhered to the Andean Community of Nations (CAN). Terms and provisions of the Treaty have been reproduced in Colombian legislation through the Law 8 of 1973. According to the Treaty, Decisions from the CAN are directly applicable by member countries. In that regards, Article 7 of the Decision 780 of the Andean Community of Nations (CAN), asks member countries to create and to maintain a statistical register based on administrative records: "For the creation and the maintenance of statistical records that are part of the national statistical system, the national statistical authorities are authorised to collect, for statistical purposes, information covered by the present Decision, existing in the administrative records kept by public and private entities. It is mandatory for both public and private entities to provide this information."

However, this Decision has never been transposed into Colombian legislation and there is no specific legal mention in the Colombian legal system on the right for DANE to access easily and to use administrative data in the compilation of official statistics. The Resolution 416 of 2006 requires for individuals to provide information to DANE but this resolution is only applicable for DANE without any binding constraint for other institutions within the Colombian statistical system.

The absence of such procedures appears as a major challenge faced by DANE. For example, DANE still has restricted access to some important administrative sources such as the Unified Tax Registry (RUT, in Spanish), the PILA Registry of the Ministry of Health and Social Protection, the Income and Complementary Tax Return Form, the Unified Tax Registry of the National Directorate of Taxes and Customs (DIAN), the Single Business and Social Registration (RUES in Spanish) of Confecamaras and individual data returns collected by the BR. In most cases, information is considered as at least partially confidential.

In addition, the question of the use of administrative data for statistical purposes by DANE also relates on limitations in accessing data because the anonymization does not allow comparing sources, or even comparing single source overtime.

The Article 160 of the National Development Plan addresses this issue and will help to strengthen the statistical framework and improve the access by DANE to administrative data, and further align Colombia with international practices. The expected decree of application of Article 160 should guarantee the effective implementation of this new legal possibility of access to some important administrative sources such as the ones resulting from the Registry of the Ministry of Health and Social Protection (PILA) program or the Unified Tax Registry of the National Directorate of Taxes and Customs (DIAN), or the National Civil Registry. In addition, the second principle of the Colombian National Code of Good

Practices for Official Statistics (para.3) recommends that "legislation grants the governing body of national statistical system to access to, and use of, administrative registers for the purpose of generating official statistics" (Cf. also paras. 2.4, 8.1, 8.2, 10.3).

***Are administrative sources used whenever possible to avoid duplicating requests for information?***

Regular DANE practice is to use administrative sources whenever possible and not to burden reporting units with additional requests if data can be found in administrative sources. Over the recent years, DANE made substantial efforts to increase the use of administrative sources, mainly by promoting technical inter-administrative co-operation agreements with public and private entities, such as the national special administrative unit for migrations. However, these efforts were not entirely successful, for example for the access to the important data from PILA (Planilla Integrada para la Liquidación de Aportes).

***Are proactive efforts made to improve the statistical potential of administrative records and avoid costly direct surveys?***

DANE continuously makes proactive efforts to improve the statistical potential of administrative records. In the context of the national and territorial statistical plans, DANE defined planning guidelines through participation of producers and users of statistics with the aim to design plans for strengthening administrative records for statistical purposes across the national statistical system. The methodology is available on DANE's website[24].

These plans include the improvement of quality of statistics including on-going quality assessment of statistical processes using administrative records as source. In general, ensuring the quality of administrative data depends on the procedures in place for the quality management of statistics. In Colombia, DANE is responsible for statistical evaluation and certification processes, including statistical use of administrative records, census, surveys, etc. (see below).

***Are there recommended practices for the reporting and presentation of administrative data?***

Guidelines for the provision of metadata for users concerning the reporting and presentation of administrative data are explicitly formulated and made publicly available. Moreover, technical guidelines are produced by DANE. It is particularly important for administrative data to be methodologically transparent to users and to be presented with appropriate metadata, such as the name of the source agency, a precise description of the purpose for which statistical data were originally compiled, an outline of the strengths and weaknesses of the data in terms of their statistical application (coverage), a description of the process of transformation if any, undertaken by the statistical agency, a description of data reliability (including adherence to international norms).

In addition to the quality framework, the quality assessment of statistical operations (see below), the development of improvement plans for statistical operations, DANE also released a methodology for developing plans for strengthening the statistical processes using administrative data.

[24] https://www.dane.gov.co/dane/index.php/statistical-planning-sen/territorial-statistical-strengthening-strategy/206-nss/files/sen/planificacion/planes/CDMB.pdf?lang=en

## 16. Management of quality of statistical outputs and statistical processes

***Does the national statistical agency have a quality management program for its statistical outputs?***

Since 2002, DANE has developed a quality management programme with the aim to improve its administrative and technical processes according to its mission (this applies to all entities of the Colombian state). In addition, DANE implemented a quality framework defining the guidelines for the production of statistics. This Quality framework is based on three key fundamentals: the National Code of Practice for Official Statistics, the production process (planning, design, implementation, analysis, and dissemination) and the components of quality requirements (environment of the statistical operation, statistical process and technological environment and databases). DANE's quality assessment and certification process do not evaluate the results obtained through a statistical process, but the process as such.

Quality management is based on the following quality dimensions: pertinence and relevance, continuity, accuracy, timeliness and punctuality, accessibility, interpretability, coherence, comparability, and transparency. These are very similar to the quality dimensions used by Eurostat, and the UN and take into account best practices and experiences from Canada, France, the United Kingdom, South Africa and the Netherlands. These dimensions comply with the OECD Quality Framework for Statistical Activities which in addition highlights cost-efficiency, *i.e.* a measure of the costs and provider burden relative to the output, as it can affect quality in all dimensions even is not seen as a quality dimension.

Over the recent years, DANE developed the following activities for developing and implementing a quality framework within the whole national statistical system, thus reaching, in this field, a level of compliance with the top best international practices:

- Promote decrees and resolutions regulating the quality process,
- Develop work procedures clearly stating the process for developing and implementing a quality framework for all statistical domains at each stage of the production process,
- Design methodology for monitoring statistical operations[25] and certifying statistical processes within the whole national statistical system,
- Foster the development of a culture of quality in statistical production.

The Quality Management approach implemented by DANE is based on ISO 9001:2000. DANE has developed work procedures and quality guidelines based on the standards for quality management from the Colombian Institute of Technical Standards and Certification (ICONTEC), in accordance with standards published by the International Standards Organization (ISO) on quality management (ISO 9001:2008-NTCGP 1000:2009[26]).

The quality framework is applied in different stages of the statistical production process, as follows:

- Promotion of quality: introduce and promote the implementation of quality requirements at all stages of the statistical process, through permanent mechanisms and instruments strived for a continuous improvement of quality of the statistical process.

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25 Statistical operations are defined by the Resolution 1503 of 2011 as a set of processes and activities, which are based on a systematic collection of data and leads to the production of aggregate results.

26 The ISO 9000 standards for quality management provide guidelines to ensure that products and services meet consumer requirements and that their quality is continuously improved.

- Evaluation: a Commission of Independent Experts (CEI) managed by DIRPEN and including academics, international experts, and external users, analyses whether the statistical operations comply with established quality dimensions. This analysis is based on the environment, the statistical process and the statistical databases. The CEI establishes a "degree of compliance" which will determine whether the statistical operation will be presented to the Certifying Committee of DANE or not.
- Certification (decree 4178 (2011)): the Certifying Committee of DANE considers three rates of certification with three different validation periods: excellent (three years), good (two years) and acceptable (one year). Each certification includes an action plan for improvement, and documents the follow-up monitoring process. Certificates are supported by the resolution 691 (2011).
- Monitoring: the implementation of actions outlined in action plan delivered with the certification is monitored. Action plans for improvement become a statistical quality management tool.

***Are quality guidelines documented and are staff trained in their application?***

DANE implemented a number of various standardised quality guidelines, such as the *Quality Manual* released in August 2013 (only available in Spanish), the *Methodology of assessment and certification of statistical process quality* (December 2012), *the Statistical Quality assessment and certification* (November 2012).

In addition, the National Code of Practice is a technical and regulatory document whose purpose is to contribute to the continuous improvement of the quality of statistics. While the 15 principles are fundamental rules, they are presented along with 88 replicable good practices based on experiences. As regards quality management, Principle 7 sets out the continuous improvement in statistical activities and Principle 10 contains rules that force entities within the NSS to implement quality procedures at all stages of the statistical production process.

The quality assurance framework is also applicable to the whole National Statistical System. The document sets out the promotion of statistical quality, its evaluation and the monitoring process.

Users, employees and managers of the National Statistical System are well informed on the concept of quality and show a good awareness of statistical quality considerations. All documents relative to the statistical quality are available on DANE's website (at least in Spanish) and adequate specialised training sessions are organised by DANE for a widespread dissemination.

***Are processes in place to monitor the quality of collection, processing and dissemination of official statistics? Are assessment and certification of quality in the process of statistical production in place?***

DANE developed a systematic framework for monitoring quality at all stages in the statistical process. Formal processes for monitoring statistical operations, defined as the set of processes and activities based on systematic collection of data and leading to the production of statistical outputs, are in place, as stated in the Resolution 1503 (2011), and in the Decree 3851 (2006).

In addition to the wide range of quality guidelines for producers of statistics, Colombian statistical authorities emphasise evaluation and certification of quality of the statistical production[27]. The Colombian certification activity assesses whether the statistical production process complies with the procedures set

[27] While few other statistical agencies (the United Kingdom, South Africa, etc.) developed monitoring procedures as regards statistical outputs, DANE was one of the first statistical offices to implement innovative monitoring procedures as regards statistical operations.

out in the Quality Management framework and the National Code of Good Practices for Official Statistics. This duty is set forth in several legal texts: Decree 3851 of 2006 establishes a "Quality Certificate" for integrating data into the Colombian Infrastructure of Data; Decree 4178 of 2011 reallocates the functions within DANE and assigns the organisation with the role of certificating good practices in the statistical production carried out by entities of the whole national statistical system; Resolution 691 of 2011 regulates process and fees for the certification of official statistics by DANE.

The Colombian certification process includes labelling, *i.e.* a label suggesting the extent to which a set of quality is met, usually accompanied by explanations about its interpretation. Decree 3851 of 2006 establishes a "Basic Information Quality Certificate" for integrating data into the Colombian Data Infrastructure (CDI according to its acronym in Spanish). Statistical outputs issued from certified processes are labelled 'official statistics' once they have obtained the quality certificate and they can integrate the statistical infrastructure "Colombiestad" [28] developed by DANE in November 2006 further to the release of PlanIB in July 2006. DANE already monitored a number of statistical processes developed in-house and now evaluates statistics from other producers within the National Statistical System. Between 2006 and 2011, 66 statistical operations within the NSS were assessed. In 2013, 50 statistical operations were evaluated (29 from DANE (58%)) and 21 from other entities). 28 operations from DANE (*i.e.* 97%) and 14 operations from other entities (67%) were certified. 7% of the certified from DANE scored the highest rate (excellent), 48% the medium one (good) and 41% the lower rate. 9% of the operations from other entities scored the highest rate, 10% the medium one, and 48% the lowest one. From 2006 to 2013, 167 statistical operations have been evaluated by DANE.

The quality reviews of statistical operations can be conducted either by internal or by external quality auditors. In each case, independence of reviewers has to be recognised. In Colombia, the Division DIRPEN at DANE, defines the quality criteria and coordinates the reviews. As mentioned above, The Commission of Independent Experts (CEI) evaluates the statistical processes according to the criteria developed by DIRPEN and then establishes a "degree of compliance" which will determine whether the statistical operation will be presented to the Certifying Committee of DANE or not. DANE appoints CEI members and ensures a degree of independence in its composition. This role empowers the DIRPEN with an important authority within DANE but also over the whole Colombian Statistical System[29].

***Does the national statistical agency systematically work on improving timeliness?***

Timeliness has not been systematically assessed for all statistical domains but procedures are in place for a continuous improvement of timeliness according to user needs. Decree 3167 (1968), requires DANE to consult users on relevance and timeliness of statistics. In addition, Principle 13 in the National Code of Good Practices for Official Statistics promotes timeliness and punctuality of statistical releases.

***Does the national statistical agency systematically work on reducing the reporting burden on respondents?***

DANE implemented significant efforts to reduce the reporting burden of statistics: improvement of procedures for processing source data are continuously improved and covered by the monitoring process, inter-administrative co-operation agreements have been put in place and are regularly monitored, etc. However, the limitation of full access to administrative data hampers the reduction of burden on respondents.

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[28] http://www.colombiestad.gov.co/index.php?option=com_frontpage&Itemid=1

[29] In the United Kingdom or in South Africa. However, the Statistical Authority responsible for monitoring the quality of official statistics in the United Kingdom is independent from the National Statistical Office (ONS).

***Overall assessment UN Principle 5***

Colombia complies only partially with UN Principle 5 as regards access to administrative data, for which giving systematic access to DANE to important administrative sources such as the ones resulting from the PILA program or DIAN should be a priority. As regards quality of statistics, DANE developed a remarkable policy that allows a constant improvement of statistical outputs produced either by the organisation or within the national statistical system. DANE demonstrates an efficient and innovative management of statistical quality and compares very favourably with the best OECD countries in this respect. Moreover, statistical quality is one of the three instruments designed for the coordination of statistics across the national statistical system, together with planning and regulation activities. The certification process as developed by DANE appears to be in advance compared to many other countries' statistical systems and includes an ambitious research agenda that will foster and improve the statistical quality of Colombian statistics on a regular basis. The perception of users and the media is that the quality of DANE statistical services is of a good standard.

The draft new Article 50 should provide a sound basis to improve the access to administrative sources. Its Article 12 reinforces the quality assurance of official statistics, in accordance with the Decree-Law 4178 (2011) which empowers DANE with the role of coordination, planning, and standardisation of statistics along with the function of providing certificates of goods practices as regards the statistical production.

**Box 6. UN Principle 6**

Individual data collected by statistical agencies, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

### 17. Legal or regulatory basis of confidentiality

Key actions on effective management of statistical confidentiality include protecting secure information, avoiding any disclosure of identifiable information and providing access to micro-data.

***Is statistical confidentiality guaranteed in law? Is there a possibility of disclosure with consent?***

Criteria and conditions to determine and to ensure the confidentiality of individual data[30] are clearly and properly defined by Colombian national legislation.

The protection of confidential data is explicitly established in Colombian legislation (Law 79 (1993), resolution 1503 (2011) and statutory law 1581 (2012)). Article 5 of the Colombian Law 79 (1993) states that "data supplied to DANE in the course of censuses and surveys may not be disclosed to the public, official entities or organisations, or to the public authorities, except in the form of numerical summaries in which it is impossible to deduce any individual information that could be used for commercial, taxation, or judicial investigation purposes, or for any other purpose than strictly statistical".

In addition, the resolution 1503 issued on 16 November 2011, establishes a Committee for the Assurance of Statistical Confidentiality, including the following DANE's staff members: Director and

[30] Relates to an identifiable legal or natural entity, is not already available in the public domain, and, if disclosed, would cause damage, harm or distress to individual or organisation by revealing their identity. Data may be collected by the National Statistical Office or obtained from other sources, such as administrative sources.

Deputy-Director, Chief of the Legal Assistance Bureau, Director of the Division of Regulation, Planning and Standardisation (DIRPEN), Director of the Division of Methodology and Statistical Production (DIMPE), Director of the Division of Census and Demography (DCD), Director of the Geo-statistics Division (DIG), Chief of the Bureau of Systems, Director of Dissemination, Marketing and Statistical Culture. The role of this Committee is to assist and advise the Director of DANE on the dissemination of micro-data and the implementation of relevant rules and policies to ensure the compliance of the statistical confidentiality.

The most recent legal text concerning the protection of individual data is the Statutory Act number 1581 issued in 2012. Article 4 establishes a principle of restricted access, and a principle of confidentiality for the treatment of individual information. Article 18 outlines duties of persons or institutions in charge of the treatment of individual data. Articles 19 and 21 specify that the Superintendency of Industry and Commerce is responsible for ensuring the compliance with legislation in the domain of the protection of individual data. Articles 23 and 24 define possible penalties applicable by the Superintendency of Industry and Commerce in case of disclosure. In addition, Article 26 prohibits the transfer of any personal data to countries that do not provide adequate protection of confidentiality.

The confidentiality principle (principle 5) in the National Code of Good Practice for Official Statistics is substantially the same as the sixth UN Fundamental Principle of Official Statistics and establishes that "entities belonging to the National Statistical System shall guarantee the protection and confidentiality of the information used to produce official statistics and shall refrain from identifying the sources". The best practices include the following recommendations:

- Ensure the commitment of confidentiality of information collected from survey's respondents,
- The signature by persons with access to individual and confidential information of a declaration stating the respect of confidentiality,
- Ensure that the publication of official statistics does not allow individual identification of respondents,
- Implement protocols for the effective protection and security of information,
- Implement protocols for the effective protection and integrity of statistical databases,
- Ensure that access to anonymised micro-data for external users is subject to protocols that guarantee their confidentiality.

Finally, paragraphs 2 and 4 of the Article 160 in the National Development Plan reinforce existing legislation on confidentially in particular as regards the use of administrative data for statistical purposes, and the exchange of micro-data.

For the Central Bank of Colombia, confidentiality of data reported by individual persons and entities is guaranteed under provisions in the Constitution (article 15) and articles 18 and 54 of the Law of the Bank of the Republic. The disclosure by officials of confidential information as well as information that is pending publication is prohibited. In addition, adequate penalties are in place for any disclosure. Article 326 of the Organic Law of the Financial System states the rules of confidentiality of data reported by financial entities.

Official statistics are often produced from data collected by National Statistical Offices and from data collected from administrative authorities. Difficulties may arise with the supply of the administrative data, especially when administrative agencies have to manage their own confidentiality issues (ex. National Taxes and Customs Directorate). Unless there is a specific provision in legislation or a protocol, the National Statistical Office should not disseminate individual data from administrative sources.

If allowed by law, informed consent would be appropriate in a situation where the publication of aggregates allow users to access information on a single sample unit, person or business, which is part of this aggregate. The current legislation does not refer explicitly to disclosure with consent and it could be deduce that a tacit agreement is obtained from respondents when they provide individual information. However, transparency could be improved if provisions on explicit permission by physical or legal units for the disclosure of identifiable individual data were explicit in statistical law.

***Do staff members of the statistical authority sign legal confidentiality commitments upon appointment?***

Any person from DANE competent to access personal and business data signs a legal pledge adhering to the confidentiality of all personal data. This commitment also concerns their activity once they have left the organisation, as stated in article 4 of resolution 1581 (2012) and article 4 of Statutory Act 1266 (2008).

***Are substantial penalties prescribed for any wilful breaches of statistical confidentiality?***

As described above, the function of the Superintendency of Industry and Commerce, as defined in the Resolution 1581 (2012), is to ensure the compliance with legislation in the domain of the protection of personal data. Articles 23 and 24 establish the mandate to impose pecuniary penalties (up to equivalent of two thousands monthly legal minimum wage), to suspend activities up to six months, to temporary close operations related to the treatment of confidential data, and to launch administrative investigations. The Resolution 1581 complements the paragraph 21 in chapter III of Law 734 (2002), which establishes "very severe penalties for persons giving access to or revealing case papers, documents or files to unauthorized persons".

## 18. Processes and procedures regarding confidentiality

***Are written instructions and guidelines provided on the protection of statistical confidentiality in the production and dissemination processes?***

DANE has implemented a procedure of identifying its sensitive indicators and establishing that all DANE staff responsible for the management of such information must sign a confidentiality commitment, agreeing not to disclose statistical information, even after leaving the organisation (article 4 of resolution 1581 (2012) and article 4 of Statutory Act 1266 (2008)).

DANE informs respondents to statistical surveys and censuses by attaching the following note in all surveys: "the data requested by DANE in this form are strictly confidential. In no circumstances, do they have fiscal purposes, nor can they be used as judicial evidence". The Secretariat therefore consider that while there is a trade-off between being transparent on the procedures and overwhelming respondents with practical information, they should also be informed how confidentiality will be protected.

## 19. Technical infrastructure

Legal arrangements have to be complemented with administrative and technical measures to regulate access to individual data and to ensure that individual data cannot be disclosed. Such arrangements should be transparent in order to increase public confidence that the use of micro-data is appropriate.

***Are physical and technological provisions in place to protect the security and integrity of statistical databases?***

A number of techniques are used to limit the risk of disclosure. Data sets are made available in a secure physical and computing environment (data laboratory) to prevent unauthorised access to micro-data. For reason of security, this infrastructure is physically disconnected from DANE's production

environment. Visitors have only access to micro-data they need for their specific research. Statistical outputs generated in the data laboratory are checked to protect against disclosure risk. Finally, all papers and reports produced based on data laboratory research are checked prior to publication. The process is described in detail in a note in Spanish available on DANE's website[31].

### 20. Policy on access to micro-data

As described above, the resolution 1503 (2011) gives authority to the Committee for the Assurance of Statistical Confidentiality to implement relevant rules and policies as regards the management of confidential information and access to micro-data. The resolution contains the provision that any statistical information held by a public organisation is public and must be surrendered upon request, without any contract or agreement, nor any justification. It has authority for the design of practices to prevent disclosure of individual information.

According to the resolution 173 adopted in 2008, DANE implemented a very effective internal policy of free access to all valid statistical information, including micro-data. Anonymised data from social surveys are available to all free of charge on the web site of DANE in very reasonable delay. DANE's policy to protect confidentiality of information is based on the aggregation of activities which, given their specialized nature, are unique and easily identifiable, with a neighbouring classification. Cases of aggregation occur most often when data are published at the regional level. This process of anonymisation ensures that statistical data may not be published or disclosed with an express reference to the persons and entities directly or indirectly involved.

***Is provision made to allow external user access to micro-data for research purposes?***

Access to micro-data for statistical purpose is governed by Resolution 1503 (2011) and is implemented in accordance with DANE's *Protocol for Accessing Anonymised Micro-data*, released by the Division of Regulation, Planning and Standardisation (DIRPEN) of DANE in November 2011. It specifically provides for authority to DANE to allow user access to anonymised micro-data from official statistics for statistical purpose and grants three types of access to micro-data: via internet for public use files, via a data laboratory, or via contract/license (data are made available only to a limited number of researchers).

***Are there strict protocols that apply to external users accessing statistical micro-data for research purposes?***

The dissemination of micro-data and sensitive tables (as regards statistical confidentiality) to researchers is organized through the activities of the Committee for the Assurance of Statistical Confidentiality which advises the Director-General on compliance with the system of rules and procedures related to the dissemination of statistically protected micro-data to researchers, and the use of software for the statistical protection of data.

Micro-data are available on DANE's website through the Anonymised Micro-data of Public Use, through the National Data Archive (ANDA) developed by the International household Survey (IHSN). Public use files with Anonymised micro-data are accessible free of charge from internet under request by researchers from public services, universities and educational centres. Basic instructions for researchers are available concerning the access and the use of statistically protected micro-data to enable selected entities to obtain statistically protected micro-data. These include registered research institutions, registered researchers, and the researchers from government agencies. The right of researchers to obtain statistically

[31] http://www.dane.gov.co/files/sen/regulacion/protocolo/PMA.pdf

protected micro-data is not absolute. To avoid manipulation of information and protect its confidentiality, entry passwords are assigned to master files which can only be operated by the researcher in charge of the project and by the research coordinator. The Committee for the Assurance of Statistical Confidentiality will then ensure that the databases are treated with relevant equipment and that the request complies with all the requirements of statistical confidentiality.

The procedure for requesting and downloading these data requires acquiring a license from DANE through the completion of a formal "request of access to micro-data" including basic information, e-mail address and description of the project. User accounts are then activated and a link is sent to researchers. Then they are able to download the micro-data and metadata without any restriction. This is done ensuring that the databases are carefully treated and comply with all the requirements of statistical confidentiality. Researchers are invited to share the results with DANE.

Accessing the data laboratory also requires acquiring a license from DANE. Then, the researchers are able to access the data laboratory under control. For security reasons, this infrastructure is physically disconnected from DANE's production environment and visitors have only access to micro-data they need for their specific research. Statistical outputs generated in the data laboratory are checked to protect against disclosure risk. Finally, all papers and reports produced based on data laboratory research are checked prior to publication. The process is described in detail in a note in Spanish available on DANE's website[32]. The number of visitors of the data laboratory is increasing and 1513 users have been registered since September 2011.

***Overall assessment UN Principle 6***

Overall, the Colombian legislative support and practices as regards management of statistical confidentiality and access to micro-data are in compliance with the sixth UN Fundamental Principle of Official Statistics and comply with those in a number OECD member countries.

Furthermore, the Secretariat notes that the protection of statistical confidentiality has been continuously improved over the recent years through improving legislation, procedures and through technological developments. The Secretariat also notes that the draft new Article 50 reinforces the importance of the management of statistical confidentiality and micro-data and encourages its implementation.

**Box 7. UN Principle 7**

The laws, regulations and measures under which the statistical systems operate are to be made public.

In order to maintain trust and credibility in the National Statistical System and in the information it produces, this principle encourages the implementation of transparency and openness in all production phases of official statistics.

We assessed whether laws and regulations are accessible to the public with the absence of financial and bureaucratic impediments; whether methods and procedures for collection, processing, storage, presentation and quality framework of statistics are made public; whether recruitment process and its legal basis are published and whether work programmes and their updates are announced.

[32] http://www.dane.gov.co/dane/files/sen/regulacion/protocolo/PMA.pdf

## 21. Public availability of laws, regulations and measures

***Are statistical laws and regulations available?***

The written Constitution of the Republic of Colombia is the source and origin of all Colombian laws and it overrides them all. Act 4 of 1913 and Act 489 of 1998 establish that every law has to be published in the Official Journal of the Republic of Colombia. In accordance with this legislation, the law, decrees and resolution related to statistics and the Colombian statistical system are published in the Official Journal. All the statistical legal texts are available in Spanish on DANE's website.

The BR website includes extracts of its law in Spanish and in English, which inform the public about the Bank's legal status and structure as well as the composition of its Board of Directors and Presidency. However, any regulations have not been published in English yet.

The documentation related to the regulation and the procedures for accessing information produced by DANE are published in the Documentary System on DANE's website.

***Are statistical work programs and periodic reports describing progress made available?***

The National Development Plan is quadrennial (the current plan "Prosperity for All" covers the period 2011-2014). In order to strengthen the national statistical system, the National Development Plan adopts and implements the National Statistical Plan that will prioritize statistical activities by all national producers of statistics.

The National Statistical Plan is a key instrument for the definition of goals, strategies and actions for the production and dissemination of official statistics, as well as for the statistical coordination across the national statistical system. DANE is responsible for its preparation and implementation. It includes methodologies and tools for estimating resources in the planning of 280 statistical activities, of which 62 are produced by DANE, of different statistical domains (economic, social, and environmental), and at different institutional levels (territorial, sectoral, institutional and national). The National Statistical Plan is available in Spanish and in English on DANE's Internet website[33].

An inventory of statistical operations is also available on DANE's website[34]. A statistical operation is defined by resolution 1503 of 2011 DANE as the set of processes and activities based on the systematic collection of data, and leading to the production of aggregate results. Information on statistical operations includes the name of the entity responsible for the statistical operation, reference metadata, collection, production and dissemination, accessibility, etc. The inventory is updated continuously.

No specific information is available on this point on BR's website.

***Are quality guidelines available?***

Quality frameworks and procedures of evaluation and quality certification are publicly available in the "Statistics Quality" section of the Spanish version of DANE's website.

The regulatory basis with regard to the recruitment process and its criterions are articulated in several legal documents in a comprehensive and proper manner. Summons and a "Guide of contracting"

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33 http://www.dane.gov.co/files/planificacion/planificacion/metodologia/ingles/NationalStatisticalPlan_Final.pdf

34 https://www.dane.gov.co/index.php/statistical-planning/inventory-of-statistical-operations?lang=es

describing the guidelines and process of DANE's recruitment are made public in the "Summons and Contracting" section of the Spanish version of DANE's website.

***Overall assessment UN Principle 7***

Colombia fulfils principle 7. DANE's website is structured and organized properly, in such way that it enables citizens to access relevant information on legal statistical texts.

**Box 8. UN Principle 8**

Co-ordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

In Colombia, responsibilities for producing macro-economic statistics are clearly defined and DANE is producing a large part of official statistics. However, many government entities and the Central Bank, regardless their legal status (Ministries, administrative departments, special entities, etc.), have legal basis for collecting, compiling, and disseminating official statistics. For instance, the Central Bank compiles financial statistics, monetary and credit aggregates, daily financial indicators, interest rates, balance of payments, external debt, direct investment, international reserves, real exchange rate index, among others[35]. In addition, other central authorities, which are not considered as statistical authorities, provide administrative statistics which are widely used by DANE in producing official statistics. In this context, the co-ordination of the Colombian official statistical system is an important challenge for statistical authorities.

Following the recommendations of the Report on the Observance of Standards and Codes (ROSC) released by the IMF in 2006, a number of legislations and processes were adopted to improve the organisation of the Colombian National Statistical System. Significant progress in co-ordination and standardisation of official statistical has been observed over the recent years.

Moreover, the proposed changes to the Statistics Law further clarify the responsibilities of DANE with respect to the co-ordination of the NSS. Although the changes have not yet been presented officially to Parliament some of the relevant proposals are referenced below.

### 22. Legal or regulatory basis for co-ordination

The national statistical authority, DANE, has the responsibility to co-ordinate the statistical activities of official statistical agencies in the national statistical system to minimise duplication of effort, respondent burden and ensure the use of standard concepts. An official list of entities producing official statistics is publicly available. These entities are regularly assessed on the basis of the national Code of Practice.

Coordination is included in the National Statistical Plan elaborated and coordinated by DANE according to Article 1 of Decree 262 of 2004: "DANE aims at ensuring the production, availability and quality of the strategic statistical information, and directing, planning, implementing, co-ordinating, standardizing and evaluating the production and dissemination of basic official information".

According to Article 2 of Decree 262 of 2004, DANE has to *"Adopt, adapt and make official the nomenclatures and classifications used in the country for the production and use of basic official statistics, as well as to advise on the implementation and use of them, with the aim to improve the quality of*

[35] See http://www.banrep.gov.co/es/catalogo-estadisticas- publicadas.

*statistical activities; to seek national and international comparability; and to work towards a statistical harmonization."*

The co-ordination role of DANE was reinforced in 2011 by Article 1 of Decree 4178, which empowers DANE to coordinate planning and standardization of statistics and to certify good practices in the statistical production of other government entities. This coordination role will be further strengthened by the new Article 160 of the National Development Plan.

In addition, the Decree 3851 of 2006 establishes a certificate of quality for integration of data into the Colombian statistical infrastructure, defined as an administrative official system, based on standardised architecture and classification. Within DANE, DIRPEN is responsible for the co-ordination.

In Colombia government bodies generate their own plans, budgets and goals in accordance with Act 1450 of 2011 (the National Development Plan 2011-2014) and Act 152 of 1994 (The Organic Law of the Development Plan).

Article 20 of Decree 3167 of 1968 states that no official organization can publish general statistics, such as results of surveys, or price statistics, foreign trade, migration, national accounts and similar, without prior authorisation from DANE.

### 23. Processes and procedures for co-ordination

The coordination is ensured by the division DIRPEN within DANE taking into account planning, regulation and quality of statistical activities.

- Statistical planning activities are undertaken and co-ordinated by DANE within the National Statistical Plan which covers DANE and other relevant public sector institutions that compile official statistics within the decentralised Colombian system. They include the definition of planning guidelines for the production of statistics, through participation of producers and users of statistics, the development and organisation of the statistical information produced at the national, sectoral and territorial levels. The plan contributes to the efficient use of financial, technological and human resources oriented towards the statistical activity; to strengthen the use of administrative records for statistical use and to co-ordinate the production and management of statistical information.
- Regulation activities cover the production of rules and regulations applicable to the processes, procedures, methods and techniques for the development of data collection, statistical design, treatment, analysis, updating processes, integration, compilation and storage of statistical information and dissemination (DANE web site and Colombietad[36]).
- DANE is also responsible for the improvement of quality of statistics, through the implementation of the Statistical Quality Assurance and the National Code of Good Practices for Official Statistics. DANE carries out activities of evaluation and certification of the quality of statistical processes and promotes quality by implementing processes in compliance with quality requirements at each stage of the production process, by developing a statistical culture in Colombian society, and by co-ordinating statistical training activities.

**Development of working groups for implementing standards and good practices.**

[36] http://www.colombiestad.gov.co/

***Are there organisational arrangements to co-ordinate data collection for statistics at the national level?***

Co-ordination is included in the National Statistical Plan for data collection, as described above.

***Are procedures in place to ensure that standard concepts, definitions and classifications are consistently applied by different statistical authorities in the national statistical system?***

DANE generates rules for co-ordination through the statistical regulations applicable to statistical processes, procedures and methods. The regulations establish the standard system of nomenclatures and classifications, its composition and procedures for maintenance, the standard concepts, documentation for the methodologies of statistical operations, protocols through the National Code of Good Practices for Official Statistics, and metadata.

In addition, the certification and evaluation of all Colombian statistical production processes are carried out by the DIRPEN division at DANE.

***Is data sharing between statistical authorities actively undertaken to minimise respondent burden and ensure consistency of statistics?***

Following the recommendations of the IMF Report on the Observance of Standards and Codes (ROSC) a number of actions were taken to extend data sharing between statistical authorities. According to the relevant Decree, DANE has to publish statistical information and to organise flows of information with other agencies. As user, DANE receives information with variables previously agreed upon and provides this information to users in statistical databases. However, as mentioned in Principle 5, further improvement is still required regarding the access to administrative data as well as their use in the compilation of official statistics.

There is an agreement of a formal communication that supports the exchanges and accompanies delivery of data. Dissemination is used by DANE to manage the co-ordination among statistical agencies within the National Statistical System. DIRPEN is responsible for the design of a strategy for the dissemination of DANE statistical information. Nevertheless, the other entities that are part of the NSS are autonomous in the definition and implementation of dissemination strategies. Thus, the implementation of dissemination media differs for each statistical operation and the entity that produces it.

Confidentiality agreements are subscribed for management of databases (Cf. Principle 6).

The Central Bank may request information from other entities in order to conduct studies on monetary matters, pledging to maintain the confidentiality. The Colombian Central Bank is not part of the Branches of Government (Executive, Legislative, Judicial), nor the control or supervision bodies nor the electoral power, but it is a State entity, of a special and unique nature. Its relationship with other entities is directly with the Ministry of Finance, since its Minister also chairs the Board of Directors of the Bank and determines their actions according to the Government's Macroeconomic program. Some agreements have been signed between the Central Bank and DANE, an example of this mutual cooperation is the “Regional Economic Situation Report” in the context of Regulation, Planning, Standardization and Normalization Management in order to produce short-term economic information, mainly using information produced or processed at both institutions. However, the coordination between DANE and the BR needs to be strengthened. The sharing of individual data returns from entities surveyed by the BR would help consolidating the national accounts produced by DANE. Also coordination in the field of international trade in services statistics is lacking.

DANE has concluded agreements with regional public agencies for data collection and compilation of official statistics, as well as in the implementation of standards and best practices that govern the statistical information.

***Overall assessment UN Principle 8***

DANE is the main producer of official statistics in Colombia and is clearly mandated by legislation for the co-ordination of the Colombian National Statistical System. Over the recent years, DANE developed and implemented appropriate tools for performing its co-ordination function efficiently. Some of these tools, such as the National Code of Good Practices for Official Statistics, or the certification of statistical processes, appear to be particularly innovative. Further evidence would be useful in some areas where the coordination appears to be more difficult, such as the definition and the implementation of a dissemination strategy (see principle 1).

Within DANE, DIRPEN is in charge of the co-ordination of statistics. However, as already mentioned in principle 5, this role not only concerns statistics from DANE but also the overall National Statistical System. Coordination between DANE and the BR would need to be strengthened.

Finally, the Article 160 of the National Development Plan reinforces the co-ordination and regulation roles of the National Statistical Authority, by introducing the binding constraint for all producers of statistics to implement all the statistical guidelines and standards set forth by DANE, including the National Code of Good Practices for Official Statistics.

**Box 9. UN Principle 9**

The use by statistical agencies in each country, of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

See other parts of the Peer review report, in particular Chapter 2, Statistical Infrastructure.

**Box 10. UN Principle 10**

Bilateral and multilateral co-operation in statistics contributes to the improvement of systems of official statistics in all countries.

International co-operation contributes in strengthening statistical infrastructures through exchanges of best statistical practices, methods, training and guidelines, technical assistance, etc. Furthermore, there is a clear interdependence between maintaining and strengthening quality and relevance of national statistics and the statistical processes at the international level. The international statistical co-operation looks towards the achievement of common goals and the development of internationally comparable statistics.

Co-operation activities in statistics are organised through bilateral or regional programs, or supported by international statistical organisations. Statistical technical co-operation can be achieved by means of training sessions, forums where experiences and best practices are shared, technical co-operation and statistical assistance on a specific statistical subject, etc.

The following section on this principle provides an overview of international co-operation projects where Colombia has been engaged, examples of regional co-operation and bilateral co-operation programs including Colombia.

## 24. Co-operation with international statistical organisations

Colombian statistical entities have co-operation agreements with international agencies, commissions and programs, working groups and tasks force. Colombia is involved (or has been involved) in the following groups at the United Nations (UN) with different roles:

- Member the UN Statistical Commission from 2009 to 2013 for the revision of the Preamble to the Fundamental Principles of Official Statistics (adopted in 2013);
- Member of the Washington Group on Disability Statistics;
- Member of the Committee of Experts on Environmental – Economic Accounting.
- Participant to the worldwide consultation for the International Merchandise Trade Statistics compilers manual, revision 1 (draft version).

Besides its involvement in UN statistical activities, Colombia contributes to the International Comparison Program (ICP). In addition, DANE, the National Department Planning of Colombia (DNP) and statistical units in several ministries cooperate with the World Bank in the Accelerated Data Program (ADP)[37]. DANE's employees receive the opportunity to learn and share experiences with colleagues from international organisations such as:

- The United Nations: UN Development Program, UN Population Fund, Economic Commission for Latin America and the Caribbean, Latin America and the Caribbean Demography Centre.
- The International Labour Organization (ILO), through an international agreement with the aim of developing research on the fight against child labour.
- The World Health Organization (WHO), together with the Pan-American Health Organization has supported the training and the monitoring of "The Vital Statistics and Civil Record System."
- The International Monetary Fund (IMF) has given assistance and consulting to Colombian statistical authority in the domain of National accounts, government finance, monetary statistics, and balance of payments statistics.

In addition, Colombia is member of the Expert Group on National Quality Assurance Frameworks[38] and participates in the Andean Committee of Statistics at the Andean Community of Nations.

Colombian government agencies are invited as participants or as observers in over 9 OECD committees, including the CSSP, working parties or expert groups.

Finally, the National Code of Good Practices for Official Statistics recommends to "establish co-operation mechanisms with international experts and agencies in order to improve and strengthen methods, concepts and procedures used in the statistical process."

## 25. Regional co-operation in statistics

Colombia is also involved in regional groups and local statistical committees. In particular Colombia is member of the Statistical Conference of the Americas, which is a subsidiary body of the Economic Commission for Latin America and the Caribbean (ECLAC) working on the progress of the statistical

[37] http://adp.ihsn.org/node/1511

[38] http://unstats.un.org/unsd/dnss/QualityNQAF/expert_group.aspx

policies and activities in Latin America. DANE is particularly involved in the following working groups where Colombia acts as:

- Coordinator of the Institutional Strengthening Working Group responsible for the elaboration and the implementation of the Code of Good Practice in Statistics in Latin America and the Caribbean[39].
- Coordinator, with Chile, of the working group on labour market indicators, where Colombia is responsible for the decent work indicators.
- Coordinator, with Uruguay, of the working group on poverty statistics.
- Member of working groups on national accounts, environmental statistics, gender statistics, Information and Communication Technologies (ICT), and working group for the monitoring of progress towards the Millennium Development Goals.

