INEI INSTITUTO NACIONAL DE ESTADISTICA E INFORMATICA

CENSOS 2017
Tú cuentas para el Perú

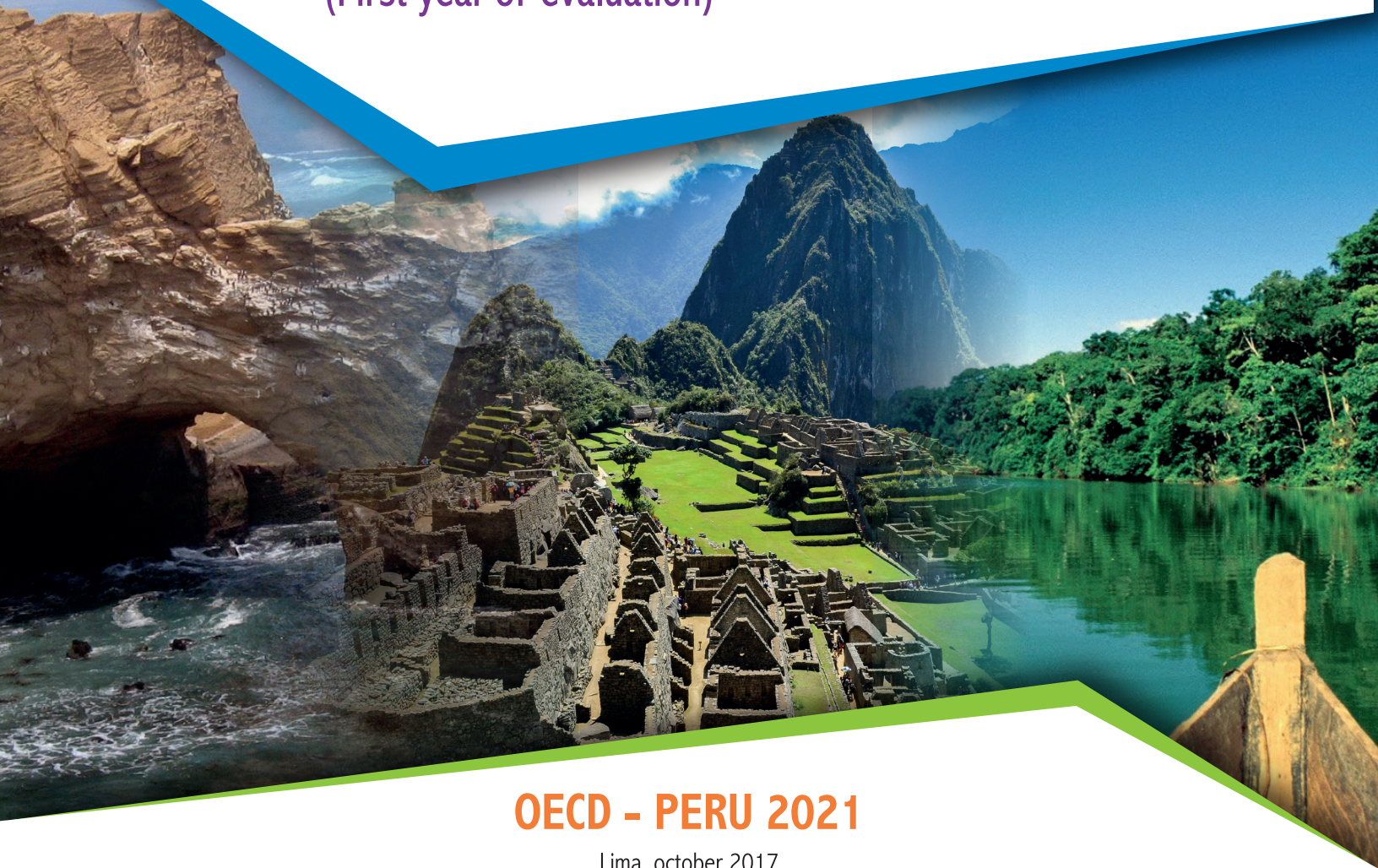OCDE MEJORES POLÍTICAS PARA UNA VIDA MEJOR

Peru
Final Version of OECD Review of Official Statistics and Statistical System
(First year of evaluation)

OECD – PERU 2021

Lima, october 2017

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FINAL VERSION OF OECD REVIEW OF OFFICIAL STATISTICS AND STATISTICAL SYSTEM

Background, main findings and recommendations

1. In November 2014, the Government of Peru agreed with the Secretariat of the OECD on a "Country Programme", that also included a Statistics Review (hereafter the "Review") undertaken by the OECD's Statistics Directorate. The main purpose was to assess the degree of coherence between Peru's National Statistical System and that of OECD Members, provi ding Peru the steps necessary to move closer to the OECD and improving its level of internationally comparable statistics.

2. The Review concerns key official statistics compiled and disseminated by the National Institute of Statistics and Informatics (INEI), and the Central Reserve Bank of Peru (BCRP). The INEI, being the major producer and disseminator of official statistics is considered the coordinator of the Peruvian National Statistical System.

3. In the Terms of Reference of the Review, it was agreed to cover three central aspects of the Peruvian statistical system and statistics, namely:

    i.   The legal and institutional framework for official statistics;
    ii. Statistical Infrastructure: Population Census, Agricultural Census, Business Register, Labour Force Survey;
    iii. The quality and comparability of annual and quarterly National Accounts statistics, including general government accounts and financial accounts.

4. In addition, the quality and comparability of Trade in Value Added (TiVA) statistics was selected as a topic of special interest.

5. Such a scope covers only three of the thirteen chapters of a standard OECD statistical assessment. The OECD and the Peruvian government are presently discussing the extension to the full set of statistical domains in a second phase.

6. The present document contains the results of this partial assessment[1] undertaken by the OECD Statistics Directorate. The Terms of Agreement mentioned that this report would be published.

Organisation of the Review

7. The Review was conducted by the OECD Statistics Directorate (STD). It started in Q4 2015 and finished by the end of 2016, lasting approximately one year. During its first stage, (Q4 2015-Q1 2016) the study team gathered the information required to conduct the evaluation in the four study areas as described above, including by conducting a first fact-finding mission during 23-27 November 2015 in Lima. This mission was excellently prepared by INEI and the BCRP and was extremely fruitful. The mission team received all the necessary general information on Peru's statistical programs.

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1 Additional comments received from Peru will be incorporated into a final version for publication.

8. During Q1 and Q2 2016, the statistical authorities of Peru successfully transmitted the questionnaires on data and metadata requested by the OECD, respecting scrupulously the timing and accomplishing all the "action points" agreed during the mission. Peru had nominated review coordinators from INEI and from BCRP who must be congratulated for ensuring good and timely exchanges with the OECD Study Team.

9. A second evaluation mission was undertaken by the OECD in November 2016 to discuss the draft assessment report which reflects the opinion of the OECD study team. The draft document has been submitted to the statistical authorities of Peru for their comments. These comments are, to the maximum extent possible, reflected in the final version at hand.

Evaluation criteria for the Statistical reviews

10. The assessment of the legal and institutional framework (Chapter 1) consists in evaluating the legal basis for statistics and its implementation in practice; and in analysing the statistical system and its institutional structure, including functions, competence, relationship and responsibilities of all participants in the Peruvian statistical system. In assessing the legal and institutional framework, the OECD Secretariat considers the pertinent laws, regulations and policies that govern the activities of all the major producers of statistics in the National Statistics System (NSS) and endeavours to examine how they are actually implemented in practice. The basis for the assessment is compliance with the Recommendation of the OECD Council on Good Statistical Practice[2].

11. As regards statistical domains (Chapters 2 to 4), 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 dissemination. 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 requirements 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.

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2 See Committee on Statistics and Statistical Policy in:
   http://webnet.oecd.org/OECDACTS/Instruments/ListByCommitteeView.aspx. In this context, the Secretariat wishes to thank Peru for
   providing a Spanish translation of this OECD Council Recommendation.

- *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.

Sources of information

12. In the course of this review, INEI and the Central Bank (BCRP) have provided extensive documentation (of which much in English) to the Secretariat in all domains of macro-economic, demographic and social statistics.

13. This initial documentation has been enriched by the many additional written responses made by INEI and BCRP to the questions of the Review mission. All questions have received clear responses that have been used to draft this report. The OECD thanks INE and BCRP for their commitment and cooperation.

Preliminary main findings and recommendations

14. Overall, in the domains covered by the Review, and independently of remaining questions, the official statistics of Peru are not far from reaching the standard requirements for OECD statistics.

15. As regards its legal and institutional framework, Peruvian official statistics are based on a rather solid statistical system, led by a professional national statistical authority: INEI. Its statistical infrastructure (Census of Population, of Agriculture, Business Register, Labour Force Survey) is sound. As regards national accounts statistics, the development of the 2007 base year has been an important achievement and the starting point of a rich source of data. As regards TiVA-related data, Peru's 2007 Supply-Use Table is extensive, provides excellent coverage in terms of products, industries, variables, and price bases, with a split for import and domestic use. The data are consistent with the 2007 published National Accounts aggregates and are sufficient to meet the OECD requirements for inclusion in TiVA. The current development of annual SUTs by INEI provides a sound basis to ensure that Peru can continue to be included in TiVA.

16. However, data gaps remain and improvements in statistics and statistical system are needed in a number of areas to reach a level comparable to OECD countries. The Peruvian authorities are taking initiatives to fill these gaps and provided plans for improvement. Among these initiatives, the OECD considers the following as important:

- The adoption of a revised statistical law which will:
  - Put official statistics on a strong and unified footing confirming INEI's role as the independent national statistical authority in Peru, acting as a strong and efficient coordinator of the National Statistical System, in conjunction with a reinstated National Statistical Council.
  - Officialise the extension of the access by INEI to individual administrative records, in particular in the domain of tax (SUNAT).
  - Implement a systematic quality management framework and revision policies.
  - Strengthen the relations with users, in particular through regular user satisfaction surveys.