**26. Bilateral co-operation in statistics**

Bi-lateral co-operation between Colombia and individual countries in the field of statistics has been extensive and fruitful over the recent years:

- In April 2011, DANE and Mexican National Institute of Statistics and Geography (INEGI) ratified an agreement with the purpose of designing, planning and developing activities and projects of cooperation and exchange of experience and statistical information. Some areas of cooperation are management of the statistical research framework, National Accounts, sampling frame, teaching of academic courses, collection and management of administrative records and design of agricultural surveys. Following the Peer review mission, INEGI has accepted the principle of sharing its experience with Colombia in order to help developing capital stock measures in Colombian National Accounts
- Colombian statistical authorities also have co-operation agreements with Spain (with the Training Centre of statisticians from developing countries); Canada; Chile; France and Korea.
- In September 2013, DANE signed a cooperation agreement with the Chilean National Statistical Office (INE), with the aim of creating an effective and long-term co-operation on the Quality Assurance of Statistical Information.
- In addition, DANE has recruited internships from Panama and Peru in the context of regional co-operation agreements for the development of Quarterly National Accounts.
- Colombian statistical authority also advises Guatemala on the Consumer Price Index's methodology.
- In the past, DANE received assistance from international experts, as for instance from Canada on the revision of CPI in 1998, or from ECLAC and the World Bank on poverty statistics.

***Overall assessment UN Principle 10***

International co-operation is an integral part of the work of DANE. Colombia benefits from extensive bilateral consultations, working groups, expert meetings, and contributes to strengthen international standards by its involvement in international organisations. Over the recent years, the engagement of Colombia in international co-operation contributed to strengthen the Colombian statistical system.

[39] http://www.eclac.cl/publicaciones/xml/3/44893/LCL3384i.pdf and http://www.dane.gov.co/files/noticias/BuenasPracticas_en.pdf

Colombia complies with the tenth UN Fundamental Principle and the Secretariat is looking forward to further participation of Colombia in OECD statistical bodies.

## ANNEX 1. DRAFT ARTICLES FOR THE COLOMBIAN NATIONAL DEVELOPMENT PLAN

*Warning: Unofficial translation*

**Article 160. NATIONAL STATISTICAL SYSTEM.** The National Statistical System, hereinafter NSS is hereby created, with the purpose of providing the society and the state with national and territorial official statistics of quality, in a coordinated manner between the producing entities and with common language and procedures, respectful of international statistical standards, which contribute to the transparency, relevance, interoperability, access, timeliness and consistency of the statistics produced in the country.

The NSS shall consist of the entities that produce and disseminate statistics or are responsible for administrative records, as follows:

1. Belonging to the branches of government, at all levels of the state structure, whether central or decentralized either by services or territorially; at the national, departmental, municipal and district levels.
2. The state bodies, agencies or entities that are independent or autonomous of control.
3. The legal persons, public or private, who provide public services.
4. Any legal person or legal person division performing public service or of public authority.
5. Legal persons that own produce or administer administrative records in the development of their corporate purpose or mission, which are inputs necessary for the production of official statistics.

The National Administrative Department of Statistics (DANE) shall be the lead agency and therefore the coordinator and regulator of the NSS. DANE shall establish the conditions and characteristics to be met by official statistics in Colombia, respecting the international standards used by the entities producing statistics. Such conditions and characteristics shall be recorded in the National Statistical Plan, which shall be agreed upon by all the members of the NSS.

Paragraph 1: The members of the NSS shall implement the guidelines, best practices, standards and technical standards set forth by DANE supported on international benchmarks, for the production and dissemination of official statistics and for the statistical use of administrative records. In order to ensure the quality of official statistics, in accordance with the regulations issued by the national government, the members of the NSS shall meet the obligations deriving from the assessments and statistical quality requirements established by DANE, or from the assessments performed by international organizations.

Paragraph 2: For the production and dissemination of official statistics, and in compliance with Act 1266 of 2008 and Act 1712 of 2014, the members of the NSS shall make available to DANE, immediately and free of charge, the full databases of the administrative records, which are requested by DANE, for which effect the statutory reserve shall not be effective. DANE shall guarantee the reserve and confidentiality of the information in accordance with Article 5 of Act 79 of 1993.

Paragraph 3: The NSS shall have a five-year National Statistical Plan that shall be formulated by DANE jointly with all the members of the NSS, and subject to approval by the National Advisory Council for Statistics, referred to in Paragraph 5 of this Article. The strategies and actions set forth in the National Statistical Plan shall be of mandatory compliance by the members of the NSS.

Paragraph 4: With no prejudice to what was established in Paragraph 2 of this Article and in order to contribute to the strengthening of the quality and consistency of official statistics, the members of the NSS shall exchange statistical information, up to the level of microdata, free of charge and in a timely manner, according to the regulations issued by the national government for that effect. The requirements of exchange of information up to the level of microdata shall be agreed upon in the National Statistical Plan or by means of the National Advisory Council for Statistics referred to in this Article. The entities that take part in the exchange of information shall safeguard the confidentiality and privacy thereof.

Paragraph 5: The National Advisory Council for Statistics is hereby created as a body of an advisory nature, with the purpose of promoting and facilitating the coordination of the NSS. The National Government shall regulate the composition and operation of this Council in which the state bodies, agencies or entities, that are independent or autonomous of control should be represented

**Article 161: CENSUS**. The National Administrative Department of Statistics - DANE - will conduct the XVIII National Population and VII Housing Census in the year 2016.

An inter-census count of population will be carried out five (5) years after the population and housing census was conducted for the monitoring and follow-up of the demographic dynamics and the update and maintenance of both the National Geo-statistical Framework and the population projections.

*GLOSSARY*

**Article 1 of Decree Law 4178 of 2011:** This Law reassigns functions to the National Administrative Department of Statistics – DANE, regarding the planning, standardization and certification of Statistics. **Article 1** Reassign to the National Administrative Department of Statistics the planning, coordination and standardization of statistics as well as the certification of good practices in statistical production processes developed by the entities that structure the national public administration.

**Article 5 of Law 79 of 1993:** Regulates the implementation of Population and Housing Censuses in the country. **Article 5.** All natural or legal persons, of any kind or nature, living or residing in the country, are required to provide requested data in the development of Censuses and Surveys to the National Administrative Department of Statistics – DANE.

**Colombian Data Infrastructure:** the Colombian Data Infrastructure – CDI, is an instrument of the National Statistical System – NSS, which was developed by DANE to integrate and store strategic statistical information that has been harmonized and standardized for comparative analysis in time and space.

The CDI includes activities of harmonization that enable the coordination and standardization of statistical nomenclatures and classifications, the development of guidelines on standards for the interoperability between strategic statistical operations of the NSS, and allows the collection of results and development of synthesis.

**Council of Ministers:** A Council of Ministers or Cabinet is, in an institutional sense, the executive branch of a government, and appoints all Ministers and its President, or Prime Minister; it comprises the executive branch of a state and works as a collegiate body. Nonetheless, the composition and functions of the Cabinet are different in each country.

**Director of DANE:** Head of the National Statistical Authority.

**Law 1450 of 2010:** Law by which the National Development Plan 2010-2014 is issued.

**Minimum Monthly Legal Wage:** For the year 2012, the minimum monthly legal wage in Colombia is COP $566.700 or US $314,8 (using an exchange rate of $ 1.800 Colombian pesos per US dollar).

**Ministry of Information and Communications Technology**: The Ministry of Information and Communications Technology (ICT) according to Law 1341, is the entity responsible for designing, adopting and promoting policies, plans, programs and projects in the field of information and communications technology.

The Ministry of ICT is also responsible for increasing and facilitating access to the information and communications technologies and its benefits for every person in the country.

Source: http://www.mintic.gov.co/index.php/quienes

**National Administrative Department of Statistics (DANE for its acronym in Spanish):** Entity responsible for planning, collecting, processing, analyzing and disseminating official statistics of Colombia.

**National Development Plan 2011-2014:** the National Development Plan 2010-2014 called "Prosperity for All", which was is issued by Law 1450 of 2010, aims to consolidate inland security with the goal of achieving peace, to take a big leap in social progress, to achieve regional economic dynamism

enabling sustainable development and growth, to increase formal employment and reduce poverty and ultimately, to achieve greater prosperity for all people.

**National Statistical Authority:** In Colombia the statistical authority is the National Administrative Department of Statistics (DANE for its acronym in Spanish).

**National Statistical Inventory:** Comprises a data repository for integration thereof, models and consultation systems of statistical information with definitions, classifications, methods, data sources, indicators and other necessary documentation for its complete understanding. This instrument is being developed by gradual increments and has implanted during its first phase the information of the 2005 Census, continuing in its next phase with other population and housing censuses.

Source: https://www.dane.gov.co/index.php/statistical-planning/inventory-of-statistical-operations?lang=es

**Statistical Plan:** permanent technical instrument that identifies strategic statistical production and statistical information requirements to make decisions and to facilitate monitoring and evaluation of policies, plans and programs for the development of the country; the plan contributes to the efficient use of financial, technological and human resources available and needed for the statistical activities of the country. There are three kinds of Statistical Plans: National, Sectorial and Territorial.

**Sector of the Public Administration:** The public sector is the set of administrative agencies by which the State complies, or enforces policies expressed in the legislation of the country.

# ANNEX 2: PLAN FOR TRANSMISSION VIA EXCEL/SDMX

| STD subject | Frequency | Data submission for the accession review | | | Required next submission | | | Future transmission format (SDMX/Excel/webquery) |
|---|---|---|---|---|---|---|---|---|
| | | Source | date | format | source | expected date for the next submission | format (Excel/SDMX/online database) | |
| National Accounts | Annual | DANE | 03-03-2013 | Excel | DANE | May 2015 (2014Y) | Excel | Excel until 2018 pending adherence to SNA2008 and ISIC Recv.4 |
| | Quarterly | DANE | 27-06-2013 | Excel | DANE | 19-06-2014 (2014Q01) | Excel | Excel until 2018 pending adherence to SNA2008 and ISIC Recv.4 |
| Financial Accounts Flows and Balance Sheets | Annual | BR | 14-04-2014 | Excel | BR | Nov. 2014 (incl. 2013 data) | Excel | Excel until 2018 pending adherence to SNA2008 and ISIC Recv.4 |
| | Quarterly | BR | | | BR | 2015? | Excel | Excel until 2018 pending adherence to SNA2008 and ISIC Recv.4 |
| Households Assets and Liabilities | Annual | BR | | | BR | 01-11-2014 (without details) | Excel | Excel |
| Institutional Inverstors Assets | Annual | BR | | | BR | 2016 | Excel | Excel |
| Public Sector Debt | Quarterly | Ministry of Finance | 23-07-2013 | Excel | Ministry of Finance | 21-07-2014 (Q1 2014 data) | Excel | Excel |
| Consumer Price Indices (CPI) | Monthly | DANE | 22-07-2013 | Excel | DANE | As soon as they are published by DANE | SDMX[2] | SDMX with STES DSD already implemented |
| Producer Price Indices (PPI) | Monthly | DANE | 22-07-2013 | Excel | DANE | Sep-14 | Excel | SDMX with STES DSD (testing to be started in Dec 2014, in parallel with alternative transmission) |
| Structural Statistics for Industry and Services (SSIS) | Annual | DANE | 22-07-2013 | Excel | DANE | 15-10-2014 | Excel | Excel, no DSD available |
| Business Statistics by Size Class (BSC) | Annual | DANE | 22-07-2013 | Excel | DANE | 15-10-2014 | Excel | Excel, no DSD available |
| Business Demography (BD) | Annual | DANE | 22-07-2013 | Excel | DANE | June 2014 | Excel | Excel, no DSD available |
| International Trade in Goods (customs based) | Annual | UN | 09-07-2013 | Excel | UN-COMTRADE | | | No direct data collection from DANE |
| | Monthly (MEI) | DANE | 09-07-2013 | Excel | DANE | Week 23 2014 (for Mar/2014) | SDMX | SDMX with STES DSD could be used until the IMTS DSD is ready. |
| International Trade in Services Statistics | Annual | BR | 15-07-2013 | Excel | BR | Jan 2015 (for 2013) to be confirmed | SDMX | SDMX with BOP DSD (testing to be started this summer, in parallel with alternative transmission if necessary) |
| Balance of Payments statistics | Quarterly | BR | 09-07-2013 | Excel | BR | End July 2014 (Q1/2014) in BPM6 | Excel | SDMX with BOP DSD (testing to be started this summer, in parallel with alternative transmission) |
| Annual Labour Force and Population Statistics | Annual | DANE | 22-07-2013 | Excel | DANE | 2013 data due in March 2015 | Excel | Excel |
| Short-term labour statistics | Monthly | DANE | 22-07-2013 | Excel | DANE | ASAP | Excel | SDMX with STES DSD (testing to be started, in parallel with alternative transmission) |
| Labour compensation statistics | Monthly | BR | 28-04-2014 | Online db | DANE | 02-06-2014[3] | Online db | SDMX with STES DSD (testing to be started ASAP, in parallel with alternative transmission) |
| Monetary aggregates | Monthly | BR | 25-07-2013 | Excel | BR | ASAP[1] | Web query (Excel files) | SDMX with STES DSD (testing to be started ASAP, in parallel with alternative transmission) |
| Interest rates[4] | Monthly | BR | 25-07-2013 | Excel | BR | ASAP | Excel | SDMX with STES DSD (testing to be started ASAP, in parallel with alternative transmission) |
| Share price index[4] | Monthly | BR | 25-07-2013 | Excel | BR | ASAP | Excel | SDMX with STES DSD (testing to be started, in parallel with alternative transmission) |
| Exchange rates | Monthly | BR | 25-07-2013 | Excel | IMF | | | No direct data collection from Colombia |
| Index of production and demand | Monthly | DANE | 25-07-2013 | Web query (Excel files) | DANE | 02-06-2014 | Web query (Excel files) | SDMX with STES DSD (testing to be started only in 2015, in parallel with alternative transmission) |
| Sales | Monthly | DANE | 25-07-2013 | Web query (Excel files) | DANE | 02-06-2014 | Web query (Excel files) | SDMX with STES DSD (testing to be started only in 2015, in parallel with alternative transmission) |
| Orders | Monthly | DANE | 25-07-2013 | Web query (Excel files) | DANE | 02-06-2014 | Web query (Excel files) | SDMX with STES DSD (testing to be started only in 2015, in parallel with alternative transmission) |
| Business tendency surveys | Monthly | Fedesarrollo | 09-07-2013 | Excel | Fedesarrollo | n.a.[5] | Excel | Excel |
| Consumer opinion surveys | Monthly | Fedesarrollo | 09-07-2013 | Excel | Fedesarrollo | n.a.[5] | Excel | Excel |

## CHAPTER 2. STATISTICAL INFRASTRUCTURE

### Background

This chapter presents the review of the main statistical infrastructure programs. It covers the following programs:

- Population and Housing Census, Vital statistics
- Agricultural Census
- Business Register
- Classifications
- Labour Force survey

DANE has responsibility for all these programs.

### 1. Population and housing census, vital statistics

DCD (Census and Demography Directorate) is the division responsible for the National Population and Housing Census in DANE. Other activities of this division are the compilation and dissemination of official statistics pertaining to Births and Deaths of the country, which are part of the "Civil Registration and Vital Statistics System", the estimation and population projections and the improvement of migration statistics using the Census and various administrative sources.

#### *Background*

Colombia proceeded to its last Population and Housing Census in 2005. This was the XVII Population census (10th in the latest century) and the VI Housing census. The coverage of the Census was all population in private households, all population in special accommodation places, and street dwellers. The objective of the Census went beyond a simple enumeration of population, with systematic information collected on dwellings, economic activity, and socio-economic variables. A co-census special survey on dwellings was organised within the Census. The co-census survey was part of a single census operation, in which two forms were conducted, one basic for the whole universe, and another extended form, conducted by random sampling and aimed at all private households.

The Law n° 79 of 1993 regulates the conduct of the population and household censuses[40]. Article 8 of Act 2 of 1962 establishes that, as of the year 1970, the Population, Buildings, Housing and Agricultural Censuses will have a ten year frequency. Article 5 establishes a legal obligation for natural persons and legal entities to respond to statistical surveys. The general Census of 2005 was conducted under Decree 1100 of 2005. A special CONPES (Economic and Social National Council) document n°3329 officially described the execution of the Census.

[40] It is to be noted that the Parliament has to approve the Census before it is published.

***Coverage***

Despite the recognised political and socio-demographic complexity of Colombia, the 2005 Census has been a great success with major improvements from the previous Censuses. 10,570, 899 households and 41, 468,384 individuals were surveyed. The aim of the Census was to be exhaustive as regards its geographical coverage. DANE recognises that, in the end, some geographical areas were not surveyed due to difficulties of access (in particular security of surveyors) or contingencies of information transfer. However, via an innovative post Census analysis, DANE estimates non coverage of population as limited to 3.7% (compared to 11.7% in the 1985 Census).

This innovative post Census analysis was based on demographic analysis based on several censuses. This is based on three steps: (1) estimation of a projection model demographic parameters (special fertility rate, abridged life tables, net migration) conducted using the previous Censuses of 1985, 1993; (2) simulations were carried out based on these parameters to ensure that the model estimated correctly the demographic history for the period 1985-2005; (3) the comparison of this model with the effective results of the 2005 Census allowed to estimate non coverage to 3.7% of the population.

The 2005 Census had a wide thematic coverage, including:

- Population and Housing: demographic, economic, social and cultural rights;
- Economic: economic units of industries, trade and services;
- Agricultural: agricultural land uses, livestock, fish and forestry associated with rural housing;
- Urban environment: variables related to urban development, urban land use and other issues associated with the environment.

The statistical units extended beyond people, households and dwellings to agricultural property, land and livestock activity with an occupied dwelling on that property, economic establishments, businesses and auxiliary units. The standard questionnaire for private households was composed of four modules:

- Housing (1 page). One per building/dwelling
- Household, including enumeration of individuals (3 pages). One per Household.
- Individual module (4 pages). One per person in the household.
- Information on economic activity associated to the household (3 pages; including a special module for agricultural activity)

***Compliance***

The Colombian Population and Housing Census and estimation procedures comply with the *UN Principles and Recommendations for Population and Housing Censuses, Revision 2* in most respect. Metadata are available in Spanish on the Internet website of DANE and a summary is available in English on the IMF SDDS website. The 2005 Census is compliant with the fundamental principles of universality within a defined territory, simultaneity, defined periodicity and individual enumeration. It is assumed to have covered the target population under international guidelines: *all national present in, or temporarily absent from, the country and aliens resident in the country*. The population belonging to the Colombian armed forces residing abroad was not included. Merchant seamen at sea were included. As regards displaced persons (*desplazados*), the Census included a question pertaining to the main cause of change of

place of usual residence[41]. Among the categories, the threat or risk to your life, liberty or physical integrity, caused by violence" was included. It is considered as a proxy for desplazados, but only related to the movements in the course of the last five years, with emphasis on the last if more than one displacement was made during this period[42]. Foreign armed forces, diplomatic personnel and civilian aliens temporarily in the country were excluded. A recommendation for equal treatment was enforced for Indigenous and Black communities and a special method of reaching these populations was based on the cooperation with their traditional authorities. Both allowed to greatly improve the coverage of these ethnic communities.

The resources devoted to the Census were appropriate. 37 800 persons were involved in the Census operations which lasted 360 days: 26 500 surveyors and 1200 IT engineers. The Census was based on a project organisation, covering all the phases, from consultation of users, creation of a sponsorship, elaboration of a consensual questionnaire, information of the general public (with a guarantee of confidentiality), recruitment and training of surveyors, field operations, elaboration of immediate plan-B solutions whenever necessary, validation of individual data, compilation of results, dissemination of results. The Census collection used modern technologies, with handheld devices, associated with lap-tops, and GPS geolocalisation. The use of these technologies allowed a real-time control on field operations. Paper questionnaires were used only in case of deficiencies of network systems, and were limited to 8% of the overall collection. The co-census survey on dwellings was organised via an automatically generated random sample. DANE developed a dynamic web query environment for on line dissemination of the Census. A micro anonymised data exchange system has been designed and is in the process of being put in place.

The economic activity classification used in the Census for the classification of economic activity related to the household was ISIC Rev 3 A.C (adapted to Colombia). The ICSE (status of employment) was not used. A specific classification from the Ministry of Education was used rather than the ISCED (level of education).

The general policy on dissemination of censuses defines a maximum one year period for the release of the census data. The first overall results of the Census were disseminated 6 months after the end of the field operations. The final detailed results six months later. Dissemination format included press releases, special publications, DANE's *Statistics Bulletin*, CD-ROMs, and on-line databases, with a special dynamic web query system for specific custom interrogations by users.

International guidelines recommend the organisation of Censuses every ten years. DANE is in the design and planning phase of the XVIII Population and VII Housing National Census. The 2016 Census and its budget have been approved by congress and the census operations will start in the second semester of 2016.

The 2016 Population and Housing National Census will be based on characteristics and processes that are similar to those established for the 2005 Census. In particular:

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41 Usual residence was strictly defined in the Census operations. An usual resident is a person who lives permanently or most of the time in a dwelling or in a special place of accommodation, although at the time of the interview they are absent. The following are considered usual residents: individuals absent since less than 6 months for vacation, training, business trips; travelling agents, seamen; individuals abducted regardless of time of absence; patients in hospitals or clinics regardless of the time of absence; displaced persons, regardless of the time spent at the household being interviewed; individuals temporarily detained in police posts; street dwellers.

42 The "Unique register of Victims" (UVR) is a more precise source of information for desplazados. In this information system, which is managed by the Unite for the Care and Comprehensive Repair to the Victims –UARIV–, more data of displaced population are available.

- Digital capture with mobile devices
- Selective counting targeted to specific ethnic groups
- Regular operations in extended period of up to three months
- Management and quality control at the municipal level
- Living quarters and household listing
- Enumeration area as the basic unit of census enumeration and control
- Assurance and quality control in the field

***Vital statistics***

The unit devoted to the coordination of Vital Statistics in DANE is responsible to compile, maintain and ensure the continuous improvement of the quality and coverage of Births and Deaths statistics. This information is captured online mostly by healthcare personnel throughout the country and is transmitted via web. Medical examiners of the National Institute of Forensic Science and Medicine certify deaths from external causes and registry offices the vital events that did not have contact with the healthcare sector.DANE processes, validates and subsequently disseminates it.

***Research on population register***

In order to modernize how to conduct surveys in the long term, and according to the recommendations of the Community of Andean Nations (CAN), Colombia aims at constructing, in the long term, a permanent population system that integrates different types of administrative records: population, education, housing, employment, etc. To be able to perform this permanent register an institutional process should be devised in order to ensure the support of the population to this project.

***Overall assessment of Population census in Colombia***

Colombia has demonstrated the capacity of organising appropriate Population censuses, ensuring a relevant information infrastructure system for demographic, housing and socio-economic statistics. The last population census which took place in 2005 was successful in coverage and compliant with international guidelines. The Peer review mission was impressed by the professionalism of the team in charge of the Census. In conformity with its aim to ensure that a population Census is organised every ten years, DANE is in the design and planning phase of the next Population and housing census which will take place in the second semester of 2016. DANE has received confirmation by the appropriate authorities of the allocation of the necessary budget and Article 161 of the National Development Plan 2014-2018, adopted by Congress on 5 May 2015, has confirmed it. DANE has committed that the complete methodology of the 2016 Census of Population will be available in English.

## 2. Agricultural and Livestock Census

***Background***

An Agricultural and Livestock Census is an essential statistical infrastructure program, in order to take stock of the situation of the agricultural sector and ensure the representativeness of the standard current statistical surveys for agriculture. In Colombia, the last and second agricultural Census was

performed a very long time ago, in 1970[43]. The difficult history and geography of Colombia had not allowed the organisation of a new agricultural Census for several decades. Such an operation was therefore highly needed.

In 2010, a new Agricultural and Livestock Census was foreseen when the National Development Plan (2010-2014) was issued. This Census was planned to be developed during that period.This Census was first scheduled to take place in 2012. Already some pilot experiments had been conducted in 2011 and in 2012. However, difficulties in obtaining appropriate resources for the Census and in the practicalities of the preparation of such a vast project led to its postponement and, eventually, created a disagreement between DANE's previous Director and the government on the timing of the operation, leading to the resignation of the head of DANE in September 2013. The former Director argued that it was inappropriate to conduct such a vast operation in 2014 in a period of elections (parliamentary and presidential elections).

The new management of DANE, nominated in October 2013, was convinced that there is no contradiction in conducting such a statistical operation in a period of elections. Colombia is a democracy with regular and frequent elections, and this should not hamper the conduct of surveys. DANE has thus officially launched the full-fledge 2013-2014 Agricultural Census at the end of 2013 to take effect during 2014. All DANE's relevant teams have been mobilised for this operation, with strong commitment of the Director, the nomination of three head coordinators, and a supervisory committee meeting each week. The operation is organised in cooperation with a great number of partners, starting of course with the Minister of agriculture and rural development. DANE has also performed a major work of preparation with the Farmers Society of Colombia, and various associations of producers. DANE has transmitted to the OECD on 29 October 2014 a complete report on the state of advancement of the Census of Agriculture. In June 2015, DANE further informed the Secretariat that, at this date, 98.5% of coverage of the country was already achieved.

This third National Agricultural and Livestock Census provides statistical geo-referenced information of all rural properties. It covers a wide range of variables:

- Social: identification of producer; socio-economic characteristics of producer; financing of production, technical assistance, employment and use of production;
- Environmental: use and coverage of land[44]; diversity of systems of production and agricultural practices; use of water and soils; handling of residuals and energy;
- Economic: inventory of plantations, forests, fields, natural coverage; inventory of cattle; inventory of machines and agricultural infrastructure; non-agricultural activities.

It is a major operation covering more than 3,9 million of rural properties located throughout 32 Departments distributed over a total area of approximately 51 million of hectares. The Agricultural Census also covered 182 black communities' collective territories and 770 Indian reservations.

The pilot test field operations started, in November 2013, with the Department of Quindio. This first operation was completed after the visit of 23 547 rural properties. The department of Risaralda was covered in February 2014, involving 60 188 rural properties (390 371 hectares) surveyed by 600 surveyors

43 However, the 2005 Census of population contained specific questions on the identification and location of production units, areas planted with transient and permanent crops, areas in other land uses and livestock inventory.

44 The classification of land uses is: surface (1) in transitory crops; (2) in permanent crops; (3) of forest plantation; (4) in planted and natural grass; (5) in fallow; (6) at rest; (7) in stubble; (8) in natural forests and paramo vegetation; (9) in agricultural infrastructure; (10) others.

during 30 days. Two other departments followed. These four pilot operations have been successful with only very few negative reactions of respondents. It is in June-August 2014 that the effective extension of operations to all departments occurred. 22 000 data collectors had been selected (out of more than 50 000 candidates). The issue of contracting personnel during elections, once mentioned as problematic, was not a problem. The design of the Census identifies three collection strategies by means of personal visits to agricultural producers: scanning, route and big producers.

Scanning strategy: it corresponds to the mainstream situation relating to small and medium sized rural properties. Enumerators of the same municipality walk along all units in a municipality in a systematic and sequential manner (enumerators work based on a precise map of the area that they have to cover, generated by DANE cartographical department).

Route strategy: the collection by "routes" is how the enumerators teams cover the rural area of some municipalities characterised by difficult access, low population density and large territorial extensions. It involves gathering information throughout a predetermined route for several days (a month approximately) without returning to the municipal township. The routes are mainly structured along a river and its tributaries, bridle paths or trails and include also ethnic territories, both indigenous and black communities. It corresponds to 88 municipalities (out of more than 1100).

Big producers strategy; corresponds to a small number of respondents but a large chunk of agricultural production (around 60%). They are the most important agricultural production units, both in terms of size and number of animals. In this case, the Census does not require a field visit but a direct survey based on a specialised questionnaire, sub-sector by sub-sector. 57 specialised enumerators (one for each sub-sector) have been trained to interview the management of the companies operating these big units.

Now that the field operations are closed, DANE will perform the analysis and editing process of the raw results in two steps. The first one, known as "structure control", will ensure the comprehensiveness of the structure of the database based on a verification process of the analytical units in each municipality by means of a graphical evaluation procedure, and, subsequently, the structure of the municipal production. More refined results can be generated at national level by means of this process. The second step will ensure the entire consistency assessment to obtain the refined database on the basis of which the results at departmental and municipal levels will be generated and published at the end of the first semester 2015.

***Overall assessment of agriculture and livestock census***

The reviewers confirm that the third agricultural and livestock Census was a much needed program. It is therefore welcome that it has been launched. The information available at the time of drafting of the present review indicates that the objectives of the Census will be successfully completed within the time frame foreseen.

## 3. Business register

***History and legal background***

DANE started the project for the creation of a statistical business register in 1992, after the economic census of 1990 and by year 2004, through Decree 262, DANE was assigned the responsibility to manage and keep updated the directories of sources of the various investigations that the Department conducts for the compilation of economic surveys. In 2005, the ANDESTAD Project in cooperation of the European Union and the Andean Community of Nations (EU- CAN) contributed to the integration process of the Andean Community and to the strengthening of its regional institutions, including in its execution the theme of Business Directories for statistical purposes; also in the 2005 General Census, a count of

economic units (establishments) was made, which served to improve statistical frameworks for economic research. By 2006, the National Plan of Basic Official Information (PlanIB), deemed essential the intensive use of administrative records undertaken by public bodies or which perform public functions to generate basic information without the need for conducting censuses nor sample surveys and in this same year the Statistical Directory was certified with ISO 9001 as part of the statistical production process.

In the regional framework, Resolution 698 of 2008 of the Andean Community of Nations (CAN) passed, which states that member countries should create and update a business directory, as well as establishing coordination of national statistical services for the harmonization of concepts, classifications and definitions used by economic statistics. In 2009, Resolution 1273-CAN (Recommendations Manual on Business Directories for statistical purposes) establishing the mandatory minimum coverage of Business Directories and Resolution 1274-CAN(Guide for the construction of Business Directories with statistical purposes) were generated.

In 2009, joint work was made with the Ministry of Commerce, Industry and Tourism toward improving the directory of the Services sector. By year 2010, the update of the Directory is performed based on the Administrative Record of the Comprehensive Form of Liquidation and Contributions to Social Security - PILA and in 2011, the framework cooperation agreement was established with CONFECAMARAS (Administrative Record). Regarding the Information System of the Directory - SID, in cooperation with the Andean Community, the conceptualization and design started in 2009, the development started in 2011 and in 2012 the first version was completed and the information was migrated to the new system. In general terms, over the last years, the updating process of the Directory has had new sources of information such as that generated by the Ministry of Health and Social Protection (PILA), Confecamaras and Superintendence of Corporations. Based on the decree 019 of 2012 (Anti-paperwork law in Article 63), which establishes that for the exercise of the public functions, the information contained in the Unified Tax Registry may be shared with the public entities and the individuals who have public functions, DANE takes steps with DIAN for the access to the Unified Tax Registry (RUT)..

***Coverage***

The statistical units of the Directory are the enterprises, establishments and homogeneous production units. It covers all sectors, all types of units, including government units. There is no minimal threshold for the registration in the SBR. However, DANE has developed a specific and independent survey of "micro-establishments", considering the large share of informal units in the country (see Chapter 5). The coverage of establishments is considered non exhaustive, as there are no administrative sources at the establishment level. Currently, only the coverage for manufacturing, education and services (in the specific case of Hotels) is considered satisfactory.

Colombia has a unique identifier for enterprises, the NIT (Tax Identification Number), which allows to match all business databases. This number is used in the SBR, in the Chambers of Commerce, in the Ministry of Health and Social Protection and in DIAN.

The variables that the Statistical Directory (DEST) covers are:

- Identification variables: NIT (Tax identification number –single identification number *e.g.* 89999902-7), CC (Citizenship identification number), CE (Foreign identification card) or PA (Passport), company name, trade name and SID own keys. The registers RUES of CONFECAMARAS and RUT of DIAN use the same indentfication key. Location variables: address, phone number, department, municipality, email, among others.
- Classification Variables: Economic activity ISIC Rev. 3 and 4, employed persons, income and legal type.

- Management or demographic variables: Status of Registry, novelties, dates of incorporation, termination date, date of commencement and cessation of operations. Units are corporations and establishments.

***Compliance***

DANE is participating in the Task Force on International Guidelines on Statistical Business Registers (UN/Eurostat) and is co-authoring two of the chapters. These guidelines will be finalised shortly. DANE is confident that it will comply. The enterprise groups are not referenced in the SBR, but DANE conducts a pilot test on profiling. There are no variables allowing the analysis of the continuity and demography of units but the SBR is being subject to a strengthening process which should resolve this problem in the future.

***Relevance***

The SBR is updated via the use of external sources, following a pre-established schedule, from:

- Ministries: Health and Social Protection (PILA, semi-annually), Education, and Transport.Confederation of Chambers of Commerce (Single Business and Social Registers – RUES-), annually
- Superintendencias, in particular for Superintendent for Corporations (Supersociedades), annually.
- Internal DANE providers; (economic surveys, telephone operations, mini surveys, and web update, mainly)

The three most important sources are RUE, Supersociedades and PILA. Combined together they allow for the update of all the variables of the SBR, except the date of cessation.

The SBR only can be consulted by DANE staff and it is used for the design of economic surveys. As a principle and for statistical confidentiality, the SBR is limited to the internal use of DANE. There is still no use of the SBR as a direct source to generate official statistics, but currently work is being made toward strengthening and evaluating the possibility of using the information in studies of business demographics, according to international guidelines.

***Overall assessment of Colombian SBR***

The Colombian Statistical Business Register (SBR) is globally compliant with the quality requested by OECD for this statistical infrastructure. The reviewers appreciate the efforts made to cover micro-establishments, to extend the coverage of the SBR and to increase its use in the regular business surveys. The reviewers welcome that DANE is now planning to incorporate section B of ISIC 4 (coal, petroleum, metal ores, and other mining and quarrying) as well as the transportation sector in the standards annual business survey. The SBR should be updated accordingly. Efforts should be made regarding allowing demography analysis.

## 4. Classifications

DANE is, via its Directorate for Statistical Regulation, Planning, Standardisation and Normalisation (DIRPEN), the coordinator of the Colombian National Statistical System for classifications, which are available in detail on DANE's website.

DANE has officially adopted all important international classifications (in parenthesis the Spanish acronym): ISIC (CIIU), CPC (CCP), COICOP, COPNI (non-profit institutions), HS (SA), ISCO (CIUO, classification of occupations), ISCED (CINE, classification of level of education), CIS (institutional sectors), COFOG, SITC (CUCI), EBOPS (CABPS, balance of payments), ICSE (status in employment). DANE uses in addition the CUODE (national classification according to Economic Use or Destination). As regards the central classifications of products (CPC) and industries (ISIC), DANE has adapted the international classification leading to "ISIC 3.1 A.C" (A.C = adapted to Colombia) and the "CPC. 1. A.C" which are extensively used in the current statistical programs. The ISCO were adapted to Colombia[45]. DIVIPOLA[46] is an encoding standard that enables having available an organised and updated list of all units in which the national territory is divided.

DIRPEN maintains a very detailed documentation on the methodology adapting the international classifications for industries and products, in English. The two main documents (both dating of 2009) are:

- *Methodology: Central Product Classification*, which defines the Colombian product classification in respect of CPC V. 1.0 (technical document VI);
- *Methodology: International Standard Industrial Classification of all Economic Activities,* which defines the industrial activity classification in respect of ISIC Rev.3.1 (technical document VII);

*ISIC*

ISIC 3 A.C was adopted in 1997, based on the experience of the Annual Manufacturing Survey and the 1990 Economic Census. ISIC 3.1 A.C, which is the classification currently in use in most statistical programs, is an update of this first adapted classification of 1998 and was adopted in December 2005. The adaptation of ISIC to specific needs of Colombia consists essentially, on one side, in breaking some categories important for Colombia, where the ISIC was not sufficiently detailed, and, on the other side, to consolidate some categories where the detail was not adapted for Colombia. This adaptation is compliant with international guidelines and the resulting classification can be easily bridged at appropriate level with the pure international classification.

The ISIC 3.1 A.C was dubbed by DANE the "operational classification" as it is extensively used not only in most DANE statistical programs but also in other institutions producers of official statistics, such as the Chambers of Commerce, the DIAN, the Ministries of Finance, of Industry, Trade and Tourism, of Health, of Social Protection etc.

Currently DIRPEN has finalised the adaptation for Colombia of the revision 4 of the ISIC: ISIC 4 A.C. DANE has made the ISIC Rev 4 A.C. official by means of Resolution 636 of 2012. The classification is already available on the website of DANE. DANE is preparing its implementation in statistical programs. The following activities are carried out in order to promote the adoption by all entities of the NSS:

- Training regarding the use and implementation
- Consultancy and technical assistance to the entities for the use of the new classification
- The verification of the use of official classifications is part of the process of certification of NSS statistics.

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45 Colombia was one of the two South American countries invited by the ILO to review and update the ISCO.

46 División Político-Administrativa.

*CPC*

DANE received the international CPC ver 1.0 in 1998 and immediately started the adaptation process for specific Colombian needs. CPC ver 1 A.C was adopted in 2002. Soon after, Colombia adapted the version 1.1 of the CPC, including sections 5 to 9 on services. As for ISIC, and in coherence of adaptations made for ISIC A.C., the specific needs of Colombia consists essentially, on one side, in breaking some categories important for Colombia, where the CPC was not sufficiently detailed, and, on the other side, to consolidate some categories where the detail was not adapted for Colombia. This adaptation is compliant with international guidelines and the resulting classification can be easily bridged at appropriate level with the pure international classification. CPC. 1. A.C is widely used inside DANE (prices, Industry, Foreign Trade, Education, Agriculture, National accounts) as well as outside DANE (Industry associations).

Currently DIRPEN has finalised the adaptation for Colombia of the version 2 of the CPC, leading to CPC ver 2.0 A.C which is already available on the website of DANE. DANE has made the CPC ver 2.0 A.C. official by means of resolution 989 of 2013. DANE is preparing its implementation in statistical programs in parallel with ISIC ver 4.

***Implementation program of new classifications***

DANE has prepared and transmitted to the OECD a complete plan for the implementation of new ISIC and CPC in all DANE's surveys. Many surveys have already moved to ISIC 4 (in particular the GEIH, in December 2014). Some are scheduled to implement ISIC 4 in 2015. The social surveys depending on the GEIH are expected to incorporate ISIC 4 in 2016. Based on this plan, national accounts will be able to completely align on these classifications on the occasion of the implementation of the new benchmark exercise which should be published in 2018. As regards CPC Foreign Trade and PPI are already using CPC 2 and the agriculture and livestock survey as well as the annual manufacturing survey will be in CPC 2 in 2015.

***Overall assessment of statistical classifications used in Colombia***

Colombia is compliant as regards the use of international statistical classifications. They are extensively used by the statistical office itself and by other producers of official statistics (Ministries, agencies, etc…) under the coordination of DANE. The program for the implementation of ISIC 4 and CPC 2 in DANE's surveys is convincing and satisfactory. DANE should make sure that this time table is respected. The situation of other statistical programs, outside DANE, is not known.

## 5. Labour force survey, measurement of informal employment and quality of life survey

In Colombia, labour force indicators are obtained via the GEIH household survey (Gran Encuesta Integrada de Hogares – Great Integrated Household Survey). This survey, as indicated by its name "Integrada", incorporates in a single collection program several socio-economic characteristics of individuals, households and residential property[47]. The scope of the survey is private households, and thus the estimates relate to the non-institutionalised population. The legal background is Law 789 (2002), 1450 (2011), 1429 (2011). The concepts used for the survey conform with concepts and definitions established by the International Conference of Labour Statisticians (ICLS 1983) of the ILO.

[47] The GEIH is the result of the merging in 2006 of the previous ECH (continuous LFS) and, partially, of the national income and expenditure survey (ENIG) and the survey on quality of life (ECV). The core of the GEIH remains focused on labour force variables, and the other variables coming from ENIG and ECV as to be seen as modules of the GEIH, based on sub-samples. The GEIH includes a module on the informal sector.

Variables covered by the survey are:

- At the level of individuals: standard labour force characteristics, including income (all persons of the household more than 10 years old) *plus* education and health access (all persons above 5 years old),
- At the level of the household: coverage of basic needs, poverty rate, dwelling conditions.

Main results are:

- Global participation rate (TGP)
- Employment rate (TO)
- Unemployment rate (TD)
- Underemployment rate (TS)

In accordance with ILO (ICLS 1983), the survey allows an analysis of the type of employment, underemployment and inadequate employment conditions. The GEIH allows to obtain also general characteristics regarding dwellings, access to public utilities, social protection system, size of the economic units employing the labour force, data on household income that can be used for poverty measurement, education levels, migration and child labour.

The GEIH is a continuous household survey throughout the calendar year, providing monthly, quarterly and annual updates for core labour force indicators and other variables. It uses a probabilistic multi-stage sample design of a stratified set of clusters, with a total sample of 66,000 households per quarter. The sampling frame is continually updated via a rotation system. The rotation system functions as follows. For the 24 cities (13 + 11, see below), the last sampling unit is quarterly rotated (*i.e.* the segment of about 10 dwellings). This corresponds to approximately 30% of the sample. For the remaining urban and rural sample, the segment is annually rotated until all the block or section has been completed.

The quarterly sample is distributed as follows:

- 30 000 households in the main 13 capital cities and metropolitan areas,
- 17 600 households in 11 mid-size capital cities,
- 14 400 households in municipal townships, populated centres and scattered rural population,
- 4 000 households (since 2013) in the so-called “nuevos departamentos”.

The sample has been built to be representative of the total population. The sample design has been reviewed in 2009, based on the 2005 Population and Housing Census. The sampling basic unit is a “segment” (MT) which comprises in average 10 dwellings, which are all surveyed, including every household within each dwelling, and every person in each household. There is a sophisticated multi-level sample design. Over one year, the survey covers more than 248 000 households, covering 437 municipalities and concentrated in 22 500 segments (in 2009). As regards displaced population, DANE does not consider that they are excluded from the survey. Some geographical areas are outside the reach of the survey, but DANE considers that there is no reason for this to bias the results.

This vast survey is strictly organised. For each region a GEIH technical assistant coordinates the operations, with a team of IT support staff, a field coordinator, supervisors and collectors. The data collection system is heavily using IT, the basic tool being the data capture devices used by the collectors. This allows a real time control of field operations and validation of data.

The classifications used in the survey conform to international classifications:

- ISIC Rev 3 A.C.
- National classification of Occupations (CNO, adapted version of ISCO).
- International Standard Classification of Education (ISCED)

Results are published monthly for the Total National and Total 13 metropolitan areas; quarterly for each Department capital, remaining municipal townships and scattered rural areas; bi-annually for regions; annually for each department. Core indicators are available on the last working day of the month following the reference period, 45 days for complementary variables. Anonymised micro-databases are available on DANE's web site.

DANE has published the detailed methodology of the GEIH in English on its website. http://www.dane.gov.co/files/investigaciones/fichas/empleo/ingles/GEIH_DANE_04.pdf. The detailed metadata of the GEIH is also published under Ddi and Dublin Core Standard.

***Measuring informal employment in Colombia***

Colombia is characterised by high informal employment leading to a high level of adjustments for "non-observed" economy (see Chapter 3). A good measurement of informal employment is essential to capture this part of the economy and to allow economists to measure the progress made towards better quality of employment. DANE measures informal employment based on the Gran Encuesta Integral de Hogares (GEIH), Colombia's continuous household survey. Four dimensions of informality can be measured: 1) worker is employed in an establishment of up to 5 workers; 2) worker contributes to social security coverage for health; 3) workers contributes to a pension; 4) worker is covered by a verbal or written contract (the survey asks whether the worker has any type of contract, whether it is written or verbal, and whether it has an indefinite or fixed term).

DANE currently releases monthly estimates (3 month moving averages) for the first three measures of informality for the country, based, since Q2 2014, on data for 23 cities and 13 metropolitan areas. There are percentages for the total of these areas and for the areas separately. DANE has recently expanded the tabulations to publish a fourth measure of informality by counting the number of workers not covered by a contract. The anonymized GEIH microdata are available on the DANE website so that researchers can tabulate their own estimates. They are available one month after the release of the quarter.

The GEIH is not a panel, so it is difficult to measure transitions into and out of informality with this survey. The GEIH does have questions about past jobs, but it is only possible to look one year back. Thus only a limited amount of information can be learned about job transitions from the GEIH. However, DANE has just begun a larger longitudinal survey called ELPS that will measure the dynamics of job informality. The first results have been published on 15 May 2014. This survey includes 14000 households and will be conducted every 2 years.

***Quality of life survey: ENCV***

DANE conducts regularly a Quality of Life survey (Encuesta Nacional de Calidad de Vida, ENCV) with the aim of obtaining information on the households' socio-economic conditions. This survey is used in particular to provide information on income distribution (see chapter 13) and poverty. The survey occurred once every two years before but has become annual since 2011. The survey takes place in the third quarter of the year and results are published in March of the subsequent year. Dissemination includes the availability of anonymised micro-data. The target population covers non-institutional civilian

population resident in all the national territory, but excluding the Nuevos Departamentos (see regional statistics in Chapter 13). The sample, selected on a stratified probabilistic sample, includes around 21 500 households. The process follows rigorous statistical quality frameworks for household surveys and incorporates the provisions of the World Bank methodology for the Measurement of Living Conditions.

***Measuring income inequalities, poverty and living standards***

DANE also publishes statistics on Monetary Poverty and Income distribution (poverty incidence FGT0; poverty gap FGT1; squared poverty gap FGT2; Gini index) based on the GEIH survey. Results are published in March for the previous calendar year, and in September-October for the last 12 months until June. These results cannot be directly used by the OECD as the GEIH does not deliver information on income after tax. The central measurement of inequality in the OECD is based on post tax data (see Chapter 13). As a result, DANE and OECD agreed to use the ENCV as the basis of the measurement of income distribution, as the ENCV contains data on taxes every three years since 2011 (when the expenditures chapter is included), and allows calculating post tax income distribution.

During the Peer review, DANE confirmed that it is not possible to add new questions to the GEIH survey on tax. However, DANE accepted to consider launching a program for modelling the tax at the individual household level of the survey, based on theoretical tax rates. Some other OECD countries do such a modelling and this is accepted by OECD. Implementing such additional data to the survey would allow using the more extended GEIH survey, compared to the ENCV.

The ENCV's most important achievement is the compilation of a multi-dimensional poverty index which identifies poor people's experience of deprivation upon 5 factors: inadequate living standards, lack of education, quality of health, work and child care. The statistical unit for measuring poverty incidence is individuals. The statistical unit for measuring deprivations is households. The statistical unit for measuring living standards is dwellings.

***Overall assessment of the labour force survey and other social surveys***

The GEIH survey complies with good practices in this domain. Overall more than 250 000 households are surveyed each year, which makes the GEIH a very solid survey. The survey allows for the statistical monitoring of a wealth of variables. It allows to measure informal employment in a convincing way. The DANE is to be complimented for starting the new ELPS survey, which is, contrary to the GEIH, a panel survey, which will allow analysing the dynamics between formal and informal employment. As regards income distribution, the OECD recommends enriching the basic data resulting from the GEIH by modelling the tax impact on income.

# CHAPTER 3. NATIONAL ACCOUNTS STATISTICS

## Background

DANE has primary role for compiling the national accounts of Colombia since 1970. DANE is responsible for compiling the non-financial national accounts and the Bank of Colombia (Banco de la República, Colombia – BR) is responsible for compiling the financial accounts (see Chapter 9). As in many other countries, there is necessity of a strong coordination between the two institutions. In the recent years, each entity developed its own process of synthesis (non-financial accounts for DANE; financial accounts for the BR) and its timetable for publication, or for the timing of the implementation of the new manuals, leading to significant statistical discrepancies.

DANE's organisation chart sets out the structure of the Synthesis and National Accounts Division (DSCN) of DANE and gives a summary description of the responsibilities of the six sections in the branch. Two of the sections are responsible for compiling the annual national accounts. One of these compiles the "goods and services accounts" (*i.e.* annual supply and use tables – SUTs) in both current prices and the prices of the previous year and the other compiles the integrated economic accounts (accounts for each institutional sector). A third section is responsible for compiling the quarterly national accounts. Of the other three sections, one is responsible for compiling regional accounts, another is responsible for coordinating the compilation of satellite accounts (health, culture, tourism, agro-industry and unpaid work) and the third is responsible for environmental accounts. In total, the DSCN has 90 employees and 4 advisors.

Much of the assessment of the quality of national accounts, including comparability with the data of other OECD Members, rests on an assessment of the sources, definitions, classifications and methods used to compile them. For this purpose DANE is to be congratulated to have supplied a wealth of information both before and during the Peer Review mission. The following technical documents in English are available on request from the Secretariat:

- OECD Questionnaire I: *Compliance* (technical document I);
- OECD Questionnaire II: *Sources and Methods* (technical document II);
- OECD Questionnaire III: *Prices and Volumes* (technical document III);
- National Accounts: Colombian Statistic System Review, Data and Metadata Requirements, which provides an overview of the Colombian national accounts (technical document IV);
- 2006-07 Household Income and Expenditure Survey Methodology (technical document V);
- *Methodology: Central Product Classification*, which defines the Colombian product classification used in the national accounts in respect of CPC V. 1.0 (technical document VI);
- Methodology: International Standard Industrial Classification of all Economic Activities, which defines the industrial activity classification used in the national accounts in respect of ISIC Rev.3.1 (technical document VII);
- Methodology: Regional Accounts (technical document VIII).

This information was integrated with the following documentation, in Spanish, available on DANE's website:

- *Metodología Cuentas Nacionales Anuales de Colombia Base 2005 Años Corrientes Bienes y Servicios*: Sources and methods used to compile the annual non-financial accounts (technical document IX). Also available now in English;
- *Metodología de las Cuentas Trimestrales – Ct-Base 2005*: Sources and methods used to compile the quarterly non-financial accounts (technical document X). Also available now in English;
- *Ficha Metodológica Cuentas Nacionales Anuales Sectores Institucionales* – CASI: Provides definitions of national accounts units and variables (technical document XI). Also available now in English;
- *PIB de Enclave de Cultivos ilicitos – fases agricolae industrial (Serie 2000-2011)*: Describes how estimates of illicit agricultural production are derived, (technical document XII);
- *Colombia Coca Cultivation Survey, 2009* (technical document XIII): published by the United Nations Office on Drugs and Crime and the Government of Colombia, 2009.

In addition, reference was also made to the methodological documents concerning each of the business surveys and the Labour Force Survey (GEIH) that provide essential source data for the national accounts, in particular for adjustment on the informal sector. All of them are available on DANE's website.

In April 2013, the IMF undertook a review of Colombia's national accounts, balance of payments and financial accounts with the objective of preparing the new base year. The recommendations of this mission are shared by the OECD.

During the Peer review mission of May 2014, DANE announced the launching of a vast program for the improvement of national accounts, in the context of the preparation of a new benchmark year to be published in 2018. This very important program should allow Colombia to fully comply with the requirements of national accounts in OECD. In the view of the OECD, the success of this program is essential. DANE's work programme for the new benchmark year to be published in 2018 includes the following priority items for the OECD:

- Fully adopting ISIC Rev. 4 and CPC V. 2 inside the national accounts, based on the implementation of these classifications in all primary statistics;
- Compiling non-financial balance sheets;
- Studying the possibility to publish in priority the first non-financial and financial annual general government accounts at Y + 6 months, and, further, quarterly institutional sector accounts.
- Adopting other changes made in the 2008 SNA. In particular, capitalisation of R&D, goods for processing, etc.

The more detailed program of work presented by DANE as regards this very important new base is listed below. This ambitious program of work includes all the above priority items for the OECD, except the reduction to Q+60 days of the first publication of quarterly GDP(P). The OECD would appreciate that such an additional objective be analysed during the forthcoming months with the objective of being implemented during 2016, before the publication of the new benchmark year.

The program of work of the new benchmark year has been developed with the aim of publishing the new data in March 2018 (see time table at the end of the tables below). This date may be seen as far away, but it corresponds, in the view of the OECD, to a realistic objective, as long as it does not get out of hands. The program should be conducted as a full-fledged project, with strong governance at the highest level of DANE to ensure the respect of the timetable. This governance should ensure that the necessary resources

in terms of staff is available to the National Accounts division, in particular for the development of quarterly income accounts.

**Detailed program for the new base year to be published in March 2018**

**1. Financial sector:**

- Updating the method of calculation of FISIM.
- Harmonization of the financial accounts compiled by the central bank (BanRep) with National Accounts; balance of financial assets
- Extension of the definitions of the financial services.
- Standards for the classification of the subsectors.
- Review and adaptation of the treatment of insurance.
- The treatment of pensions
- Other treatments.

**2. Inclusion of Non-profit Institutions serving Households (NPISHs)**

**3. Government**

- Standards for the classification of subsectors.
- Treatment of particular cases in the sector: i. economically significant prices ii. fiscal credit, mixed partnership assets: public, private, etc.
- Review of the treatment of taxes on products, production, wealth and those related to the environment.
- Harmonize the sources and the treatments of the national accounts with the Interinstitutional Committee for Public Finance Statistics.

**4. Feasibility study of the non-financial assets accounts and the calculation of stock of non-financial assets[1]**

- Consumption of Fixed Capital - CFC by activity and institutional sector.
- Valuation of Gross Fixed Capital Formation - GFCF on own account.
- Intangible assets (R&D, artistic assets, etc.) and environmental assets.
- Capital services.
- Valuation of stock.
- Balance of non-financial assets.

**5. External trade**

- Transactions with the rest of the world (reinvested earnings on direct foreign invesment)
- Change of ownership criterion instead of that of border crossing.
- Treatment of free trade zones and outsourcing (internal and with the rest of the world).
- Recording of transactions of resident and non-resident units (Rest of the world accounts).
- Companies under foreign control and their control chain.
- Harmonization of the balance of payments and international trade of services.
- Other treatments included in SNA 2008

**6. Quarterly accounts**

- Feasibility study for the calculation of quarterly GDP using the income approach and by institutional sector.
- Exercises of analysis of quarterly employment.
- Reviewing some specific items (FISIM, civil works, etc).

**1. Inclusion of the information from:**

- DIAN – Declarations
- PILA.
- Balance of payments "dividends and reinvested earnings; other detailed information.

**2. Use of updated and comparable sources of information**

- Agriculture census
- Population Census (2005)
- Income/Expenditure survey (2006-2007)
- Micro establishment surveys
- Other available sources

**3. Improvement of the statistical operations for agriculture, manufacture, trade, services, etc.**

- Improvement in the consistence between the results of the intra annual and annual surveys;
- Updating of the sampling frameworks of the surveys and relationship with the universe.
- Information available according to ISIC Rev. 4 A.C. and CPC Rev 2.0 A.C.

**4. Construction of the Business Register including all the statistical units and their basic characteristics as a tool for:**

- Establish the institutional classification of all units
- Define the foreign controlled corporations (inward and outward FATS), identify and analyze the control chains.
- To establish the BR corresponding to NPISH
- Match the information provided by surveys and through administrative records.

**1. Updating and improvement of:**

- Method of estimation of the production and intermediate consumption matrices
- Gross Fixed Capital Formation – GFCF
- Changes in inventories
- Method of calculation of the vectors:
  - External trade
  - Households final consumption
- Sectoral calculation:
  - Civil works.
  - Financial sector "FISIM".
  - Enclave
  - Agriculture
  - Government
  - others

**2. Calculations of the social protection system:**

- Pensions (defined contribution and defined benefit systems)
- Health
- Labor risks
- Family protection

**3. Development of special studies:**

- ❑ Calculation of the non observed economy
- ❑ Development of annual employment matrixes
- ❑ Labor and capital Productivity

**4. Treatment of institutional units, establishments and/or observation units (statistical units):**

- ❑ Ancillary units
- ❑ horizontally integrated corporations
- ❑ Vertically integrated corporations
- ❑ Treatment outsourcing
- ❑ Temporal unions and consortiums

| Item | Activities for the change of the base year | 2014 | | | | 2015 | | | | 2016 | | | | 2017 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | I | II | III | IV | I | II | III | IV | I | II | III | IV |
| 1 | Assessment of possible improvements in the four planned dimensions | | | | | | | | | | | | | | | | |
| 2 | Review, adaptation and updating of the classifications | | | | | | | | | | | | | | | | |
| 3 | Analysis and systematization of the sources of information coming from superintendencies: companies, finance, values, solidarity, public services, family compensation, health, transport, vigilance and private security. | | | | | | | | | | | | | | | | |
| 4 | Development of the conceptual frameworks for: social protection, financial and non-financial assets accounts, Non-profit Institutions serving Households, rest of the world and external trade, foreign controlled corporations | | | | | | | | | | | | | | | | |
| 5 | Definition of the Business Register of the universe of registered statistical units and their characteristics | | | | | | | | | | | | | | | | |
| 6 | Collection of the characterization of the sectors and vectors of the NA | | | | | | | | | | | | | | | | |
| 7 | Review, analysis, incorporation of the new sources of information associated with the assessment of possible improvements | | | | | | | | | | | | | | | | |
| 8 | Implementation of the sectoral calculations of the National Accounts (production accounts and income account, vectors and institutional sectors accounts, input-output balance, etc.). | | | | | | | | | | | | | | | | |
| 5 | Process of synthesis and review of the consistency of series | | | | | | | | | | | | | | | | |
| 6 | Publication of the change of the base year. | | | | | | | | | | | | | | | | |

## Evaluation of national accounts of Colombia

### *Coverage*

*Annual non-financial accounts*

The coverage of the annual Colombian non-financial accounts satisfies the core of the OECD requirements. The major deficiencies are the delay in the publication of annual institutional sector accounts, and in particular for the general government (first accounts are published in March Y+2), and the absence of estimates of the stock of non-financial assets (by sector/industry) as well as estimates for the consumption of fixed capital (for which only general government is covered). As regards the national accounts data for the general government (non-financial and financial accounts), which is a priority for the OECD, improvements are necessary in terms of delay of publication and consistency between financial and non-financial accounts. Regarding employment data, DANE has only transmitted partial data on employment in national accounts and hours worked are theoretical hours worked and not observed hours worked. DANE has committed to compile and publish systematically these national accounts employment data, together with a public table explaining the differences between these data and the official employment data based on the GEIH, after analysis by a working group in the framework of the change in the base year.

As discussed below, the Colombian non-financial accounts are largely derived by extrapolation from a base year. The latest base year is the year 2005 and the previous one is the year 2000. At this stage, DANE has transmitted consistent time series only for the period 2000-2013, which is short in terms of OECD requirements. However, DANE publishes on its web site much longer time-series, since 1975, as a result of a parallel research project. However, these times series are not benchmarked on the current official time series for the period 2000-2004, at least for current price data. DANE commits that this long “retropolation” (backward extrapolation) will be benchmarked on the 2000-2005 data during the process of the new base year (only available in 2018).

*Quarterly non-financial accounts*

DANE is able to supply quarterly data at current prices/volumes seasonally adjusted/non-seasonally adjusted for:

- GDP expenditure approach;
- GDP production approach;
- Gross fixed capital formation by type of asset;
- Household final consumption expenditure by durability.

DANE does not compile quarterly estimates of GDP using the income approach, and so is unable to provide quarterly estimates of:

- GDP income approach;
- Disposable income, saving and net lending/net borrowing;
- Real disposable income.

DANE also does not compile quarterly accounts by institutional sector, in particular for general government, and has not supplied quarterly estimates of employment. DANE announces a possible plan to extend the disposal of quarterly accounts to GDP income and quarterly institutional sector accounts for the new benchmark year. However, this would need the allocation of new resources to the National Accounts division.

The quarterly accounts series transmitted to OECD are coherent with annual accounts.

***Compliance***

*Compliance with the concepts, definitions, classifications and recommendations of the 1993/2008 SNA*

DANE compiles annual national accounts for the total economy from the production account through to the capital account, and by institutional sector (all five major sectors and some subsectors) from the generation of income account to the capital account. There are no balance sheet data for non-financial assets.

DANE compiles quarterly estimates for the goods and services account and quarterly estimates of gross value added by activity, but no income accounts. All published quarterly data are seasonally adjusted (using X-12 ARIMA).

Aggregate volume estimates are derived as chain-linked volume estimates with annual weights using the Laspeyres formula. Quarterly estimates in the prices of the previous year are linked together using the annual overlap method.

In its answers to the OECD Questionnaire I (technical document I), DANE reports that its national accounts comply closely with the recommendations of the 1993 SNA. It has already implemented a few of the changes made in the 2008 SNA, such as the treatment of defence expenditures of a capital nature.

***Adequacy of the data inputs, principally: annual and monthly/quarterly business services and household budget and labour force surveys; annual and quarterly public finance data***

Chapter 2, on the Colombian statistical infrastructure, contains assessments of DANE's business register, population census and labour force survey (as part of the Quarterly Integrated Household Survey, GEIH), while Chapter 5 contains an assessment of Colombia's business statistics. In this section, the adequacy of these statistical resources is examined in terms of meeting the needs of the national accounts.

Overall, Colombia has the core of business and household primary statistical programs to ensure adequate sources for national accounts. The main issue remains the size of the informal sector, which is not or partly not covered by the standard business statistics. However, the solid Labour Force Survey (GEIH) is appropriately used by the national accounts to overcome this structural gap. It should be noted that businesses and households are compelled by law to respond to DANE's censuses and surveys. Accordingly, DANE obtains high response rates. However, the main problem for Colombian national accounts is that the primary business surveys do not cover the small businesses of the informal sector. DANE has developed appropriate methods to estimate this significant non-observed economy based on the household survey (GEIH).

It should be also noted that the sources of national accounts do not encompass all existing administrative sources while their complete access by DANE could significantly strengthen the quality of the accounts. Presently, the access to administrative sources is limited and when available, their degree of anonymisation is so strong that it makes it impossible to compare individual information coming from different sources, or for the same source, for different periods: this is the case of PILA, of fiscal sources (VAT, income tax..) and of individual data on corporations obtained by the Central Bank collection systems. There is no access to detailed information of the income tax returns of the legal entities and individuals, neither on the value added tax reports. There is no access either to the detailed information used to calculate the balance of payments (this refers mainly to the estimation of dividends and reinvested profits). The National Accounts division only has access to the list of enterprises.

Regarding the access to PILA (the unique format for the calculation of social contributions), a Memorandum of Understanding was signed on December 27, 2013 (n° 996), stating the cooperation between the Ministry of Health and Social Protection and DANE, which objective was to work together to accomplish their institutional technical, administrative and economical missions. It had four years of duration, since its inception. It established a continuous mutual support for the development of projects of interest to any of the parts. It should facilitate the access and the exchange of information between the parts, according to the specific needs, respecting the principle of confidentiality and statistical reserve and other normative postulates ongoing in the country. At the beginning of 2014, information was obtained on the PILA for year 2011; the methodology to be used for using this information for the National Accounts compilation is in progress. Additionally, since October 2013, contacts have being underway for signing a Memorandum of Understanding with DIAN in order to have access to the administrative records that are required for the statistical production of DANE.

However, as expressed in Chapter 1, the inclusion of the principle of the right of access to individual administrative data by DANE in the articles 160 of the 2014-2018 National Development Plan is a step forward to accelerating this process, which is essential, in particular as regards the plan to introduce quarterly institutional sector accounts. Indeed, the quarterly access to information on compensation of employees via the PILA system would be a major step forward to ensure an estimate of the quarterly primary income accounts.

***Business register***

In addition to identification and contact information, DANE's business register records the following information for units:

- Type of legal organisation
- Main activity
- Secondary activity
- Number of employees

- Total income
- Date of incorporation
- Date of cessation
- Current status

DANE uses information from a wide range of administrative sources as well as its own business surveys to maintain its business register, and it has developed a sophisticated system for coordinating this information so as to minimise duplication and allow for its efficient maintenance. If the information obtained is unsatisfactory, then follow-up enquiries are made by telephone. Priority is given to ensuring the information on the register for larger businesses is adequate.

***Annual manufacturing survey***

The annual manufacturing survey (Spanish acronym EAM) is in fact a census of establishments with either employment greater than or equal to 10 or output above a certain amount. The population of establishments for year y is based on that for year y-1, with additions (identified using various means) and deletions. Questionnaires are sent to both the establishment and the parent enterprise. Data relating to compensation of employees, employment, output, intermediate consumption, inventories (by stage of processing) and fixed capital formation are obtained. Establishments are classified at the ISIC 4-digit level and products at the CPC 5-digit level.

In general, the EAM is conducted in accordance with the requirements of the national accounts. However, there are two issues: (1) the exclusion of the sector of Mining Energy and Transport (see Chapter 5 on Business statistics); (2) the exclusion of small businesses (see Chapter 5 for a discussion on the new micro-establishment panel survey).

***Annual trade survey***

The annual trade survey (Spanish acronym EAC) is a survey of enterprises classified to either wholesale or retail trade. Enterprises with 20 or more employees are completely enumerated, whilst those with less than 20 employees are sampled. Only data relating to trade activity are obtained from enterprises engaged in other economic activities. Data relating to compensation of employees, employment, output (sales and cost of goods sold are separately obtained), intermediate consumption, inventories and fixed capital formation are obtained.

From reference year 2009, in order to improve year-to-year comparability, a sophisticated panel-type base generation methodology has been adopted. The aim is to minimise the standard error of movement without compromising the quality of the estimates.

The Secretariat recognises that the EAC appears to be a soundly-based survey that should produce good quality estimates of most variables.

***Annual services survey***

The annual services survey (Spanish acronym EAS) is a census of large enterprises undertaking services activities. The scope of the survey encompasses a wide range of non-government service provision. The census is restricted to enterprises equalling or exceeding either a certain number of employees or a certain annual revenue, which vary according to the industry of primary activity. With the exception of higher education, the employment threshold is either 40 or 75 and the annual revenue threshold is 3 billion pesos. For higher education the employment threshold is 20 and the revenue threshold

is 1 billion pesos. Data relating to compensation of employees, employment, output (sales and cost of services sold are separately obtained), intermediate consumption and fixed capital formation are obtained.

The survey uses modular questionnaires that allow for variation in the questions asked to enterprises, according to the peculiarities of their particular industries.

The Secretariat notes that the EAS appears to be a soundly-based survey that should produce good quality estimates for the large enterprises in the sample. Its weakness is that it excludes small enterprises.

***Monthly labour force survey***

The monthly LFS (GEIH) conforms with ILO recommendations on concepts and definitions (see Chapter 2). It uses a probabilistic multi-stage sample design of a stratified set of clusters, with a total quarterly sample of 66 000 households. The scope of the survey is private households, and thus the estimates relate to the non-institutionalised population. The sampling frame is continually updated. This source is essential for the adjustment for non-observed (also called "non-registered") economy, as the GEIH allows to cover activities that are not observed via the traditional business surveys, because of their size (the standard business surveys do not include small businesses) or their non-registration (the business surveys include only registered enterprises).

An employment matrix for 2005 (the latest base year) has been derived from the confrontation of "labour supply" as obtained via the GEIH, in total as well as by industry to the "labourdemand" as obtained via the business surveys[48]. The difference (in terms of full time equivalent[49]) is attributed to the non-registered economy. This employment matrix is now available for years 2010, 2011 and 2012. DANE is working to extend this availability to the years 2006 to 2009.

***Monthly manufacturing survey***

The monthly manufacturing survey is a long-running survey of manufacturing establishments. It produces estimates of sales, output, employment and compensation of employees for 48 industry groups. The survey is currently based on the 1997 Annual Manufacturing Survey. A sample of 1 344 establishments has been drawn from the establishments surveyed in the 1997 survey and the monthly data reported by these units are weighted according to the 1997 results.

***Quarterly services survey***

The quarterly services survey began in the first quarter 2007. It produces estimates of revenue, employment and compensation of employees. Its scope is food and drink services provided by hotels and restaurants (section H, ISIC Rev.3.1), storage and communication (section I), real estate, renting and business services (section K), private higher education (section M), private health and social services (section N), private other community services (section O, except Divisions 90, 91 and some parts of Division 92).

The survey is currently based on a sample frame created in respect of 2006 and augmented in 2009. The survey covers companies with either 50 or more employees or with annual revenues of 5 billion pesos or more in 2006. The sample, based on reasoned selection, has 1806 units.

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48 The terms "labour supply" and "labour demand" are used here not in their traditional economic meaning.

49 The number of occupied persons is transformed into full-time equivalent on the basis of a constant of 48 hours worked per week.

***Monthly hotels survey***

The monthly hotels survey began in July 2004. Besides collecting tourism-related data, it provides estimates of revenue, employment and wages and salaries arising from the provision of accommodation services. Its scope is hotels, hostels, hotel/apartments, resorts and camping sites.

The survey is currently based on a sample frame created in respect of 2000. The survey covers units with either 20 or more employees or with annual revenues of 320 million pesos in the year 2000.

***Monthly retail trade survey***

The monthly retail trade survey began in January 1989. It produces estimates of sales, employment and wages and salaries. The survey is currently based on a sample frame created in respect of 1997. The survey covers companies with either 20 or more employees or with annual revenues of 1.21 billion pesos or more in 1997. The probability sample has 627 units.

***Annual and quarterly public finance data***

Currently, in Colombia, the national headline indicators for public deficit are the ones disseminated by the MHCP for central government (*i.e.* not general government). All authorities use this figure for the monitoring of fiscal policy. The figure is in cash. The MHCP announces that it should be able to move to accrual based GFSM 2001 during 2015.

When Colombia entered in an IMF program in 1999, the BR was put in charge of compiling the fiscal data based on IMF methodology (cash plus arrears). Since 2006, with end of the programme, the responsibility of the data compilation was moved to the MHCP, based on the same principles of compilation. The BR continues to calculate below the line quarterly accounts but does not publish these accounts, which are exclusively used by the MHCP for internal control. There is no timely headline indicator covering specifically the general government.

***The importance of SNA general government accounts***

The OECD gives priority to the national accounts sources as regards the monitoring of the fiscal policy. In particular, the national accounts concept of "general government" is central to the set of headline tables of the Economics Department of the OECD for the monitoring of government finance statistics. In this context, the current situation as regards the consistency and timeliness of the sources for the general government remains below OECD requirements.

The DANE transmits to the OECD a complete "table 200", which is the standard OECD table covering the annual non-financial accounts of the general government sector[50]. This account covers the three subsectors of government (Central, Local, Social security). This table is complete (some last small clarifications are under way between the transmission experts). However, major improvements are necessary on three fronts to meet full OECD compliance:

- The timeliness of the annual table has to be advanced from March Y+2 to, at minimum, June Y+1, even if these first data remain provisional. The current availability of the annual table for general government in March Y+2 (*i.e.* 15 months after the end of the year under review) is very

[50] COFOG data are now also available for 2009-2012 and published on DANE's website. The insufficient level of disaggregation of codes in the budget execution for investment programs hampers the quality of the data.

significantly late compared to other OECD member countries and precludes the use of these data for fiscal monitoring and projections.

- The consistency of the data with the main headline data from the MHCP has to be ensured, if necessary via a transparent bridge table. In the medium-term, DANE should envisage in priority the development of quarterly non- financial accounts for the general government.

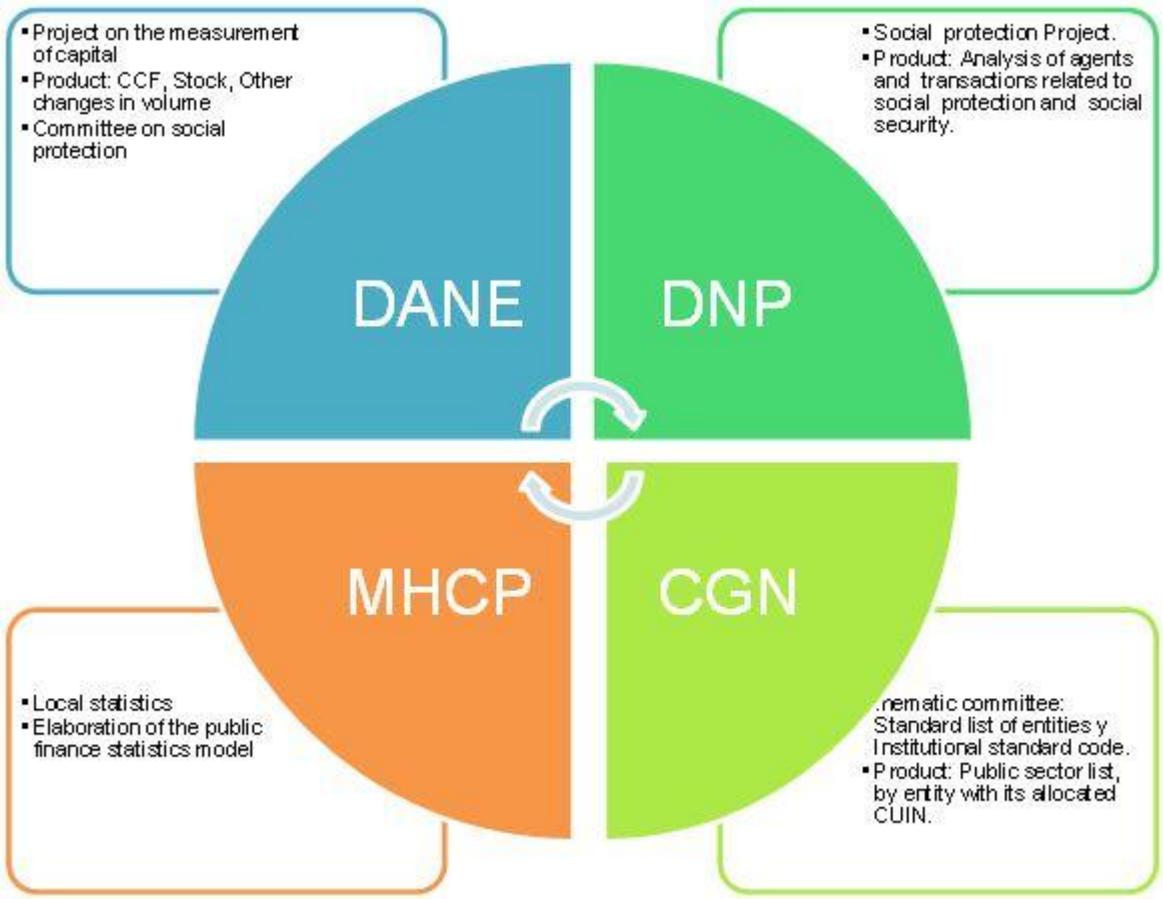
- For two of these three major improvements, DANE is now putting in place work plans that should meet OECD compliance in a reasonable delay:
  - In December 2014, DANE has started a work plan with the explicit objective of being in a position to publish general government accounts at Y+6 months in 2017 (*i.e.* 2016 accounts will be available by June 2017). This objective will be reached in two steps. The first step, to be achieved in November 2015, is to publish general government accounts at Y+10 months (*i.e.* 2014 accounts will be available by October 2015). This pilot test will be renewed in 2015. Then, in a second step, the accounts will be published at Y + 6. In December 2014, DANE has started a comprehensive work program for ensuring convergence on fiscal data between DANE, MHCP, BR and GAO (General Accounting Office). This work program includes the adoption of a unique list of entities composing the general government, used by all these four partners in fiscal statistics, under the supervision of DANE. This list will be public. The work program also includes a commitment that DANE publishes regular bridge tables if some divergences remain between the headline indicators of fiscal policy published by the four partners.

The information is received for annual government sector accounts in April of each year, and for quarterly accounts, information is received two months after the end of the quarter of reference[51]. For government, as for other institutional sectors, complete accounts are not presently available as balance sheets will only be compiled in the new National Accounts base. Quarterly GFS are available but are not consistent with National Accounts. They are not compiled by DANE but by the MHCP. The MHCP is working on the adoption of accrual accounting for these GFS in coordination with the units in charge of budget and investments.

An Inter-institutional Committee of Government Finance statistics (CIEF), composed of DANE, the MHCP, the General Accounting Office and the BR, was created in 2012 (decree 574 of March 2012) which main objective is to homogenize Government Finance Statistics and National Accounts (see graph below which illustrates the composition and the projects that are coordinated within this committee). In addition, work is underway to sign a Memorandum of Understanding between DANE and DIAN. Those actions include the development of meetings and work groups, to establish the information needs, the conditions under which information will be shared and exchanged and the responsibilities of the parties. In particular, work is presently underway within the Inter-institutional Committee on Government Finance Statistics, of which the DSCN is an active member, to unify the sources for the compilation of the accounts of the public sector and the treatment of these sources, in order to produce consistent results for National Accounts and IMF/GFS purposes. These would encompass the whole array of accounts, including stocks, financial and non-financial.

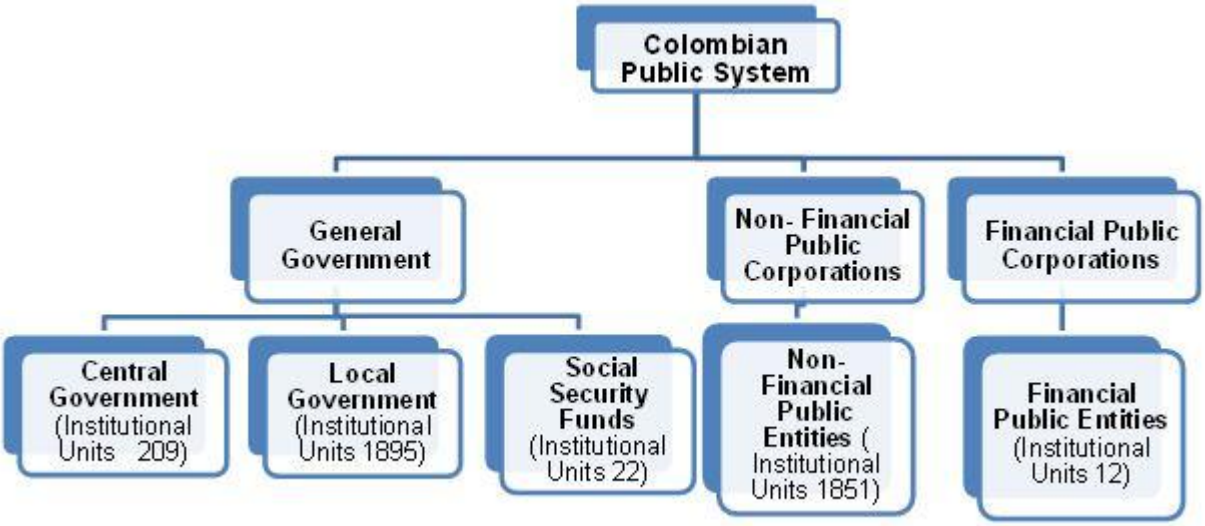
[51] There are difficulties in integrating in the present national accounts software specific government entities that have special financial statements such as FOSYGA, FOMAG, Fondo Nacional del Café, etc.

**Figure 1. Inter-institutional Government Finance Committee**




A list of the entities composing the general government and the public sector was defined and approved within the Inter-institutional Committee on Government Finance statistics (see graph below, which includes the number of entities by sub-sector). This list is available in the Government Accounting Office's website (CGN), which is in charge of updating and managing this list[52]. In the OECD view, it is the DANE which should be the coordinating institution for this list, as DANE is the guardian of the classification on institutions regarding national accounts. DANE should publish this list or at least have the official responsibility for this list. Recent contacts with Colombian authorities have confirmed that DANE will indeed be given the responsibility for this list. This would ensure the quality of the national accounts estimates for the general government and foster the consistence between non-financial accounts and financial accounts. It is to be noted that the concept of "public sector" (*i.e.* which includes non-financial and financial market corporations controlled by governments units) is less a priority in OECD than the concept of general government.