- The rapid implementation of a programme solidifying the processes of compilation and dissemination of annual national accounts and ensuring its timeliness. The main objective is the regular publication of the first estimated accounts of year Y, including institutional sector accounts, at the latest at Y + 9 months and, for general government accounts, at Y + 6 months.
- The strengthening of the priority of INEI's communication strategy on its quarterly national accounts, in particular its seasonally adjusted series.
- The strengthening of the communication of general government accounts in SNA format, by respecting a timing of Y+6 months, the publication under the supervision of INEI of an official list of entities classified in general government and a regular publication of a bridge table with the headline indicator of deficit of the MH.
- The rapid launching of a program to develop annual financial accounts.
- The development of the data on Trade in services, by services category and trading partner country is essential for TiVA, and other analytical purposes.
- The development of estimates of the stock of capital and the consumption of fixed capital.
- The development of historical time series of main National Accounts Aggregates. Of particular interest here, also for the purposes of developing time series of TiVA measures, are:
  - Time series for 1995-2007 of gross output, at the same level of industry detail currently available for value added.
  - Time series 1995-2006 of main aggregates of National Accounts in SNA 2008.
- The implementation of a medium to longer-term program with the aim to develop:
  - Quarterly institutional sector accounts.
  - Quarterly financial accounts.
- While the annual Supply and Use tables that are currently being developed in Peru are sufficient to integrate Peru into TiVA once submitted to OECD, there are a number of elements where supplementary data could significantly improve the quality of TiVA estimates:
  - SUTs should follow an industry breakdown that allows for a full alignment with current and future TiVA industry breakdowns. INEI is currently assessing the possibility of breaking down the transport industry.
  - Time series (1995-2015) of purchases abroad by residents and purchases in Peru by non-residents to create a clear distinction between cross-border trade and tourism.
  - Desirable additions include the overall CIF/FOB adjustment for imports, as well as complementary matrices on trade margins, transportation margins, net taxes by product and industry for SUT years.
- Development of the data on Trade in services, by services category and trading partner country to complement the extensive and detailed information about merchandise trade that is needed for TiVA and other analytical purposes. Another, desirable addition is data on merchandise trade in second hand capital goods, waste and scrap to properly link trade flows with production and value added.

17. The OECD Statistics Directorate is prepared to extend the scope of the Review to other domains of statistics in order to complete its assessment and to continue the fruitful co-operation with Peru in the area of TiVA and related subject matters.

CHAPTER 1. LEGAL AND INSTITUTIONAL FRAMEWORK SURVEY

1.1. Introduction

18. This Chapter summarises the degree of conformity of the Peruvian statistical and legal and institutional framework for official statistics with the Recommendation of the OECD Council on Good Statistical Practice[3] . This Recommendation refers to the formal laws, regulations and policies that govern the collection, production and dissemination of official statistics, the institutions and agencies that undertake these tasks, and written guidelines for the implementation of recommended practices in accordance with international guidelines and recommendations. Finally, it also encompasses procedures for the recruitment, training and career development of all personnel working in all aspects of the statistical cycle of official statistics.

19. In Peru, the National Institute of Statistics and Informatics (INEI), the Central Reserve Bank of Peru (BCRP), the Superintendency of Banking, Insurance and Private Pension Funds Administrators (SBS) the Superintendency of Securities Market (SMV), the Ministry of Labour and Employment Promotion (MTPE) and the National Superintendency of Customs and Tax Administration (SUNAT) are some of the main producers of official statistics. The SUNAT is a decentralized public institution of the Ministry of Economy and Finance whose purpose is, among others, to manage and control the international freight traffic within the customs territory; collect applicable taxes according to law; facilitate the economic activities of foreign trade; as well as to monitor the international human trafficking and means of transport and to develop necessary actions to prevent and suppress the commission of customs crimes. Therefore, it is considered as one of the main producers of official statistics in the country.

20. INEI is the statistical authority responsible for collecting, producing, and disseminating data on national accounts (annual and quarterly), sample surveys, population statistics, environmental statistics, monthly index of national production, price indices, and income and employment levels.

21. BCRP compiles and disseminates data on general government operations, central government operations, central government debt, analytical accounts of the banking sector, interest rates, balance of payments, merchandise trade and services, international reserves and foreign currency liquidity, and the international investment position[4] . BCRP is also responsible for the maintenance of the National Summary Data Page of the International Monetary Fund (IMF) which contains data described in the metadata available on the IMF SDDS website, and a four months a-head advance release calendar. SBS compiles and disseminates data on interest rates and the exchange rate; SMV compiles and disseminates statistics on the stock market; and the Ministry of Labour and Employment Promotion compiles and disseminates data on employment and wages.

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3 See Committee on Statistics and Statistical Policy in: http://webnet.oecd.org/OECDACTS/Instruments/ListByCommitteeView.aspx

4 In addition, BCRP currently disseminates quarterly national accounts but the present report recommends to give the exclusive responsibility of disseminating national accounts to INEI (see chapter 3).

22. This chapter covers two parts: (i) a brief presentation of the National Code of Good Practices for Official Statistics in Peru; and (ii) the compliance with the Recommendation of the OECD Council on Good Statistical Practice, broadly structured on the following areas: first, recommendations I-V consider the institutional, legal and resources requirements that enable statistical systems to function; recommendations VI-VIII relate on methods, quality and processes of statistical production; recommendation IX is about dissemination; recommendations X and XI deal with co-ordination and co-operation; and recommendation XII is about looking ahead and embracing statistical innovation.

23. Information used for the preparation of this Chapter was collected using a template based on the Recommendation of the OECD Council on Good Statistical Practice, on various frameworks and guidelines provided by INEI, and on material extracted from national publications and websites.

1.2. Presentation of the National Code of Good Practices for Official Statistics in Peru

24. The Peruvian Code of Good statistical practice[5] was released by INEI in 2012, as required by the Supreme Decree N°072-2012-PCM. According to the decree, INEI is responsible for ensuring and monitoring its implementation within the National Statistical System. For this purpose, an INEI Chief resolution provided in 2014 the guidelines for implementing the Code in the National Statistical System.

25. The Peruvian Code explicitly recognises the United Nations Fundamental Principles of Official Statistics, and the European Code of Good Practice for Official Statistics as references. The Code sets out principles and good practices that should be followed by the producers of official statistics in Peru.

26. The code includes three dimensions corresponding to three commitments: users, efficiency and quality. The three dimensions include the following nine principles:

- Commitment to users:
  - Relevance;
  - Impartiality and objectivity;
  - Professional independence;
  - Transparency, equity and timeliness;
- Commitment to efficiency:
  - Adequate use of sources of information;
  - Coordination
- Commitment to quality:
  - Sound methodology;
  - Coherence and comparability;
  - Confidentiality;

27. Each principle is illustrated by a set of good practices (the Code contains a total of sixty-seven good practices) and each good practice is evaluated through the implementation of a set of indicators (the Code includes a total of 132 indicators). INEI developed a specific online platform with the aim to monitor the implementation of these indicators.

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5 https://www.inei.gob.pe/media/buenas-practicas/Codigo_Buenas_Practicas.pdf

28. While the structure of the Peruvian Code of good statistical practices differs from the existing similar codes of practice, its content is similar to the European Code of Practice for Official Statistics and to the Code of Practice in Statistics for Latin America and the Caribbean. The main divergences relate on cost-effectiveness, accuracy and reliability, accessibility and clarity, and user satisfaction. The following sections provide information on the Peruvian Code as compared to the Recommendation of the Council on Good Statistical Practice.

1.3. Assessment with respect to the Recommendation of the Council on Good Statistical Practice [6]

Recommendation 1: Put in place a clear legal and institutional framework for official statistics which should in particular provide:

•   *details as to the organisation of the NSS, the legal status and role of the NSO, as well as the legal status, functions, relationship, rights and responsibilities of other institutions within the NSS.*
•   *a clear mandate for institutions of the NSS to collect data for statistical purposes.*

1.1 There is a comprehensive and coherent statistical legislation periodically revised and amended. The statistical legislation defines the nature of official statistics; the legal framework for the compilation, production and dissemination of official statistics; the legal status, role in the system, functions, relationship, rights and responsibilities of institutions within the NSS; the mandate for data collection; the coverage of statistical activities; and the role, functions and composition of the Statistical Council. The statistical legislation also regulates the organisation of the NSS; the independence of the NSO and its head; the relationship between the producers of statistics and respondents; the access to administrative records and their use for statistical purposes; the dissemination policy; the legal infrastructure for ensuring the confidentiality and the penalties in case of breach of confidentiality; budget issues; the availability of sufficient resources for financing statistical programmes, the international statistical co-operation, and the co-ordination of statistical activities within the country's statistical system.

29. The legal framework for official statistics in Peru relies on the following main legislations:

    •   Decree Law No. 21372 of December 1975 creates the National Statistical System in order to ensure that the official statistical activities develop in an integrated, coordinated, rationalised manner following common regulations. The National Institute of Statistics (former name of INEI) was designed as the governing body of the National Statistical System. While INEI has the power to launch legal revision, the Decree Law of 1975 was not substantially revised since it came into force.
        • Legislative Decree No. 604 of 1990, "Law on the Organization and Functions of the National Institute of Statistics and Informatics"; creates the National Statistical System as well as the National System of Informatics, and changes the name INE into INEI since INEI is now the governing entity of both statistical and informatics systems. Likewise, the decree law ascertains INEI objectives and fields of competence and identifies a list of bodies of the National Statistical System (central, regional and local levels) in accordance with the Governance Structure of the Peruvian State. The decree law also importantly establishes its functions, and defines its organic structure and financial resources, as producer of statistics and as regulating body of the National Statistical System. The decree law also created a National Advisory Council of Statistics, which

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6 In this section, the principles of the OECD Recommendation are presented in bold and its good practices are underlined.