52 http://www.contaduria.gov.co/wps/portal/internetes/home/accesos/entidades/entidades-sector-publico/

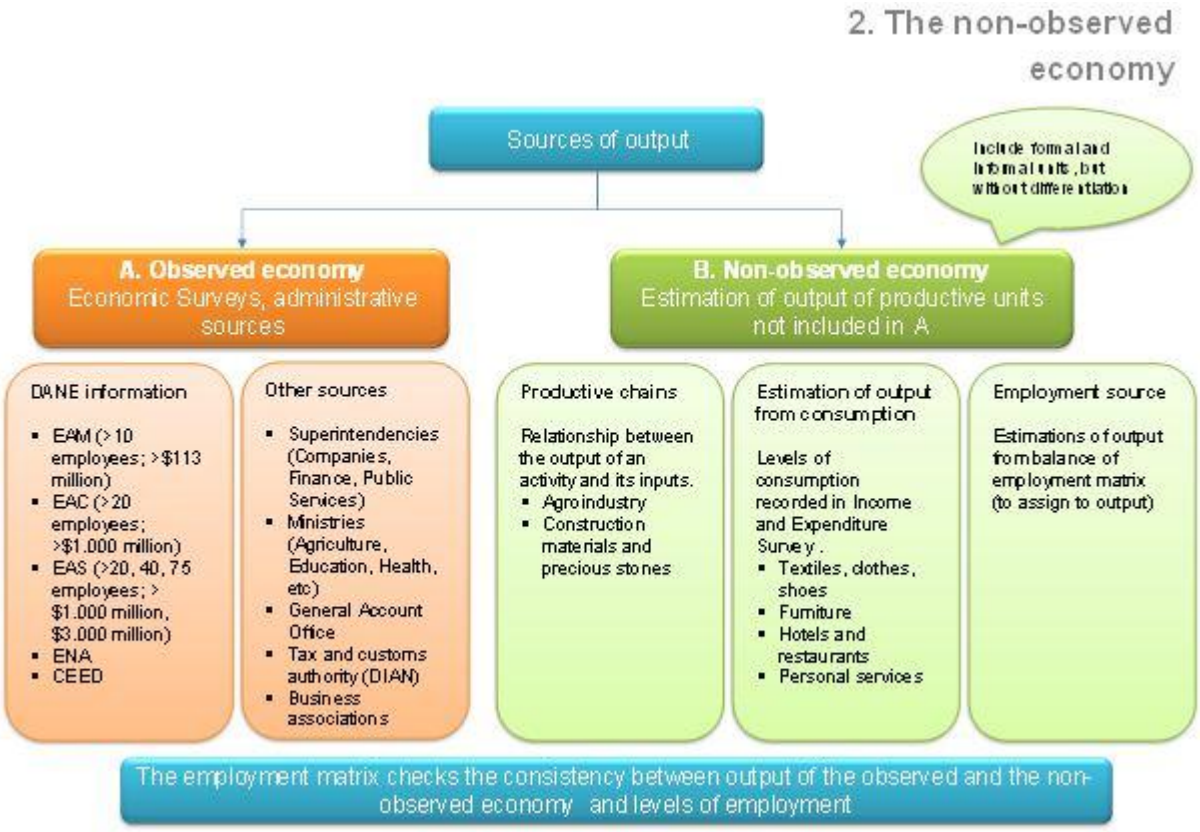



The Government Accounting Office (CGN) provides to NA the financial statements (balance sheets and profit and loss accounts) of each government entity, including, since 2013, the funds accounts for social security.

***Extent to which activities falling within the production boundary defined by the 1993/2008 SNA are comprehensively measured by the estimates of GDP***

Exhaustiveness

Exhaustiveness adjustments are essential in the Colombian economy which is characterised by the existence of a large "informal sector", which output is not observable directly via traditional business surveys. DANE has much invested in the development of appropriate adjustments allowing taking into account this part of the "non-observed" economy into GDP. The slide below illustrates the sources for output and their relation to the measuring of the missing "non-observed economy".




The exhaustiveness of production in national accounts as regards this non observed economy is ensured indirectly through the construction of annual *employment matrices* which allow the confrontation of the labour by economic activity originating from the LFS (Integrated Survey of Households –GEIH) with the estimation of labour by economic activity which derives from traditional surveys by sector and by administrative records. Through this procedure, an estimation of employment not recorded from the business surveys is derived. An output is associated with this estimate and is added to the output obtained from the traditional sources (see above the slide on "sources of output").

In this process, of estimating the non-directly observed employment no difference is made between the "formal" and the "informal" official definitions of employment. The objective is simply to cover the non-observed economy and to complement what is observed through the micro-establishment survey (see Chapters 2 and 5), which makes no difference either between formal and informal activity. Thus this estimate of additional employment extends to small businesses (even formal) not covered by the surveys as well as to informal enterprises.

The process is based on the base year employment matrix (2005). The GEIH provides an overall estimate of labour by economic activity and size of establishment with the following information: employment by occupational category, primary and secondary job, type of occupation, gender, number of worked hours in a week, compensation of employees, and profit. The employment matrix normalises labour on the basis of the number of hours worked –in the primary and secondary jobs- that represent 48 hours in Colombia.

This matrix allows the confrontation of the sources from the household survey and the business surveys. In a first step, the number of occupied persons in the GEIH was adjusted with the number of occupied persons in the 2005 population Census. In a second step, the GEIH information allowed to derive

number of employees, number of self-employed, number of hours worked, total compensation, and conversion of persons employed to full time equivalent, by economic activity and size of establishments. In a third step, the same information was constructed from the business surveys and the financial statements of large firms. As regards big establishments (more than 5 employees), the two sources were rather consistent as regards compensation data (the only significant difference due to management staff, not well accounted for in the GEIH). Once the number of jobs of the two sources were confronted and discussed, a difference by activity was obtained, which was finally considered to correspond to jobs attributable to the small companies (formal and informal).

Output was then assigned to this additional "supply" of labour and this output was added to the estimation of output based on traditional sources of information. The production of these non-explained jobs by economic activity was obtained applying a production on average from the micro-establishment survey. This additional production corresponding to small enterprises and the non-observed economy is exclusively assigned to the household sector.

There are known drawbacks in such a process of estimating the non-observed part of the economy. Indeed, household surveys are not very good at producing employment estimates by industry; the adjustment relies on household respondents answering questions concerning employment accurately and truthfully; the adjustment in the base year assumes that labour productivity is the same within the scope of the surveys, which is typically dominated by large units, as it is outside the scope of the survey, which is typically dominated by small businesses. However, the process followed by DANE remains the only possible considering the existing sources of information.

Non-exhaustiveness arises because the statistical surveys and administrative sources on which national accounts estimates are based are incomplete, incorrect or otherwise deficient. Seven sources or types of non-exhaustiveness relating to the GDP estimated from the production side are identified according the tabular approach developed by Eurostat. These are:

- N1: Producers engaged in legal activities who should register but do not (in order to avoid tax and social security obligations, minimum wage requirements, health and safety regulations, etc.)

- N2: Producers who avoid registration because they are engaged in illegal activities.

- N3: Producers who are not obliged to register because they have no market output (typically households engaged in production of goods for own consumption or own fixed capital formation).

- N4: Producers (legal entities or incorporated enterprises) who are registered but not surveyed (because register not up-to-date or enterprise incorrectly classified in the register or size of enterprise below a certain threshold).

- N5: Producers (entrepreneurs or unincorporated enterprises) who are registered but not surveyed (because register not up-to-date or enterprise incorrectly classified in the register or size of enterprise below a certain threshold).

- N6: Mis-reporting by producers (usually the under-reporting gross output and/or the over-reporting intermediate consumption).

- N7: Other statistical deficiencies (because data are incomplete, not collected or not directly collectable; or because data are incorrectly handled by statisticians during processing and compilation).

In full transparency, DANE provided the Secretariat with a very complete set of information including the adjustments for each year, from 2005 to 2011, by institutional sector and industry of activity (rows) by the seven types of non-exhaustiveness (columns) following the Eurostat approach. In 2011, the total value of adjustments for non-exhaustiveness account for 19.7% of total gross value added and 17.9% of GDP. All of the adjustments are confined to the non-financial corporations (6.8% of total GVA and 13.5% of NFC GVA) and households (12.9% of total GVA and 36.6% of households GVA) institutional sectors. The industry sections attracting the greatest adjustments are manufacturing (3.2% of total GVA and 23.5% of manufacturing GVA), wholesale and retail trade (4.2% of total GVA and 46.4% of wholesale and retail trade GVA), hotels and restaurants (2.9% of total GVA and 88% of hotel and restaurant GVA), real estate, etc. (2.9% of total GVA and 21.4% of real estate, etc. GVA), health and social work (2.0% of total GVA and 88.4% of health and social work GVA) and other services (2.3% of total GVA and 85.3% of other services GVA).

Overall, the adjustments appear to be realistic. Some comments can be made. N2 (illegal activities is treated separately in Colombia (see below). There is no adjustment for producers engaged in legal activities that should be reported (N1). This can be attributed to the fact the LFS employment adjustment described above is mostly allocated to small producers who are registered but are out of scope of the business surveys (N4 and N5) and none to N1. What is more difficult to explain are the missing adjustments for construction (except N3) and the relatively small adjustment for mining and quarrying considering the development of illegal and informal mining. DANE has committed to analyse more closely the situation of these two sectors during the process of the new benchmark year. In particular, the on-going Agricultural Census could be a source for a better estimate of small informal mines.

The total adjustment as a proportion of GVA (and GDP) declines between 2005 and 2011 from 22.2% of total GVA to 19.7% of total GVA. Most of this decline is attributable to relatively smaller adjustments to the GVAs of manufacturing and wholesale and retail trade. DANE explains this decreasing trend by three reasons: (1) the economic growth of the recent years has been based on the modern sectors, in particular mining, transport, communication, and financial sector, which are characterised by large observed enterprises; (2) the livestock and agricultural productions such as African palm have acquired technical organisation; (3) the structural surveys of DANE have improved their coverage, in particular the edification Census and the EAM.

*Production and distribution of illicit drugs*

Colombia has a reputation as a major producer of illegal drugs and its efforts to estimate this production and associated expenditure and income flows are therefore of particular interest. DANE has published a detailed description of how it goes about incorporating the measurement of illicit drug activity in the Colombian national accounts[53] and also publishes estimates separately each year.

DANE compiles estimates for the agricultural production of coca leaf, poppy gum and marijuana and the subsequent manufacture of cocaine hydrochloride and heroin. No estimates are made for the subsequent distribution because of a lack of information. Given concerns about the quality of the estimates and their high degree of volatility, illicit drug production is recorded as if it were taking place in an enclave[54] outside Colombia, and flows are recorded between it and the domestic economy and the rest of the world. The enclave is a part of the national territory and therefore of the national economy. Nevertheless, for analytical reasons, it can be included or excluded from the national economy. In practice, the production of drugs is not included in the GDP estimate of Colombia, but in the GDP of this enclave.

53 http://www.dane.gov.co/files/investigaciones/pib/especiales/Boletin_enclave_ilicitos_2000_2010_septiembre2012.pdf

54 Note the enclave is not one specific region. Rather, it is all the areas devoted to illicit drug production throughout Colombia.

However, the revenue obtained by this production is redistributed to the Colombian workforce participating in this production, as part of primary income received by Colombia from the rest of the world (enclave). So this revenue is part of the Colombian Gross National Income. However, its amount is limited to an estimate of the value of the primary workforce involved in the growing of primary illegal products (coca leaf, poppy gum and marijuana) and first transformation (manufacture of cocaine hydrochloride). The revenue stemming from the difference between the price of primary products and their export price to the rest of the world is not estimated. This presentation of the illicit drug data permits maximum flexibility in how they are used. Annual SUTs are compiled for the agricultural and manufacturing of illicit drug production in the enclave.

Since 1999, the Colombian government (principally through the National Narcotics Directorate, NND) has worked closely with the UN Office on Drugs and Crime (UNODC) to measure and reduce coca leaf and cocaine hydrochloride production. The land area devoted to growing coca is estimated each year using satellite images via the *Sistema Integrado de Monitoreo de Cultivos Ilícitos* (SIMCI). The official data produced by the UNODC, NND and SIMCI are used by DANE to produce national accounts estimates associated with coca leaf and cocaine hydrochloride production.

DANE estimates that the gross value added of illicit drug production in the enclave has declined from 3 560 billion pesos in the year 2000 (1.7% of GDP) to 2 076 billion pesos[55] in 2011 (0.3% of GDP).

While the omission of estimates of the wholesaling, retailing and transportation of illicit drugs could be significant, the Secretariat recognises that there are no reliable ways to overcome the lack of information on the amount of the margins extracted from these steps and their allocation to Colombian resident units. The Secretariat is thus satisfied with the current treatment.

***Methods used to compile the Colombian non-financial accounts***

*Colombian approach to compiling the core annual national accounts*

Annual supply and use tables (SUTs) are compiled in current prices and in prices of the previous year. In current prices there are 61 activity categories (*i.e.* industry groups) and 369 product groups, but in the prices of the previous year the latter are compressed to 61 product groups. However, all computations with respect to products, such as volume estimation, are generally done in respect of the 369 product groups.

ISIC Rev.3.1 and CPC V. 1.0 are the industry and product classifications used. Although, due to historical reasons, the high level classifications used in the Colombian national accounts are different to the standard classifications. A correspondence table showing the composition of the 61 national activity categories in terms of ISIC Rev. 3 at the 4-digit level has been provided by DANE. DANE has announced to complete alignment of the national accounts classifications to ISIC 4 and CPC 2 for its new benchmark year scheduled to be published in 2018. Household final consumption expenditures are classified according to COICOP and government outlays are classified according to COFOG.

The institutional sector tables are consistent with those for the total economy. Hence, with exception of the financial accounts, the annual national accounts are fully consistent, with no statistical discrepancies.

To a large extent, the Colombian national accounts are compiled by extrapolating from a base year, currently 2005, backwards (to the year 2000) and forward to the current year. Previous base years have been:

[55] As of 2 October 2013, 1$US = 1908 Colombian pesos.

- 1975 for the period 1970-1995;
- 1994 for the period 1994-2005; and
- 2000 for the period 2000-2007.

The base year accounts establish the levels and structures for the whole integrated system of accounts for all the years in a series. Definitions, concepts, classifications and methods are reviewed prior to the introduction of a new base year and changes are introduced at this time. The accounts for other years in the series are intended to measure the changes that have occurred in the economy, from one period to another, by avoiding, as much as possible, changes in data sources and methods.

In some parts of the system, especially services, initial estimates are derived by extrapolating values in the base year using volume and price indicators. In some other cases, initial estimates are made by assuming the relative constancy of relationships, such as the product composition in volume terms of the intermediate consumption of an industry group. However, in such cases attempts are made to take account of any known changes in either the production functions of activities in the industry group, or changes in the composition of activities within the group. Relative constancy assumptions are also made in respect of transport and distribution margins on products.

For some activities complete information is available, and there is no need to make such assumptions. Such is the case for financial institutions, general government and some major non-financial corporations for which a complete set of accounts is available. In these cases, care is taken to make sure that changes in variables from one year to another reflect reality and are not due to other factors.

*Compiling the SUTs at current prices*

The major data sources used to compile the annual SUTs for Colombia are as follows:

- Annual Manufacturing Survey (EAM)
- Annual Trade Survey (EAC)
- Wholesale and retail trade
- Annual Services Survey (EAS)
    - Accommodation and food services
    - Postal and telecommunication services
    - Business services
    - Entertainment and recreational services, culture, TV, radio, newspapers, etc.
- Data from various supervisory bodies, *e.g.* Superintendence of Companies
- Quarterly Continuous Household Survey (incorporating the Labour Force Survey)
- Quarterly Census of Building Activity
- Customs data
- Government finance statistics
- Accounts of major non-financial corporations

- Data relating to financial institutions from the Central Bank of Colombia
- Various other administrative sources
- PPI and CPI compiled by DANE

Not much use is made of data from the taxation office, which could be used to match the business register, and to cross check the tax data received by the government with the tax data assessed by surveyed entities. This omission results from the inability of DANE to have access to administrative data at individual level from DIAN. An MOA is currently under discussion with DIAN to improve this situation.

Data from the annual surveys are not available in time for the compilation of the first estimates of year y, published in March of year y+1. Hence, quarterly (or monthly) data are used instead, and the estimation is commonly done at a coarser level. The following descriptions apply to the compilation of the "preliminary" estimates of year y published a year later (y+2), and then "final" estimates for year y published in March of year y+3.

*Output*

For the most part, output in year y is estimated by extrapolating from year y-1. The extrapolation is done using two different approaches:

- At the product level, using volume and price indices. The resulting values are then allocated to industries in the same proportions as in year y-1.

- Using value data obtained from surveys and administrative sources relating to industries. A product decomposition is available from some sources and they are evaluated by comparing them with those of the supply table for the previous year. Otherwise, the product proportions from the previous year's supply table are used to allocate the industry values of output.

Approach (a) is commonly used to derive estimates for agriculture, forestry, fishing, mining, ground transportation and construction. In most cases, the volume and price indicators relate to supply, such as export data for mining products. In other cases, the indicators relate to total demand (intermediate consumption plus final consumption expenditure plus gross fixed capital formation plus changes in inventories plus exports minus imports), such as coffee, flowers, bananas, cattle, minerals primarily composed of gold, precious metals, emeralds, machinery rental services and civil construction works. In the case of civil construction works, care is taken to ensure the estimated output is excluded from the output of units that have undertaken the production but which are assigned to different industries, such as utilities and mining.

Approach (b) is employed to estimate the output of manufacturing, air transport, public services, wholesale and retail trade, financial services, and other services.

Estimates in the prices of the previous year are derived by:

- extrapolating the current price estimates in the previous year by the volume indicators when approach (a) is used, and
- deflating the current price product values with appropriate price indices when approach (b) is used.

Many additional sources are used to derive the estimates of output in the base year (currently 2005), and they can be thought of as adjustments to the data from the principal sources. In extrapolating estimates of output from year y-1 to year y, data from the principal sources are used for many industries, and this is done at the most detailed level practicable. For activities in which adjustments represent a significant share in the total production (informal sector), the part for which accounting information is available and the part corresponding to adjustments are extrapolated independently, making an assumption for each one using a different indicator.

One type of adjustment applied to some manufacturing branches is to ensure consistency between the outputs of an industry that are used as inputs in another. The other main adjustment is related to the introduction of the informal sector (non-observed economy) as explained above (see section on exhaustiveness).

The output of general government and NPISHs is derived by summing the value of inputs, including consumption of fixed capital (derived using the PIM). Constant price estimates of output are derived by summing the constant price estimates of inputs. The constant price estimates of the labour component are derived by deflating the current price estimates by an index of public sector wage rates. An adjustment is made for perceived increases in labour productivity of one to two per cent per annum.

*Residential and non-residential building*

DANE takes a lot of trouble to derive its estimates of building output by using comprehensive and complex methods. Estimates of building output are derived for:

- Residential (houses and apartments);
- Offices, shopping centres, hospitals, etc.; and
- Industrial buildings.

The data sources used to derive these estimates depend on their type and location as follows:

| *Building type* | *Source of information* |
|---|---|
| Building in the 15 main urban areas | Census of buildings and building permits |
| Building in other urban areas | Model using building permits and characteristics of building census data for the 15 main urban areas |
| Unlicensed residential building | Urban housing stock, Finance for new housing |
| Rural residential building | Rural housing stock, Population projections |
| Repair and maintenance of buildings | Stock of urban and rural housing |

The bulk of building occurs in the 15 main urban areas, and a quarterly census of buildings for provides the means to derive estimates of the value of work done[56].

*FISIM*

During the Peer review mission, a technical discussion was organised on the compilation of FISIM. The exchanges resulted in recognition by DANE that improvements could be made on their current method of estimation, based on the clarifications included in SNA 2008. Issues cover: (1) the formula of

[56] A comprehensive description of the methods used for this and other categories is provided in pages 60-70 of the technical document IX: *Metodología Cuentas Nacionales Anuales de Colombia Base 2005 Años Corrientes Bienes y Servicios.*

calculation of the FISIM using a reference rate; (2) the choice of the reference rate; (3) the necessary split of calculations based on maturity; (4) the discussion on whether risk premiums are part of FISIM. A consultant from the US BEA has given technical assistance to DANE during October 2014. Based on this support, DANE sees now better how to manage the analysis of the financial sector and its transactions and is in the process to evaluate the different possible solutions to be implemented in the new base year.

*Household final consumption expenditure*

Household final consumption expenditure (HFCE) is estimated using a number of data sources. The main ones are:

- The Living Conditions Survey (or Quality of Life Survey), conducted in respect of 1997, 2003, 2008, 2010 and annual thereafter;
- The Quarterly Integrated Household Survey;
- Retail Trades Survey; and
- Sale of New Motor Vehicles Survey.

The general approach at macro level is as follows. Total HFCE evolves according to two aggregates, *total food and non-alcoholic aggregates* and *other goods and services*. Taking into consideration that the first aggregate is inelastic, it is assumed that it grows in volume with the population growth rate and in price with the CPI for *Food and non-alcoholic beverages*. The main assumption for this aggregate is that global per capita consumption remains constant. As for *other goods and services* its evolution at current price evolves in parallel as total household income as derived from the Households Labour Survey.

At an intermediate level, the Living Conditions Survey is used to calculate the expenditure share of a specific basket of products. Finally, within each group of products, the CPI is used as an indicator of this product's relative scarcity.

The Monthly Retail Trade Survey excludes small retailers and so the observed growth rates cannot be assumed to be representative of total retail sales.

Annual retail sales are categorised in the following sixteen groups:

1. Food (general supplies) and non-alcoholic beverages
2. Liquors and cigarettes
3. Textile products and garments
4. Footwear, leather products and goods substitutes of leather
5. Pharmaceutical products
6. Personal cleaning products, cosmetics and perfumery
7. Electrical appliances and furniture
8. Domestic utensils
9. Household cleaning products
10. Informatics equipment
11. Books, office goods, newspapers and magazines

12. Hardware goods, glasses and painting
13. Spare and accessories pieces for vehicles
14. Vehicles and bikes
15. Lubricants for vehicles
16. Other non-specified goods

These are used as indicators for 16 product groups. The data are not only unrepresentative of the whole industry, they are also quite volatile. In order to produce smoother annual growth rates, a simple average is taken of the retail sales growth rates and the annual growth rate of household income from the Integrated Household Survey.

The Sale of New Motor Vehicles Survey is a census of enterprises involved in the import and assembling of new vehicles. It provides information on both units and sales values of new national and imported vehicles.

Furthermore, using benchmark incidence rates obtained from surveys conducted in respect of 1998 and 2007, usage of cigarettes and illicit substances is extrapolated by using population data.

For some products, such as the rentals of dwellings, household consumption is the only element of demand, or by far its main component. In such cases, supply-side data are used to derive the estimates of HFCE.

*Gross fixed capital formation*

The scope of gross fixed capital formation (GFCF) in the Colombian national accounts, with a few minor exceptions (intangible fixed assets are restricted to software and movies), is in line with the recommendations of the 1993 SNA.

Demand-side estimates for non-financial corporations for year y are derived by comparing the balance sheets for year y and year y-1 for each unit, by ensuring the exclusion of any assets recorded that fall outside the 1993 SNA's fixed asset boundary. No GFCF survey data are used. The non-financial sector includes a number of enterprises controlled by the GAO, Superintendencies of Companies, of public services, financial entities, of the solidarity economy and health. This information, which represents 80% of the universe (90% in the financial sector) is adjusted using information reported by the establishments in the economic surveys, and is used to obtain the demand side GFCF.

A GFCF matrix is established to compare the data obtained by the supply of GFCF products and the corresponding demand by institutional sectors. Overall, the estimates of total GFCF are based on a combination of supply side and demand side data in which supply side data are often given more importance.

Volume estimates are derived by deflating the current price estimates with the corresponding product PPIs, where available, and the most suitable price indices, where they are missing. The current price values of computer equipment are deflated by the CPI for computer equipment and the current price values of software are deflated by the IPI for software.

*Changes in inventories*

The major sources of data used to estimate changes in inventories are the annual manufacturing and trade surveys. Estimates are derived by stage of processing for manufacturing, but no such distinction is

made between the inventories held by other industries. The international standard procedure of deriving constant price estimates of opening and closing inventory levels, differencing them and then inflating the resulting changes in inventories at constant prices to derive current price estimates, is followed at the product level. An effort is made to match the timing of the deflators with business accounting practices in Colombia.

PPIs are used to construct the deflators and inflators for manufacturing output (finished goods and work-in-progress) and various price indices or unit value indices are used for intermediate consumption. The most relevant CPIs are used to revalue wholesale and retail trade inventories at the product level.

In some instances, mainly mining and agriculture, quantity and price source data are used to derive both the current and constant price estimates of changes in inventories.

The published volume estimates of changes in inventories are constant price estimates at average 2005 prices.

*Exports and imports of goods and services*

DANE follows a conventional approach to deriving estimates of recorded exports and imports of goods, by basing them on customs data. Exports and imports of services are compiled by the Central Bank of Colombia, which uses two principal sources of data:

- Surveys of companies and other entities whose economic activities involve transactions between residents and non-residents, such as airlines and foreign shipping agents, the managers of ports, telecommunications companies; and
- Information obtained from regulatory authorities, such as that relating to insurance companies and from which estimates of reinsurance operations abroad are made.

DANE transforms the Central Bank data to make it consistent with the recommendations of the 1993 SNA. This includes allocating some of the domestic production of FISIM to exports and making estimates of the imports of FISIM.

The estimation of total exports and imports of goods and services is complicated by the existence of free trade zones (FTZs), the illicit production of drugs and smuggling (mainly imports). There is no recorded trade collected for customs purposes for the FTZs, and so estimates of exports and imports are made using data from the administrative units responsible for maintaining records of some of the activities undertaken in the FTZs and data obtained by the annual manufacturing and services surveys, which include units in the FTZs.

In Colombia, there is substantial production of illicit drugs and the export and the import of inputs, such as fertilizers, are unrecorded by administrative systems. DANE has undertaken special studies to estimate the associated exports and imports. Consistent with the estimates of output (see above), the estimates of the value of exports of illicit drugs are restricted to coca leaf and cocaine hydrochloride and their values exclude trade and transport margins.

There are neither export nor import price indices calculated for Colombia, and volume estimates are derived by deflating current price values at the 6-digit product level (*i.e.* the 369 SUT product level) using a variety of price indices:

- Current price estimates of goods that are quite homogenous (a coefficient of variation of less 35%, where $CV = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$) are deflated using unit value price indices. 20 export and 34 import product categories, mainly primary, are deflated using this methodology;
- For heterogeneous goods, PPIs are used in some cases. In cases where the US is the major trading partner, then EPIs and IPIs from the US Bureau of Labour Statistics are used. Price indices obtained from the IMF's database are used for some import products;
- Volume estimates of services are mostly derived by deflation, using CPIs.

*Intermediate consumption*

In the current base year (2005), intermediate consumption was calculated according to the structures of costs of each industry. The sources used were economic surveys (Annual Manufacturing Survey, Annual Services Survey and Annual Trade Survey), flows based on the balance sheets from the Superintendence of Companies, budgets of construction (buildings and civil works), and structures of the costs of agriculture from the Ministry of Agriculture.

For years other than the base year, initial estimates of intermediate consumption (IC) for each product for each industry branch in the prices of the previous year are derived by extrapolating the current price values of IC in the previous year (year y-1) by the growth in the corresponding volume of output (*i.e.* growth of volume of output from year y-1 to year y). Initial estimates of current price values of IC are derived by inflating these values with the growth in the corresponding price indices. These values are replaced in those cases where either actual intermediate consumption data exist or more soundly-based estimates are available, and the corresponding estimates in the prices of the previous year are obtained by deflating the current price values with a suitable price index. This applies to the intermediate consumption of the following industries:

- Generation, transmission and distribution of electricity;
- Manufacture of gas, distribution of gaseous fuels through pipes, providing steam and hot water;
- Collection, purification and distribution of water;
- Public administration and defence, and mandatory social security;
- Non-market education services;
- Health and social services in the market sector; and
- Intermediate consumption of FISIM by using industries.

*Balancing the SUTs*

The balancing of the SUTs follows a fairly standard multi-step process in which a number of iterations may take place. An important feature is that the current price estimates and the estimates in the prices of the previous year are balanced concurrently.

- The first step in the balancing process is to confront the supply and use of each product. In the first instance, discrepancies are allocated to components of intermediate consumption that have not been fixed on a pro rata basis. The initial estimates of supply are then confronted with the revised usage data. Depending on the outcomes, further analyses are undertaken. Attention is given to a number of features of the data, such as:
- The year-to-year growth rates of the cells: current prices, volumes and prices;

- Consistency between related variables, such as outputs that are used as inputs of other industries;
- Comparisons are made between the growth rates of output and gross value added and employment by industry;
- Comparisons between the imputed taxes on products and the corresponding data from government finance statistics;
- Comparisons between the imputed trade and transport margins on products and the corresponding survey output data;
- Comparisons between the growth rates of cells and any available related exogenous information.

*Generation of income accounts*

Estimates of the compensation of employees are derived according to the industry. For agriculture, they are calculated on the basis of daily wages per cultivated hectare. For most other industries there are data from economic surveys (Annual Manufacturing Survey, Annual Services Survey and Annual Trade Survey), flows based on the balance sheets from the Superintendence of Companies and budgets of construction (buildings and civil works). In addition, global estimates of compensation of employees are calculated using data from the monthly Household Survey. An employment matrix is built in order to reconcile the estimates of the two approaches.

Gross operating surplus and gross mixed income are derived as balancing items in the generation of income account for each institutional sector.

*Quarterly national accounts (QNA)*

Quarterly estimates of GDP are derived using the production and expenditure approaches, *i.e.* gross value added by industry *plus* taxes *less* subsidies on products, and consumption expenditure *plus* capital formation *plus* exports *less* imports. They are derived by using indicators to distribute and extrapolate the annual estimates using the proportional Denton benchmarking procedure. Estimates are published in both original and seasonally adjusted terms and in current prices and volumes. The latter are derived as chain-linked indices using the Laspeyres formula with annual weights. Quarterly estimates in the prices of the previous year are linked together using the annual overlap method. X-12 ARIMA is used for seasonal adjustment. In terms of the methods used to compile its QNA, DANE follows the recommendations of the IMF's *Quarterly National Accounts Manual: Concepts, Data Sources, and Compilation, 2001.*

For the purpose of compiling the QNA, the annual SUTs are aggregated from 61 industry groups and 369 product groups to 53 industry groups and 113 product groups. For some final demand aggregates the product groups are further compressed. The following table shows the number of product groups for the major aggregates.

**Table 1. Compilation of QNA: Dimensions of major aggregates**

| Aggregate | Dimension |
|---|---|
| Output and intermediate consumption | 53 industry groups and 113 product groups |
| Value added | 53 industry groups and nine major industry groups |
| Household final consumption expenditure: | |
| Compilation, from which they are categorized by: | 69 product groups |
| - purpose | 4 large product groups |
| - durability | 12 large product groups |
| Government final consumption expenditure | 6 large product groups |

| | |
|---|---|
| Gross fixed capital formation | 20 product groups and 6 asset categories |
| Changes in inventories | Overall economy |
| Exports | 45 large product groups |
| Imports | 40 large product groups |
| Taxes and duties on imports | 40 large product groups |
| Value added tax | 113 product groups |
| Subsidies on products | 113 product groups |
| Trade and transport margins | 85 product groups |

The annual values for each product group for each major aggregate other than value added and intermediate consumption are distributed and extrapolated using quarterly indicators (in some cases monthly indicators are aggregated to quarterly). Sources for the quarterly indicators include:

- Monthly Manufacturing Survey (MMM) for manufacturing output, Monthly Retail Trade Survey (MMCM) (excludes small businesses), Major Retail Stores and Hypermarkets (GAHM) for HFCE and retail trade output, Quarterly Services Survey (MTS) for communications activities, restaurants, hotels and services to the companies;
- Quarterly building census;
- Quantity indicators for the output of several industries from various sources: tonnes harvested (agriculture), barrels produced (petroleum), gigawatts generated (electricity), student enrolment (education), etc.;
- Data from the tax office, other government agencies and various other sources;
- The price indices used are the same as those used to compile the annual national accounts.

The compilation of the initial quarterly estimates of GDP proceeds in two stages:

- Quarterly indicators of output and the components of GDP(E) are constructed for each product group in current prices and constant prices (base year 2005), benchmarked[57] to the corresponding annual estimates and then seasonally adjusted.
    - Comparisons are made between the growth rates of the annual benchmarks and the annualised quarterly indicators to ensure the latter are tracking the former satisfactorily.
    - The quarterly estimates of the product groups simply follow the growth rates of the indicator for quarters beyond the latest annual supply and use tables.
- The national accounts aggregates are then formed.

*Compiling GDP using the production approach*

The general approach to compiling quarterly estimates of GVA by industry can be summarised as follows:

[57] DANE uses software developed by Statistics Canada to do the benchmarking. The proportional Denton method, as modified by Pierre Cholette, is used. The benchmark-to-indicator (BI) ratios are examined to determine how well the quarterly indicators are correlated with the annual estimates, and remedial action is taken if required.

- The seasonally adjusted current and constant price estimates of output for each of the 113 product groups are allocated to producing industries using the corresponding annual supply tables. The supply tables for the latest year are used for quarters for which annual tables are yet to be compiled;
- The allocated products by industry are then summed to obtain quarterly estimates of total output by industry;
- Quarterly estimates of intermediate consumption at current and constant prices by product group are then imputed using the corresponding annual use table. The use tables for the latest year are used for quarters for which annual tables are yet to be compiled;
- Current and constant price estimates of gross value added are derived by differencing the estimates of output and intermediate consumption;
- Estimates of taxes *less* subsidies on products are derived individually using the most appropriate indicators, benchmarked to the annual estimates and reconciled with available tax data for the most recent quarters;
- The current and constant price estimates are then aggregated. The latter are aggregated as annually-weighted chain Laspeyres indices.

This method uses structural information from the annual supply and use tables that can only be validly used with seasonally adjusted quarterly data. Besides, DANE publishes non-seasonally adjusted estimates but no information has been provided on the derivation method.

*Compiling estimates of GDP using the expenditure approach*

The quarterly current price and chain volume estimates of the aggregates are derived by aggregating the corresponding estimates of the product groups. No annual structural data are used and so estimates can be readily derived in both seasonally adjusted and non-seasonally adjusted terms.

Having produced initial estimates of the aggregates, DANE then proceeds to analyse the results, including making comparisons with exogenous data. Unlike the annual estimates, the quarterly estimates of GDP using the expenditure and production approaches are not balanced. However, when significant discrepancies between the two estimates occur, a detailed analysis is undertaken, including an examination of product balances, to identify and remedy major inconsistencies.

*Quarterly indicators*

*GDP(P)*

DANE has quite a comprehensive set of indicators for measuring the output of goods-producing industries, with a high degree of coverage. In the case of manufacturing, aggregates of output of industries at the 3-digit level of ISIC Rev. 3 are used to approximate the output of 31 product groups. A few other manufacturing product groups, relating to agricultural and mining products, are estimated using other indicators. The output of the construction industry and GFCF of construction are estimated in the same way as the annual estimates. The indicator of civil works used for the estimation of quarterly accounts is that of payments deflated by a price index, which can lead to gaps between payments and effective production. DANE is working to improve this indicator.

The current method of compilation of civil works is essentially based on payments made by government entities. This hampers the quality of the quarterly accrual estimate of this important part of GFCF, as the timing of payments do not correspond to the timing of the works. Two exercises are

developed to improve the situation, one with medium term implementation, and one with more long-term implication.

In the medium term, an indicator is put in place by the DSCN to reflect a basket of intermediate consumption goods identified as the most representative ones of civil works activity in annual accounts and for which quarterly information is available. In the more long-term, DIMPE is developing an impressive new statistical program with the aim at obtaining a direct measure of the physical progress of construction works based on a directory of construction projects and direct information by type of works.

The output of wholesale and retail trade is estimated by summing the wholesale and retail margins on products. The quarterly estimates of the product groups comprising final demand and intermediate consumption are used in conjunction with margin rates from the annual supply and use tables to derive quarterly margin estimates in current and constant prices by product group.

The outputs of other service industries not covered by the quarterly services survey are derived using many different indicators. Residential rents are estimated using model-based estimates of the residential stock and average rents, all differentiated by region and quality. The output of business services is estimated using an indicator comprising a weighted average of the outputs of the principal industries consuming business services. Quarterly estimates of FISIM are derived in the same way as the annual estimates.

*GDP(E)*

Quarterly estimates of HFCE by product group are derived at constant prices by benchmarking quarterly indicators to the corresponding annual estimates. In some cases, such as cigarettes and illicit drugs, there are no quarterly indicators and the methods used to derive the annual estimates are used. The constant price estimates for the product groups are then distributed by COICOP and durability according to their shares in the annual estimates. The constant price estimates are then inflated using CPIs to obtain current price estimates. The Monthly Retail Trade Survey (MMCM) is used to derive constant price estimates for some products, such as processed foods, clothing, appliances, etc. In many other cases, the quarterly constant price estimates are derived in a similar way as the annual estimates.

In the methodological information available on DANE's website[58], it is written that for some agricultural products quarterly estimates of HFCE at constant prices are assumed to have uniform rates of growth subject to the estimates being consistent with the annual estimates. A smoothing technique based on Denton-Cholette is used.

Quarterly estimates of GFCF, exports and imports are derived in the same way as the annual estimates. The quarterly estimates of changes in inventories for coal, petroleum, coffee and cattle are derived using direct information, but the initial estimates for manufacturing and retail and wholesale trade are derived by distributing and extrapolating the annual estimates of changes in inventories according to sales data from the monthly surveys (Monthly Manufacturing Survey and Monthly Retail *Trade Survey).*

*Quarterly institutional sector accounts*

There are currently no quarterly institutional sector accounts, while OECD requires the transmission of such data (Table 8 of SNA 2008 transmission program). This is a major gap in the availability of quarterly statistics, in particular as regards the government sector.

[58] §4.1.1 of *Metodología de las Cuentas Trimestrales – Ct-Base 2005.*

*Financial account and rest of the world account*

The rest of the world account is compiled using data from the balance of payments (BoP). Both the BoP and the financial accounts are compiled by the Central Bank (Banco de la República, Colombia – BR). An assessment of Colombia's BoP is made in Chapter 8 and an assessment of its financial statistics is made in Chapter 9.

***Timeliness***

Initial annual estimates are published with a lag of about 64 weeks and initial quarterly estimates are published with a lag of about 81 days.

Every year DANE publishes a schedule for the release of its national accounts publications. The quarterly national accounts are published about 81 days after the end of the reference quarter. The first very simplified annual accounts are released as sum of the quarterly accounts about 81 days into year Y, but the true national accounts estimates including income accounts (called "provisional") are published with a lag of almost 64 weeks from the end of the reference year) and "definitive" estimates for year Y-3 (a lag of almost 116 weeks from the end of the reference year).

These lags are significantly longer than those for many OECD countries. There is a need to reduce the delay for the first results of the quarterly GDP(P) and annual income accounts. As regards first estimate of quarterly GDP(P), most OECD countries publish their first estimates within Q + 45 days. To align brutally to this short delay could be unreasonable in Colombia. However, a reasonable short term objective for DANE would be to reduce the delay to Q + 60 days. This could start to be tested during 2015, and put in place, if the test is positive, in 2016. As regards annual income accounts, it has already been said that the priority is the publication of the accounts of the general government in June Y+1. The development of quarterly institutional sector accounts on the occasion of the new benchmark year will change the picture as regards the timeliness of income accounts.

***Interpretability (availability of metadata)***

DANE provides detailed and comprehensive information of many aspects of its national accounts on its website, including definitions of national accounts variables, industry and product classifications and the methods used to compile its estimates. However, there are some gaps in the descriptions of the methods used that required further inquiries with DANE. The most important of is how the annual income estimates (compensation of employees, gross operating surplus and gross mixed income) are derived. DANE is currently documenting this part of the methodology.

***Data and metadata transmission***

DANE has supplied annual and quarterly national accounts data and metadata to the OECD Secretariat electronically. Although the data supplied were incomplete and there were some inconsistencies, the Secretariat deems that these problems can be overcome.

An agreement between OECD and DANE has been made to postpone the implementation of SDMX for national accounts data transmission to OECD to 2018, after the new SNA and the new classifications consistent with ISIC 4 and CPC 2 have been fully implemented. Pending this, DANE will transmit the standard OECD Excel tables in SNA 93.

**Overall assessment of the national accounts statistics and main recommendations**[59]

The national accounts statistics of Colombia globally comply with the standard quality framework of the OECD. The system of national accounts of Colombia has a long history of more than 40 years. It is developed and relies on an organised and quite complete system of sources. Reasonable estimates are made for the illegal and the informal sectors. The central annual goods and services accounts are compiled based on a remarkably disaggregated 369 SUTs. This detail ensures the quality of aggregates as it allows the use of detailed source indicators, assignment of flows to final or intermediate uses and a good volume/price breakdown. Quarterly national accounts are based on a sound methodology. The documentation of the methodology and sources used is appropriate, including a large part of it available in English. The resources devoted to national accounts is appropriate for regular compilation (90 staff, including coordination of satellite accounts) if not for the additional projects (quarterly income accounts).

This overall positive assessment leaves room to recommendations greater consistency with OECD requirements. These improvements are directly linked to the implementation of the announced new benchmark year to be published in 2018. In the view of the reviewers, the main domains for improvement are the following:

- Full alignment with ISIC rev 4 and CPC rev 2.
- Development of more complete annual general government accounts, covering non-financial and financial accounts, and available at Y+6 months, as first provisional estimates.
- Development of quarterly income accounts, leading to availability of main quarterly indicators such as quarterly surplus/deficit of general government, household saving rate and net operating surplus.
- Reduction of the delay of the first estimate of quarterly GDP production approach to Q + 60 days.
- Compilation of stocks of non-financial assets.
- Implementation of capitalisation of R&D and other new features of the SNA 2008, using the opportunity of the new base year.

Already, progress in these directions is on way as DANE has started a work program to ensure the availability of general government accounts at Y+6 months by 2017. The success with implementing the new base year is essential for the full compliance of Colombia with OECD requirements for national accounts. This project should therefore be organised under strong governance, including commitment at the highest level of DANE. As regards government accounts, it needs a strong involvement of the Interagency Commission on Government Finance Statistics (CIEF) and depends on the progress of the implementation of new public accounting standards.

[59] This section has taken into account the report of the IMF April 2013 technical assistance mission on national accounts.

# CHAPTER 4. PRICE STATISTICS

## Background

The objective of the OECD's Price Statistics Programme is to compile core series on prices that are comparable between countries, analytically useful, timely and available for period as long as possible. This review focuses on the Consumer Price Index (CPI), the Producer Price Index (PPI), Purchasing Power Parities (PPPs) and House Price Indices (HPI).

The assessment process consisted of the examination of the existing national and international sources for Colombian price statistics and the collection of data and metadata supplied by Colombia via the OECD questionnaires. The information so gathered provided the main inputs source for the assessment. The National Administrative Department of Statistics (DANE) is the official producer of CPI and PPI statistics in Colombia and contributed actively to the review process.

## OECD data and metadata requirements for price statistics

### *Coverage – CPI*

Every month, the OECD Statistics Directorate publishes seven CPI series as part of the OECD's Main Economic Indicators publication and also through the OECD CPI press release (which is drafted last Friday of each month). The seven series are considered CPI target indicators and are compiled with the aim of showing comparable CPI data across countries in terms of analytical use, timeliness and availability.

The seven CPI target series have been defined following the COICOP Classification:

- CPI All items – COICOP 01 to 12;
- CPI Food – COICOP 01;
- CPI Energy – COICOP 04.5 & 07.2.2;
- CPI All items less Food less Energy (Core inflation) – COICOP 01-12 less COICOP 01. 04.5 & 07.2.2;
- CPI Housing – COICOP 04.1, 04.2 & 04.3;
- CPI Services;
- CPI Services less Housing – Services less COICOP 04.1, 04.2 & 04.3.2.

Some countries provide the OECD only with the component series of the CPI target indicators. In order to publish comparable series and to calculate zone aggregates, the OECD then computes CPI target indicators using weights and component series provided by the national statistical office. This is particularly frequent for the series *CPI Energy* and *CPI All items less Food less Energy*.

The Secretariat calculates monthly CPI zone aggregates including all OECD member countries and labelled OECD-Total for the four following CPI target series: *CPI All items*, *CPI Food*, *CPI Energy* and *CPI All items less food less energy*. These CPI zone aggregates for OECD-Total are shown with time series

starting in January 1970. The OECD-Total refers to all OECD countries from January 1995; prior to 1995 some OECD countries are not covered.

The Secretariat requests as long a time series as possible of historical CPI data (the better would be from January 1970 with a minimum required length from January 1995) and maintains CPI series from 1970 or earlier for most countries. Moreover, it is recommended that countries disseminate all CPI series with a fixed common reference period on their website in English.

***Coverage – PPI***

Only a limited number of output PPI series are collected by the OECD Statistics Directorate. The choice of these series is governed by analytical usefulness, comparability and availability in a majority of OECD countries. Much more than what happens with the CPI, the scope and compilation practices of PPI series vary between countries. To accommodate these different practices in the OECD member countries, 13 series have been defined as a target. For each series, two variants exist: PPIs over goods and services delivered to all domestic and foreign markets ('total'), and PPIs for goods and services delivered to the domestic market only ('domestic'). Each of the 13 target series belongs to one of the three different categories of PPIs, as reported below.

The first is defined around economic activities and provides an industry dimension. PPIs are grouped with regard to the higher level of the ISIC Rev.4 classification (section B to N) which classifies producer units according to their kind of activity, mainly on the basis of the principal class of goods produced or services rendered. The series considered are as follows:

4. PPI by Economic Activity for both total and domestic markets:
    - Total industry (ISIC Rev.4, Sections B, C, D – corresponding to NACE Rev. 2, Sections B, C, D);
    - Mining and quarrying activities (ISIC Rev.4, Section B – corresponding to NACE Rev. 2, Section B);
    - Manufacturing (ISIC Rev.4, Section C – corresponding to NACE Rev. 2, Section C);
    - Manufacture of food and beverages products (ISIC Rev.4, Section C10 – corresponding to NACE Rev. 2, Section C10).

The second category of PPIs classifies producer prices by similarity of end use or material composition, without regard to the industry of origin. This set of PPIs provides a breakdown of a group of industries (Sections C to E inclusive of ISIC Rev. 3.1 classification) by type of use. They are listed below.

2) PPI by Type of Commodity for both total and domestic markets:
    - Consumer goods;
    - Durable consumer goods;
    - Non-durables consumer goods;
    - Investment goods;
    - Intermediate goods;
    - Energy.

The third category of PPI is defined by stage of processing. This structure classifies goods and services according to their position in the chain of production.

1. PPI by Stage of Processing for both total and domestic markets:
   - Primary products - Raw (or unprocessed) materials;
   - Intermediate goods;
   - Finished goods.

PPI by stage of processing are only available for five non-European OECD countries: Australia, Canada, Japan, Korea and the United States. European countries generally provide PPIs by economic activity and by type of commodity. It is not always possible for countries to supply PPI data for both the domestic and total markets.

The Secretariat calculates monthly PPI zone aggregate including all OECD member countries and labelled OECD-Total for the *Domestic PPI for Manufacturing (ISIC Rev.4, Section C)*. This PPI zone aggregate for OECD-Total is shown with time series starting in January 1982. The OECD-Total refers to all OECD countries from January 1995; prior to 1995 some OECD countries are not covered.

The Secretariat requests as long a time series as possible of historical PPI data (the better would be from January 1970 with a minimum required length from January 1995) and maintains PPI series from January 1970 for most countries. Moreover, it is recommended that countries disseminate all CPI series with a fixed common reference period on their website in English.

***Compliance – CPI and PPI***

The points of reference for the methodological assessment, or "compliance", are the international standards. In particular, the current international guidelines and recommendations for the compilation of CPI are those adopted by the Seventeenth International Conference of Labour Statisticians held in Geneva in December 2003. The "*Consumer price index manual: Theory and practice*"[60], (hereafter referred to as the *International CPI Manual*) was jointly produced by the International Monetary Fund (IMF), the OECD, the International Labour Organisation (ILO), the Statistics Office of the European Commission (Eurostat), the United Nations Economic Commission for Europe (UN-ECE) and the World Bank, in 2004. The basic reference for PPIs is the 2004 "*Producer price index manual: Theory and practice*"[61], (hereafter referred to as the *International PPI Manual*), also produced by the IMF, OECD, ILO, UN-ECE and World Bank.

***Interpretability (Metadata requirements) – CPI and PPI***

For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. However, to ensure transparency of data and establish the confidence of users in an international setting, it is strongly recommended that metadata be available in English and easily accessible over the internet.

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60 ILO/IMF/OECD/UNECE/Eurostat/The World Bank, "Consumer price index manual: Theory and practice", Geneva, International Labour Office, 2004. http://www.ilo.org/public/english/bureau/stat/download/cpi/prefcpi.pdf

61 ILO/IMF/OECD/UNECE/Eurostat/The World Bank, "Producer price index manual: theory and practice", Washington, D.C., International Monetary Fund, 2004. http://www.imf.org/external/pubs/ft/ppi/2010/manual/ppi.pdf

For prices statistics, the OECD requires information on the concepts and scope of the index, expenditure weights and their sources and sampling, price collection and index calculation methods.

***Timeliness – CPI and PPI***

It is essential that countries provide data (or that data are made available in the SDMX web service) at the same time or immediately after they are released nationally. Moreover, all CPI series required by the OECD for the monthly 'OECD Consumer Price Index press release' should be made available on a timely basis in order to meet the schedule of the press release, which is usually finalised the last Friday of the month following the reference month (*i.e.* between the 26th and 31st day of the month).

For PPI, it is important that countries provide data or that data be available at the same time or immediately after they are released nationally. Ideally, PPI data should be made available within one month after the reference period.

It is also recommended that fixed and unchangeable release dates for the CPI and PPI be published in English at least 12 months in advance. Such advance announcements ensure transparency and strengthen the perception of objectivity of the data dissemination.

***Data and metadata transmission – CPI and PPI***

The Secretariat collects CPI and PPI target time-series from the countries through the OECD EXCEL questionnaires. A second-best solution would be for the Secretariat to collect data from the countries' website, in English, using the same process as that used for many OECD countries. Moreover, the Secretariat very much encourages countries to participate in the pilot project to disseminate short-term economic statistics via SDMX[62]. This approach will lessen the burden of data transmission for countries and for the OECD.

Methodological information on both CPI and PPI target time-series should be transmitted by countries in the OECD questionnaires (at this stage of the SDMX program, there is unfortunately no possibility of metadata transmission via SDMX). The Secretariat recommends that all metadata be made available, in English, on the internet to strengthen transparency and facilitate the use of the price statistics by external users.

**Evaluation of the consumer price index (CPI) of Colombia**

The Secretariat assessed the Colombian consumer price index series to see if these meet OECD requirements.

***Coverage – CPI***

DANE provided to the OECD the *CPI All items* series with data starting in January 1970 and this meets perfectly the OECD requirements in terms of time coverage for the CPI all items.

The CPI data are shown with a fixed reference period (*i.e.*, December 2008=100). Data are presented as an index, as percentage change on the previous period, change on the same month of the previous year and change over the last 12 months.

[62] SDMX (Statistical Data and Metadata eXchange) is an initiative to foster standards for the exchange of statistical information sponsored by the Bank for International Settlements (BIS), the European Central Bank (ECB), the Statistical Office of the European Union (Eurostat), the International Monetary Fund (IMF), the OECD, the United Nations (UN) and the World Bank (WB).

***Compliance – CPI***

The Colombian CPI is compiled following a national classification structure that has been derived from and adapted to COICOP, though it is not fully in line with the latter. DANE confirmed that it will aim full compliance with COICOP in 2018.

The CPI survey is based on 216 000 individual price quotations collected each month, using 100 surveyors over 24 cities, and 55 000 outlets. There are 181 basic expenditure categories, each one including several basic items (425 items). Types of points of sales encompass: market places, fairs and mobile markets; hypermarkets, supermarkets and private stores; family compensation funds –cooperative stores and neighbourhood convenient stores; specialised stores; drugstores; perfumeries and pharmacies; establishments specialised in the provision of services; restaurant and food outlet chains; rental of dwellings. The places of purchase are updated based with the points of purchase survey included in the Income and Expenditure survey. This structure of places is kept updated, when a place is closed.

Overall, the Colombian CPI complies with the concept, definitions and recommendation set by the ILO recommendations and the International CPI Manual. In particular:

- The CPI follows the SNA 1993 household consumption concept excluding own-account production of market goods and services and illegal production. The CPI uses detailed expenditure data from the National Income and Expenditure Survey;
- The National Income and Expenditure Survey is compiled according to the COICOP classification, as its basis for the classification of goods and services. CPI weights are derived from the National Income and Expenditure Survey that is in line with international practice;
- The treatment of specific expenditure groups such as insurance (including vehicle insurance only) is in line with international recommendations;
- The non-resident household expenditures are excluded, in line with international practices;
- Index calculations at the elementary level are based on a Jevons-type index number formula which follows international recommendations. The geometric mean is used for the calculation of the indices at the first level, which enables capturing the replacement effect within the elementary aggregates;
- For higher level aggregates, in line with international practice, DANE uses a modified Laspeyres-type formula to aggregate across elementary price indexes;
- The inclusion of Owner Occupied Housing (OOH) in the Colombian CPI by using a rental equivalent approach fully meets international recommendations;
- Treatment of missing prices is in line with international recommendations: when an item is temporarily missing, prices are imputed by calculating the geometric average of relatives of each item or variety for which there is information for the reference month. Subsequently, this geometric average of price relatives is applied to the previous price of the missing item. When it became permanently unavailable a replacement item is selected;
- Quality changes are captured by using the implicit methods.
- Some prices are fixed and controlled by the government, but this has no impact on the CPI, as these prices are observed and processed exactly as other prices.

However, some methodological issues arise. In particular:

- Prices are collected monthly in 24 department capitals, including some metropolitan areas. Therefore, the CPI covers only resident households with two or more than two members living in urban areas, while households living in rural areas are excluded. However, household coverage is already more than 80%, as 75% of the population of the country is urban and this is increasing. DANE will redesign of the CPI in 2018 and will envisage the possibility of extending the collection to the remaining non covered sub-capital municipalities in some departments thus aiming to achieve a national total urban CPI.
- As stated above, the classification used for the CPI is national, derived from the COICOP classification but not fully in line with that. However, DANE expects full compliance with COICOP in 2018.
- CPI weights are revised every 10 years only at the level of the 181 basic items. Last revision took place in 2008, with data from the 2006-2007 Income and Expenditure Survey. Due to budget restrictions that limit the frequency of this heavy survey, DANE indeed carries out weights revision according to the maximum deadline recommended by the international community, namely 10 years. However, it has to be noted that international guidelines also say that a five-year frequency for weights revision would be preferable[63]. DANE could envisage the use of national accounts sources between two Income and Expenditure surveys, even if this is at more aggregated level than basic level.
- The second hand goods are not included in CPI and this is not in line with international recommendations. DANE recognises that the inclusion of second-hand goods requires an assessment, considering that there is a second hand market in some domains, such as vehicles.

***Interpretability (Metadata requirements) – CPI***

The methodological document 'Consumer price, methodology' is published on DANE's website in both the Spanish[64] and the English[65] language. Methodological changes are announced in Spanish only, at the time the data are released in the 'Boletín de Prensa' (Press Release) and later in the 'Boletín de Estadística' (Statistics Bulletin). Specifications on changes in the production of CPI data, including brands, quality and variety, are documented in the 'Cartilla de Especificación de Calidades' (List of Quality Specifications). DANE commits that announcements of methodological changes are also made in English in the future.

The English version of the CPI webpage[66], on DANE's website, has been recently updated with metadata in English (factsheet and methodology). The OECD recommends that this metadata includes a specific section explaining the exact method for the compilation of the six series compiled at the request of the OECD. According to DANE, this is on-going.

Moreover, CPI weights are published on DANE's website[67], though, in Spanish only.

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63 According to the International CPI Manual (paragraph 4.50): http://www.ilo.org/public/english/bureau/stat/download/cpi/ch4.pdf

64 http://www.dane.gov.co/dane/files/investigaciones/fichas/metodologia_IPC-09.pdf

65 http://www.dane.gov.co/files/investigaciones/fichas/ingles/IPCMETHODOLOGY_DANE.pdf

66 http://www.dane.gov.co/index.php/price-index-and-costs/consumer-price-index

67 https://www.dane.gov.co/index.php/indices-de-precios-y-costos/indice-de-precios-al-consumidor-ipc/86-economicas/precios/3030-sistema-de-ponderaciones-24-ciudades?lang=en

***Timeliness – CPI***

DANE publishes the consumer price index no later than five working days after the end of the reference month or the business day before. Release timetable is available on DANE's website[68].

DANE more than meets OECD timeliness requirements. In particular, it is in line with the OECD CPI publication and press release monthly schedule.

***Data and metadata transmission – CPI***

Colombia now transmits CPI data using SDMX.. Metadata has unfortunately to be transmitted by using ad-hoc format (separate Word file) as SDMX does not yet allow for metadata transmission. In addition to the SDMX webservice, DANE will publish all the seven series on its website, jointly with its regular CPI publication on the release dates according to the official calendar. The series are transmitted via SDMX.

Furthermore, CPI data are disseminated also through a dynamic online portal[69] ("Sistema de consulta"), though only available in Spanish.

**Overall assessment – CPI**

Overall, Colombia meets OECD requirements for the CPI series in terms of coverage and compliance. In that respect, all the seven CPI target series have been provided by Colombia. More detailed metadata as regards the content of the six additional series would be useful. In general terms, Colombia meets international methodological standards for the construction of the consumer price index. Furthermore, timeliness and data and metadata transmission requisites are fully met.

In conclusion, the reviewers recognise that Colombia generally meets the OECD requirements for CPI but welcomes that DANE has recognised that the following items will be addressed by DANE in the scope of the preparation of the 2018 review of the CPI:

Extension of collection of prices for sub-capital municipalities aiming to achieve a national total urban CPI.

- Full adoption of the COICOP classification;
- Consideration of the use of national accounts sources for more frequent revisions of CPI weights pending Income and Expenditure surveys;
- Provision of CPI series starting in January 1995
- Provision of more complete methodological information in English.

68 http://www.dane.gov.co/dane/index.php/calendar/

69 http://www.dane.gov.co/Dane/inicioIPC.jsf

**Evaluation of the producer price index (PPI) for Colombia**

***Coverage – PPI***

In December 2014, DANE redesigned in depth the Colombian Producer Price Indices system. Six categories of producer price indices are compiled on a monthly basis of which 3 categories are of particular interest for the OECD price unit:

1) PPI by economic activities for domestic market, according to ISIC Rev.4 adapted for Colombia for sections A, B, and C, with details at the divisions, groups and classes level;
2) PPI by economic activity for total market according to ISIC Rev.4 adapted for Colombia for sections A, B, and C with details at the divisions, groups and classes level (*e.g.* goods produced in the country regardless of the destination of consumption, domestic or exported);
3) PPI by CUODE ('Clasificación según Uso o Destino Económicos', i.e. classification by economic use and destination). according to the ISIC Rev.4 and CPC[70] Ver. 2 both adapted for Colombia , with subclasses aggregation up to the five digit level;

- Additionally, DANE publishes PPIs both for imported and exported goods. There is no current plan to extend PPIs in the domain of services nor to compile PPIs by stage of processing.

In this framework, six PPI series for domestic market and 2 PPI series for total market meet OECD requirements in terms of coverage, namely: the *PPI Mining and quarrying activities* for both total and domestic market; the *PPI Manufacturing* for both total and domestic market (data starting in June 1999); the *PPI Manufacture of food products for domestic market only* (data starting in December 2006); the *PPI Consumer goods for domestic market only* (data starting in January 2001); the *PPI Capital goods for domestic market only* (data starting in January 2001); and the *PPI Intermediate goods for domestic market only* (data starting in January 2001).

Note that these PPI series are provided and published on DANE's website[71] with historical data from December 2014. PPIs series for domestic market have been linked by DANE with the previous version of the series resulting to PPIs series with data starting as follows: *PPI Mining and quarrying activities* for domestic market (data starting in June 1999); *PPI Manufacturing* for domestic market (data starting in June 1999); the *PPI Manufacture of food products for domestic market only* (data starting in December 2006); the *PPI Consumer goods for domestic market* (data starting in January 2001); *PPI Capital goods for domestic market* (data starting in January 2001); and the *PPI Intermediate goods for domestic market* (data starting in January 2001).

PPIs series for total market (*PPI Mining and quarrying activities and PPI Manufacturing)* starts in December 2014; no historical data have been provided by DANE. Given the OECD publishes all PPI series with the reference year 2010=100, the two total PPI series cannot be as such published by the OECD.

These new PPI series were integrated into the OECD PPI database in February 2015. The process of integration of Colombian PPI data went very smoothly. PPIs are now reported regularly to OECD during the first week of each month.

70 Central Product Classification.

71 . http://www.dane.gov.co/index.php/indices-de-precios-y-costos/indice-de-precios-al-productor-ipp

All PPI data are published with a common fixed reference period (i.e., December 2014=100). Data are presented as an index, as percentage changes on the previous period, change on the same month of the previous year and change over the last 12 months.

The Secretariat welcomes that DANE has started the production of more detailed OECD target series for PPI, in particular those covering the total market, to better meet OECD coverage requirements. However, the Secretariat strongly encourages the calculation of historical data for total PPI series.

***Compliance – PPI***

In terms of compliance of the Colombian PPI with OECD standards, the following points have to be noted:

- Basic prices collected exclude V.A.T., consumption taxes, transportation costs and marketing margins. Therefore, producer prices are in line with international recommendations;
- The classifications used are the ISIC Rev. 4 and CPC Ver. 2 both adapted for Colombia;[72]
- Weights are derived from the supply-use tables of the National Accounts. Weights are updated every 5 years and the current reference period corresponds to the year 2011;[73]
- The index calculation at the basic and higher level of aggregation is in line with international recommendations. The elementary aggregate is based on the Jevons Index, while a modified Laspeyres-type formula is applied to higher levels;
- Treatment of missing prices is in line with international recommendations: when an item is temporarily missing, prices are imputed. The imputation process consists of the replacement of the missing value with the value of the last observation available. When it became permanently unavailable a replacement item is selected.
- Quality changes are captured by using the implicit quality methods.

***Interpretability (Metadata requirements) – PPI***

Methodological information seems to be available on the DANE website … but it is not possible at this time to load pdf documents! Additionally, IMF SDDS page has not been updated.

The PPI weights are released online.

The Secretariat recommends that DANE make more complete methodological information available in English and welcomes the recent publication of the PPI weights on its website.

***Timeliness – PPI***

The Producer Price Index is published on the 4th day of each month or the nearest working day, usually earlier than the CPI. The PPI release dates for the current year are available to the public on the official calendar on DANE's website[74].

72 . http://www.dane.gov.co/files/investigaciones/boletines/ipp/Correlativa_CPC_CIIU_15.xls

73 . http://www.dane.gov.co/files/investigaciones/boletines/ipp/Ponderaciones_ipp_15.xls

74 http://www.dane.gov.co/dane/index.php/calendar/

DANE more than meets OECD timeliness requirements. In particular, it is in line with the OECD PPI monthly publication schedule.

***Data and metadata transmission – PPI***

DANE transmitted the six PPI domestic and the two PPI total target series via SDMX. The relevant metadata has been transmitted in parallel (as SDMX does not allow the transmission of metadata).

Data are monthly updated via SDMX transmission. Additionally, the eight PPI target series are published on a monthly basis on DANE's website through an EXCEL file, with the respect of the official release calendar.[75] It has to be noted that no web query has been put in place to date.

***Overall assessment – PPI***

Overall, the Colombian PPI complies with the concept, definitions, classification and recommendations of the International PPI Manual and meets the international methodological standards for the PPI construction. In this respect, the six domestic PPI target series that were provided by DANE compare favourably with those of other OECD countries.

There are some areas that the OECD recommends that DANE consider for further implementation in the future in order to fully meet OECD requirements. These are:

- The two total PPI series provided by DANE start in December 2014 only; Given the OECD publishes all PPI series with the reference year 2010=100, the two total PPI series cannot be published by the OECD till DANE does not compile backward time-series.
- Provision of all domestic PPI series starting in January 1995[76];
- Provision of more complete methodological information in English;

***Purchasing Power Parities***

Colombia participated in the 2011 International Comparison Program for prices which allowed the compilation of Purchasing Power Parities for 199 countries across the world. Colombia participated as a member of the Latin American region and results were published in April 2014. The accession to the OECD requires Colombia to join the OECD region, in a similar way as Chile for the round 2011. The Eurostat-OECD PPP Programme was established in the early 1980s to facilitate the comparison of the GDPs of European Union and OECD Member countries that take into account the relative purchasing powers of the currencies of the individual countries involved. PPPs for all OECD countries are calculated on a triennial base and the price collection is spread over three years. The current round is 2014 for which the price collection started in 2012. DANE has confirmed that it accepts the principle of joining the OECD PPP round 2015-2017.

The consumer goods price surveys are organised following a rolling survey approach. This comprises a cycle or round of the following six surveys which takes three years to complete with the following schedule for the round 2017:

- Food, Drinks and Tobacco 2015-1

75. http://www.dane.gov.co/files/investigaciones/boletines/ipp/anex_ipp_ene15.xls

[76] This is on-going.

- Personal Appearance 2015-2
- House and Garden 2016-1
- Transport, Restaurants and Hotels 2016-2
- Services -2017-1
- Furniture and Health (2017-2)

An OECD PPP mission to Colombia took place from 24 to 27 March 2015. The aim of this preparatory mission was to discuss the organisation of the surveys on consumer goods and services and to prepare the other surveys (Construction, Equipment goods, Compensation of employees, Housing and hospital services) that will take place in 2017-2018.

This mission proved to be extremely useful and showed that Colombia has experience and operational staff in the field of PPPs because of their recent participation to the ICP round and has already taken the necessary steps to organise in an efficient way the data collection for the surveys on consumer goods and services.

A team devoted to the collection of consumer goods and services has already been created and a pilot survey for the survey on food, drinks and tobacco took place in November-December 2014 and showed that Colombia was able to identify and price a high number of products for this survey. However, this pilot survey also showed that the OECD specification for the products included in the basket of goods and services are quite tight and that it is difficult to use information directly from the CPI and that it will require more effort than for ICP to collect prices for the OECD Programme.

One of the difficulties of the PPPs is to estimate national prices. Colombia has chosen to collect prices in Bogota, Cali, Medellin and Barranquilla to establish national prices. This seems a reasonable and acceptable choice. It is the practice of most OECD countries to collect only urban prices in a selected number of cities to represent national prices.

The six surveys for consumer goods and services were discussed in depth and the issue of representativity was also analysed carefully taking into account the specificities of the Colombian consumption patterns. This review was quite useful and showed that Colombia should be able to report prices for a sufficient number of comparable and representative items for all surveys.

During this mission, the surveys outside consumer goods and services were also discussed but in less details. It was mainly organisational issues that were tackled.

National accountants attended to the sessions on rents and compensation of employees and the organisation of the data collection for these surveys will be shared between the price and the national accounts units.

Surveys on capital goods are particularly expensive and are often outsourced to experts. DANE has a good understanding and knowledge of the Survey on equipment goods because of the recent ICP round and has already taken some contacts with an expert on the subject. The approach used for construction in the OECD PPP Programme is entirely new for DANE and they need further consultation with experts to determine a way forward.

For the hospital survey, there is a need to establish a contact with the Ministry of Health in order to access to the data needed.

For all these surveys, DANE has started to take the necessary steps so that they can meet the deadlines and fulfil the OECD requirements.

The preliminary results for the PPP round 2017 will be calculated in December 2018 and the final results in December 2019. For the final results, the breakdown of the National Accounts used for the year 2017 will be compiled according the results of the new base year 2018. For the preliminary results of the PPP round due end of 2018, the goal is also to use information coming from the base year 2018 as far as possible but however estimates might be necessary.

Until results for 2017 are available, PPPs for GDP and consumption will be estimated on the basis of the 2011 results.

***Overall assessment for PPPs***

DANE has a qualified and experienced team in PPPs and has taken the necessary steps to ensure a smooth implementation of the OECD-Eurostat programme. The good cooperation between price and national accounts units is constructive. The OECD is confident that DANE has in hand all the necessary tools for ensuring a successful participation in the 2015-2017 OECD-Eurostat PPP program.

***House price statistics***

Starting in 2015, the OECD Statistics Directorate is collecting house price statistics for all its members as well as OECD accession and key partner countries. The objective is to create an internationally comparable database focusing on House Price Indices (HPIs) - also called Residential Property Prices Indices (RPPIs) - and other associated indicators that provide a picture as complete as possible of the residential real estate market. A house price index consists of a price index based on effective transactions on house sales, whether second hand or new.

OECD has sent to DANE and the Banca de la República a qualitative questionnaire on the House Price Index. The Colombian authorities have returned the questionnaire on 3 (DANE) and 12 (BR) September 2014.

***Evaluation of Colombia HPI***

DANE does not compile a complete HPI and limits itself to compile indices of construction costs (ICCV) and a price index limited to new housing units (IVPN). The IPVN is a quarterly price index, based on the survey of 13 000 construction projects, and comparing the price of the first units sold within the project to the last one sold, and establishing an average price for the square meter of these projects. The geographical coverage is urban areas for a total of 23 municipal areas.

The BR compiles a quarterly (national) and annual (by city) Housing Price Index of second hand houses (IPVU). This index is based on transactions limited to Bogota, Medellin and Cali, plus four other smaller municipalities. It uses transaction prices collected using loan's appraisals reported via specialised mortgage lending financial institutions. The valuation is close to the market price when the disbursement is made. The time series cover 1988 to today. The delay of publication is around 110 days after the end of the quarter. The index is revisable. The complete series is revised and updated every quarter since, according to methodology, the sample of houses considered every period might change and increase in time. There is a "nominal index" (not deflated) and a "real index" (deflated by the CPI). There is a methodological note on the IPVU on the web site of the BR, in Spanish and in English.

DANE and the Central Bank indicated, during the OECD mission that took place from 24-27 March 2015, that they will start a discussion in 2015 to study the feasibility of producing a new House Price index covering both new and existing dwellings.

***Overall assessment of House Price Indices in Colombia***

The reviewers encourage the Central Bank and DANE to work together to establish a new index covering both new and existing dwellings. Meanwhile, the OECD will include in its housing database the IPVU (with the appropriate metadata) that fulfils partially the OECD requirements. In a second phase of development of the database, DANE and the Bank will be contacted for the inclusion of further indicators.

# CHAPTER 5. STRUCTURAL AND DEMOGRAPHIC BUSINESS STATISTICS

## Background

This chapter presents the review of structural business statistics (SDBS) as part of the accession process relating to the Colombia's candidacy for OECD membership. In the context of the OECD, "structural business statistics" consist of three datasets: Structural Statistics for Industry and Services (SSIS); Business Statistics by Size Class (BSC); and Business Demography (BD). This review covers the compliance of Colombia to report data into these databases. The data are the output of the following statistical programs of DANE: (1) Annual Manufacturing Survey (EAM); Annual Service Survey (EAS); Annual Trade Survey (EAC); Business register (SBR).

The assessment process consisted of the examination of the existing national and international sources for Colombian business statistics and the collection of data and metadata supplied by Colombia via the OECD questionnaires. The information so gathered provided the main inputs source for the assessment. The DIMPE in DANE is the official producer of business statistics in Colombia and contributed actively to the review process.

## OECD data and metadata requirements for SDBS

The OECD SDBS consists of three datasets, Structural Statistics for Industry and Services (SSIS); Business Statistics by Size Class (BSC); and Business Demography (BD)[77]. The OECD requirements for these datasets are summarised below and additional detailed information on variables, definitions and methodological standards are available in Technical Documents available on request from the OECD's Statistics Directorate. These documents have been transmitted to DANE.

### *Coverage Requirements for Structural Statistics for Industry and Services (SSIS)*

For the SSIS database, the Secretariat asks countries to provide annual information relating to the economic activity, including employment, of industries at a very detailed level, (3-digit or preferably 4-digit level). Variables include: turnover, value-added, investment, wages and salaries, employees and number of enterprises. The complete list of variables required has been made available to DANE. The Secretariat maintains SSIS data from at least the year 2000 for most countries. Accession countries should provide as long a historical series as possible; ideally, beginning in 2000 or earlier.

### *Coverage Requirements for Business Statistics by Size Class (BSC)*

For the BSC database, the Secretariat asks countries to provide annual information relating to the economic activity, including employment, of industries at a very detailed level (3-digit or preferably 4-

[77] The SSIS is in fact virtually included in the BSC, as the latter is in fact the simple breakdown of the former by size class.

digit level), broken down by employment size classes. Variables include: turnover, value-added, investment, wages and salaries, employees and number of enterprises. The complete list of variables required has been made available to DANE. The Secretariat maintains BSC data from at least the year 2000 for most countries. Accession countries should provide as long a historical series as possible; ideally, beginning in 2000 or earlier.

***Coverage Requirements for Business Demography (BD)***

The BD database contains information relating to business births (often referred to as business entries), business deaths (often referred to as business exits), business survival, high-growth enterprises and gazelles. The complete list of variables required has been made available to DANE. The Secretariat maintains BD data from the year 2005 for most countries. Accession countries should provide as long a historical series as possible; ideally, beginning in 2005.

***Compliance Requirements for SDBS***

The definitions of the variables are provided in the technical documents made available to DANE. These definitions are consistent with international practices though there are no standard international reference manuals specifically for SSIS and BSC. For the Business Demography programme, the definitions provided in the technical document are based on the *Eurostat-OECD Business Demography Statistics Manual* (www.oecd.org/std/industry-services/businessdemographymanual).

While the technical document provides the detailed definitions and concepts that should be followed, the principal requirements are summarised below.

- For enterprise size-class breakdown in the BSC questionnaire, the OECD prefers to receive data for the following employment size classes: 1-9, 10-19, 20-49, 50-99, 100-199, 200-249, 250-499, 500-999 and over 1000. However, if this detail is not available, OECD strongly recommends the following second best: 1-9, 10-19, 20-49, 50-249, >250.
- Value added should be valued at factor cost.
- For BD, the Secretariat collects "employer enterprise" data (*i.e*. data covering only businesses with at least one employee).
- The Secretariat requests monetary variables in millions of national currency units, employment variables in numbers of persons employed, hours worked in thousands, and the number of enterprises or establishments in units.
- In 2010, ISIC Rev.4 became the new standard classification for SSIS, BSC and BD data collection from reference year 2008. As a consequence, information should be provided in ISIC Rev.3 at least until year 2007 and in ISIC Rev.4 from 2008. However, to ensure comparability over time and the overall quality of the database, the Secretariat strongly encourages countries to provide information in ISIC Rev. 4 also for as many years as possible preceding 2008. Having one year of double reporting (*i.e.* one year reported in both ISIC Rev.3 and ISIC Rev.4) is the minimum requirement for the SDBS database to permit sound analytical work over time.
- If a country has not made the transition to ISIC Rev.4, plans and dates for a transition to Rev.4 should be provided.

### *Interpretability (Metadata) Requirements for SDBS*

For OECD purposes, complete and clear metadata must be available in one of the official languages of the organisation, English or French. However, to ensure transparency of data and to establish the confidence of users in an international setting, it is strongly recommended that metadata be available in English and easily accessible over the internet.

The Secretariat asks countries to provide a variety of metadata concerning the institution responsible for the statistics, any national classification system used, reference units and data sources. The Secretariat collects such information through the SSIS, BSC and BD metadata questionnaires, which have been transmitted to DANE.

### *Timeliness Requirements for SDBS*

It is important that countries provide data or that data be available at the same time, or immediately after, they are released nationally. While, ideally, data should be available as soon as possible after the reference period it is understood that a lag is necessary to permit the data to be collected and tabulated. Most OECD countries provide data about two years after the end of the reference period.

### *Data and metadata transmission requirements for SDBS*

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data, in as timely a fashion as possible. For business statistics, the Secretariat sends three separate EXCEL templates or "questionnaires" to countries annually for each of the programmes SSIS, BSC and BD. However, if the country finds it more convenient, data can be sent in a flat file format or as a SAS dataset.

## Evaluation of Colombian SDBS

A first transmission of SSIS data was provided in July 2013, a second in June 2014 and a last one in September 2014, for all three sectors (Manufacturing, Trade and Services). A first transmission of BSC data was provided in December 2013, in separate files: one for Manufacturing, one for Trade. There was no transmission of BSC data for Services. A first transmission of BD data was provided in December 2013, in separate files: one for Manufacturing, one for Trade, and one for Services. A second transmission was made in September.

### *Coverage*

The data for Colombia are extracted from the three main annual business surveys: EAM, EAC, and EAS.

The Annual Manufacturing Survey (EAM), which covers ISIC Rev.3 section D at 4-digit level and CPC at 5-digit level, is a census of all establishments (around 10 000) with 10 or more persons engaged, plus a specific production threshold, adjusted each year according to the PPI of each sector. Its geographical coverage is national.

The Annual Trade Survey (EAC), which covers ISIC Rev.3 section G at 4-digit level and CPC at 5 digit level, is an annual sample survey of retail and wholesale enterprises with legal capacities and tax identification (Numero de Identification Tributaria). The survey's sample, of a size of around 100 000 units, is obtained by random selection, with a two steps approach: (1) forced inclusion (all units are selected), probability inclusion (some units are selected). The forced inclusion covers the biggest enterprises with sales value of more of 2 903 million pesos (for 2012) or 20 or more persons engaged. Enterprises specialised in repair and maintenance (excluding vehicles), sale and purchase in second hand goods (excluding vehicles), lotteries, telemarketing or mail order, are not covered. The coverage of the survey is national.

The Annual Services Survey (EAS), which covers ISIC Rev.3 section H (Hotels), division 63, 64 of ISIC Rev.3 section I (but not 60 to 62), ISIC Rev.3 section K, class 8050 (ISIC Rev.3 section M), group 851 (ISIC Rev.3 section N), groups 92 and 93 (ISIC Rev.3 section O), is a census of large enterprises equalling or exceeding either a certain number of employees or a certain annual revenue, which vary according to the industry or primary activity. The number of units surveyed is around 5 200. With the exception of higher education, the employment threshold is either 40 or 75 and the annual revenue threshold is 3 billion pesos.

All surveys have the limitation of excluding very small units. The large sizes of the informal sector in Colombia as well as the exclusion of small units suggest that the Colombian structural business survey have limitations. DANE is working on a plan to decrease the threshold for inclusion of firms in the Annual Trade Survey and the Annual Survey of Services. Also, this limitation is compensated in the national accounts by the special treatment which extrapolates results to the informal sector, based on an employment matrix (see Chapter 3).

In addition, DANE has developed a specific survey on micro-establishments. A panel of approximately 48000 establishments with one to nine persons employed and located in 24 major cities and metropolitan areas is surveyed on a large number of subjects, such as economic activity, production, sales and revenues, employed persons, costs (including labour costs), entrepreneurship, informal sector, etc. The industrial classification ISIC Rev.3 A.C. is used for economic activities. First results covering the year 2013 have been released in March 2014[78]. In the new survey, micro establishments are identified as the same legal unit (tax identification number NIT, Citizenship identification number CC, business name or trade name), develop activities of industry, commerce and services, take more than a year of operation, and occupy the same physical space. As mentioned in chapter 2, the coverage of establishments is considered non exhaustive, as there are no administrative sources at the establishment level. Methodological information on the micro-establishments survey is only available in Spanish at this stage[79] but DANE is currently working on its translation in English.