> was discontinued afterwards (see section 2) and an Inter-Agency Coordinating Committee of Statistics. INEI currently falls under the supervision of the Presidency of the Council of Ministers, and is governed by internal public law and enjoys a technical and managerial autonomy. Subsequently, the National System of Informatics is merged with the Governance Secretariat of PCM by Supreme Decree N° 066-2003-PCM.
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> • Supreme Decree No. 043-2001-PCM approves the "Regulations of Organisation and Functions of the National Institute of Statistics and Informatics - INEI"; and reaffirms the objectives and general and specific functions of each body within INEI: Senior Management, advisory bodies, control body, supporting bodies, line bodies and decentralised bodies. The Decree also specifies the operational instruments, information sources, indicating the commitment of natural and legal persons to provide information, on penalties for failure in providing of statistical information, statistical confidentiality, confidentiality of information and the use of official statistical information and inter-institutional relations with NSS bodies. Finally, with regards to the confidentiality, Article 97 of Supreme Decree N°043-2001 PCM states that: "the information provided by sources, has a private nature and may not be disclosed on an individual basis, even if there is administrative or judicial order. It may only be disclosed or published in non-nominative form. The information provided, may not be used for tax or law enforcement purposes".
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> • Law N°13248 of 1960, "Census Law", gives INEI the responsibility of conducting census and sets up the frequency of the population census every ten years and the frequency of economic and agricultural censuses every five years.

30. In addition to the statistical legislation, Peru adopted a Code of Good Statistical Practices in 2012, as described above.

31. The objectives of the NSS are to (i) regulate official statistical activities; (ii) to coordinate, integrate and rationalise official statistical activities; and (iii) to promote training, research and development of statistical activities. To fulfil the objectives, the entities of the National Statistical System develop plans, censuses and surveys, procedures and analysis, data validation processes, , and publish and disseminate information according to their activities. The field of competence of the National Statistical System include the continuous collection, production, and dissemination of official statistics, i.e. sample surveys, population statistics, indicators and indices in general, national and regional accounts, the macro statistical schemes, analysis and research.

32. The NSS comprises INEI as well as the set of bodies of the state entities that produce statistics at the national, regional (subnational), and local government levels. Functionally, the National Statistical System operates at the sectoral level. At each level, the NSS has technical-administrative power and role to regulate, execute, manage and control the production and dissemination of the official statistical information in concordance with legal provisions.

33. The bodies that constitute the National Statistical System are as follows:

   • The National Institute of Statistics and Informatics (INEI), governing body
   • The National Advisory Council on Statistics
   • The Interagency Coordinating Committee on Statistics

- The Sectoral Statistical Offices and other Statistical Offices of the Ministries of the Central bodies Decentralised Public Bodies and State Enterprises
- Statistics Bodies of Regional Governments
- The organs of Statistics of Municipalities
- Statistical bodies of public authorities and autonomous bodies.

34. INEI is the central and the governing body of the National Statistical System, responsible for establishing standards, planning, managing, coordinating, and supervising Peruvian official statistical activities. The Chief of INEI is the highest authority of the National Statistical System.

35. As governing body of the National Statistical System, INEI issues standards, technical and methodological procedures to be applied by all the producers of statistics of the public entities at national level. In this context, INEI concentrates the production of official statistics and organises their dissemination through various periodical publications, such as the annual National Statistical Compendium available online on INEI website.

36. An Inter-institutional Coordination Committee for Statistics enables the ongoing coordination of INEI with the statistical bodies of the State at three government levels: national, regional and local government (municipalities). The coordination activities are related to the implementation of statistical standards, technical and methodological procedures and training activities.

37. INEI, as governing body of the National Statistical System, has national coverage through 25 decentralized offices located in the major cities of the country. Through these offices, INEI coordinates with the statistical bodies of the public entities dependent on regional and local governments (municipalities).

38. In the last 38 years of statistical production, the NSS has achieved:

- Positioning to national and international level as a competitive agency in the field of statistics.
- Organisation of national scope and decentralised at the departmental level. Capacity and infrastructure to implement specialised censuses and surveys at the national level.
- Getting the largest database of the country, which users access without major restrictions and even many of these databases are found on the web page.
- Statistical Programs in execution that cover a broad range of topics, which are a good basis to start activities of expansion and improvement for the statistical production.
- Compliance at all levels of the structure of the NSS, especially of statistical confidentiality that ensures the confidentiality of information requested for statistical purposes.
- Also opening the dialog has strengthened the NSS, at the national level, with the public and users of the academy, research centres, business associations, and international agencies.

39. INEI, as governing body of the National Statistical System, regularly invites external experts from the private sector, international organisations, research centres, universities and government entities in participating in the technical committees with the purpose of promoting and ensuring the quality, transparency, and credibility of the information in the field of measurement of strategic indicators, i.e. of national interest.

40. According to the recent Organic Law of the Executive Branch No.29158 (LOPE, *Ley Organica del Poder Ejecutivo*), the Peruvian National Statistical System is a functional system and INEI is a specialised technical body, that joins the statistical bodies of the Public Sector (Specialised Public Organisms), and which ensures that official statistical activities are integrated, coordinated, and harmonised under a common technical and normative framework. In accordance to the LOPE, an SPO has independence to perform its duties under the relevant Act.

41. In 2016, INEI prepared a modified statistics law with the aim (i) to strengthen the functions of INEI and the National Statistical System; (ii) to align the INEI with the LOPE; and (iii) to update the Law No.604 (in order to be able to adopt the LOPE). The draft statistics legislation would give more autonomy to INEI, would design a future vision for the National Statistical System with a greater commitment to involve entities in the National Statistical System, in particular at a decentralised level, and to institutionalise the participation of users. In this context, the draft statistics law proposes several important changes in the current law:

    • strengthen access to information sources in particular administrative records (Article 20);
    • strengthen the objectives, organisation and functions of INEI (Article 22 to 48);
    • strengthen the objectives, organisation and functions of the National Statistical System (Article 8 to 13);
    • explicitly includes the principles from the national code of good statistical practice (Article 3) as described above;
    • reinforce the right of INEI to access administrative sources for the production of official statistics (Article 20);
    • Implement a Board of directors of non-public sector who shall advise the Head of the institution;
    • Consolidate the capacity of the producers of official statistics to guarantee the statistical confidentiality (Articles 18 and 19);
    • Introduce sanctions to the sources that refuse to provide information for statistical purposes;
    • Involve users, experts, scholars and researchers with outstanding experience in statistical matters, with members of the Board of INEI.

42. The draft new legislation has been forwarded to the Presidency of the Council of Ministers in 2016 and is in an initial stage of the parliamentary process.

43. INEI position in the general administrative framework of Peru is currently under discussion between the OECD and the Peruvian government. As regards statistical practices and policies, it is fundamental that, if any change is envisaged, INEI remains with an access to the highest authorities, and continues to receive adequate resources to perform efficiently its functions.

1.2 Laws and regulations governing the collection, compilation and production of official statistics are consistent with the UN Fundamental Principles of Official Statistics.

44. The Peruvian Code of Good Statistical Practice explicitly refers to the UN Fundamental Principles for Official Statistics and to the European Code of Practice for Official Statistics. In practices, data are collected and produced in accordance with scientific norms on sources, methods, standards and procedures of statistics and the confidentiality of information is maintained. The most recent legal texts take into account the UN Fundamental Principles for Official Statistics. For example, Article 97 of Supreme Decree No. 043-2001 PCM considers the principle 6 of "UN Fundamental Principles of Official Statistics".

1.3. *Statistical authorities have a clear mandate for data collection and the authority to compel respondents to comply with data requests (e.g. the Population and Housing Census, Agricultural Census, surveys, administrative sources[7], etc.). In the case of Population and Housing Census, the obligation for citizens to participate and to respond to the questionnaires is legally binding and established by law.*

45. The Organic Law and Regulations of Organization and Functions of INEI (No. 043-2001-PCM) clearly mandates INEI to collect data for the production of official statistics. In addition, each statistical operation (censuses and surveys) is authorized by an Administrative Resolution that set deadlines for data collection. However, the legislation, in particular the Law of Organization and Functions of INEI, does not allow sharing data collection with some other entities.

46. In Peru, respond to surveys and censuses is mandatory for households and enterprises. Article 87 of Supreme Decree No. 043-2001-PCM, states that "Natural and legal persons who refuse to provide data, falsifying the truth maliciously, or without justification delay established terms, will receive penalties established in Article 89, without prejudice to civil or criminal liability that might arise," and the Article 88 introduces penalties in case of non-compliance: "Penalties will be applied by National Statistical System governing body and is intended to improve production of statistics." According to Article 89, penalties are designed as fines.

47. The item 5.1 of the Peruvian Code of Good Practices for official statistics explicitly refers to the obligation of natural and legal persons to provide information to the National Statistical System, and considers penalties for non-compliance.

48. In the specific case of the single day population and housing census, the government of Peru issues a Supreme Decree requiring the population of urban areas to stay at home in order to ensure a high response rate.