DANE would also implement a two years plan to address identified deficiencies in the Annual Trade Survey and the Annual Survey of Services.

***Coverage for SSIS***

As regards variables and activity coverage, Colombian data meets OECD requirements only partially. In particular, SSIS data transmitted to OECD does not cover the following ISIC Rev.3 sectors:

- Mining and quarrying

[78] https://www.dane.gov.co/daneweb_V09/files/investigaciones/boletines/microestablec/CP_micro_2013.pdf

[79] https://www.dane.gov.co/daneweb_V09/files/investigaciones/fichas/Ficha_Met_Enc_Micro_07_13.pdf

- Electricity, gas and water supply
- Construction.
- Transport

- However, DANE has recently conducted first tests to incorporate the producers of coal in the Annual Manufacturing Survey (EAM 2015). As regards Electricity, gas and water, a directory of businesses has been set up and a special form is developed by DANE for their incorporation in the EAM of 2016. As regards services, DANE and the Ministry of transport have set up a specific agreement to implement a basic business survey on road freight transportation and intermunicipal passenger transportation with results available in 2016.

The following variables are totally missing for all sectors: Gross operating surplus, Changes in stocks, Number of employees in full time equivalent units, Hours worked, Employers' social contributions. DANE is currently assessing their inclusion in the 2015 survey. The following variables are unequally transmitted: Number of establishments (only for ISIC D), Number of enterprises (only from ISIC G to N). While for other sectors the data covers 1997-2012, the data only covers 2003-2012 for ISIC G, and 2006-2012 for ISIC H, K, L and M.

During the Peer Review mission, DANE agreed in providing hours worked from the Monthly Manufacturing Survey, and investment data from the Trade Structural Survey.

***Coverage for BSC***

The same variables are missing: Gross operating surplus, Changes in stocks, Number of employees full time equivalent units, Hours worked, Employers social contributions. The requested minimal size class breakdown in 5 categories is available for Manufacturing, Trade and Services. The following variables are unequally transmitted: Number of establishments (only for ISIC D), Number of enterprises (only from ISIC G to N). Size class 1-9 and 10-19 is missing for the number of enterprises and for many variables in services sector.

***Coverage for BD***

The most recent BD database has been transmitted on 30 September 2014 for all three sectors (Manufacturing, Trade and Services), however separately for each sector, and reflecting unequal information levels for each sector.

- As regards the manufacturing sector, the time span covered is 1998-2012. All variables concerning the death of enterprises are covered, as well as information on high growth enterprises and "gazelles". However, information on active enterprises and birth are absent from the database.
- As regards the services sector, the time span covered is 2006-2012. Most of variables concerning number of active enterprises, births, and deaths are covered. However, no information is available on high growth enterprises and "gazelles".
- As regards the trade sector, the time span covered is 2003-2012. All variables concerning number of active enterprises, births, deaths, high growth enterprises are covered. However, no information is available on "gazelles".

***Compliance***

Colombia uses the concepts, definitions, and classifications that are used for the relevant OECD data programs and that are typically adhered to by OECD Member countries. In particular, Colombia uses the ISIC Rev.3 classification, adapted to Colombia, which is compliant with OECD guidelines. DANE will implement ISIC Rev.4 in 2014 (7 May for the Annual Trade Survey, 8 May for the Annual Manufacturing Survey, and 22 May for the Annual Services Survey). Information for the year 2013 will be published according to ISIC Rev.4 in December 2014 (2 December for the Annual Manufacturing Survey, 10 December for the Annual Trade Survey, and 11 December for the Annual Services Survey). Colombia complies with the definitions of turnover, production (however excluding own-account production), and value added.

However, the data comply with international references only partially. For example: the size classification generally complies with OECD requirements except for the use of 200-499 size class in the annual trade survey, which would not allow us to distinguish up to 250 and 250+ cases.

***Interpretability (Metadata requirements)***

DANE has answered to the Metadata section of the SSIS questionnaire. Required metadata is available on the internet (also in English):

- Annual Manufacturing Survey:

http://www.dane.gov.co/files/investigaciones/fichas/EAM.pdf (Spanish version)

https://www.dane.gov.co/files/investigaciones/fichas/industria/ingles/Annual%20Manufacturing%20Survey%20%20Methodology.pdf (English version)

- Annual Trade Survey:

http://www.dane.gov.co/files/investigaciones/fichas/EAC.pdf (Spanish version)

http://www.dane.gov.co/files/investigaciones/comercio_servicios/eac/en/Annual%20Trade%20Survey%20Methodology.pdf (English version)

- Annual Services Survey:

http://www.dane.gov.co/files/investigaciones/fichas/Metodologia_EAS1.pdf (Spanish version)

http://www.dane.gov.co/files/investigaciones/fichas/en/Service%20Annual%20Survey%20(SAS)%20Methodology.pdf (English version)

***Timeliness***

The first publication for all results of the three sectors (Industry, Trade and Services sectors) is made 11.5 months after the reference period. A second and final publication occur 5 months later. The Transmission to the OECD is possible shortly after these dates, taking into account the formatting of the data into OECD questionnaires. These delays are compatible with OECD guidelines.

***Data and metadata transmission***

Data is transmitted in an Excel questionnaire via email. The presentation of the data and units of measurement applied satisfy OECD needs. As Data Structure Definitions (DSDs) are not currently available for Structural and Business Statistics, DANE is encouraged to explore the use of SDMX for the transmission of structural business statistics only at a later stage.

**Overall assessment of data and metadata received from Colombia for SDBS**

The reviewers identified several shortcomings regarding SDBS, notably in terms of coverage. DANE is already preparing to overcome these limitations and additional data are expected in a near future. The implementation of ISIC Rev.4 in the main three annual business surveys is on-going. Colombia should be able to report in ISIC Rev.4 starting in December 2014.

While there is already significant coverage of the data required, a number of variables of the basic structural business information are still lacking. The capability of Colombia to respond to the requirements of OECD structural business statistics depends heavily of the sector under review, because of the separate organisation of the surveys between manufacturing, trade and services. A harmonisation of business surveys could be helpful in progressing. DANE already started such harmonisation of variables surveyed across sectors and the reviewers encourage DANE to continue along this path.

# CHAPTER 6. INDICES OF PRODUCTION AND DEMAND

## Background

Measures of monthly changes in the volume of production are of particular interest for economic analysis. In particular, indices of production and demand are used for the identification of turning points in economic cycles in the compilation of the OECD Composite Leading Indicators (CLIs).

In Colombia, indices of production and demand statistics (also called as 'real indicators') are produced by DANE (Departamento Administrativo Nacional de Estadística). The present assessment is based on the data and metadata submitted by DANE via the OECD questionnaires.

## OECD data and metadata requirements for indices of production and demand

### *Coverage*

The OECD data requirements for indices of production and demand cover monthly series on value-added and turnover; new passenger registrations; and construction permits. For most items, information of total industry is required, and a breakdown by Main Industrial Groupings (MIG[80]) is highly desired. More specifically:

- Indices of Industrial production by economic activities, *i.e*. volume of output for total industry (B to E) as well as by sections (Mining (B), Manufacturing (C), Energy (D), and Construction (F)) as well as of ISIC Rev. 4, are required.
- Value-added grouped by MIG for Industry (B to E) is highly desired: consumer goods, consumer durables, consumer non-durables, intermediate goods, capital goods.
- Turnover value or volume Manufacturing (C) and Total Industry (B-E) is highly desired. Turnover comprises the total invoiced by the observation unit during the reference period, which corresponds to market sales of goods or services supplied to third parties. Total Industrial turnover should be further broken down by MIG.
- Turnover volume and value for Retail trade, except of motor vehicles and motorcycles (Section G, Division 47) is required.
- Number of new passenger cars registered for the first time is required. In that case, an acceptable alternative measure to new passenger car registrations may be the number of new vehicles sold.
- Number of construction permits issued for new dwellings (residential buildings) is required.
- Number of dwellings for which construction work commenced (highly desired).
- Value and volume of turnover in national currency in the retail sector (ISIC Section G, Division 47) is required.

Countries should provide as long a historical series as possible, beginning, at the latest, in 1995, though earlier data are preferred

[80] The Main industrial groupings, a Eurostat term, provide an alternative statistical breakdown of the economic activities of Manufacturing. See Eurostat Glossary: MIG

Countries should provide the most frequent data available, either monthly or quarterly.

The OECD prefers that seasonal adjustments be made by the country itself as national statistics experts have better knowledge of local seasonal factors than international statisticians do. However, if a country does not supply seasonally-adjusted (s.a.) data or if the series of s.a. data they provide is not sufficiently long, the OECD undertakes the adjustments using X12-ARIMA.

***Compliance***

The definitions and compilation methods used should follow the UN International Recommendations for Industrial Statistics (2008)[81], the UN International Recommendations for the Index of Industrial Production (2010)[82], the International Recommendations for Distributive Trade Statistics (2008)[83] and the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4 (2008)[84].

***Interpretability (Metadata requirements)***

For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. However, to ensure transparency of data and establish the confidence of users in an international setting, it is strongly recommended that metadata be available in English and easily accessible over the internet.

With respect to indexes of production and demand, the OECD requirements for metadata are the statistical population and unit, the geographic coverage, the sector coverage, the frequency, the classification system, the reference period, the seasonal adjustment method, the source of data and the method for index calculation.

***Timeliness***

It is important that countries make data available at the same time, or immediately after, they are released nationally. Ideally, monthly data should be available within one or two months and quarterly data within one quarter after the reference period.

***Data and metadata transmission***

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users too.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data, in as timely a fashion as possible. Transmission of data in EXCEL spreadsheets or in another electronic format will be negotiated and implemented on a case-by-case basis.

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81 http://unstats.un.org/unsd/publication/seriesM/seriesm_90e.pdf

82 http://unstats.un.org/unsd/EconStatKB/Attachment242.aspx

83 http://unstats.un.org/unsd/trade/M89%20EnglishForWeb.pdf

84 http://unstats.un.org/unsd/publication/seriesM/seriesm_4rev4e.pdf

**Evaluation of indices of production and demand of Colombia**

The Secretariat assessed the indices of production and demand for Colombia to determine how well they meet the OECD data and metadata requirements.

***Coverage***

*Industrial production indices - Total (ISIC Rev. 4, B-E) and for each Section in the Industry Classification*

Colombia uses production in manufacturing (ISIC Rev.3, Section D) when describing the country's industrial sector. There is currently no available indicator that describes in the short-term the complete sector. Given the growing importance of mining and energy in Colombia's economy, the Secretariat encouraged the creation of an IPI (Industrial Production Index) that incorporates all the industrial sectors of the economy. During the Peer Review, DANE agreed on the importance of considering the inclusion of mining and energy in the production index and started to work on the extension of sectors coverage to the sectors B (Mining and quarrying), D (Electricity, gas and steam and air conditioning supply), E (Water supply; sewerage, waste management and remediation activities) and F (Construction). Companies exporting coal are currently included in the EAM and DANE will investigate the feasibility to use information from business registers with the aim to produce results in 2016.

The production in manufacturing indicator fully meets the coverage requirement. The conceptual definition of the indicator is aligned with international standards for ISIC Rev.3, section D. Data cover the national territory and are available on DANE's website from January 1990. It should be noted that the survey covers only formally established businesses. If small and unorganised enterprises play an important role in Colombia's economy in terms of production and employment, the current survey does not cover this sector. DANE has developed a micro-establishment panel, but its inclusion in the compilation of indices of production is not envisaged at this stage, as the panel is annual.

Lastly, Colombia breaks down production in manufacturing by economic use or destination (Clasificación según Uso o Destino Económico, CUODE), indicators that are highly relevant but not required by the OECD.

Overall, data provided by DANE for this category only partially meet OECD requirements in terms of coverage of mining and energy. However, DANE has committed to extend the coverage by 2016.

*Turnover in the retail sector volume and value*

Data on turnover in the retail sector fully meet the OECD coverage requirement. The indicator covers retail trade activity (ISIC Rev.3, Divisions 50 and 52). The geographic coverage is national and the series is available on DANE's website from January 1999[85].

The conceptual definition of the indicators, the volume and value index of retail trade, seems to be aligned with OECD standards. Data are also available for retail trade not including motor vehicles (ISIC Rev.3, Division 52). Like the indicators on manufacturing, the retail sales survey only includes formal businesses.

*Building Permits issued for dwellings*

While the statistical concept of the indicator (licenses approved and areas approved under the permits for dwellings) aligns with that of OECD, it is unclear whether the geographic coverage is comprehensive. Building permit information is collected from administrative registries. While the number of municipal

[85] http://www.dane.gov.co/index.php/trade-and-services/monthly-retail-trade-sample

areas covered increases regularly, only 88 municipal areas are covered since January 2009 (77 were covered from January 1986 to 2008). There is no information in the documentation assessing how much of the building activity in Colombia is covered by these municipalities, nor is there any indication if these indicators are representative of the country as a whole.

Data on building permits issued for dwellings, provided by DANE, only partially met the coverage requirement. However, according to the Law 1469 (2010), the entities that issue building permits have obligation to deliver such information to DANE. Quality of information and completeness of the registry have been improved and DANE is now able to improve the coverage of data on building permit issues for dwellings according to the OECD requirements.

*Number of dwellings for which construction work commenced*

In general, construction is considered underway once a foundation has been laid or is in preparation, for example digging has begun. As regards number of dwellings for which construction work commenced, data submitted by DANE cover construction work started on dwellings recorded in the period that excavation and cementation are started (after the preparation of the site). The extraction and haulage of material from the site, and the construction of the foundations are included.

Information on work started is compiled via a building census. The aim of the building census is to determine quarterly the state of building activities and to establish its composition, production and development, and to be an input for GDP measures. Work started information from a census is available from the second quarter of 1997 for floor areas and from the second quarter of 2001 for number of dwellings permits, with a geographic coverage of 7 urban areas and metropolitan areas. An additional 8 cities and metropolitan areas were added to the census from the third quarter of 2007, and an additional 18 cities were added with the release of the second quarter of 2013 including historical data from the second quarter of 2012. As for building permits, the geographical coverage has increased over time.

The OECD requirements for the building series (work started in construction and building permits) are only partially met in terms of coverage because the geographic coverage is not national in scope. While OECD would prefer a monthly indicator, DANE is not in a position to change the periodicity from quarterly to monthly.

In addition, the building census mainly produces indicators based on floor areas. During the Peer Review, DANE recognised the importance of producing number of dwellings for which construction works commenced in the reference period. DANE is currently implementing variables in the census with the aim to lead to better short-term measures of dwellings started.

*Other series*

Additionally, there are several core series required by the OCED that are missing, namely:

- value-added in the industrial sector *mining and quarrying* (ISIC Rev.4, Section B);
- value-added in the industrial sector *electricity, gas, steam and air conditioning supply* (ISIC Rev.4, Section D);
- value added in the *construction* sector (ISIC Rev.4, Section F); and
- passenger car registrations. DANE has developed and transmitted to the OECD a series on car registration, however only on an annual basis.
- The Secretariat welcomes the recent provision by DANE of a seasonally adjusted index of production.

All the series, except one, are available on a monthly basis and the units comply with the OECD standards for all the data provided. Work started is available only on a quarterly frequency. Monthly is preferred, but quarterly is acceptable.

***Compliance***

*Production and turnover in manufacturing*

In terms of the production in manufacturing, data partially comply with OECD standards. The conceptual definition of the indicator is fully aligned with international standards for ISIC Rev. 3, Section D. However, it should be noted that the sample frame for DANE's survey was updated in 2001 and based on the 1997 Annual Manufacturing Survey as well as contact lists from other organisations and associations related to the manufacturing industry. International standards recommend that the sample frame should contain current information otherwise it loses its representativeness. In accordance, DANE plans to release data based on a new sample frame in July 2014. The Monthly Manufacturing Survey[86] (MMM) currently covers 44 sectors of ISIC Rev.3 Section D, and will provide information on 40 sectors of ISIC Rev.4 Section C after its redesign. Total production, sales and employment are available from the Monthly Manufacturing Survey from the year 1990.

The construction of the indexes only partially aligns with international recommendations. The Monthly Manufacturing Survey (MMM) collects the nominal value of production at the four digit (class) level of the ISIC Rev.3. The total index of production (in nominal terms) is created from the un-weighted sums of the classes in each period and base period. Weights are an important aspect of the index construction because they provide a measure of the relative importance of each component. DANE is envisaging the use of external weights.

The construction of the total index of real production is not well documented. The only reference to this indicator is in the glossary of the Spanish version of the methodological document. The glossary defines real production as the nominal value deflated by the producer price index at each industrial class. Since it is recommended that producer prices be used as the deflator and that it be applied at the "lowest level possible but not higher than the ISIC class", the indicator adheres to international standards in these two aspects. The deflation is applied to the nominal value of production and then the index is calculated on the deflated value, as it has been confirmed during the Peer Review. Deflators used are a combination of domestic deflators (PPI) and export price deflator. Further clarifications on this aspect would be useful from a user perspective and DANE agreed to extend the availability of on-line metadata in English on this particular item.

*Turnover in the retail sector volume and value*

Similar to the production index, the conceptual definition of the retail sales without fuel indicator is aligned with international standards for ISIC Rev.3, section G, Division 52. Like the Monthly Manufacturing Survey, the sample frame for value and volume measures of turnover is based on an annual survey, the 2001 Annual Survey of Trade (EAC 2001), as well as contact lists from other organisations and associations related to the manufacturing industry. The sample frame is currently being redesigned based on the EAC 2011 and will be published on 23 July 2014.

The construction of the indexes aligns with international recommendations. As a general guideline, it is recommended the use of the chain-linked Laspeyres index with the weights being updated at least every five years.

[86] A Quarterly Regional Survey provides similar information at the regional level.

Colombia collects total value of retail turnover and calculates the nominal monthly turnover index (turnover value index) as the percentage change of monthly turnover from the turnover of a base year. The value for the base year is the arithmetic mean of the 12 monthly turnover results for the base year. The volume index is computed by deflating the value of retail turnover (sales) by the appropriate consumer price index for each group (the groups generally correspond to an ISIC class). In this respect, the calculation of the indices follows international guidelines and OECD definitions.

Aggregation to higher levels of Section G of ISIC Rev.4 should be carried out by using weights based on value added (or turnover) share of each activity in the base year (UN IRDTS[87] 7.16). According to the Monthly Retail Sales Survey (MMCM) documentation, the monthly index of total sales (nominal and real) without the fuel sector is a weighted aggregate of the detailed level. However, there is no description of the weights used or if the intent was to adjust the impact of each component by a measure of relative importance. Moreover, it is recommended that these weights be updated as frequently as possible, at least every five years. It is unclear how often Colombia updates these weights.

The observational unit is a legal enterprise engaged in retail trade. International guidelines suggest establishment be used whenever possible.

*Building Permits & Work Started*

There are no limitations with these series regarding definitions, classifications, and concepts. The series currently reported by DANE cover new construction authorised as well as additions. DANE is considering the compilation of distinct indicators for new constructions and additions. Furthermore, the limitation with the building statistics is that geographic coverage is not national. Moreover, the coverage has changed over time. For both permits issued and work started, DANE provides two time series: one with few geographic areas but a longer time series; and the other with an expanded geographic area, but a short time period. There are overlapping time periods in the two series, so linking the expanded series with the other in such a way to maintain the growth rates in the historical period would be possible.

*For all series*

The current classification of economic activities is ISIC Rev.3 adjusted for Colombia. DANE is currently developing a national ISIC classification based on ISIC Rev.4. The new design of samples for industry and commerce based on ISIC Rev.4 adjusted for Colombia has been published in July 2014. DANE will present first results based on ISIC Rev.4 including conversion key with ISIC rev.3 in May 2014 (Annual Trade Survey on 7 May, Annual Manufacturing Survey on 28 May, and Annual Services Survey on 22 May). Data for the year 2013 based on ISIC Rev.4 will be published in December (Annual Trade Survey on 2 December, Annual Manufacturing Survey on 10 December, and Annual Services Survey on 11 December). The Secretariat recommends that DANE provide as much historical data as possible for each series under the new classification system. In addition, DANE's move to ISIC Rev.4 must coincide with that of other producers of official statistics.

DANE provides a breakdown of manufacturing production by economic use or destination (CUODE). The labelling of the breakdowns (Production of total manufactured investment goods, Production of total manufactured consumer goods, Production of total manufactured intermediate goods) aligns with OECD required definitions of Main Industrial Groupings. However, more documentation is needed regarding this classification system in order to confirm the compliance of data with OECD Main Industrial Groupings. A simple indication of the ISIC classes included in each grouping would be sufficient.

[87] International Recommendations for Distributive Trade Statistics: http://unstats.un.org/unsd/trade/M89%20EnglishForWeb.pdf

***Interpretability (Metadata requirements)***

With the exception of the Colombian Classification According to Economic Use or Destination (CUODE), almost the all required metadata are available on the internet, with some gaps.

A methodological document and two "methodological cards" (an abridged/summary version of the methodology) are available in English. The metadata in English cover manufacturing production and turnover, building permits, and work started. At least, documentation in English for the Monthly Retail Sales Survey (MMCM) should be provided.

More specifically, metadata available in English are:

- the Monthly Manufacturing Survey (MMM) methodology;
- the Building Census Methodological Card; and
- the Construction Licenses Methodological Card.

There are some gaps in the documentation. More effort is required to ensure that the Spanish and translated English version contain the same information, both in terms of detail as well as in the translation. Terms that are defined in the international guidelines and used in the documentation should follow the standard definitions. Lastly, for the series that are produced via a census and not through a national survey, information on geographic coverage should be included in the metadata. More details about each gap are found below:

- The English versions of the documents do not contain the same information or the same amount of detail as the Spanish version. For example, the glossary in the Spanish version of the Monthly Manufacturing Survey Methodology contains twice as many items including a description of "real production". There is no reference to this a required time series in the English version of the methodology.
- More detail is needed on the methodology of both the Monthly Manufacturing Survey (MMM) and Monthly Retail Sales Survey (MMCM). Information such as deflation methods to calculate real production and real turnover in manufacturing currently does not exist. The methods of weighting and aggregating of the retail sales index (Section 4.1 Statistical Analysis of the MMCM documentation) do not have enough detail. There is information neither on the weights used nor on the purpose of the weights in the aggregation.
- Further improvements in translation are also needed. For example, in the methodology card for building census, work started ("Obra nueva") is defined as "corresponde a las obras que iniciaron actividad constructora durante el período intercensal". The translation is as follow: "New Buildings: They are the construction of completely new buildings, whether or not the ground used for it was vacant". The important concept of "incitation" or "start" of construction was not included in the translated definition. Additionally, in the Excel file provided to the OECD for retail sales, the title of the series referred to "Index actual values". A more precise economic translation of "Índice de los valores reales" would have required the use of the term "real" rather than "actual" when referring to the deflated nominal value. Improvements in the translation to preserve the economic concepts and definitions are needed.
- Using terms of common and understood international concepts with different definitions could lead to confusion. An example is the definition of "industrial establishment" which, as already stated in the *Compliance* section above, in Colombia differs from that of international guidelines. Furthermore, the definition of "industrial establishment" is included in the glossary of the Spanish version of the Monthly Manufacturing Survey (MMM), but not in the English version of

the methodology. In the English version, the definition of an establishment is only defined in terms of its size, but not by the number of activities or location.

- As regards the metadata for the two series not compiled with a national survey (*i.e.*, building permits issued and work started), further improvement in the metadata would be to include information on the geographic coverage. The current metadata provides detailed information regarding the evolution of cities or municipalities included in the census (or administrative data). However, there is no explanation as to how or why the geographic areas were chosen, nor is there any metric measuring the share of permits or housing starts that the data series captures. Further improvements in the metadata are also required to inform the users of the degree to which the data from the selected cities are representative of the national situation.

Overall, data and metadata sent to the OECD were translated into English. However, all the data series on the DANE website are only available in Spanish. Even in the English version of the DANE's website, most methodological documents and all publications and data are only available in Spanish.

As long as DANE can provide the OECD timely updates of their series with the English translations, there are no gaps or limitations to accessibility. Anyway, it is recommended again that English version of data and metadata be made available over the Internet. Furthermore, as already stated, more effort is required to ensure that the Spanish and translated English version of the documents contain the same information, both in terms of detail as well as in the translation.

***Timeliness***

DANE indicated that data on manufacturing production and sales, retail sales, building permits issued, and work started on dwellings can be provided to the OECD at the same time they are publically available. This has to be evaluated also in practice, once arrangements for on-going data transmission will be established between the OECD and DANE.

***Data and metadata transmission***

DANE has provided data and metadata requested by the Secretariat through the OECD metadata survey and via Excel. At present this arrangement is satisfactory.

The availability of indexes of production and demand statistics on DANE's website is mixed:

- All pertinent indexes and time periods for retail sales and manufacturing production and turnover are available on DANE's website.
- Only certain series for building permits are available on DANE's website. Area under approval is accessible from the web; however the number of building permits issued is not. DANE transmitted to the OECD information for the 77 municipalities starting from 1986, but only data from 2003 are available on the website.
- The work started on dwelling time series is not fully and easily available on DANE's website. Current information is found in the monthly press release and historical information is available in the monthly archives.

As confirmed in the table on data submission agreed between the OECD and DANE, the implementation of SDMX in this domain of indices of production and demand should start only during 2015, and only as a test, in parallel with continued alternative Excel transmission.

***Coherence***

Data for production and sales in manufacturing are consistent over time. They are also consistent across the two different statistics. Manufacturing production and manufacturing sales follow the same patterns over time. The respective time series are also consistent while comparing across countries; there are no unexplained differences when comparing the Colombia series with that of other OECD countries.

The same is verified when assessing the real and nominal indexes of retail sales.

The series covering the same subject but with different geographic coverage are consistent with each other. Comparing the series converted to indexes with the same reference year, the trends are similar within the same series but across the geographic definitions. More specifically, the indexed series for building permits using information from 77 municipalities looks similar to the indexed series for building permits using 88 municipalities.

However, when comparing the building permits with work started (indexed using the same reference year), the two do not align. In particular, there is a strong increase in early 2011 relative to 2010 in the permits approved that is not recorded in the work started series. The differences in the building permits and work started series may be attributed to the concern that the geographic coverage of the two series are not national and do not overlap.

**Overall assessment of indexes of production and demand and main recommendations**

Overall, Colombia data and metadata for indexes of production and demand meet the OECD requirements except for the coverage of the mining and energy sector. Given the importance of the mining and energy sector in Colombia, the production in manufacturing does not sufficiently captures the entire industrial sector of Colombia. DANE is encouraged to continue its already started effort to move ahead with plans to provide missing mining and energy IPI.

The production and turnover series provided to the OECD meet the standards applied in most countries. These series could be published on the OECD website with indication in the metadata of any deviations from the international recommendations.

The reviewers welcome the priority given by DANE to the move to the classification ISIC Rev. 4 and are confident that this will be effective very soon.

Improvements to cover metadata shortcomings as mentioned above should be pursued.

# CHAPTER 7. INTERNATIONAL TRADE IN GOODS

## Background

In Colombia, statistics on imports and exports of goods are produced by DANE (the Departamento Administrativo Nacional de Estadística) in coordination with DIAN (National Directorate of Taxes and Customs). The present assessment is based on the data and metadata submitted by DANE via the OECD questionnaires.

## OECD data and metadata requirements for international trade in goods

The OECD International Trade in Goods programme consists of three databases: the new Quarterly International Trade by Commodity Statistics (QTCS), Annual International Trade by Commodity Statistics (ITCS) and Trade by Enterprise Characteristics (TEC). In the context of the Short Term Economic Statistics (STES) OECD is also collecting two monthly series of total exports and imports of merchandise trade. The OECD requirements for these datasets are summarised below and additional detailed information on variables, definitions and methodological standards are available, on request, from the OECD Statistics Directorate (STD).

**Important:** The detailed Monthly Statistics of International Trade (MSIT) collection which included total trade by partner, SITC sections and volume and price indices by SITC section **has been discontinued in May 2014** to avoid unnecessary duplication of data collection with the new UN data monthly trade collection (by detailed commodity at HS 6 level and partner). **As a consequence Colombia is not required anymore to provide the MSIT series to OECD including the indices series initially planned to be provided from February 2015.** However, DANE should transmit monthly total imports and exports under the Short Term Economic Statistics (STES). Instead of monthly statistics, OECD now publishes Quarterly International Trade by Commodity Statistics (QTCS) which are derived from the UN monthly trade data collection and thus no direct transmission from Colombia to OECD is needed, but only transmission of monthly data to the UN, which Colombia fulfils.

### *Coverage*

Imports consist of imports for direct domestic consumption; withdrawals from bonded warehouses and free zones for domestic consumption (special trade only); and imports into bonded warehouses and free zones (general trade only). Exports consist of exports of national products; exports without transformation of goods, which had already been counted as special imports; and exports from bonded warehouses or free zones of goods, which have not been transformed since import (general trade only). As regards QTCS and ITCS, values of imports and exports are expressed in billions of USD.

*Coverage Requirements for Quarterly International Trade by Commodity Statistics (QTCS)*

The OECD publishes:

- Quarterly Trade Statistics derived from the UN COMTRADE new monthly trade collection. The OECD synchronises data from the UN-Comtrade database and maintains the QTCS database. The timely delivery of data according to UN Comtrade requirements is much appreciated.

*Coverage Requirements for International Trade by Commodity Statistics (ITCS)*

The OECD publishes:

- Annual trade data by detailed Commodity (at least 6 digits) and by partner countries according to the general trade system, in the national currency. The OECD synchronises data from the UN-Comtrade database and maintains the ITCS database. The timely delivery of data according to UN Comtrade requirements is much appreciated.

The Secretariat requests that countries code data using the International Harmonised Commodity Description and Coding System, (Harmonised System or HS).

*Coverage requirements for Trade by Enterprise Characteristics*

The OECD collects:

- The number of enterprises engaged in imports or exports and number of enterprises, indicating the difference between administrative units used in external trade statistics and statistical units used in business statistics.
- The number of trading enterprises by economic sector and employment size class.
- The value of trade and number of enterprises by economic sector and employment size class both for exports and imports.
- The concentration of trade value (both for exports and imports).
- The number of trading enterprises by partner countries and zones (both for imports and exports).
- The value of trade by partner countries and zones (both for imports and exports).
- The value of trade by commodity and economic activity (both for imports and exports).
- The value of trade and number of trading enterprises by types of ownership.

***Compliance***

*Compliance Requirements for Annual International Trade by Commodity Statistics (ITCS)*

The definitions and compilation methods used for QTCS should follow the recommendations in *International Merchandise Trade Statistics: Concepts and Definitions,* (IMTS 2010). Among UN IMTS recommendations, those on trade system, valuation CIF/FOB, and origin/last known destination are of particular importance for the OECD. Furthermore, data should respect the Kyoto convention, the United Nations Convention on Contracts for the International Sale of Goods, the General Agreements on Tariffs and Trade article VII and the World Trade Organization Agreement on Rules of Origin.

Moreover, the Secretariat requests that the data record import partner countries according to the country of origin and export partner countries according to the last identifiable destination.

*Compliance Requirements for Quarterly International Trade by Commodity Statistics (QTCS) derived from UN Comtrade monthly statistics*

As for ITCS, the definitions and compilation methods used should follow the recommendations in *International Merchandise Trade Statistics: Concepts and Definitions,* (IMTS 2010).

*Compliance Requirements for Trade by Enterprise characteristics (TEC)*

The Secretariat requests the application of the general trade system. The statistical unit to be used should be the enterprise which means that trade data that are generally collected and registered by

declaring unit, must be connected to characteristics available in the Business Register (BR) for the whole enterprise concerned. The product classification to be used is the CPC Ver.2 and the activity code should be the activity carried out by the enterprise according to ISIC Rev.4 classification. The ISIC code within the BR should refer to the principal activity during the reference year. The 2-digit level of the ISIC code should be used. The number of employees is defined as those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. The annual average should be considered, and not employment on a particular date.

OECD takes notes that Colombian Trade by Enterprise Characteristics data are under development with the assistance of UNSD.

***Interpretability (Metadata requirements)***

For OECD purposes, it is strongly recommended that metadata be available in English and easily accessible over the internet. The SDMX format facilitates the use, understanding and updating of data and information.

For international trade in merchandise statistics, the standard metadata requirements are sources and methods on (i) trade system, (ii) trade valuation, (iii) statistical territory, (iv) commodity classification, (v) coverage of trade, (vi) trading partners (origin/last known destination), and (vii) exchange rate.

***Timeliness***

It is important that countries provide data or that data be available at the same time, or immediately after, they are released nationally. Ideally, monthly data should be available within two months after the reference period and yearly data should be available within 4-6 months after the reference period. It is very useful to have a release calendar.

***Data and metadata transmission***

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data.

**Evaluation of International trade in goods statistics of Colombia**

The Secretariat assessed the data available for Colombia to determine how well they meet the OECD data and metadata requirements.

***Coverage***

Colombia satisfies the coverage requested by the OECD. The data are monthly. They have been made available to OECD from January 1991 onwards. Two datasets are available: trade flows by SITC section and trade flows by partner country. As noted in the introductory paragraphs, DANE is not anymore required to transmit to OECD indices of imports and exports based on PPIs for the Monthly Statistics of International Trade (MSIT) as initially planned from February 2015 as this collection has been discontinued.

***Compliance***

Colombia satisfies compliance with OECD requirements. The strong coordination between DANE and DIAN (Customs) ensures the appropriate exhaustive coverage of all declared international flows of goods. Declarations to customs are compulsory. All imports/exports are covered, including minerals, as long as they are legal. International classifications are used. Colombia compiles its export statistics by country of destination and imports statistics by country of origin. Imports are recorded on a CIF basis. The importation on Colombian imports in CIF value can be decomposed into its components: FOB value, Freight, Insurance and others.

At this stage, DANE is transmitting data on the special trade system, excluding the movements of Free zones. DANE is able to publish information on trade in goods including the Free zones. However, the full system of integrating Free zones with the administrative records (and avoiding double counting) in order to disseminate data on Colombian international will be only ready finished in 2015.

***Interpretability (Metadata requirements)***

Metadata are available in English in very detailed Excel tables. The only shortcoming comes from the fact that partner countries should be preferably identified by codes (ISO alpha or numeric codes) and not by labels. DANE uses labels from the adaptation of the ISO 3166 of the Latin American Integration Association, but can provide the information in international coding.

***Timeliness***

Colombia satisfies OECD requirements as monthly export data are made publicly available within 40 days, and import data within 44 days.

***Data and metadata transmission***

Colombia transmits annual as well as monthly imports/exports data to the UN Comtrade. Regarding the two total exports and imports monthly merchandise trade series collected within the OECD short term Economic Statistics, preparation of SDMX transmission using the STES DSD until the IMTS DSD is in progress.

**Overall assessment of merchandise trade statistics and main recommendations**

The quality of monthly merchandise trade data provided by DANE is in line with the requirements of the OECD. However, it is expected that Colombia moves to the general trade system, including Free zones, during 2015. As regards countries' codes, DANE will provide the OECD in the official international coding.

# CHAPTER 8. BALANCE OF PAYMENTS AND INTERNATIONAL TRADE IN SERVICES

## Background

In Colombia, statistics on imports and exports of services and the balance of payments are produced and disseminated by the Banco de la República (BR, Central Bank of Colombia). The present assessment is based on the data and metadata submitted by BR via the OECD questionnaires.

## OECD data and metadata requirements for BoP and international trade in services statistics

### *Coverage*

The OECD requires quarterly data on Balance of Payments and annual data on trade in services between residents of the reporting country and non-residents, by detailed service category and detailed partner country (Trade in Services by Partner Country statistics (TISP)). Some Balance of payments aggregates as well as series related to remittances are also required.

### *Compliance*

The definitions and compilation methods used for BoP and international trade in services should comply with the concepts outlined in the *Balance of Payments Manual*, fifth edition (BPM5) or the *Balance of Payments and International Investment Position Manual*, sixth edition (BPM6) of the International Monetary Fund (IMF) and with the *Manual on Statistics of International Trade in Services* (MSITS 2002/ MSITS 2010). The categories of Services reported should be those of the EBOPS (Extended Balance of Payments Services classification). Since many countries are beginning the transition from BPM5 to BPM6, information on plans and schedules for implementation of the new Manual is also required. OECD requires publication and transmission of seasonally adjusted data.

### *Interpretability (Metadata requirements)*

For OECD purposes it is strongly recommended that metadata be available in English and easily accessible over the internet. For BoP and international trade in services statistics, the OECD requires information on source, national data provider and publisher, data collection systems, thresholds for data reporting (if any), national reference publications, international guidelines and manuals used, periodicity, breaks in the time-series and websites disseminating statistics.

### *Timeliness*

It is important that countries provide data or that data be available at the same time, or immediately after, they are released nationally. Ideally, yearly data should be available within 4-6 months and quarterly data within one or two months, after the reference period.

### *Data and metadata transmission*

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users, too.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data. For international trade statistics, it would be ideal if data were transmitted as soon as they are released, through the standard OECD EXCEL questionnaires.

**Evaluation of BoP and International Trade in Services Statistics for Colombia**

***Coverage***

BoP data for Colombia in BPM6 are available quarterly since 2000. The coverage of data is complete and presentation is in accordance with IMF presentation.

As regards, international trade in services, the BR has completed the questionnaire with annual data on international trade in services by category of service covering the period 1994 to 2014. The data are generally complete, with figures for total services and all main services items. Most services items are also broken down further except for Travel, Construction and Royalties and License Fees. Data for other balance of payments items have been provided. Information on remittances according to BPM 6 and by country of origin, from 2005 to 2014, has also been transmitted.

The questionnaire for international trade in services by partner country was not completed and the BR does not release any information by partner country. However, in August 2013 DANE released exports on trade in services by main partner country for certain accounts of the BoP Services Classification 2008-2012, following this up with the same information for imports in December 2013: http://dane.gov.co/index.php/servicios/muestra-trimestral-de-comercio-exterior-de-servicios.
Unfortunately, these figures are not comparable with the data published by the BR due to different sources being used and the inclusion of information from administrative records in the BR data. Exports and imports of services are compiled by the BR uses two main sources of data: (i) surveys of companies and other entities whose economic activities involve transactions between residents and non-residents (airlines and foreign shipping agents, managers of ports, telecommunications companies, etc.) and (ii) information obtained from regulatory authorities, such as information on insurance companies used in measuring the value of reinsurance services made abroad. In addition, the BR uses accounting information and administrative records from regulatory authorities for transport, travel, computer, insurance, financial, and other business services among others.

In December 2014, DANE and BR have agreed a comprehensive working plan for the convergence of international trade in services statistics.

***Compliance***

Data are compiled in accordance with the methodology set out in the sixth edition of the IMF's Balance of Payments Manual (BPM6) and the Manual on International Trade in Services.

The BR implemented a new treatment of goods for processing sent abroad based on information from customs records. The BR deduces estimates of manufacturing services on physical inputs owned by others from estimates of the gross value on goods processed abroad and from the gross value of goods when they return in the compiling economy after their transformation.

During the Peer review mission, the BR explained that they may consider the publication of seasonally adjusted data for BoP, but that the decision was not yet made.

***Interpretability (Metadata requirements)***

Metadata relating to the Balance of Payments, as provided by Colombia, are available in English on the IMF's Dissemination Standards Bulletin Board: http://dsbb.imf.org/Pages/SDDS/DQAFBase.aspx?ctycode=COL&catcode=BOP00

Detailed metadata specific to trade in services can be found on the Central Bank´s web page: http://www.banrep.org/en/balance-of-payments (click on "metodología balanza de pagos", pages 5-7). In addition, metadata for the partner country collection can be found on DANE'S webpage: http://www.dane.gov.co/index.php/comercio-exterior/muestra-trimestral-de-comercio-exterior-de-servicios. However, both of these appear to be available only in Spanish.

***Timeliness***

According to the information provided, data are released nationally on a quarterly basis, one quarter after the reference period. They can be provided to the OECD immediately after they are released nationally.