1.4. *The statistical Authorities are required by law to conduct a Census of Population and Housing and a Census of Agriculture at least every ten years.*

49. The Law No.°13248 of 1960, i.e. the "Census Law", establishes the frequency of population and housing Censuses every ten years in the territory of Republic of Peru and in their jurisdictional waters, and the frequency of other censuses (economic, agricultural, industrial, commercial and service, etc.) every five years. The population census was conducted on a regular basis: 1940, 1961, 1972, 1981, 1993, 2005, 2007, and the next population census is planned for 2017. The Supreme Decree No. 066-2015-PCM, declared the implementation of the National Census 2017 as national interest and priority. The statement of national priority is performed prior to each implementation of census.

1.5. *Statistical laws and regulations are publicly available.*

50. Statistical laws and regulations are published in Spanish (i) in the official Peruvian daily gazette El Peruano; (ii) on the Website for Transparency of the Peruvian State; and (iii) on the INEI website.

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7 Administrative sources refers to the organisational unit responsible for implementing an administrative regulation (or group of regulations), for which the corresponding register of units and the transactions are viewed as a source of statistical data.

Overall assessment on Recommendation 1:

51. The National Statistical System in Peru relies on an appropriate legal and institutional framework. The statistics legislation clearly defines the responsibilities of the producers in the production of official statistics. The coordinating role of INEI over the activities within the NSS is also established by the statistical legislation. The law also establishes a mandate for data collection (including the right to request administrative data) and regulates confidentiality and dissemination of official statistics. However, some administrative data are banned from the production of official statistics due to confidentiality issue (see section on Recommendation 5) and the statistical legislation should be amended with the aim to guarantee the access on administrative data for statistical purposes. The announced revision of the statistical law should be an opportunity to ensure this access in priority together with the other recommendations presented below (inclusion of an explicit provision on the professional independence of INEI or the Chief statistician, (re)creation of the National Statistical Council, full access to and cooperation with owners of administrative records).

Recommendation 2. Ensure professional independence of National Statistical Authorities. To this end, OECD Members and non-Members adhering to this recommendation should ensure that the National Statistical Authorities:

- *are professionally independent from other policy, regulatory or administrative departments and bodies, as well as from private sector operators, considering that professional independence of the producers of official statistics is essential for the production and the dissemination of objective statistics.*
- *have the exclusive authority, as part of their professional independence, to decide on statistical methods and dissemination.*
- *are protected, through the inclusion of explicit provisions in statistics legislation or regulation, from political and other interference in developing, compiling and disseminating official statistics.*

2.1. The professional independence of the Statistical Authorities from other policy, regulatory or administrative departments and bodies, as well as from private sector operators in compiling and disseminating official statistics, is explicitly guaranteed by law and ensured in practice by all entities of the National Statistical System.

52. According to Article 1 of Legislative Decree No. 604, the purpose of the National Statistical System is to ensure that activities are integrated, coordinated and developed under common technical standards: "The National Statistical System is intended to ensure that, in its respective fields, activities are carried out in an integrated, coordinated, rationalised manner and under a common technical standards, benefitting from technical and management autonomy". The NSS acts in technical and management autonomy, and therefore the members of the National Statistical System also enjoy this autonomy. However, the words "professional independence" of INEI are not explicitly mentioned in the provisions of the statistics legislation and the OECD welcomes the introduction of an explicit provision on the professional independence of INEI in the article 3 of the draft new law presented in 2016 (see above), based on the existing principle in the National Code of Good Practices for Official Statistics in Peru.

2.2. The Head of the NSO, and where appropriate, the heads of other National Statistical Authorities, have responsibility for ensuring that statistics are developed, produced and disseminated in an independent manner.

53. The Head of the NSO is the Chief of INEI, and is responsible for producing quality and timely statistics in accordance with the statistics legislation which itself ensures technical autonomy.

2.3. The Head of the NSO, and where appropriate, the Heads of other National Statistical Authorities, have the sole responsibility for deciding on statistical methods, standard and procedures, and on content and timing of statistical releases. Is it explicitly provided by law.

54. According to the Articles 12-16 of the Regulations of Organisation and Functions of INEI (No. 043-2001-PCM), the Chief of INEI, jointly with Deputy Chief of Statistics, decides upon statistical methodology and release calendar of the statistics produced by INEI. According to the statistics legislation, the Chief of INEI, as head of the regulatory entity of the National Statistical System, is empowered by law to have the sole responsibility for deciding upon methods and timing of releases.

2.4. The Head of the NSO, and where appropriate, the Heads of other National Statistical Authorities, have sufficiently high hierarchical standing to ensure senior level access to policy authorities and administrative public bodies. They are of the highest professional calibre.

55. According to Article 11 of the Regulation of Organisation and Functions of INEI (No. 043-2001-PCM), the Chief of INEI is the highest authority of the National Statistical System. He belongs to the administrative category of "Head of Central Agency," equivalent to Vice-Minister of State, which is high enough to ensure access to high-level political authorities. The Chief of INEI has a high professional level and is selected by public open competition.

2.5. The appointment of the Heads of the NSO and, where appropriate, the Heads of other National Statistical Authorities, is based on professional competence only. The reasons on the basis of which the incumbency can be terminated are specified in the legal framework. These cannot include reasons compromising professional or scientific independence.

56. The Chief of INEI is selected through a public open competition for a renewable period of four years. Its removal cannot occur for reasons that affect his professional or scientific independence.

2.6. The national legislation provides clear and detailed description of the procedure for appointment and dismissal of the Head of the NSO. A list of conditions under which the Head of the NSO can be dismissed is provided by law.

57. Appointment procedure and reasons for removal of the Chief of INEI are detailed in the Supreme Decree No. 058-2006 PCM.

2.7. A clear reporting system for the Head of the NSO is provided by law in order to ensure and reinforce its technical independence.

58. While situations vary in a great deal, the heads of the NSOs report to a Minister in most OECD member countries. However, the terms of reporting vary considerably across countries. Including a clear reporting system for the Head of the NSO in the statistical legislation is a good practice in the sense that it allows to define the relationships between NSO and the senior level officials with whom the Chief statistician interacts on a regular basis.

59. In Peru, the current statistical legislation does not explicitly regulate the reporting system between the Chief of the INEI and policy makers. Whether the Chief of INEI is reporting to the Minister of Economy and Finance, or to the President of the Council of Minister, and the relationships and the terms of reporting to the Minister are not established in the statistical legislation However, INEI is a specialized technical body assigned to Presidency of Council of Ministers (PCM), therefore the Chief of INEI reports to the Prime Minister through periodic management reporting.

2.8. The statistical work programmes are published and periodic reports describe progress made.

60. The statistical programmes are developed and disseminated by INEI and the main achievements as well as the plans and progresses made are reported on a regular basis.

2.9. Statistical releases are clearly distinguished and issued separately from political/policy statements.

61. INEI's publications do not take into account political declarations and policy statements.

2.10. The NSO and where appropriate, other National Statistical Authorities, comment publicly on statistical issues, including criticisms and misuses of statistics as far as considered suitable.

62. The Chief of INEI, or any authorized person, is allowed to make public comments and/or to provide any necessary clarification on identified statistical issues. These actions are carried out through press conferences, alongside with the presentation of the results of censuses or surveys. These presentations allow clarifying the use and interpretation of official statistics, and/or interpreting the concepts and statistical figures.

2.11. Data collection, data production and release of information are ensured without formal approval from third parties.

63. INEI, as regulatory entity of the National Statistical System, is sole responsible for data collection and data production. According to the legislation, INEI is also responsible for the dissemination of official statistics.

2.12. A Statistical Council including external experts to advise the Heads of the National Statistical Authorities on strategic statistical issues. The nature of the Statistical Council in terms of oversight or advice, membership, chair, frequency of meetings and the reporting arrangements to government are provided for by law.

64. The Chapter III of Legislative Decree No°604 considers the following advisory bodies as participation bodies and agreement of public and non-public: (i) the National Advisory Council of Statistics; and (ii) the Inter-Agency Coordinating Committee of Statistics.

65. The National Advisory Council of Statistics is no longer operational. It was composed of representatives of business, labour and professional organizations, and universities, and chaired by the Chief of INEI. The Council advised the Chief of INEI and the members of National Statistical System on statistical policy and issues submitted to its consideration. In practice, a number of inter-institutional Advisory Commissions replace the National Advisory Council of Statistics but their agenda is limited to statistical methods and not statistical policy. For example, in the case of poverty measurement, the Inter-Agency Advisory Committee on Methodologies for Calculation of Poverty includes representatives from the World Bank, the Institute of Research for Development-IRD France, the Ministry of Economy and Finances, the Central Reserve Bank of Peru, the Group for the Analysis of Development–GRADE, the Pontificia Universidad Católica del Perú-PUCP, the Universidad del Pacifico-UP, the Integrated Committees to Fight Poverty, the Ministry of Women and Social Development-MIMDES, and the Inter-Ministerial Committee on Social Affairs of Presidency of the Council of Ministers-CIAS-PCM. Similar advisory commissions are in place when sensitive statistical issues require consensus of public and private users, such as national accounts, measurement of informality, satellite accounts, short-term indicators, etc.

66. The Inter-Agency Coordinating Committee of Statistics advises on the coordination of the National Statistical System in formulating, executing and evaluating the National Policy of Statistics and Statistical Plans. The Committee operates at both national and regional government levels. Meetings are hold at least every quarter, but additional sessions are organised when specific questions need to be discussed.

Overall assessment on Recommendation 2:

67. While the National Code of Good Statistical Practices contains a principle of professional independence, the statistics legislation does not include an explicit provision using the words "professional independence" of INEI, or of the Chief of INEI, or any other authority within the National Statistical System. An integration of such explicit provision in a revised statistical legislation is recommended.

68. The Chief of INEI is under the administrative dependence (reports to) the President of the Council of Ministers and this position ensures an appropriate distance with administrative power. It is therefore recommended to maintain the Chief Statistician at the highest position in the administration to ensure that the principle on professional independence of INEI included in the Peruvian code of practice is effective in practice. According to the legislation, a statistical council advises the Chief of INEI on the statistical policy. In practice, the Council was progressively replaced by several inter-institutional committees as regards advising on statistical methods. However, these committees do not advise on statistical policy and the Statistical Council could certainly provide valuable guidance to ensure an efficient co-ordination and cooperation between the producers of official statistics by providing advice for establishing priorities for statistical production, to promote the development of the national statistical system, to facilitate cooperation between producers of official statistics and survey respondents, or to develop a statistics programme for the National Statistical System as a whole. A reinstatement of a national statistical council is recommended.

Recommendation 3. Ensure adequacy of human, financial and technical resources available to the National Statistical Authorities for the production and dissemination of official statistics. To this end, Adherents should ensure that resources are:

- ***sufficient to allow National Statistical Authorities to meet their commitment to quality, and to meet professional standards thereby fulfilling their role as providers of reliable, relevant and accessible data for national and international use;***
- ***adequate to produce a minimum core set of data, to be defined nationally or internationally, to monitor the economy, society and the environment.***

3.1. The National Statistical Authorities have sufficient funding for statistical production and dissemination, to support staff training, to develop computing resources, and to implement innovation. Resources are adequate in magnitude and in quality to meet statistical needs.

69. INEI financial resources are allocated through the Annual Budget Law of the Republic of Peru, according to the Institutional Operational Plan (POI), which contains the programming of statistical activities, including staff training. In case of insufficient resources, it is possible to request additional budget to the Ministry of Economy and Finance (MEF, by its acronym in Spanish), or to apply for technical and financial cooperation from international agencies supporting statistical activities.

70. However, there have been issues with the Budget in the past, in particular as regards the frequency of national population and housing censuses, and the publication of national accounts statistics. According to Law No. 13248, or Census Law, published on August 1959 in the official gazette El Peruano, National Population and Housing Censuses should be conducted every 10 years (starting from 1960), and Economic, Agricultural, Industrial, Trade and Services Censuses every 5 years (starting also from 1960). While in the most recent years, efforts have been made to ensure the enforcement of this law and to maintain the statistical infrastructure, this was not the case all along the past decades:

- 2005   X National Population and V Housing Census
- 2008   IV National Economic Census
- 2007   XI National Population and VI Housing Census
- 2012   IV National Agricultural Census
- 2012-13   I National Artisanal Fisheries Census in the Maritime and Continental Field
- 2017   XII National Population and VII Housing Census

71. National accounts based in the year 2007 were released in 2012 and their updating required the development of a new economic census as well as additional specific surveys (for example for measuring poverty) to continue to reflect accurately the changes in the national economy. These developments required additional financial resources and changes in budget allocations.

72. Peru is encouraged to secure the long term permanent funding for the collection, production, and dissemination of official statistics.

3.2. The adequacy of resources is regularly monitored.

73. The senior management of INEI, the Institutional Supervisory Body, and the Ministry of Economy and Finance carry out a permanent monitoring of the amount and utilisation of allocated resources through the Integrated Financial Management System (SIAF, by its acronym in Spanish).

3.3. The scope, detail and costs of statistics are commensurate with needs.

74. As mentioned above, SIAF (see good practice 3.2) ensures a continuous monitoring of resources against the needs in terms of official statistics. However, INEI does not carry out user satisfaction surveys to improve the identification of needs. Moreover, an increase of scope and detail of broaden the statistics produced by INEI in scope and detail, as it was the case in most OECD countries over the recent years, would require significant extra resources and investment. In this context, increasing the contribution of administrative records to the production of official statistics within the National Statistical System would improve the efficiency of the work at INEI and within the National Statistical System.

3.4. The procedures exist to assess and justify demands for new statistics against their cost.

75. The requests for the development of new statistical programmes depend on the priorities assigned to public policy and to the monitoring of public investment. The Ministry of Economy and Finance, or any other concerned Ministry, is allowed to carry out transfers of financial resources to INEI in the framework of the Annual Budget Law, such as the assignment of the execution of specific surveys for the development of indicators for "Budget by Results". The Budget by Results is a tool which aims to improve budget management and to allow links between the plan, the budget, and the implementation of actions, directing the public expenditure to achievement of specific outcomes and impacts.

76. The General Law of National Budget System (Unique Arranged Text of Law No. 28411) was approved in 2012 and made effective from 2 January 2013. In Chapter IV, Budgeting for Results, Article No. 84 - Statistical Information - INEI is instructed to produce statistical information required for monitoring indicators and evaluate public statements in the domains corresponding to its functions and responsibilities, in particular when statistical information could not be generated by statistical systems of public entities and/or those linked to public statements prioritized by the General Directorate of Public Budget, within the framework of the implementation of "Budget by Results".

77. From 2007 to 2015, the number of indicators requested to INEI by agencies responsible for executing policies produced climbed from 52 to 607. Consequently, specific surveys were implemented for the compilation of these indicators.

3.5. The procedures exist to assess the continuing need for all statistics, to see if any can be discontinued or curtailed to free up resources.

78. As mentioned above, INEI is responsible for preparing the statistical work programmes and for monitoring their implementation within the National Statistical System. In this context, INEI needs to define the priorities according to the budget constraints. The experience of INEI in the execution of censuses and surveys has enabled continuous improvements of methodologies and procedures over the recent years (updating sampling frames, use of ICT in data collection, etc.). Improvements in planning, in survey implementation, and the introduction of new technologies (tablets), contributed to significantly improve data quality by reducing the time allocated to data collection and processing, and actually contributed to reduce budgets. In the same time, a number of surveys and research programs were discontinued and some permanent surveys became periodic, i.e. carried out every 4 or 5 years depending on the variability of the characteristics measured (ex. time use survey, survey on family budgets, survey on disability, etc.).

3.6. The National Statistical Authorities have implemented a policy of continuous vocational training for their staff.

79. The "People Development Plan" achieved throughout the year is applied in accordance with the legislation. The National School of Statistics and Informatics (ENEI, for its acronyms in Spanish) is a decentralized body, responsible for promoting, guiding, developing, and coordinating training activities and research. The school is developing academic activities for technical and specialized training within a network of fifteen training institutions located in the major cities in the country. In this school, staff working in institutions within the National Statistical System and the Regional Statistical System receives continuous training. A training plan including detailed contents and timetables in statistics and informatics is developed and approved every year.

80. It is quite remarkable that Peru has a specific recognised Statistical school. The School of INEI in Lima has been designated by the Andean Community of Nations-CAN, as headquarter of the Andean Centre for Statistical Education and Training until 2019. The Andean Centre for Statistical Education and Training provides high-level training to member countries of the Andean Community (Bolivia, Colombia, Ecuador and Peru) in areas related to social statistics, population, poverty, economic statistics, and specialized information systems, for ensuring the production of reliable, updated and comparable data.

Overall assessment on Recommendation 3:

81. Overall, the resources are commensurate with the needs of the producers of official statistics in Peru to produce a core set of statistics. Resources are allocated through the national Annual Budget Law in accordance with the Institutional Operational Plan. The adequacy of resources for data collection, compilation and dissemination is permanently monitored by the Ministry of Economy and Finance, which can decide to allow additional budget whenever necessary. The high position of the Chief of INEI in the Peruvian administration gives more force to his budget proposals. However, there have been issues with the Budget in the past, in particular as regards the frequency of national population and housing censuses, and the publication of national accounts statistics. While in the most recent years, efforts have been made to ensure that appropriate resources are available for the production and dissemination of official statistics and to guarantee their quality, this was not the case all along the past decades. INEI faced an increasing demand for statistics, invested in emerging technical opportunities, and developed training programs to further improve the adequacy of human and technical resources for the collection, production, and dissemination of official statistics. In this context, adequate financial resources need to allow the INEI to produce official statistics, to ensure their quality and to ensure the coordination of statistical activities within the National Statistical System.

Recommendation 4. Protect the privacy of data providers (including individuals, households, enterprises, administrations, and all levels of government) and guarantee by law the confidentiality of the individual information provided and its use for statistical purposes only.

4.1. Statistical confidentiality is guaranteed by law.

82. Several provisions in the Peruvian statistics legislation guarantee the confidentiality of individual information on data providers:

- Article 31 of the Decree Law No. 21372 of 1975, i.e. the Law of National Statistical System, states that "the information provided by sources has a private nature and may not be disclosed on an individual basis, even if there was an administrative or judicial order. Only the statistical results in non-nominative form may be disclosed or published".
- Chapter IV of Regulations of Organisation and Functions of INEI (Supreme Decree No. 043-2001-PCM) specifies in Article 97 that "the information provided by sources, has a private nature and may not be disclosed on an individual basis, even if there is administrative or judicial order. It may only be disclosed or published in non-nominative form. The information provided, may not be used for tax or law enforcement purposes. The exchange of information between the bodies of System to fulfil its purposes, does not violate statistical secrecy or information confidentiality, nor the information used in the development of Directories".
- Article 98 states that "workers who are directly related to the management of statistical information and violate the statistical secrecy, will be subject to disciplinary sanctions considered in Legislative Decree N°276, without prejudice to any civil or criminal liability".
- Article 9 of Legislative Decree N°604 issued in April 1990, states that the function of INEI includes safeguarding the confidentiality of information produced by the entities of the National Statistical System.
- Article 7 of Law N°13248 on Censuses requires guaranteeing the statistical secrecy.