***Data and metadata transmission***

BoP data are accessible on the BR website as an Excel file adapted to the needs of OECD. Data for international trade in services by service category were sent in US dollars using the standard questionnaire and could therefore be easily integrated into the OECD database. Data are also available from the website of the BR (http://www.banrep.org/en/balance-of-payments), in English. The partner country data from DANE are only available in Spanish.

The BR agreed to include BoP data in the pilot test SDMX data transmission by the end of 2014.

**Overall assessment of international trade in services and Balance of Payments**

In general, Colombia's data for BoP meets the OECD requirements regarding coverage, compliance, timeliness and data transmission. Also, the BR should confirm that it will implement seasonal adjustments on the main aggregates of the BoP. In addition, BoP data will be included during 2015 in the pilot test of SDMX for the transmission to the OECD.

Colombia only partially meets the OECD requirements in international trade in services statistics. In terms of coverage, data for international trade in services by partner country is only available for certain services. In addition, data by service category released by DANE is not comparable to those produced by the BR. The reviewers recommend an extension of partner country data across all service items and a convergence of trade in services data by partner country released by the BR and by DANE. An action plan for such a convergence has been agreed between DANE and the BR and work is on-going on this plan.

# CHAPTER 9. FINANCIAL STATISTICS

## Background

This chapter presents the review of: (1) annual and quarterly financial accounts and related statistics and, (2), of other short-term financial statistics as part of the accession process relating to the Colombia's candidacy for OECD membership. OECD data requirements for other short-term financial statistics (for the rolling updated *Main Economic Indicators* (MEI) database) are for interest rates, monetary aggregates, share prices, and reserve assets.

The assessment process consisted of the examination of the existing national and international sources for Colombian financial statistics and the collection of data and metadata supplied by Colombia via the OECD questionnaires. The information so gathered provided the main inputs source for the assessment. The Banco de la República is the main official producer of financial statistics in Colombia and contributed actively to the review process. The Ministry of Finance (MHCP) is in charge of public debt statistics.

## OECD data and metadata requirements for annual and quarterly financial accounts and related statistics

### *Coverage*

The OECD collects information and maintains databases on four annual and quarterly financial statistics topics: (i) financial accounts and financial balance sheets; (ii) households' assets and liabilities; (iii) institutional investors' assets; and (iv), public sector debt. An overview of the contents of these four databases is provided below while the questionnaires and technical annexes with detailed lists of data, breakdowns required by the OECD, and guidelines have been transmitted to the Banco de la República. For all four databases, the Secretariat requests data in national currency units.

*Financial Accounts and Financial Balance Sheets*

The OECD database on Financial Accounts is composed of two sets of data, the Financial Accounts and the Balance Sheets Accounts. Financial Accounts record, by type of instruments, the financial transactions between sectors. The Balance Sheets Accounts record the stocks of financial assets and liabilities held by the institutional sectors, and give a picture of their net worth, at the end of the accounting period.

For both financial accounts (transactions) and financial balance sheets (stocks) the OECD requires data by *institutional sector*, some of which are divided into sub-sectors, for *financial assets* and *liabilities* grouped into seven categories of instruments, most of them split into sub-instruments. In addition, countries are asked to report balancing items for both net financial transactions and financial net worth. Countries should provide financial accounts and financial balance sheets on both a *non-consolidated* and a *consolidated* basis. Country should provide *annual* and *quarterly* tables.

Countries should provide as long a historical series as possible; ideally, beginning in 1995 for yearly series and in Q1-1995 for quarterly series. In the OECD database, data are available from 1950 for some countries though for most countries the series begin in 1995.

*Households' Assets and Liabilities*

The OECD database on *Households' Assets and Liabilities* is an extension of the financial balance sheet database. The Secretariat collects more detailed information to better identify and analyse households' wealth in OECD countries.

The Secretariat requires annual and quarterly series for specific assets and liabilities by category of instruments, including investment funds shares (and sub-instruments), life insurance reserves (and further breakdowns), pension funds (and further breakdowns), and liabilities, including short- and long-term loans (and detailed sub-categories). The Secretariat also collects data for a selection of the most important households' non-financial assets, which contribute to their wealth, such as dwellings, land and consumer durable goods. This helps to measure the full value of household wealth. Countries should provide as long a historical series as possible, ideally, for Households' Assets and Liabilities, beginning in 1995 for yearly series and in Q1-1995 for quarterly series. The households assets and liabilities questionnaire is currently under review and will be amended to align it to the System of National Accounts 2008 (2008 SNA) and the European System of Accounts 2010 (2010 ESA) standards in terms of definitions and classification on instruments.

*Institutional Investors' Assets*

"Institutional investors" are composed of investment funds, insurance companies and pension funds, and other forms of institutional savings institutions. Within these sectors, further breakdowns are required. The annual and quarterly financial assets to be reported are currency and deposits, securities other than shares, (broken down according to initial maturity); loans, (broken down according to initial maturity); shares and other equities and other financial assets. Certain assets are further split according to the residency of issuers/holders. As well, total non-financial assets are requested. Countries should provide as long a historical series as possible; ideally, beginning in 1995 for yearly series and in Q1-1995 for quarterly series. Data requirements for institutional investors' assets are currently the subject of an internal review process in order to bring the breakdown of the financial sector and financial instruments in line with SNA 2008.

*Public Sector Debt*

The OECD, the World Bank and IMF have developed a new quarterly database to disseminate data on government and broader public sector debt. The basic requirements are for consolidated, quarterly debt data for central government. Debt data for general government, budgetary central government, non-financial public corporations, financial public corporations and the total public sector are also collected, when available.

The debt instruments to be reported are all liabilities considered as debt, except liabilities in the form of equity and investment fund shares and financial derivatives and employee stock options. They comprise Special Drawing Rights; currency and deposits; debt securities; loans; insurance, pension, and standardized guarantee schemes; and other accounts payable. Data are to be broken down by instrument, maturity, residence of creditor, and currency. Countries should report all available data, in their national currency, at nominal value, from Q1 1995 onwards.

***Compliance***

In general, the definitions and compilation methods used should comply with the System of National Accounts 1993/2008.

*Financial Accounts and Financial Balance Sheets*

Financial Accounts and Financial Balance Sheets are components of the System of National Accounts (SNA) and are integrated in the OECD annual national accounts database. This activity mainly focuses on the collection of comparable quantitative and qualitative information on financial transactions carried out and on financial stocks held by institutional sectors, according to the 1993 System of National Accounts (1993 SNA). In the OECD questionnaire, both the instrument breakdown and the institutional sector classification follow the SNA 1993 international guidelines. OECD will move to SNA 2008 classifications at the end of 2014.

In National Accounts, as a rule, the financial accounts are to be recorded on a non-consolidated basis. However, consolidation, which consists in eliminating the transactions of assets and liabilities between sub-sectors of the same sector and between institutional units of the same sub-sector, can be useful for of analysis in certain cases, especially for financial corporations and general government. The OECD requires both consolidated and non-consolidated data for both Financial Accounts and Financial Balance Sheets.

*Households' Assets and Liabilities*

The document "Non-Financial and Financial Assets and Liabilities of Households, Definitions of Assets and Liabilities of Households", issued by the OECD Working Party on Financial Statistics in 2010, provides the methodological guidelines and definitions for reporting Households' Assets and Liabilities. These guidelines have been transmitted to Banco de la República. The finer breakdown of households' financial assets required by the OECD is consistent with the financial classification of the 1993 SNA. As mentioned earlier, the breakdown of households' financial assets and liabilities is under review and will be amended in 2015 to comply with the SNA 2008.

*Institutional Investors' Assets*

The OECD database on Institutional investors' assets aims to integrate these data in the framework of the 1993 SNA. In addition to the sub-classification of the financial assets of the 1993 SNA, the OECD requires a further breakdown between assets issued by residents and assets issued by non-residents. This finer breakdown by type of investors has been established with reference to the 1993 SNA, when possible. The Secretariat prefers to receive consolidated data. As mentioned earlier, the breakdown of institutional investors' assets is under review and will be amended in 2015 to comply with the SNA 2008.

*Public Sector Debt*

Countries should comply with the guidelines in "Public Sector Debt Statistics: Guide for Compilers and Users", issued by the Task Force on Finance Statistics. This guideline has been transmitted to the MHCP. The classifications and definitions are in line with those of other international manuals including the 2008 System of National Accounts (2008 SNA) and the Government Finance Statistics Manual 2001[88]. However, the valuation, here, differs from SNA valuation rules in that public sector debt is measured at nominal value (and not at market value as in core national accounts). The OECD Secretariat (STD) has also prepared instructions for countries that are reporting data to the Public Sector Debt database. These instructions are available from STD and were provided to MHCP along with the data template.

[88] The revision of the *Government Finance Statistics Manual* is under way to maintain consistency with the *2008 SNA.*

***Interpretability (Metadata requirements)***

For OECD purposes, complete and clear metadata must be available and transmitted to STD in one of the official languages of the organisation, English or French. However, to ensure transparency of data and help users for cross-country comparisons, it is strongly recommended that metadata be available in English and easily accessible over the internet (on the national websites).

For financial statistics, the OECD requires information on sources and methods regarding the compilation of questionnaires, valuation methods and any deviation of national definitions and concepts from the 1993 SNA or 2008 SNA framework. For Households' Assets and Liabilities and Institutional Investors' Assets, the Secretariat asks countries to complete specific methodological surveys the first time that they provide data. (These methodological surveys have been transmitted to Banco de la República).

***Timeliness***

It is important that countries provide data or that data be available at the same time, or immediately after, they are released nationally. Ideally, yearly data should be available within 6-9 months and quarterly data within 4 months, after the reference period.

***Data and metadata transmission***

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users, too.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data. For Financial statistics, it is ideal if data are transmitted as soon as they are released, through the standard OECD EXCEL questionnaires.

Evaluation of Colombian Financial accounts and related statistics

Financial accounts and financial balance sheets

The Banco de la República (BR) is responsible for the compilation and dissemination of financial accounts in flows and stocks (financial balance sheets). Financial accounts are currently available for Colombia for the years 1997 to 2013 and financial balance sheets from 1996 to 2013. The classification of financial instruments is derived from the SNA 1993[89] and data is available at the first level of the classification (F1 to F7) as well as on a more detailed level (in particular with the split short/term; long-term). The classification of sectors and sub-sectors is consistent with the SNA classification (with the exception of S15, NPISH[90]), and data is available at the first level of the classification (S1, S11, S12, S13, S14 and S2) as well as at the second level of classification (S121, S122, S123, S124, S125; S1311, S1313, S1314). Financial accounts are available in stocks and flows, and consolidated as well as non-consolidated. However, the financial stocks are not valued at market prices, except assets and liabilities of the sector S2 – Rest of the World to match them with the International Investment Position of the Balance of Payments

[89] On the Website of the Banco de la República, the financial instruments' classification is already presented according to the SNA 2008 methodology.

[90] In financial accounts, there is no S15 (NPISH). For source reason (tax identification number), the NPISH sector is implicitly included in the corporation sector (S11).

(BOP). BR does not intend to compile balance sheets at market prices before the IFRS are adopted by the major enterprises as the legal framework issued by Colombian authorities require valuing the balance sheets of all institutional sectors in accordance with IFRS.

On the timeliness issue, currently financial accounts and financial balance sheets are not published with a predetermined date by the Banco de la República. In the following years, the first publication/transmission of flows and stocks for year Y should be made at Y+10 months. Revisions could occur in March Y+2 when these first results are confronted with the non-financial institutional sector accounts. Regarding the format of the data transmissions to the OECD, OECD expects that the transmission remains in Excel format until the whole of the Colombian national accounts move to SNA 2008, which is not expected before 2018. BR has committed to publish a 12 month in advance release calendar that will include financial accounts.

Few metadata have been reported along with financial accounts data. A Spanish and English version of the methodology for the Financial Accounts of Colombia is available. Deviations to the SNA 2008 standards are limited to: (1) as explained above, no valuation at market prices until enterprises adopt IFRS; (2) the institutional classification does not disaggregate investment funds; (3) the NPISH sector is included in S11; (4) the financial instrument F21 refers to monetary base (currency plus banking reserve); (5) tax transactions are valued cash and not on an accrual basis, so there is no receivables/payables for tax. The financial accounts of Colombia include an estimate of pension obligations for funded systems for government employees but do not include any estimate for social security systems.

No quarterly financial accounts and financial balance sheet data have been transmitted by the BR to the OECD yet. The BR has a plan to compile and publish quarterly financial accounts (flows and stocks) starting in mid-2016. The source is the quarterly survey of the Superintendance for Corporations. As the survey is organised only twice per year for two quarters, the BR will publish two quarters at a time. The implementation of IFRS accounting may delay the deadline expected for quarterly financial accounts.

***Comparisons B9/B9F***

In theory, the balance item Net lending/net borrowing of both the capital account and the financial account are equal. In practice, there is a divergence called “statistical discrepancy” which results from the different statistical sources used to calculate financial and non-financial accounts. As in many OECD countries, this statistical discrepancy is admittedly significant for corporations and households. Better coordination between DANE and the BR should help in resolving these discrepancies. The issue is particularly important for the general government, as it is generally expected that the discrepancies are limited as the source data is exhaustive for the general government. In the case of Colombia, when comparing the net lending/net borrowing of the capital account with the one of the financial account for the general government sector, a substantial statistical discrepancy (between -2.9% to 5.0% of GDP) appears from 2000 to 2010 for which data are available in both accounts. This issue raises the question of the coherence and consistency of the global general government account and the central role in this consistency exercise that DANE should play (see Chapter 3).

***Public Sector Debt statistics***

The Ministry of Finance of Colombia (MHCP) is responsible for the compilation and dissemination of Public Sector Debt statistics (PSDS). Quarterly Public Sector Debt data has been transmitted to OECD in October 2014 from Q1 2008 to Q2 2014 for all sectors. The Secretariat welcomes that the MHCP has committed to regularly transmit this data at Q + 45 days. The data reported by the Ministry of Finance is in nominal value and covers debt securities (AF33), loans (AF4) and other accounts payable (AF7), as well as a breakdown by residual maturity for these debt instruments. No breakdown by the residence of the

creditor has been transmitted and it seems the MHCP is not in a position to report this breakdown. The MHCP's current compilation of Public Sector Debt statistics is cash-based and follows the IMF Manual on Government Finance Statistics, 1986 edition (GFSM 1986). The method of estimation for AF7 remains unclear given the fact that the MHCP recognises that the underlying accounts used are on a cash basis. It seems in particular that there interest flows are on a payment basis rather than on an accrual one.

By the end of 2015, the MHCP will update its government finance statistics to an accrual based methodology following the GFSM 2001 framework[91]. This program should ensure at first the publication of annual debt in accordance with GFSM 2001. GFSM 2001 Quarterly debt is only expected to be calculated later.

***Comparisons between the financial balance sheets and the public sector debt data***

When comparing the amounts of the following debt instruments for the central government sector (currency and deposits – AF2; debt securities – AF33; loans - AF4; Insurance, pensions & standardised guarantees – AF6; and other accounts payable – AF7) reported in the public sector debt questionnaire with the ones reported in the financial balance sheet questionnaire (transmitted by the Banco de la República), large differences occur for all these debt instruments (4% of GDP on average for debt securities, 0.7% for loans and 0.6% for other accounts payable). And yet, the definition of the debt instruments and their valuation are supposed to be the same for both datasets. Data of the financial balance sheets are lower than the ones reported in the PSD questionnaire, despite the fact that the debt instruments AF2 and AF6 are reported in the financial balance sheet only.

This issue raises the question of the coherence and consistency of the global general government account and the central role in this consistency exercise that DANE could play (see Chapter 3).

*Household assets and liabilities*

No data can be transmitted yet to the OECD on households' assets and liabilities. DANE is preparing a plan for the estimation of the stock of non-financial assets for households for 2018. The issue of transmitting the information requested for households non-financial assets will have to be reviewed after 2018. As regards financial instruments, the level of detail that is requested by OECD goes beyond the capacities of the sources for financial accounts. The BR will therefore report exclusively the aggregated level corresponding to the one of standard financial accounts.

*Institutional investors' assets*

No data have been transmitted yet to the OECD on institutional investors' assets. The BR will be able to transmit the institutional investors' information requested up to end 2014, during the second part of 2015. However, because Colombia began to adopt IFRS in 2015, the reporting formats of financial information are changing and there is a great uncertainty about how the financial information will be reported. For that reason the BR cannot give a schedule for sending information under the new IFRS, that is 2015 onwards.

[91] The GFSM 2001 differs from the "Public Sector Debt Statistics: Guide for Compilers and Users". A detailed summary of the differences between these two methodologies can be found on the IMF website.

**Overall assessment of financial statistics**

While the system for the compilation of financial flows and stocks exists in Colombia and is compliant with the principles of the SNA, a significant delay has been observed as regards the publication of the most recent years. The OECD welcomes that the BR has achieved to reduce this delay to 10 months for the year under review, starting in November 2014 for 2013. The reviewers also welcome the announcement by the BR that quarterly financial accounts should be available starting mid-2016 and that the BR will be able to transmit institutional investors' information by mid-2015.

The reviewers recommend the BR that a release calendar be published 12 months in advance, in English, over the internet. The BR committed to publish such a calendar.

As regards the public debt, the reviewers welcome the transmission at Q + 45 days and the move to debt based on accrual principles and in accordance with GFSM 2001 by end 2015. It expects the calculation of corresponding quarterly data as soon as possible. The coordination of data for the general government between DANE, MHCP and BR is essential for the credibility of government finance statistics.

**OECD data and metadata requirements for other short-term financial statistics**

The OECD other short-term financial statistics dataset presents three separate subjects: Interest Rates, Share Prices and Monetary Aggregates. In Colombia, these short-term financial statistics are produced by different authorities, namely the Central Bank of Colombia (Banco de la República, Colombia - BR), the Ministry of Finance and Public Credit (Ministerio de Hacienda y Crédito Público - MHCP), the Colombia Stock Exchange (Bolsa de Valores de Colombia - BVC) and the Financial Superintendency of Colombia (Superintendencia Financiera de Colombia - Superfinanciera). However, the BR has accepted to act as an intermediary for the transmission of data of other producers. In practice, the BR will be therefore the exclusive contact of OECD for all these indicators.

The following assessment is based on information collected through the OECD data and metadata questionnaires and through the websites of the Colombian institutions involved in the process. The information flow exchanged with these has been co-ordinated by DANE.

***Coverage***

The OECD requires monthly short-term financial statistics for the following series:

- Interest rates:
  - Immediate interest rate
  - Short-term rate (3 month interbank offer rate)
  - Long-term rate (10 year government bonds)
- Share Price Index
- Monetary aggregates:
  - Monetary aggregates, narrow money (M1)
  - Monetary aggregates, intermediate money (M2) [for M2 data are desirable but not required]
  - Monetary aggregates, broad money (M3)

The OECD requires seasonally adjusted data and prefers that the adjustments be made by the national statistics experts who have better knowledge of local seasonal factors than do international statisticians. However, if a country does not supply seasonally adjusted (s.a.) data or if the series of s.a. data they provide is not sufficiently long, the OECD undertakes the adjustments using TRAMO-SEATS according to the European Statistical System guidelines.

Countries should provide a historical series as long as possible; ideally, starting in 1980 or earlier. All data should be available monthly. The OECD prefers to receive data in national currency units. The OECD presents the data either as an index (with 2010 as the base year) or as a level, depending on which type of measure is the most appropriate or useful in the context of economic analysis. The OECD calculates annual and quarterly data on the basis of monthly figures.

***Compliance***

The OECD is seeking data that comply with the standard definitions and compilation methods, as described below:

- Immediate interest rate: A term to describe call-money rates. Call money and day-to-day loans play a predominant role in interbank money dealings and between banks and money market dealers.
- Short-term rate: The 3-month interbank offer rate is the target concept.
- Long-term rate (10-year government bonds): These rates are principally yields on the secondary market of government securities. Generally the yield is calculated at the pre-tax level and before deductions for brokerage costs and commissions and is derived from the relationship between the present market value of the bond taking into account also interest payments accrued.
- Share Price Index: all-share or broad indices. They are price indices and not return indices, *i.e.* they exclude dividend payments. Where possible, the monthly indices are calculated as averages of daily closing quotations.
- Monetary aggregates, narrow money (M1): The target definition for narrow money covers all coins and banknotes as well as personal money in current accounts that may be used as means of payment, *i.e.* overnight deposits. Data should be provided as monthly figures expressed in current prices ("nominal" terms), measured as end-of-period stocks.
- Monetary aggregates, intermediate money (M2): The target definition for intermediate money comprises narrow money (M1), deposits with a maturity of up to two years and deposits redeemable at a period of notice of up to three months. Depending on their degree of similarity to liquid money, such deposits can be converted into components of narrow money, but in some cases, there may be restrictions involved, such as the need for advance notification, delays, penalties or fees. The definition of M2 reflects the particular interest in analysing and monitoring a monetary aggregate that, in addition to currency, consists of deposits which are liquid. Data should be provided as monthly figures expressed in current prices ("nominal" terms), measured as end-of-period stocks.
- Monetary aggregates, broad money (M3): comprises M2 and marketable instruments issued by the monetary financial institutions (MFI) sector. Certain money market instruments, in particular money market fund (MMF) shares/units and repurchase agreements are included in this aggregate. A high degree of liquidity and price certainty make these instruments close substitutes for deposits. As a result of their inclusion, M3 is less affected by substitution between various liquid asset categories than narrower definitions of money, and is therefore more stable. Data

should be provided as monthly figures expressed in current prices ("nominal" terms), measured as end-of-period stocks.

***Interpretability (Metadata requirements)***

For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. However, to ensure transparency of data and establish the confidence of users in an international setting, it is strongly recommended that metadata be available in English and easily accessible over the internet. The Secretariat requires metadata describing the source and definitions.

***Timeliness***

It is important that countries provide data or that data be available at the same time or immediately after they are released nationally. Ideally, monthly data should be available within one to two months after the reference period.

***Data and metadata transmission***

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users, too.

In the case of Colombia and for the indicators of this section, an SDMX pilot test is envisaged to take place as soon as possible, using the STES DSD. The BR should coordinate with DANE's SDMX team and contact the OECD SDMX team. Transmission of data in EXCEL spreadsheets or in another electronic format can continue as long as the SDMX is not fully operational.

**Evaluation of the short-term financial statistics for Colombia**

***Coverage***

*Interest rates*

The Peer review mission of May 2014 agreed that the BR will provide all the information on the interest rates. As for the immediate rate, the BR will report the Interbank interest rate (TIB) for 1 day (available daily since 2 May 2002 on the BR web site[92]). As for the short term rate, the BR will report the Reference bank index (IBR) for 90 days (available daily since August 2012 on the BR web site[93]). The methodology in Spanish for these interest rates can be found on the Asobancaria's website.[94] It refers to rates that reflect the price agents are willing to pay or offer to get resources in the financial markets. As regard the long-term rate for government bonds, it was agreed that the BR will report the rate on standard long term bonds issued by the government that it compiles and publishes itself (available on the BR web

92 http://www.banrep.gov.co/en/node/ 29371

93 http://www.banrep.gov.co/en/node/ibr

94 http://www.asobancaria.com/portal/page/portal/Asobancaria/publicaciones/economica_financiera/estudios_regulaciones_financieras/indicador_bancario_referencia

site[95]). This rate only differs from the rate published by the MHCP for an adjustment for zero coupon bonds.

*Share Price Index*

The Peer review mission of May 2014 agreed with the Colombian authorities that the share price index will be transmitted to the OECD also by the BR. However, this has not been implemented and OECD is obliged to update the index manually. The index transmitted will be the COLCAP as the former IGBC index will be discontinued. 'COLCAP' is an index that reflects changes in the prices of the 20 most liquid shares on the Stock Exchange of Colombia (BVC), where the value of the adjusted market capitalization of each company determines its weight. The COLCAP is a better and more extensive index than the IGBC, which will be discontinued. 'COLCAP' Index: data are available as of December 28, 2007, with a value equal to 1,000 points on January 15, 2008; the BR has transmitted to OECD a time series linking the COLCAP with the previous headline share price indicator IGBC up to January 1991.

*Monetary aggregates*

The Secretariat extracts the series for the monetary aggregate, narrow money (M1) and for the monetary aggregate, broad money (M3) through a macro. The data include the most recent figures, with historical data dating back to January 1982. These are available on a monthly frequency. These data are compliant with OECD requests[96].

No information on, intermediate money (M2) has been provided, since it is not an OECD target series and was not part of the OECD data request for Colombia. The BR confirmed that the data for M2 is available and can be transmitted to the OECD. However, the definition differs from that considered in the OECD document. In particular the data produced and published by the BR consider M2 as the sum of narrow money (M1), saving accounts and time deposits, without taking into account their maturity.

The information provided by Colombia is not seasonally adjusted (s.a.). The BR is currently discussing the possibility of implementing seasonal adjustment for monetary aggregates. The OECD will perform the seasonal adjustment using the TRAMO-SEATS method if Colombia provides only raw series. However, the strong preference of the OECD is to receive already seasonally adjusted series by the BR.

***Compliance***

*Interest rates*

The interest rates proposed by the BR are compliant.

Share Price Index

- The COLCAP index is compliant.

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95 http://www.banrep.gov.co/en/node/ 36055

96 Weekly data for all monetary aggregates can be found in: http://www.banrep.gov.co/sites/default/files/paginas/AM_crediticios_sem.xls%20.%20Soon%20available%20in%20E

*Monetary aggregates*

In general terms, concepts, definitions and classifications for data on both monetary aggregates M1 and M3 are common to those of other OECD member countries.

In the calculation of monetary aggregates, some noticed that, in the IMF SDDS metadata, Colombia is shown as including the deposits of the central government, which would depart from the recommendations of the IMF Monetary and Financial Statistics Manual (MFSM). However this is a misunderstanding. The issue of inclusion/not inclusion of deposits of central government is not relevant for Colombia because, in Colombia, there are no such deposits since an agreement of June 2005. All central government deposits are managed in the BR since that date. It would be useful that the BR amends the wording of the metadata of the SDDS to clarify this point.

***Interpretability (Metadata requirements)***

Detailed and clear methodological information in English is available on the IMF SDDS website for the immediate and the short-term interest rates[97] and for monetary aggregates[98]. Limited methodological information is available also on the English version of the BR's website for the short-term interest rate[99] (in the downloadable EXCEL file), but not for the immediate rate, for which metadata are only available in Spanish[100]. The Secretariat recommends that the same degree of information available in Spanish be also translated into English. In particular for monetary aggregates, the Secretariat advises that the methodological document 'Sectorización monetaria y económica'[101] be circulated also in English. The BR committed that this will done as soon as possible.

For long-term interest rate, the BR is requested to transmit the appropriate metadata corresponding to the interest rate that it will now transmit in accordance with the agreement made during the Peer review mission. However, the BR has not yet transmitted these metadata.

***Timeliness***

Timeliness has to be evaluated in practice, now that the arrangement has been done that the BR will transmit all the indicators. The Colombian authorities have informed the Secretariat that data can be supplied in real time, immediately after they are released nationally. More specifically, for the three subject areas data are released as follow:

- Interests Rates: the immediate and the short-term interest rates are published respectively on a daily and a weekly basis. Also a monthly average is produced and available on the BR web site. The long-term interest rate is released daily;

- Share Prices: data are available on a daily basis on the BR website;

97 http://dsbb.imf.org/Pages/SDDS/DQAFBase.aspx?ctycode=COL&catcode=INR00

98 http://dsbb.imf.org/Pages/SDDS/BaseSMReport.aspx?ctycode=COL&catcode=AAC00&ctyType=SDDS

http://dsbb.imf.org/Pages/SDDS/BaseSMReport.aspx?ctycode=COL&catcode=AAB00&ctyType=SDDS

99 http://www.banrep.gov.co/en/node/30440

100 http://www.banrep.gov.co/tib

101 http://www.banrep.gov.co/sites/default/files/paginas/sectormon.pdf

- Monetary Aggregates: the information is released on a weekly basis two weeks after the reference period.

***Data and metadata transmission***

Data and metadata for the three subjects (*i.e.* Interest Rates, Share Prices and Monetary Aggregates) have been provided through the OECD questionnaires. After the agreement made during the mission, all the indicators will be now on transmitted by the BR. Pilot tests for the transmission of the data via SDMX should be started as soon as possible.

**Overall assessment of the other short-term financial statistics**

Overall, Colombia meets the OECD requirements for the short-term financial statistics which are comparable with those of other OECD countries. The OECD welcomes that the BR has accepted the principle of directly transmitting the complete data for interest rates, share prices and monetary aggregates. However, this has not still happened in practice. The OECD welcomes the new indicators proposed by the BR, and will finalise its assessment based on the timely transmission of the data, preferably in SDMX format. The OECD expects that the BR will soon confirm that it is able to transmit seasonally adjusted data.

## CHAPTER 10. LABOUR AND POPULATION STATISTICS

### Background

The aim of labour statistics is to monitor the status of the labour market. In particular, they provide a record of both unemployed and employed individuals computed as percentages of the labour force population. More specifically, labour statistics are sourced from sample household labour force surveys on a monthly or quarterly basis. It is widely accepted that household labour force surveys are the best source for key labour market statistics.

As far as the relevance of population statistics is concerned, the size and growth of a country's population are both causes and effects of economic and social developments. Policymakers need to take into account demographic trends in order to optimise government spending, for instance, on health care or education. In this respect, beyond population size, its composition also matters. For most OECD countries, population data are based on regular, ten-yearly censuses, with estimates for inter-census years derived from administrative data. Population projections are also important for economic and social analysis and policymaking. All population projections require assumptions about future trends in life expectancy, fertility rates and migration.

The OECD collects both infra-annual (monthly or quarterly) and annual labour force statistics. More specifically, infra-annual labour and infra-annual labour compensation statistics are collected on a monthly basis by the OECD Statistics Directorate (STD). Whereas, population statistics and annual labour statistics are collected by the OECD Directorate for Employment, Labour and Social Affairs (ELS) in association with STD through a joint questionnaire on Annual Population and Labour Force. In the present assessment, the generic title *labour and population statistics* is used to refer to the statistical subject-category including: annual and infra-annual labour statistics, infra-annual labour compensation statistics and population statistics.

In Colombia, data for labour and population statistics are compiled and disseminated by the Departamento Administrativo Nacional de Estadística (hereafter referred as DANE). Official labour force indicators for Colombia are obtained and produced by DANE through the Gran Encuesta Integrada de Hogares (GEIH)[102] (or Great Integrated Household Survey, in English).

The present assessment is based on the data and metadata supplied by DANE and on information found on DANE's website[103].

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102 http://www.dane.gov.co/index.php/es/ocupacion-y-empleo/gran-encuesta-integrada-de-hogares

103 http://www.dane.gov.co/index.php - http://www.gks.ru/wps/wcm/connect/Rosstat/Rosstatsite.eng/

**OECD data and metadata requirements for labour and population statistics**

***Coverage***

*Infra-annual labour statistics*

The OECD requirements for infra-annual labour statistics comprise monthly Labour Force Survey (LFS) data, harmonised unemployment levels and rates and stocks and flows of job vacancies. Specifically, the Secretariat requires the following monthly (preferably) or quarterly series:

- Labour force survey data:
    - Population (total, males and females);
    - Working age population, defined as the sum of active and inactive labour force (total, males and females); by basic age groups (15-64 and 15-74), as well as by more detailed age groups (15+, 15-24, 25-54, 55-64);
    - Labour force, defined as the sum of employment and unemployment (total, males and females); by basic age groups (15-64 and 15-74), as well as by more detailed age groups (15+, 15-24, 25-54, 55-64);
    - Employment by main industry: Agriculture, Industry, Construction and Services (for age group 15+);
    - Employment by working time: Full time, Part time (total, males and females, for age group 15+);
    - Employees (for age group 15+);
    - Unemployment and employment levels and rates (total, males and females); by basic age groups (15-64 and 15-74), as well as by more detailed age groups (15+, 15-24, 25-54, 55-64);
    - Unemployment by duration: Short-term (less than 1 year), Long-term (1 year and over) by gender (total, males and females, for age group 15+); and
    - Inactive working age population (total, males and females); by basic age groups (15-64 and 15-74), as well as by more detailed age groups (15+, 15-24, 25-54, 55-64).
- Stocks and flows of job vacancies.

The Secretariat also publishes the OECD monthly Harmonised Unemployment Rate (HUR), for which it requires monthly data on employment (total economy), and unemployment (total, males and females) levels and rates for the age groups 15+ and 15-24.

Countries should provide as long a historical series as possible; beginning, at the latest, in 2000 and in 1990 for the series required for the HUR release. However, even longer historical series are suitable.

Until 2011, the OECD core requirements for short-term labour statistics were limited to the basic age groups 15-64 and 15-74 and did not include the number of inactive individuals and the working age population. These requirements were met by most member countries.

In 2011, the Secretariat launched an initiative to collect additional series and sub-aggregates to satisfy new analytical needs. More specifically, the new requirements are for monthly or quarterly labour force survey data classified by new and more detailed age groups (15+, 15-24, 25-54 and 55-64), and for data on the number of inactive individuals and the working age population. These additional data permit the Organisation to provide an enhanced picture of developments in the labour market, in two respects. First, the data identify withdrawal from active participation as well as unemployment itself. Second, the data permit examination of labour force participation by older workers, which is increasingly relevant given increased life expectancies, changing retirement policies and changing attitudes to retirement age.

The OECD began releasing outputs from this new LFS data programme in 2012, more specifically through the OECD Quarterly Employment Situation news release.

*Infra-annual labour compensation statistics*

In terms of labour compensation statistics, the Secretariat requires monthly data on earnings for the following categories: total economy, private sector, manufacturing and market services. Earnings are defined as "remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays. Earnings exclude employers' contribution in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. Earnings also exclude severance and termination pay". (ILO 1973, para 8) Earnings include wage rates (composed of basic wages, cost-of-living allowances, and other guaranteed and regularly paid allowances, according to the ICLS terminology), overtime payments, bonuses and gratuities regularly and irregularly paid, remuneration for time not worked, bonuses and gratuities, and payments in kind.

Countries should provide as long a historical series as possible; beginning, at the latest, in 1996. However, even longer historical series are preferred.

For both short-term labour statistics and labour compensation statistics, the OECD prefers that seasonal adjustments be made by the country itself as national statistics experts have better knowledge of local seasonal factors than international statisticians do. However, if a country does not supply seasonally adjusted (s.a.) data or if the series of s.a. data they provide is not sufficiently long, the OECD undertakes the adjustments using TRAMO-SEATS.

*Annual labour statistics*

The OECD requirements for long-term labour statistics are for annual LFS statistics. In particular, the following annual series are required:

- Labour force components, by sex (total, males and females);
- Persons in civilian employment, by professional status (according to ICSE-93[104]) and by sex (total, males and females);
- Persons in civilian employment, by activities (ISIC Rev.3 and/or ISIC Rev.4) and by sex (total, males and females);
- Wage earners and salaried employees, by activity (ISIC Rev.3 and/or ISIC Rev.4) and by sex (total, males and females).

[104] International Classification of Status in Employment: http://www.ilo.org/global/statistics-and-databases/statistics-overview-and-topics/status-in-employment/current-guidelines/lang--en/index.htm

Countries should provide as long a historical series as possible; beginning, at the latest, in 2000.

These annual labour force series as well as a large number of labour force datasets collected and coordinated by the OECD Department of Labour, Employment and Social Affairs (DELSA) using the annual labour force questionnaire are to be transmitted in early February each year.

*Population statistics*

The OECD requirements for population statistics include annual demographic data, population projections and various vital statistics broken down by several characteristics, such as age group and sex. More in detail, the requirements comprise the following annual series:

- Population by three broad age groups (less than 15 years, 15-64, 65 and over) and by sex (total, males and females);
- Population by five-year age group and by sex (total, males and females);
- Population historical data, from 1950, and projections, to 2050, by five-year age group and by sex;
- Vital statistics (number of births, number of deaths and net migration).

Countries should provide as long a historical series as possible; ideally, beginning in 1950.

***Compliance***

*Labour statistics*

For long-term labour statistics and for short-term labour and labour compensation statistics, the definitions and compilation methods used should comply with the guidelines of the 13th International Conference of Labour Statisticians (ICLS) convened in 1982 by the International Labour Organisation[105], hereafter referred as the 'ILO guidelines'. Any divergences from the ILO guidelines must be clearly indicated in the metadata. More specifically for labour compensation statistics, the methodological reference in the Resolution of the 12th International Conference of Labour Statisticians (ICLS) concerns an integrated system of wage statistics.

For the harmonised unemployment rates and levels, compliance requirements are based on definitions of the ILO guidelines. Under these definitions, the unemployed are persons of working age who, in the reference period, are without work, are available for work and have taken specific steps to find work[106].

*Population statistics*

The definitions and compilation methods used for population statistics should comply with the OECD, International Labour Organisation (ILO) and the United Nations (UN) international definitions[107].

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105 http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/lang--en/index.htm, http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087481/lang--en/index.htm

106 See Methodological note: OECD Harmonised Unemployment Rates

107 OECD, "Labour Force Statistics 1989 - 2009, 2010 Edition", page 359-370; "Principles and Recommendations for Population and Housing Censuses", Revision 1. United Nations, New York, 1998, Series M, No. 67, Rev; "Handbook of Vital Statistics Systems and Methods, Volume 1: Legal,

Specifically, population series required by the OECD include all nationals present in the country, or temporarily absent from the country, and aliens permanently resident in the country.

It includes national armed forces stationed abroad, merchant seamen at sea, diplomatic personnel located abroad and displaced persons resident in the country.

It should exclude foreign armed forced stationed in the country, foreign diplomatic personnel located in the country, and civilian aliens temporarily in the country.

Population statistics may be measured according two alternative concepts:

- "present in area population", or *de facto*, *i.e.* persons actually present in the country at the time of the Census;
- "resident population" or *de jure*, *i.e.* persons regularly domiciled in the country at the time of the Census.

***Interpretability (Metadata requirements)***

For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. However, to ensure transparency of data and establish the confidence of users in an international setting, it is strongly recommended that metadata be available in English and easily accessible over the internet.

For long-term and short-term labour statistics, the OECD requires metadata that describe the source, geographic coverage, the urban/rural coverage, frequency, age groups, classification system, seasonal adjustment method and treatment of armed forces and institutional populations.

For labour compensation statistics, the Secretariat requires metadata that reports information on source, geographic coverage, key statistical concept and calculation methods.

For population statistics, the OECD requires the following information: the source, reference period, key statistical concepts, population coverage, item coverage, quality comments[108].

***Timeliness***

It is important that countries provide data or that data be available at the same time, or immediately after, they are released nationally. Ideally, for both short-term labour statistics and labour compensation statistics, monthly data should be available within one or two months and quarterly data within one quarter, after the reference period. Data for the monthly harmonised unemployment rates and levels should be available no later than 30-35 days after the reference period.

For annual labour statistics, it is important that countries provide the latest available annual data, ideally those for the year preceding the OECD questionnaire reception that usually takes place at beginning of the year (March). For population statistics, the latest available data are required.

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Organisational and Technical Aspects", United Nations Studies in Methods, Glossary, Series F, No. 35, United Nations, New York 1991.

108 OECD, "Labour Force Statistics 1989 - 2009, 2010 Edition", page V.

***Data and metadata transmission***

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users, too.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data, in as timely a fashion as possible. Transmission of data in EXCEL spreadsheets or in another electronic format is negotiated and implemented on a case-by-case basis.

As far as population and long-term labour statistics are concerned, the Secretariat requests countries to complete specific EXCEL tables that form the questionnaire on Annual Population and Labour Force.

**Evaluation of labour and population statistics for Colombia**

***Coverage***

*Infra-annual labour statistics*

In terms of variables, OECD coverage requirements are largely met for short-term labour statistics.

Data provided via the OECD EXCEL template for short-term labour statistics include monthly and quarterly data for almost the all required series from 2001 to 2012.

While on average, OECD countries produce data back to early 90's, or even before, there are no plans for DANE to consider developing longer time series. Significant changes in the GEIH survey do not allow DANE to calculate historical series including years before 2001. However, DANE is currently considering the development of seasonally adjusted figures from 2001, which were not provided for the assessment.