4.2. Specific measures are in place to ensure the full protection of individual data from any potential disclosure without consent, with the aim to ensure the confidence of data providers in participating in statistical surveys: written instructions and internal guidelines are provided to statistical authority staff on the full protection of statistical confidentiality in the production and dissemination processes; appropriate penalties are prescribed for wilful breach of confidentiality and for any disclosure of individual data of a private nature that could infringe upon private life. These penalties are well-known to statistical staff and new employees sign legal confidentiality commitment upon appointment.

83. Article 97 of Regulations of Organisation and Functions of INEI (No. 043-2001-PCM) states that the information provided by sources has a private nature. This article is printed on the paper version of each questionnaire for the information of the respondents. INEI staff is well informed of the instructions and sanctions for non-compliance. No complaints against information confidentiality have been known.

4.3. The confidentiality policy is made known to the public.

84. According to the Supreme Decree N° 043-2001 PCM, survey respondents are informed about confidentiality and statistical secrecy at the beginning of each survey. The relevant legal provisions from the statistical legislation which guarantee the protection of individual information are reproduced in all the surveys.

4.4. Physical, technological, administrative and organisational provisions are in place to protect the security and integrity of statistical databases.

85. INEI has developed procedures for managing data backups in relation to the security and integrity of statistical databases. Copies of the information storage media are located in premises outside the institution, and the access to the premises is restricted for authorized staff only. Additional security measures are also in place. However, there are no specific security measures in place as regards the

confidentiality of individual information, except that new INEI contract staff is required to sign an affidavit, committing incomers to ensure the confidentiality of information handled or processed. There are penal and administrative sanctions in case of breaches of statistical confidentiality.

86. Respondents are informed on the INEI confidentiality policy and on the measures in place to guarantee the confidentiality of information when they participate in statistical surveys.

4.5. Provisions are in place and internal guidelines are available to allow external user access to micro-data for statistical research purposes under strict protocols and only after anonymisation of the data.

87. INEI implemented an open dissemination policy allowing external users to access statistical information, including micro-data, in on-line databases through the institutional portal of INEI without any restriction. External users are allowed to access anonymised micro-data for research purposes in accordance with the Statistical Secrecy and Confidentiality of Information, established in the Regulation of Organisation and Functions of the National Institute of Statistics and Informatics, Supreme Decree No. 043-2001-PCM.

4.6. Privacy issues as regards the use of new data sources (e.g. social network data) are identified and procedures are implemented to guarantee statistical confidentiality.

88. While INEI does not have a specific policy on the use of Big Data, enabling for example to gather information from the social network, it intends to develop appropriate standards for its use in the future. INEI is also considering including a clause on statistical confidentiality in the Inter-institutional agreements.

Overall assessment on Recommendation 4:

89. Confidentiality of individual information is a priority for INEI and appropriate arrangements are in place to ensure statistical confidentiality. In accordance with the legislation, INEI ensures the integrity and security of statistical databases and allows external researchers to access anonymised microdata. However, additional measures could be implemented with the aim to further cooperate with owners of administrative data that use the argument of the statistical confidentiality to limit access of INEI to administrative records (see next section).

Recommendation 5. Ensure the right to access administrative sources to produce official statistics. To this end, OECD Members and non-Members adhering to this recommendation should ensure that:

- *National Statistical Authorities have the right to access administrative data for the regular production of official statistics and to use them in the interest of ensuring quality of official statistics, raising the analytical value of official statistics, reducing burden on survey respondents and reducing the cost of statistical programmes.*
- *National Statistical Authorities co-operate with owners of administrative records as regards their statistical quality and have authority to influence their design to ensure they are fit for statistical purposes.*

5.1. The Statistical Authorities are authorised by law to use administrative records for the regular production of official statistics.

90. According to the legislation, in particular the Legislative Decree No.°604 and Chapter II of Regulations of Organisation and Functions of INEI (No. 043-2001-PCM), INEI is allowed to request administrative records for the production of official statistics, provided that information is not considered classified, or does not affect National Security. However, INEI is not always successful in accessing strategic administrative sources, notably for the compilation of national accounts, due to a lack of cooperation with data owners. While an agreement was signed between INEI and SUNAT for the transmission of processed statistical information, this procedure is not efficient and does not allow INEI to access appropriate administrative information required for the compilation of national accounts. The processing is performed by SUNAT and required exchanges with other sources, and the calculation of national accounts relies on a tight schedule decided by INEI which is not respected by SUNAT (see chapter 3).

91. A more comprehensive legislation providing a fundamental basis for using sources of administrative data for statistical purposes, and entitling INEI with the right to access to administrative data at unit level with identification data and to link them with other administrative records, would strengthen the capacity of the national statistical authority in data analysis. INEI launched a project for updating the statistical legislation and the article 20 of the draft new legislation strengthens the right of INEI to access administrative sources for statistical purposes, and to make explicit the obligation of data owners to provide information required for statistical purposes (articles 14 to 17). This project would further improve INEI access and use of administrative data while reinforcing the standards on information protection.

5.2. Administrative sources are used whenever possible and cost-effective to avoid duplicating requests for information and reduce reliance on direct surveys.

92. The use of administrative sources has been carried out generally in an aggregate way that is why comparative analysis is very limited. INEI is currently developing a project to provide a Statistical Administrative Records System by administrative records, with a view to develop continuous surveys that would contribute to the monitoring of specific statistical activities.

93. INEI Peru, together with the National Statistical Offices of Ecuador, Colombia and Bolivia, members of the Andean Community, and with the financial support of the Inter-American Development Bank, are part of a project on administrative records through which seeks to strengthen the capacity of INEI staff to use administrative records for statistical purposes.

94. The resources are intended to hire experts and to organise training events for staff in four Statistics Offices. In the first stage, Swedish consultants were hired to provide the methodology for the development of System in the Nordic countries; so that it can be applied in the CAN countries.

95. The system is composed of four records: Population, Companies, Property and Activities, and keys or codes for their interrelation. Priority has been given to the development of two records: Population and Property. The development of these records has as sources of information to the National Register of Identification and Civil Status-RENIEC, Ministry of Health, EsSalud, for the population subject, and the National Superintendency of Public Registries -SUNARP, the Tax Administration Service of Lima-SAT of the Metropolitan Municipality of Lima and the Agency for the Formalization of the Informal

Property-COFOPRI, among others. It is being coordinating with these public institutions, those that have supported initially the diagnosis conducted with the aim of knowing the quality of administrative records information using evaluation instruments based on 06 statistical quality criteria.

96. The greatest difficulty observed is the access to the microdata with identification that is necessary for the development of statistical records. Likewise, it is expected that the population registers have better advantages, as they have a unique code for the integration of databases, which it is not the case with properties that have limitations since they do not have a unique code for the integration.

97. This project is an initiative that should provide results in the medium term, provided it has a regulation for access to the data with identification, financing and enough institutional support. Currently a pilot has been scheduled to be carried out in a district of the country.

5.3. National Statistical Authorities are involved in the design of administrative data in order to make administrative data more suitable for statistical purposes.

98. INEI only participates partially in the design of vital statistics records (births, deaths, marriages and divorces), and integrally in the design of recording crimes and offences, linked to the Integrated System of Crime and Citizen Security.

5.4. National Statistical Authorities co-operate with owners of administrative data in assuring data quality.

99. In the case of vital statistics, INEI signed several Agreements with Ministry of Health and National Register of Identification and Civil Status (RENIEC) that establish the priority to conduct activities outlined in the Project "Improvement of coverage, quality and consistency of vital statistics in Peru", sponsored by World Bank. However, it is necessary to intensify the development of activities to improve the quality of data from administrative records.

5.5. Agreements are made with owners of administrative records which set out their shared commitment to the use of these data for statistical purposes.

100. INEI has signed several agreements with different owners of administrative data (MINSA, RENIEC, National Penitentiary Institute (INPE), Callao Superior Court of Justice, Office of Electoral Processes (ONPE), the National Superintendence of Tax Administration (SUNAT), among others) with the aim of carrying out joint actions and strengthening the production of Peruvian official statistics. However, the agreement with SUNAT is not adequate to ensure the most efficient use of its tax data for the compilation of national accounts. The signing of further agreements with other institutions, such as National Superintendence of Public Registries (SUNARP), Ministry of Housing, Ministry of Housing, Construction and Sanitation, among other, is expected in the near future.

5.6. Recommended practices are available for the reporting and presentation of administrative data.

101. Informing users with detailed metadata including the name of the source agency for the administrative data, a precise description of the purpose for which data was originally compiled and collected, an outline of strengths and weaknesses of the data from administrative source, a description of the processes in place for the transformation of data, and descriptions of the reliability of data is fundamental. In

Peru, these recommended practices are not systematically in place. However, in some particular cases, practices based on good practices identified in the production and dissemination process of statistics from administrative records are reproduced and include, for example, the dissemination of a methodological note, explanatory notes, cut off dates, and the main concepts and terms used.

5.7. *Linking administrative data with survey data is encouraged by National Statistical Authorities with the aim of reducing the burden on respondents, reducing the costs in producing official statistics, and increasing the analytical value of official statistics.*

102. INEI's purpose is to enhance the use of administrative records for statistical purposes in the future, and in this perspective, a project has been launched to raise awareness in sectors that generate records. INEI has developed workshops to improve the use of administrative records and it was carried out the diagnosis to evaluate quality.