As regards stock and flows of job vacancies, DANE is considering the development of a new survey allowing the release of quarterly indicators.

*Infra-annual labour compensation statistics*

DANE publishes annual earnings based on the GEIH household survey for the total economy, the manufacturing sector and for some different services activities. This data meet OECD requirements in terms of definition and coverage whereas they are not available for the aggregate market services. However, the frequency does not meet OECD requirements for short-term labour compensation statistics. DANE has committed to start delivering these data on a quarterly basis.

DANE also publishes a monthly index of real wages and salaries based on the Monthly Manufacturing Survey (MMM), and defined as the monetary remuneration paid by the employer and including wages, bonuses, commissions, and other monetary benefits specified in job contracts. This index is calculated before tax payments, social security and benefit contributions. However, this index does not fully meet OECD requirements as it is available for manufacturing only. Colombia only partially meets OECD requirements for short-term labour compensation statistics.

*Annual labour statistics*

In terms of variables coverage, the OECD requirements are fully met for the annual labour statistics.

However, data for 2006 for ‘Wage earners and salaried employees, by activity’ were not supplied and DANE reported a note explaining that ‘For 2006 the data is not presented. During this year the survey methodology introduced changes'. The Secretariat recommends that DANE produce estimates for the data missing in that year or, as an alternative solution, allow the OECD to compute an interpolation between 2005 and 2007 data (with an explanatory note in the metadata).

DANE compiles annual labour data by activity according to ISIC Rev.3. DANE has implemented ISIC Rev.4 in December 2014 and first data in ISIC 4 should be available during 2015. ISIC 3 will continue to be collected in parallel during 2015 in order to create linking factors for historical series.

Annual figures are computed as an arithmetical mean of the infra-annual figures.

As for short-term labour statistics, the Secretariat recommends to improve the length of the historical time-series for the long-term labour indicators, considering that consistency over time is ensured for the period 2001-2012 only. However, extending the length of the time series before 2001 is difficult for DANE due to major differences in methodology and geographical coverage between the GEIH and the National Household Survey that had been previously used. Indeed, long time series are not available on DANE's website and links with historical data based on the National Household Survey is not recommended. Both series are also available in the LABORSTA database on ILO without links.

*Population statistics*

Colombia partially meets the OECD coverage requirements for population statistics. Data were provided for the period 1985-2020, while the requested period was 1950-2050. DANE is currently developing the methodology for the 2016 Population and Housing Census with the aim to produce population projections with 15-year range and to publish population projections until 2050, in line with international recommendations. However, these projections will only be available after the 2016 Census.

With particular regard to vital statistics, data on births were provided for the period 1998-2012 while data on deaths were provided from the year 1979. This is acceptable considering the average coverage of OECD countries for these data. Data are obtained from the continuous Vital Statistics program (see chapter 2). Net migration is sourced from the Population and Housing Census.

Population estimates and projections for the missing periods would be desirable. In the meantime, the Secretariat proposes to use the UN’s database series to cover the missing period for both the historical observations and the projections (*i.e.* 1950-1984 and 2021-2050 respectively), by introducing two breaks in the series. This solution would consent better comparability with other OECD countries in terms of data.

***Compliance***

Data on labour statistics are based on the GEIH household survey which is described in chapter 2.

Colombian classification of labour statistics by age group differs from that required by the OECD. GEIH household survey covers urban population aged 12 years and rural population aged 10 years and over. More specifically Colombia does not normally produce data for the required age group ‘15 and over’ but the GEIH allows computing data by specific age groups and DANE has responded to the OECD data request by computing the data according to the OECD-specific age groupings. DANE also agreed to provide the OECD with data according to these age groups on a regular basis.

While employment and unemployment concepts broadly follow ILO guidelines, national reporting of unemployment level and rates include open and hidden unemployment. The OECD requires data referring only to open unemployment for international comparisons. As the GEIH allows DANE to differentiate

open and hidden, or invisible unemployment, DANE also provided the OECD with quarterly data referring to open unemployment only. Monthly data for open unemployment would however also be very welcome, in particular because monthly internationally comparable data are requested for the harmonised unemployment rate press release. DANE committed to start transmitting these data on a monthly basis.

The GEIH's target population is the civilian population and armed forces are not included. The OECD countries' normal practice is for the inclusion of the armed forces population in the labour force calculation. DANE is starting a consultation of international experiences in this field and is considering the best way to introduce this population in the labour force survey.

As regard short-term labour compensation statistics from the Monthly Manufacturing Survey, additional methodological information is required to assess if the definition of the real index of wages and salaries fully complies with the ICLS terminology. More specifically, it is not clear if the real index of remuneration refers to direct wages and salaries according to ICLS terminology. Furthermore, DANE does not report information on what is excluded from the earnings definition.

Finally, data on population fully comply with OECD methodological standards. In particular, data are computed according to the "resident population" (or *de jure*) concept. The only deviation from OECD standards concerns the classification of population by five-year age group. In Colombia the higher disaggregation level corresponds to '80 and over', whereas the OECD requires details for the age groups '80-84' and '85 and over'. It appeared from the Peer Review that DANE was considering the provision of population statistics for the age groups '80-84' and '85 and over'.

***Interpretability (Metadata requirements)***

Metadata on short-term and long-term labour statistics available from DANE are detailed and translated into English. A specific document on the GEIH methodology is released on DANE's website[109].

Besides, DANE makes comprehensive metadata available in English for population statistics[110] and, more specifically, on census[111].

On the other hand, as far as labour compensation statistics is concerned, additional metadata is required and DANE is considering developing such methodological information.

***Timeliness***

According to DANE, core data on labour and population can be provided to the OECD on the last working day of the month following the reference period, while complementary data within 45 days after the reference period. This would meet the OECD requirements for timeliness.

***Data and metadata transmission***

*Short-term labour statistics*

Data for short-term labour statistics were transmitted by DANE through the OECD EXCEL questionnaire, as requested by the Secretariat. The Secretariat recommends that DANE provide the data following the SDMX Short-term statistics DSD, as agreed during the Peer review mission.

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109 http://www.dane.gov.co/files/investigaciones/fichas/empleo/ingles/GEIH_DANE_04.pdf

110 http://www.dane.gov.co/files/investigaciones/fichas/ingles/VitalStatisticMETHODOLOGY_DANE.pdf

111 http://www.dane.gov.co/censo/files/metodologia/en/General%20Census%202005%20Methodology.pdf

The OECD EXCEL template that DANE compiled is currently the support that contains the more relevant amount of information in terms of OECD requirements. Actually, almost the same extent of data is available on both the Spanish and English versions of DANE's website in a detailed EXCEL file[112], though data (and enclosed metadata) are reported in Spanish only. For that reason, the Secretariat has faced difficulties in identifying the OECD target series.

Unfortunately, data by sex are available only on the Spanish version of DANE's website[113], whereas data by age group are not accessible online apparently. Additionally, the fact that Colombian classification by age group differs from that required by the OECD makes essential that DANE fill in the OECD template every month.

Detailed metadata in English were also made available via the OECD metadata survey. Moreover, additional methodological information is also accessible from DANE's website, however, only in Spanish.

The Secretariat recommends that DANE release an English version of the data EXCEL file on its website.

*Short-term labour compensation statistics*

Data and metadata in Spanish have been submitted through an EXCEL file as requested by the Secretariat. However, data and methodologies of the GEIH household survey are available in English on DANE's website. As regards wages and salaries from the MMM survey, additional information on the definition of the real wage index would be useful.

*Long-term labour statistics*

Data and metadata were provided through the OECD questionnaire on Annual Population and Labour Force. DANE should continue to use this Excel questionnaire for future transmission.

*Population statistics*

Besides, data on population were also provided by DANE through the OECD Annual Population and Labour Force questionnaire. Data are similarly available online, on DANE's website[114], though only in Spanish. DANE should continue to use this Excel questionnaire for future transmission.

Informal employment

Nearly 50% of the labour force is currently under informal employment in Colombia. A measure of the size of the informal employment is thus essential. DANE publishes monthly a measure of the informal employment, using the GEIH, based on a definition of: (1) size of establishment (<5); (2) contribution to social security; (3) contribution to pension, and (4) existence of a verbal or written contract. In addition, DANE has recently extended the source of the measurement to 24 cities.

DANE has started recently a new longitudinal survey called ELPS that will measure the dynamics of job informality. This survey includes 14 000 households and will be conducted every 2 years. The first

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112 Under section 'Monthly Information', item 'Annexes – yyyy (month)': http://www.dane.gov.co/index.php/labor-market/great-integrated-household-survey

113 Under section 'Información último trimestre', item 'Anexos': http://www.dane.gov.co/index.php/mercado-laboral/segun-sexo

114 http://www.dane.gov.co/index.php/demographic/population-series

results were published on 15 May 2014. This panel based survey will allow to analyse the dynamics of informality when the second round will be conducted and published.

***Coherence***

In the EXCEL file that DANE compiled with infra-annual labour statistics, the following inconsistencies have been noticed:

From January 2001 to July 2006, in the 15-64 age group, the number of employed persons is different from the sum of numbers of employed persons in 15-24, 25-54 and 55-64 age groups; the active population is different from the sum of employment and unemployment; and the employment rate is different from the ratio of the number of employed persons divided by the working age population.

From January 2006 to July 2006, the number of unemployed persons in the 15-64 age group is different from the sum of numbers of unemployed persons in 15-24, 25-54 and 55-64 age groups.

From January 2001 to December 2005, the unemployment rate for the 15-64 age group is different from the ratio of the number of unemployed persons divided by the working age population.

DANE has committed to review these inconsistencies in their 2015 submission.

**Overall assessment of labour and population statistics and main recommendations**

Overall, labour and population statistics for Colombia meet the OECD minimum requirement in terms of compliance, interpretability, timeliness and metadata transmission. The reviewers take note of the progress made by DANE to measure informal employment, which is an essential feature of the Colombian labour force and welcomes the new initiatives taken by DANE such as the new panel based ELPS survey.

However, certain shortcomings have been identified that the Secretariat invites DANE to address in the near future to ensure better comparability with other OECD countries in terms of data and related practices. More specifically, the reviewers identified the following items for DANE's possible consideration:

- the production of data for the armed forces or the provision of additional methodological information;
- the improvement in coverage for historical data on labour; there are no plans to produce longer time series by extending historical data before the year 2001;
- the production of historical data and projections for population in order to cover the currently missing periods (*i.e.* 1950-1984 and 2021-2050); long-term plans are linked to the 2016 Population and Housing Census;
- the compilation of the OECD SDMX DSD, for short-term labour statistics, according to the guidelines provided in the instructions sheet; DANE plans to provide short-term labour statistics according to OECD requirements in 2015;
- the publication of the data in English on DANE's website.

With specific regard to labour compensation statistics, the reviewers recommend:

- the provision of monthly (preferably) or quarterly data, at least for the same series already supplied on an annual frequency in the GEIH household survey;

- the transmission of additional metadata to the OECD, in English, on wages and salaries from the MMM survey.

***Sources***

Harmonised Unemployment Rate (HUR) http://www.oecd.org/std/labour-stats/HUR_11e13.pdf

Employment situation http://www.oecd.org/std/labour-stats/QES_10e13.pdf

ILO www.ilo.org/global/statistics-and-databases/standards-and-guidelines/lang--en/index.htm

OECD Short-term Labour Statistics database

http://stats.oecd.org/Index.aspx?DatasetCode=STLABOUR

ILO, 1973, *Resolution Concerning an Integrated System of Wages Statistics adopted by the 12th International Conference of Labour Statisticians* (October 1973), ILO, Geneva, available from

http://www.ilo.org/public/english/bureau/stat/download/res/wages.pdf

## CHAPTER 11. BUSINESS TENDENCY AND CONSUMER OPINION SURVEYS

### Background

Business tendency and consumer opinion surveys are carried out to obtain qualitative information for use in monitoring the current business situation and forecasting short-term developments. Information from these surveys has proved of particular value in forecasting turning points in the business cycle hence they are used as inputs in the calculation of the OECD Composite Leading Indicators (CLIs). The information collected in BTS is described as qualitative because respondents are asked to assign qualities, rather than quantities, to the variables of interest. It is generally much easier for respondents to give qualitative rather than quantitative information because the former does not require respondents to consult their accounting records. As one of the main advantages of qualitative surveys, the questionnaires can be completed quickly and the results of the survey can be published much sooner than the results of traditional statistical surveys. Tendency and opinion surveys cover a wide range of variables selected for their utility in monitoring the business cycle and include items not covered by quantitative statistics, such as capacity utilisation and views on the overall economic situation.

In Colombia, data for BTS and COS are produced by the Foundation for the Higher Education and Development (Fedesarrollo), which is a non-profit policy research centre based in Bogotá. Fedesarrollo was created in 1970 to undertake independent technical studies, contributing to the policy-making process in Colombia in economic and social policies. Studies produced by Fedesarollo are funded by private sector, public sector, multilateral agencies, and local and international foundations.

Over the years, Fedesarrollo has acquired a reputation for independence and analytical rigor. It is also known at national and international level for the quality and reliability of its opinion surveys. In that regard, the business tendency survey (manufacturing and retail trade) has more than 25 years of existence; the consumer opinion survey started in November 2001; while the financial opinion survey (in conjunction with the Colombia's Stock Exchange, BVC) started in May 2005.

The information flow exchanged between the Secretariat and Fedesarrollo has been co-ordinated by DANE.

### OECD data and metadata requirements for the business tendency and consumer opinion surveys

What follows are the OECD data and metadata requirements pertaining to business tendency surveys and consumer opinion surveys statistics, based on the OECD's newly defined core list.

#### *Coverage*

The OECD data requirements for BTS are for monthly series on:

- Manufacturing sector:
    - Confidence indicator (% balance) - if not provided it can be computed in-house, if the following components are given: Production: future tendency; Order books: level; and, Finished Goods Stocks: level.
    - Business situation: present;
    - Business situation: future tendency;
    - Employment: future tendency;

- Production: tendency;
- Production: future tendency;
- Order books: level;
- Orders inflow tendency;
- Finished Goods Stocks: level;
- Capacity utilisation (rate);
- Selling prices: future tendency;
- Export order books: level.

- Construction Sector:
  - Confidence indicator (% balance) - if not provided it can be computed in-house, if the following components are given: Orders books: level; and Employment: future tendency.
  - Employment: future tendency;
  - Orders books: level;
  - Business situation: present;
  - Selling prices: future tendency.

- Retail Trade Sector:
  - Confidence indicator (% balance) - if not provided it can be computed in-house, if the following components are given: Business situation: present; Business situation: future tendency; and, Volume of stocks: level.
  - Employment: future tendency;
  - Business situation: present;
  - Business situation: future tendency;
  - Volume of stocks: level;
  - Orders intentions/demand: future tendency.

- Services Sector:
  - Confidence indicator (% balance) - if not provided it can be computed in-house, if the following components are given: Business situation: present; Business situation: future tendency; and, Employment: future tendency.
  - Business situation: present;
  - Business situation: future tendency;
  - Employment: tendency;
  - Employment: future tendency;
  - Demand evolution: tendency;
  - Demand evolution: future tendency;

In addition, for COS, the following series are required:

- Consumer confidence indicator (% balance);
- Consumer Prices: future tendency;
- Expected economic situation.

The information collected for business tendency surveys is described as qualitative because respondents are asked to assign qualities rather than quantities to the variables of interest. For example, in a business tendency survey, respondents might be asked to assign qualities to the value of their order books such as "higher than normal", "normal" or "below normal". Because of the difficulty of interpreting all three percentages, BTS results are normally converted into a single number, either using "balances" (difference between percentages of respondents giving *favourable* and *unfavourable* answers) or "diffusion indices" (expressed as a fraction of *favourable* answers plus half of the fraction of *no change* answers).

Usually the series are seasonally adjusted, at least to some extent, resulting in a smooth series free of seasonal variation and noise. This and the fact that they usually do not need revisions facilitate their use in forecasting and, in particular, in predicting turning points in the business cycle. However, if a country specifically does not supply seasonally-adjusted (SA) data, the OECD undertakes the adjustments using X12-ARIMA.

***Compliance***

The OECD requests that definitions and compilation methods comply with the OECD harmonised system for business tendency surveys as described in the publication 'Business Tendency Surveys: A Handbook'[115] (2003, OECD, Paris). This Handbook is based on a standard framework for business tendency surveys established by the European Commission (EC) Directorate-General for Economic and Financial Affairs during the 1970s. The OECD has co-operated with the EC to adapt the framework to other countries, thus creating a harmonised system.

As regards consumer opinion survey, the OECD requires that countries comply with the guidelines set in 'The Joint Harmonised EU Programme of Business and Consumer Surveys'[116].

***Interpretability (Metadata requirements)***

For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. However, to ensure transparency of data and establish the confidence of users in an international setting, it is strongly recommended that metadata be available in English and easily accessible over the internet.

The Secretariat requires metadata describing the source, key statistical concepts and data coverage.

***Timeliness***

It is important that countries provide data or that data be available at the same time, or immediately after, they are released nationally. Ideally, monthly data should be available within one month and quarterly data within one quarter after the reference period.

115 http://www.oecd.org/std/leading-indicators/31837055.pdf

116 http://ec.europa.eu/economy_finance/db_indicators/surveys/documents/userguide_en.pdf

***Data and metadata transmission***

In the medium to longer term, all countries are encouraged to develop the capacity to exchange data and metadata via the SDMX global data dissemination and exchange standard. This will be the most efficient and effective solution not only for dealing with the OECD but also for responding to demands of other international organisations and exchanging data with major users, too.

In the meantime, the OECD is flexible and endeavours to work with each country to find the most efficient and effective solution that will guarantee regular, ongoing transmission of data. For BTS and COS statistics, it is ideal if data are available and accessible over the internet so that the Secretariat can build automated queries to capture the data as soon as they are released. If this approach is not feasible, transmission of data in EXCEL spreadsheets or in another electronic format will be negotiated and implemented on a case-by-case basis.

**Evaluation of the business tendency and consumer opinion surveys in Colombia**

The Secretariat assessed Colombia business tendency and consumer opinion surveys statistics to determine how well they meet the OECD data and metadata requirements.

***Coverage***

In terms of variable, geography and population coverage, Colombia meets the OECD requirements.

In the business tendency surveys, the manufacturing sector offers all 12 variables for which only 1 is not compatible (*i.e.*, 'Export order books: level') with OECD guidelines. The construction sector has 3 indicators out of the 5 requested (*i.e.*, the 'Confidence indicator' is not provided but it can be computed as components are available, whereas 'Selling prices' is not collected). The retail sector covers all 6 indicators of which 2 are not compatible (*i.e.*, 'Employment: future tendency' and 'Orders intentions/demand: future tendency'), while the service sector is entirely not covered. For the consumer opinion survey, all 3 required series are covered by Fedesarrollo. Finally, the same unit of measure is used across all surveys data.

Information on coverage by sector for BTS is presented below:

- Manufacturing Sector – Colombia provided both the non-seasonal adjusted and the seasonal adjusted (s.a.) data for all the series required by the OECD for this sector. The entire set of series is available on a monthly basis and starts in January 1980, with the exception of the series for 'Employment: future tendency', 'Export order books: level' and 'Rate of Capacity Utilization'. These three latter series are available on a quarterly basis and start in March 1981.
- Construction Sector – Colombia provided only the raw series (while s.a. data were not supplied for this sector) for 'Employment: future tendency', 'Orders books: level' and 'Business situation: present' on a quarterly frequency, beginning in 1991. Fedesarollo is currently reviewing its capacity to deliver seasonally adjusted series to the OECD, along with the possibility of including new questions into the survey on construction. Data for 'Selling prices: future tendency' and for the 'Confidence indicator' have not been provided, even though the latter can be computed in-house using the component series supplied (*i.e.*, 'Employment: future tendency' and 'Total order books').
- Retail Trade Sector – Colombia provided both the non-seasonal adjusted and the s.a. data for all the required series. Data have been provided on a monthly basis and start in March 1986, with the

exception of the series for 'Employment: future tendency'. The latter has been provided on a bi-annual frequency and starts in February 1990.

- Services Sector – Colombia does not cover the services sector because a survey does not exist at this time. However, Fedesarollo will consider its implementation in the more general effort to improve institutional surveys and fill data gaps following the OECD recommendations.

In addition, for consumer opinion surveys, Colombia supplied non-seasonally adjusted data for all the required series on a monthly basis, beginning in November 2011.

***Compliance***

Fedesarrollo is now transmitting the following data on a regular basis:

* The Consumer Confidence Index (CCI) consolidated and its components; *i.e.* with respect to the Consumer Opinion Survey, a total of 8 series is being transmitted: The Consumer Confidence Index (CCI), the Economic Conditions Index (ECI) and the two questions that comprise it, as well as the Consumer Expectations Index (CEI)) and the three questions with which it is constructed.

* The Industrial Confidence Index (ICI) and its components. With respect to the Business Tendency Survey of the Industrial sector, a total of 4 series is being transmitted: The Industrial Confidence Index (ICI), the current volume of orders, the level of stocks and the expectations of production for next quarter.

* The Business Confidence Index (BCI) and its components; With respect to the Business Tendency Survey of the Trade sector, a total of 4 series is being transmitted: The Business Confidence Index (BCI), the current status of the enterprise or business, the level of stock and the expectations of the economic situation in the next six months.

From the analysis of the questionnaires and the integrated comments provided by Fedesarrollo, the Secretariat noted that most of the data comply with the international references and meet the OECD requirements. The classification ISIC Rev.3 is used since January 2004 and preliminary phases for the implementation of ISIC Rev.4 are in progress. Since the November 2014 survey, the survey template includes the ISIC Rev 4 AC of the companies. To be noted that only aggregated data are reported from the EOE.

***Interpretability (Metadata requirements)***

Fedesarrollo has recently produced technical documents describing the different business tendency and consumer opinion surveys conducted in Colombia.[117].

Besides, the Secretariat welcomes the announcement by Fedesarrollo that an English version of its website will be launched during 2015.

***Timeliness***

Fedesarrollo transmits the Consumer Opinion Survey (COS) on the 12th of each month, and of the Business Tendency Survey (BTS) on the 24th of each month, as agreed with OECD.

[117] Versions can be found at http://www.fedesarrollo.org.co/encuestas/boletines-empresarial-eoe/ and http://www.fedesarrollo.org.co/encuestas/consumidor-eoc/.

A 12-month in advance news release calendar is available online.[118].

***Data and metadata transmission***

Data and metadata will be sent to OECD via an EXCEL file.

The main results of the business tendency and the consumer opinion surveys are also released via official bulletins in Spanish on Fedesarrollo's website[119], on a monthly basis. Following OECD recommendation, Fedesarollo is currently translating information available on its website in English.

**Overall assessment of the business tendency and consumer opinion surveys**

As is the case in many OECD countries, the business tendency and consumer opinion surveys are conducted by a research organisation that is not part of the official national statistical system, *i.e.* Fedesarollo.

Overall, BTS and COS data can be considered satisfactory in terms of OECD requirements for coverage, length of the time series, seasonal adjustment, soundness of the data across OECD countries and coherence with the international standards.

As far as data coverage is concerned, the reviewers would appreciate to receive information on the progress of the plan for the implementation and development of a business tendency survey for the service sector, which does not currently exist. Also, information for the progress in the seasonal adjustment of the construction sector series would be welcome.

118 http://www.fedesarrollo.org.co/encuestas/boletines-empresarial-eoe/ and http://www.fedesarrollo.org.co/encuestas/consumidor-eoc/.

119 BTS: http://www.fedesarrollo.org.co/encuestas/empresarial-2013/
COS: http://www.fedesarrollo.org.co/encuestas/consumidor/

# CHAPTER 12. WELL-BEING INDICATORS

## Background

The OECD Better Life Initiative aims at measuring the well-being of people and the progress of societies, a key priority for the OECD, whose overarching mission is to promote "Better Policies for Better Lives". This initiative focuses on developing statistics that go beyond the traditional macro-economic indicators, are focused on individuals and capture aspects of life that matter to people and that, taken together, help to shape the quality of their lives.

Two important elements of this initiative are the "How's Life?" bi-annual report and the "Better Life Index" (BLI). The "How's Life?" report provides a comprehensive picture of well-being in OECD countries and other major economies, by looking at people's material conditions and quality of life across the population through 25 headline indicators and more than 30 secondary indicators to complement the analysis on specific topics. The BLI is an interactive web-based tool that allows citizens to compare well-being across OECD countries and beyond and it is based on 24 of the 25 headline indicators grouped into the 11 dimensions of the OECD well-being framework.

At this stage of the assessment of Colombia's statistics, the aim is to limit the analysis to the 25 headline indicators included in "How's Life?". Some of them are extracted from traditional sets of statistics, such as national accounts or labour force surveys, and their assessment should be linked with the global parent set. Some others are new experimental indicators that, in some cases, go beyond standard official statistics developed by statistical offices (*e.g.* indicators that are based on non-official surveys, such as the Gallup World Poll).

## Evaluation criteria

In all statistical (accession) reviews, the Secretariat evaluates the data and metadata to determine how well they meet OECD needs in terms of coverage, compliance, interpretability, timeliness and data and metadata transmission. These five elements comprise the basic elements of the OECD's evaluation. In addition, where feasible, other aspects of the *OECD Quality Framework for Statistical Activities* are also considered, such as coherence, accuracy and credibility.

However, at the present state of the Better Life Initiative, and considering the diversity of sources used for the 25 indicators, the present assessment is limited to the simple availability of the data for Colombia.

DANE transmitted to the OECD a set of data on 1 October 2014 using the OECD Excel questionnaire for the Well Being Initiative. As explained below, and as is common for most other OECD countries, not all data is available in DANE. The reviewers welcome that almost all the expected data for the average values broken down by gender have been transmitted in this first set. However, the metadata are sometimes incomplete and more data with socio-economic breakdown would be necessary (in particular no data for inequalities in top and bottom 20% have been provided at all). Overall, the first step towards the inclusion of Colombia in the Better Life Initiative is satisfactory but improvements will be needed for a full participation in the coming years.

The implementation of SDMX in the domain of well-being indicators is not envisaged at this stage.

## OECD data requirements for the headline indicators of well-being and availability for Colombia

### *Dimension 1: Income and Wealth*

Source: National Accounts

*Household net adjusted disposable income*

This is defined by the System of National Accounts adding to households' net disposable income the social transfers in-kind that households receive from governments (such as education and health care services). Data refer to the sum of households and non-profit institutions serving households (S14_S15). Unit of measurement: US dollars at current PPPs per capita (PPPs used are those for actual individual consumption)

Additional information: Data by quintile (average of quintile 5 and quintile 1 of household net adjusted disposable income)[120].

Colombia coverage: Coverage will not be fully possible before 2018. While DANE regularly publishes household disposable income, it only publishes a gross version of it and not a net one (*i.e.* excluding consumption of fixed capital). A program for the calculation of the stock of capital and consumption of fixed capital for households is planned, but should deliver only in 2018, on the occasion of the publication of the new benchmark year for national accounts. The National Quality of Life Survey may be used to calculate quintiles 5 and 1.

*Household net financial wealth*

Net financial wealth consists of: currency and deposits, securities other than share, loans, shares and other equity (including shares issued by investment funds), insurance technical reserves, and other accounts receivable or payable, net of household financial liabilities, as defined by the System of National Accounts – SNA. Data refer to the sum of households and non-profit institutions serving households (S14_S15). Unit of measurement: US dollars at current PPPs per capita (PPPs are those for actual individual consumption).

Colombia coverage: the time series of net financial wealth of households up to 2013 will be available in November 2014.

### *Dimension 2: Jobs and earnings*

Source: Labour Force Survey and National accounts

*Employment rate*

It is the number of employed persons aged 15 to 64 over the population of the same age. Employed people are those aged 15 or more who report that they have worked in gainful employment for at least one hour in the previous week, as defined by the International Labour Organization – ILO. Unit of measurement: Percentage of the working-age population (aged 15-64).

[120] The Secretariat calculates quintile 5 and 1 of the household net adjusted disposable income by applying the quintile 5(1) to average ratio of household disposable income, as collected through the OECD Income distribution and poverty programme, to the average household net adjusted disposable income as collected through the OECD National Accounts.

Additional information: Data by gender (for men and women); data by educational attainment (0/1/2 ISCED group and 5/6 ISCED group)

Colombia coverage: average and by gender values were transmitted and made available via the GEIH survey.

*Long term unemployment rate*

This indicator refers to the number of persons who have been unemployed for one year or more as a percentage of the labour force (the sum of employed and unemployed persons). Unemployed persons are defined as those who are currently not working but are willing to do so and actively searching for work. Unit of measurement: Percentage of the labour force

Additional information: Data by gender (for men and women); data by educational attainment (0/1/2 ISCED group and 5/6 ISCED group)[121].

Colombia coverage: average and by gender values were transmitted and made available via the GEIH survey.

*Average gross annual earnings of full-time employees*

This indicator refers to the average annual wage per full-time equivalent dependent employee, which are obtained by dividing the national-accounts-based total wage bill (Wages and salaries – SNA D11) by the average number of employees in the total economy, which is then multiplied by the ratio of average usual weekly hours per full-time employee to average usual weekly hours for all employees (sourced from the Labour Force Surveys). It considers the employees' gross remuneration, that is, the total before any deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees. Unit of measurement: US dollars.

Additional information: Data by gender (for men and women); data by quintile (quintile 5 and quintile 1).

Colombia coverage: average value transmitted (but not by gender) via national accounts tables. Total wages and salaries (D11) received by households are available in the OECD Annual National Accounts database. Total employees as compiled in national accounts has been transmitted by DANE for 2005, 2011 and 2012, including adjustment for full time employees.

*Employment insecurity*

This indicator presents the probability to become unemployed. It is calculated as the number of people who were unemployed in 2012, but were employed in 2011, over the total number of employed in 2011. Unit of measurement: Percentage of employed

Additional information: Data by gender (for men and women)

Colombia coverage: data not available until second round of the new ELPS panel survey. This second round will be available in 2016.

[121] Data by educational attainment are often available for unemployed people (not for long-term unemployed). Imputations are therefore calculated by the Secretariat.

***Dimension 3: Housing***

Source: various surveys on living conditions, national accounts

*Number of rooms per person*

This indicator refers to the number of rooms (excluding kitchenette, scullery/utility room, bathroom, toilet, garage, consulting rooms, office, shop) in a dwelling divided by the number of persons living in the dwelling. Unit of measurement: Rate (number of rooms divided by the number of people living in the dwelling).

Colombia coverage: transmitted and made available via the GEIH survey.

*Dwellings without basic facilities*

This indicator refers to the percentage of the population living in a dwelling without indoor flushing toilet for the sole use of the household. Flushing toilets outside the dwelling are not to be considered in this item. Flushing toilets in a room where there is also a shower unit or a bath are also counted. Unit of measurement: Percentage of the population.

Colombia coverage: transmitted and made available via the Quality of Life survey.

*Housing expenditure*

This indicator considers the expenditure of households in housing and maintenance of the house, as defined in the SNA (P31CP040: Housing, water, electricity, gas and other fuels; P31CP050: Furnishings, households' equipment and routine maintenance of the house). It includes actual and imputed rentals for housing, expenditure in maintenance and repair of the dwelling (including miscellaneous services), in water supply, electricity, gas and other fuels, as well as the expenditure in furniture and furnishings and households equipment, and goods and services for routine maintenance of the house as a percentage of the household gross adjusted disposable income. Data refer to the sum of households and non-profit institutions serving households (S14_S15). Unit of measurement: Percentage of the household gross adjusted disposable income.

Colombia coverage: Complete and transmitted. P31CP040 and P31CP050 are available as well as gross adjusted disposable income.

***Dimension 4: Health Status***

Sources: Administrative data, health surveys or household surveys

*Life expectancy at birth*

Life expectancy measures how long on average people could expect to live based on the age-specific death rates currently prevailing. This measure refers to people born today and is computed as a weighted average of life expectancy for men and women. Unit of measurement: Number of years.

Additional information: Data by gender (for men and women).

Colombia coverage: available at DANE and has been transmitted for the average and by gender.

*Self-reported health status*

This indicator refers to the percentage of the population aged 15 years old and over who report "good" or better health. The WHO recommends using a standard health interview survey to measure it, phrasing the question as "How is your health in general?" with response scale "It is very good/ good/ fair/ bad/ very bad"[122]. Unit of measurement: Percentage of the population.

Additional information: Data by gender (for men and women); data by net disposable income quintile[123] (quintile 5 and quintile 1).

Colombia coverage: available via the Quality of Life survey and has been transmitted for the average and by gender.

***Dimension 5: Work and Life***

Sources: Labour force survey, Time use survey

*Employees working very long hours*

This indicator measures the proportion of dependent employed whose usual hours of work per week are 50 hours or more. Unit of measurement: Percentage of the dependent employed.

Additional information: Data by gender (for men and women)

Colombia coverage: available via the GEIH survey and has been transmitted for the average and by gender.

*Time devoted to leisure and personal care*

This indicator measures the amount of hours (minutes) per day that, on average, full-time employed people spend on leisure and on personal care activities. Leisure includes a wide range of indoor and outdoor activities such as walking and hiking, sports, entertainment and cultural activities, socializing with friends and family, volunteering, taking a nap, playing games, watching television, using computers, recreational gardening, etc. Personal care activities include sleeping (but not taking a nap), eating and drinking, and other household or medical or personal services (hygiene, visits to the doctor, hairdresser, etc.) consumed by the respondent. Travel time related to personal care is also included. Unit of measurement: Number of hours (minutes) per day spent on leisure and personal care.

Additional information: Data by gender (for men and women).

Colombia coverage: available via the ENUT (Time use) survey 2012-2013 and transmitted for the average and by gender.

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122 Source: WHO (1996), "Health Interview Surveys: Towards International Harmonization of Methods and Instruments", *Who Regional Publications*, European Series, No. 58.

123 If the information is not available for net disposable income (after taxes and transfers), then gross income can be considered. Note that for OECD countries data coming from health surveys generally relate to individual income, while data coming from household surveys generally relate to household (equiv alised) income.

***Dimension 6: Education and skills***

Source: Labour force survey, UNESCO, PISA, administrative data

*Educational attainment*

Educational attainment considers the number of adults aged 25 to 64 holding at least an upper secondary degree over the population of the same age, as defined by the ISCED classification. Unit of measurement: Percentage of the adult population (aged 25 to 64).

Additional information: Data by gender (for men and women).

Colombia coverage: available via the GEIH survey and transmitted for the average and by gender.

*Students' cognitive skills*

Students' average score in reading, mathematics and science as assessed by the OECD's Programme for International Student Assessment (PISA). Unit of measurement: average PISA scores.

Additional information: Data by gender (for boys and girls); Socio-economic inequality (PISA index of economic, social and cultural status (ESCS) top quintile versus bottom quintile).

Colombia coverage: complete. Colombia is part of the PISA programme.

*Expected years in education*

This indicator is the average duration of education in which a 5 year old child can expect to enrol during his/her lifetime until the age of 39. It is calculated under the current enrolment conditions by adding the net enrolment rates for each single year of age from the age of five onwards. Unit of measurement: number of years.

Additional information: Data by gender (for boys and girls).

Colombia coverage: in principle available via the GEIH survey but not transmitted.

*Competencies of the adult population*

Mean proficiency in literacy and numeracy of adults aged 16 to 64. It is based on data collected through the OECD Survey of Adult Skills, which is part of the Programme for the International Assessment of Adults Competences (PIAAC), co-ordinated by the OECD.

Additional information: Data by gender (for men and women); data by parents' educational attainment ("neither parent has attained upper secondary education" versus "at least one parent has attained tertiary education").

Colombia coverage: not yet covered, but should be available soon. Colombia has announced its participation in the third round of PIAAC.

***Dimension 7: Social connections/Community***

Source: The Gallup World Poll

*Social network support*

It's a measure of perceived social network support. The indicator is based on the question: “If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?” and it considers the respondents who respond positively. Unit of measurement: percentage of people aged 15 and over.

Additional information: Data by gender (for men and women); data by educational attainment (0/1/2 ISCED group and 5/6 ISCED group).

Colombia coverage: There is no source from official Colombian statistics. OECD will need to continue to refer to Gallup World Poll.

***Dimension 8: Civic engagement and governance***

Sources: OECD survey of regulatory management system, IDEA and Comparative Studies of Electoral System

*Consultation on rule-making*

The indicator is a weighted average of "yes/no" answers to various questions on the existence of law consultation by citizens, of formal procedures enabling general public to impact regulation and governmental actions. The indicator describes the extent to which formal consultation processes are built in at key stages of the design of regulatory proposals, and what mechanisms exist for the outcome of that consultation to influence the preparation of draft primary laws and subordinate regulations. This indicator has been computed based on responses to the OECD’s survey of regulatory management systems, where respondents were government officials in OECD countries. The indicator is based on questions about the existence of formal procedures enabling general public, business and civil society organisations to impact regulation and governmental actions, and on whether citizens’ views on such consultation procedures are made public. Source: OECD, Indicators of regulatory management systems, 2009 report: http://www.oecd.org/gov/regulatory-policy/44294427.pdf

Colombia coverage: not covered. The coverage of this indicator will need future participation of Colombia in the specific OECD survey organised by the Regulatory Management Committee.

*Voter turnout*

Voter turnout is here defined as the ratio between the number of individuals that cast a ballot during an election (whether this vote is valid or not) to the population registered to vote. As institutional features of voting systems vary a lot across countries and across types of elections, the indicator refers to the elections (parliamentary or presidential) that have attracted the largest number of voters in each country. Unit of measurement: Percentage of the population.

Additional information: Data by gender (for men and women); data by income quintile (quintile 5 and quintile 1)

Colombia coverage: There is no source from official Colombian statistics. OECD will need to continue to use data sourced in International Institute for Democracy and Electoral Assistance. DANE will explore whether the National Registry has information on electoral participation.

***Dimension 9: Environmental quality***

Sources: The World Bank, the Gallup World Poll

Air pollution

The indicator is urban-population weighted average of annual concentrations of particulate matters less than 10 microns in diameter (PM10) in the air in residential areas of cities with more than 100,000 residents. Unit of measurement: Micrograms per cubic meter.

Colombia coverage: There is an official source for this indicator for Colombia via the IDEAM. Data has not been transmitted by DANE.

*Satisfaction with water quality*

The indicator captures people's subjective appreciation of the environment where they live, in particular the quality of the water. It is based on the question: "In the city or area where you live, are you satisfied or dissatisfied with the quality of water?" and it considers people who responded they are satisfied. Unit of measurement: Percentage of people aged 15 and over.

Colombia coverage: There is no source from official Colombian statistics. OECD will need to continue using the Gallup World Poll.

***Dimension 10: Personal security/Safety***

*Homicides rates*

Deaths due to assault. Unit of measurement: Age-standardised rate per 100 000 population.

Colombia coverage: available from the Ministry of Defense and transmitted by DANE.

*Self-reported victimisation/ Assault rate*

The indicator is based on the question: "Within the past 12 months: have you been assaulted or mugged?" and it considers people declaring having been assaulted or mugged. Unit of measurement: Percentage of people aged 15 and over.

Additional information: Data by gender (for men and women).

Colombia coverage: there is an official source for Colombia for this indicator, via the ECSC survey (Survey of Citizen Security and Coexistence). Data transmitted by DANE for the average as well as by gender.

Dimension 11: Subjective well-being

Source: The Gallup World Poll

*Life satisfaction*

The indicator considers people's evaluation of their life as a whole. It is a weighted-sum of different response categories based on people's rates of their current life relative to the best and worst possible lives for them on a scale from 0 to 10, using the Cantril Ladder (known also as the "Self-Anchoring Striving Scale"). Unit of measurement: mean value (Cantril Ladder).

Additional information: Data by gender (for men and women); data by educational attainment (0/1/2 ISCED group and 5/6 ISCED group).

Colombia coverage: There is no source from official Colombian statistics (the questions in the ENCV do not exactly match the questions of the OECD). OECD will need to continue using the Gallup World Poll.