103. In the specific topic of crime and citizen security, for example, INEI works in the design for using administrative records that facilitate the production of official statistics. In August 2016, INEI introduced the Integrated System of Crime and Citizen Security Statistics with the aim of having a tool to support the analysis and design of public policies in the field of crime and citizen security. This system was driven in the framework of Project "Support for the improvement of the quality of crime and citizen security statistics in Peru", that INEI runs with the support and financing from Inter-American Development Bank (IADB). This system has been developed with information collected by INEI through the national population and housing census, specialized surveys and administrative records provided by institutions included in the Inter-institutional Crime Statistics Committee (CEIC, its acronym in Spanish), such as Ministry of the Interior, National Police of Peru, Public Ministry, Ministry of Justice, Judiciary and National Penitentiary Institute; and other entities involved in this area. This project aims to improve crime and citizen security statistics by strengthening the technical capacity for registration, management and information analysis, data quality improvement and integration of information in a large database on crimes and violence and their determinants.

Overall assessment on Recommendation 5:

104. According to the legislation, statistical authorities in Peru are allowed to request administrative records for the production of official statistics, provided that information is not considered classified, or does not affect National Security. While administrative sources are used whenever possible, the argument of confidentiality constitutes a significant drawback in their effective right to access and use administrative data for statistical purposes. For example, INEI encounters major difficulties in accessing some strategic administrative data produced by the SUNAT (taxes, international trade in goods, contributions to the social security, etc.) and used in the compilation of national accounts, despite a formal agreement signed between the two institutions. As a consequence, a significantly larger use of administrative sources in the production of the Peruvian official statistics would be possible and would improve the quality of statistics and strengthen the organisation of their production.

105. Legal provisions should strengthen the right of statistical authorities to access, free of charge, administrative sources of all national and local authorities, i.e. data and metadata at the level of detail necessary for the production of official statistics. Provisions relative to the guarantee of confidentiality cannot be invoked. Statistical authorities should commit that all procedures are in place to guarantee the confidentiality of personal information (see recommendation 4).

106. Consideration should be also given to strengthening the cooperation between statistical authorities in Peru and providers of administrative data. In the case of the SUNAT, which performs statistical calculations for its own use but also for INEI for the compilation of national accounts, effective coordination with INEI and institutional framework conditions are required and would certainly benefit from an agreement involving decentralised units of both agencies. This cooperation agreement should include a section on practices for the dissemination of information from administrative sources. Furthermore, strengthening the cooperation between INEI and the owners of administrative data before any major revision in their data collection or processing would facilitate the use of administrative data in the production of official statistics.

Recommendation 6. Ensure the impartiality, objectivity and transparency of official statistics, through the development, production and dissemination by the National Statistical Authorities of statistics respecting scientific independence put in place in an objective, professional and transparent manner in which all users are treated equitably. Equitable treatment implies in particular equal access to data by all users.

6.1. Official statistics are collected, compiled and disseminated on an impartial and objective basis and determined by statistical considerations only.

107. Official statistics in Peru are collected, compiled and disseminated in an impartial and objective manner. Information is collected through surveys, censuses, administrative records, and others (see chapter 2); the results are disseminated through the website of the INEI, and paper publications, such as compendiums, newsletters, etc.

6.2. Equal access to official statistics for all users at the same time is guaranteed by law. If a public or private body has access to official statistics prior to their public release, this fact and subsequent arrangements are publicised and controlled. In the event that a leak occurs, pre-release arrangements are revised so as to ensure impartiality.

108. The statistical legislation N°27806 and N°27815 guarantee equal access to official statistics for all users. Official statistics produced in the National Statistical System are disseminated through INEI's website as well as on the website of the respective sectoral bodies.

109. Public or private bodies have no access to official statistics before its public release. In case of the Consumer Price Indexes pursuant Law N°29438, information is sent one day in advance to Official Newspaper in accordance with the Law N°29438, setting corresponding embargo time for its publication. Users are well informed on this procedure and no information leaks have occurred.

6.3. Choices of sources and statistical methods as well as decisions about the dissemination of statistics are informed by statistical considerations.

110. The sources and methodologies used for producing statistical information are posted in the section on Methodologies on the INEI website[8] and decisions about dissemination are made by statistical considerations.

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

8 https://www.inei.gob.pe/estadisticas/metodologias/

111. In the very few cases in which errors have occurred in the past, these have been corrected as soon as possible and disclosed through a corrigendum. However, there is no specific procedure in place at INEI to standardise the correction of errors and the treatment of errors is managed on case by case basis.

6.5. Information on the methods and procedures used is publicly available.

112. Information on statistical methods and procedures is published in Spanish in the section on Methodologies on the INEI website. INEI is considering the publication of this information in English.

6.6. Statistical release and statements made in press conferences are objective and non-partisan.

113. Statistical publications and statements made in press conferences, and interviews given by authorized officials of INEI, are objective and impartial. Main massive mainstream media and specialized media attend the press conferences; both have broad freedom to make clarifications.

6.7. Statistical release dates and times are announced in advance. A twelve-month-ahead advance release calendar is provided. Official statistics are released according a standard daily time. Any divergence from the dissemination time schedule is publicised in advance, explained, and a new date is set.

114. At the beginning of each year, INEI and BCRP issue their own dissemination calendars of official statistics announcing the day of publication of the main reports and statistical bulletins. The release dates provided in these dissemination calendars are considered as unchangeable, and any cause and/or reason why change may occurs is explained when a new date is announced. The dissemination calendars of official statistics are available on the INEI website[9] and on the BCRP website[10]. INEI releases all official statistics at 10:00 a.m. according to a standard daily time.

115. The Peruvian statistical authorities are encouraged to build on their already existing annual advance release calendar by making it a permanent twelve months a-head release calendar. While INEI is ready to develop such calendar, there is no plan at this stage. This project would also require for INEI to collect information on release dates from other producers of statistics in Peru.

6.8. Any major revisions or changes in methodologies are announced in advance.

116. INEI always announces major changes in methods through press releases published on its institutional website.

6.9. Statistical plans and programmes, methodologies, processes and procedures, quality assessments are made publicly available by the statistical authorities.

117. Information on statistical plans and programs, methodologies, processes and procedures is publicly available on the INEI website[11] and includes documented information on the contribution of the different bodies within the National Statistical System involved in the production of statistics.

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9   https://www.inei.gob.pe/calendario/
10   http://www.bcrp.gob.pe/docs/Estadisticas/Calendario-Estadisticas.pdf
11   https://www.inei.gob.pe/sistema-estadistico-nacional/
     and https://www.inei.gob.pe/estadisticas/metodologias/

6.10. Guidelines exist for the presentation of data, including the treatment of time series breaks, and seasonally adjusted data, with the aim to ensure that official statistical data and metadata are presented in a way that facilitates proper interpretation and meaningful comparisons.

118. Currently, a regulatory framework for the treatment of temporary series breaks does not exist. The restructuring of time series is based on the importance of indicators and information needs. This activity is performed directly by INEI staff responsible for each statistical subject domain. The treatment of time series breaks is carried out taking the System of National Accounts (SNA) Manual 2008 as reference for national accounts, and the program ARIMA X-12 provided by the U.S. Census Bureau is used for the seasonal adjustment of economic data.

Overall assessment on Recommendation 6:

119. Statistical legislation in Peru enables the statistical authorities to collect, compile and disseminate official statistics on an impartial, objective and transparent basis, in accordance with scientific standards. All users are treated equitably, pre-releases are limited, and INEI controls their use and informs publicly who benefit from this practice. Advance release calendars covering the period from January to December are published at the beginning of each year by INEI and BCRP. The Peruvian statistical authorities are encouraged to implement a twelve months a-head advance release calendar with the aim to improve transparency.

Recommendation 7. Employ sound methodology and commit to professional standards used in the production of official statistics. To this end, OECD Members and non-Members adhering to this recommendation should:
* ***apply appropriate statistical procedures and methods, including a stated revisions policy;***
* ***strive to adhere to international norms and standards, such as methodological manuals developed by the United Nations Statistical Commission or by the OECD, and international classifications in the statistics collected by the OECD.***

7.1. Official statistics are produced according to strictly professional considerations, including scientific principles and professional ethics with regards to methods and procedures used for the collection, processing, storage and dissemination of statistical data.

120. Statistics compiled by the INEI are produced from a strictly professional standpoint and based on manuals, norms and standards published by the United Nations, ILO, etc. The dissemination of results is scheduled and made objectively.

7.2. Sound statistical methodology requiring adequate tools and procedures and expertise is implemented and guaranteed by the national statistics law.

121. Article 1 of Legislative Decree N°604 provides that statistical activities should be conducted in an integrated, coordinated and rationalised manner and under a common technical regulation. Accordingly, the role of INEI is to regulate, supervise and evaluate the methods, procedures and statistical techniques. In that sense, INEI determines methods and strategies, technical and scientific tasks that require expertise to quantify the economic and social facts. These activities are associated with a strong analytical, technical and professional capacity, allowing ongoing review of production processes of official statistics.

7.3. International statistical standards, guidelines and good practices are applied in the NSS as appropriate.

122. The statistics are produced on the basis of common standards concerning the scope, definitions, units and classifications in the different surveys, census and sources that allow comparability. It is implemented in the NSS through the establishment of specialised coordination committees and training performed by the National School of Statistics and Informatics. Peru is in line with the basic principles of official statistics that is how the Code of Good Statistical Practice of Peru (Supreme Decree No. 072-2012-PCM) has been developed.

7.4. National statistical classifications developed by statistical authorities are consistent with international classifications. Detailed concordance exists between national classifications and the corresponding international classifications.

123. International classifications are entirely adopted and one additional category is added to better classify national items/divisions, or is adjusted only to those categories in which the national reality is not reflected. In this case, appropriate concordance and correlation tables are made available and allow international comparability. In the case of short-term indicators, the most recent versions of the Classification of Consumption by Purpose (COICOP), the International Standard Industrial Classification (ISIC Rev. 4), and the Central Product Classification (CPC Rev. 2) are being used (see chapter 2).

7.5. Procedures are in place to ensure that standard concepts, definitions and classifications are consistently applied throughout the National Statistical Authorities.

124. As governing body of National Statistical System, INEI is responsible for the appropriate implementation of concepts, definitions and classifications throughout the National Statistical System. The main procedure in place consists in organising coordination meetings with experts and/or users of classifications, and to elaborate a standard document to regulate, monitor and evaluate methods, procedures and statistical techniques implemented by entities of the National Statistical System. In this regards, INEI issues, after the corresponding methodological evaluation, a legal standard that authorizes to implement standard information in any other sectoral statistics office ensuring coherence and appropriate statistical production.

7.6. Subject matter advisory committees made up of external experts advise on relevant statistical matters.

125. Advisory committees composed of experts advise INEI in specific topics such as population and housing census, agricultural censuses, and poverty measurement. The Advisory Committee for Estimating Poverty (Supreme Resolution N° 097-2010-PCM) has the following functions: advice on measure of poverty and others related indicators, evaluate and validate results; and propose, when appropriate, modifications to methodologies, provided that comparability over time of indicators is ensured.

7.7. Graduates in the relevant academic disciplines are recruited.

126. Graduate professionals are hired by INEI in all statistical areas. For example, graduated in Economics, Accounting, Administration and Statistics degrees are recruited for activities related to economic indicators, National Accounts and economic surveys. Regarding non-permanent specialized surveys, both staff responsible for the methodology and staff in charge of data collection should be professionals in academic disciplines related to thematic to be measured and analysed. For example, staff involved in Health Centres Survey in Control of Growth and Development of Children under One-year of Age shall be graduated in medicine and nursing.

7.8. Co-operation with the scientific community, academic institutions and international organisations is organised to improve methodology and the effectiveness of the methods implemented, and to improve methodological and technical skills of staff.

127. INEI cooperates with scientific community, academic institutions and international organisations in order to improve statistical methodologies. For example, committees have been formed in relation to the National Accounts, Environment, and other important statistical subject domains. Another example relates to the Advisory Committee for Estimation of Poverty.

128. In order to promote the exchange of information and to achieve synergies between institutions, INEI and entities of the NSS have set up the Statistical Thematic Group (GTS, by its acronym in Spanish), with the permanent and active participation of the Public Sector, including the Peruvian Agency for International Cooperation (APCI) which works as coordinator and facilitator. This group consists of representatives from: OECD/Paris 21, UNFPA, IMF, IFAD, IDB, FAO, WHO/PAHO, AECI, SECO, World Bank, Counterpart Fund Peru-Japan, CAF, FONDAM, OEI, IRD, IOM, UNDP, UNICEF, UNOPS, KOICA, USAID, GIZ, European Union, Counterpart Fund Peru-Germany, ILO, UNODC, OAS, WFP, UNESCO and JICA.

7.9. Strategies for recruitment, as well as processes for technical and managerial development and training of existing staff, are established, implemented and revised as required.

129. Recruitment strategies of experts, specialists, and temporary staff are established according to relevant administrative procedures usually including an evaluation of previous professional experience. Besides technical aspects, scheduled training workshops are carried out where legal scopes, statistical confidentiality and confidentiality of statistical information, as well as administrative issues (accountability, mobility, etc.) are disseminated.

7.10. In the case of statistical surveys, questionnaires and systems for production are systematically tested prior to the data collection.

130. Pilot surveys are systematically carried out before developing the final statistical survey, where the contents of the questionnaire, data collection processes and other important aspects are evaluated. Such tests are also used to finalise questionnaire design, manuals, guidelines, etc.

7.11. Parallel runs are undertaken when systems or questionnaires are redesigned in any significant way.

131. When there are significant changes in questionnaires and/or redesign of systems, processes are conducted at the same time to evaluate the results and validate their use, since it allows comparing results.

7.12. Survey designs, sample selections and estimation methods are well based and regularly reviewed and revised as required.

132. There is a continuous improvement of samples and estimation methods as a result of the updating of household, businesses, and establishment registers. The latter is updated with administrative records.

7.13. The business register and the frame for population surveys are regularly evaluated and adjusted if necessary in order to ensure high quality.

133. The statistical Business register is updated by INEI on a quarterly basis by using administrative records and information on establishments from the National Economic Census as sources.

134. The framework of households in household surveys is updated with the Population and Housing Census but categories are updated on a regular basis.

7.14. Data collection, data entry, and coding are routinely monitored and revised as required.

135. Data collection, entry and coding methods are regularly reviewed. The traditional method of the printed form has been replaced by electronic forms available on tablets which are downloadable on web or online. These procedures involve a direct data entry supported by a basic consistency. Concerning the encoding, there is an automated process and another manual.

7.15. Appropriate editing and imputation methods are used and regularly reviewed, revised or updated as required.

136. Editing and imputation methods are mainly used in household surveys. The consistency of economic surveys requires a new interview with the informant.

7.16. Revisions follow standard, well-established and transparent procedures.

137. At present, there is no integrated data revision policy or strategy at the INEI and details on the processes of revising statistics are not always described in metadata published for each statistical subject domain. Revisions methods and implementation procedures are under the responsibility of the head of each individual statistical subject domain:

- In the implementation of surveys, the different types of reviews made are usually executed in two stages: during the field operation and cabinet. The data collection of surveys is carried out through mobile device which already contains a set of basic rules for controlling omissions, out of range, and inconsistencies that are recovered immediately by the interviewer with the qualified informant. The data collection process through mobile device is automatically stopped if any omission or inconsistency is identified, thus ensuring the quality of basic information collected.
- The National Directorate of National Accounts revises statistical figures in the following two cases: a) data update; b) comparison and reconciliation of data according to information sources, to comply with the methodological processes of best practices and the System of National Accounts.
- The Technical Directorate of Economic Indicators has a policy based on a continuous review of the basic information. Due to the temporary nature of information, which is monthly and based on samples, also whose results are evaluated according to changes in the coverage of its samples, in the output indicators has been established a review and quarterly update by Administrative Decree. In the case of price indicators, its results are definitive, are not subject to review after its approval. The consistency and review of information are part of the price compilation and its validation.
- With regards to statistics on demography, population projections are revised after each national population and housing census, or when any specific survey including information on fertility and mortality is carried out.

138. INEI is encouraged to envisage the implementation of a revision policy following standards and including well-established transparent procedures (as detailed metadata and a revision calendar to inform users of when revisions of statistical results are planned to be published).

7.17. A revision schedule is published by the producers of official statistics.

139. INEI does not publish a revision schedule. Samples, questionnaires, and definitions are reviewed on an ongoing basis. The timetable for the implementation of a statistical activity, when considered appropriate, includes a date for the presentation of the "Preliminary Results" and another one for the dissemination of the "Final Results". In the case of surveys, and in accordance with the contracts established with users, during the implementation of the field operation, a cut is performed and a preliminary database is submitted to calculate its indicators and monitor them. To complete the field operation, a final database is obtained and therefore the presentation of the final results.

140. When it comes to national censuses, the results presented are definitive.

141. In the case of National Accounts, the time of disclosure of the revised figures is not announced, but the date of review and update of figures are established by agreement between producers of statistics.

7.18. The design of statistical questionnaires used in survey-based data collection processes is regularly reviewed.

142. Questionnaires are regularly reviewed to ensure they are accurate and comparable over time. At the end of the data collection processes, non-responses and questions that presented problems are analysed in order to improve the response rate, or to find alternative and reformulate the questions. New questions, or new proposed modules, are discussed in meetings with the person or institution that requests this information.

Overall assessment on Recommendation 7:

143. INEI applies sound methodologies based on appropriate statistical methods and international standards. Progress can be achieved by establishing and publishing a revision policy following standard, well-established transparent procedures, including a revision calendar to inform users of when revisions of statistical results are planned to be published. A catalogue of international and national classifications would further improve their consistent use by all the entities of the National Statistical System. In addition, INEI is encouraged to further enhance the dissemination of official statistics by providing a common portal and a common release calendar for the whole National Statistical System.

Recommendation 8. Commit to the quality of statistical outputs and processes, in particular to key quality dimensions as defined in national and international quality assessment frameworks, for instance in the Quality Framework and Guidelines for OECD Statistical Activities: timeliness and punctuality (statistics are released in a timely and punctual manner); relevance (statistics meet the needs of users); accuracy (statistics accurately and reliably portray reality); credibility (confidence is placed by users in statistical products); coherence and comparability (statistics are consistent internally, over time and in space and it is possible to combine and make joint use of related data from different sources); and interpretability and accessibility (see Recommendation 9).

Quality management, monitoring, evaluation plans and reports

*8.1. A quality policy ensures that the producers of official statistics systematically assess the quality of official statistics. Quality policy is publicly available through guidelines, framework, reports, etc. and staff members receive appropriate training for their applic*ation.

144. Although the quality of INEI's statistical production is framed within the international standards and the Fundamental Principles of the United Nations for Official Statistics, their ordering and integration in any corporate document or in a manual that expresses the quality policy to be followed by the institution and its partners of the NSS would be necessary.

8.2. An efficient, and possibly independent, quality management system exists. It includes an appropriate organisational structure; quality indicators and other tools and processes for the planning, implementation, and monitoring of the quality of source data; and the collection, processing, and dissemination of official statistics.

145. A unit at INEI explicitly dealing with quality management would help in clarifying the organisational structure for managing quality. The quality management is used at all stages of the statistical production processes, including pilot tests to evaluate data collection instruments, and the use of standards for the dissemination of micro-data. Replacing paper forms by digital or online forms improved the quality of data collection, avoiding typing and applying technology for basic consistency. In addition, improvements and reviews of the automatic coding and macro-consistency enabled a shorter assessment of the quality of information.

8.3. The national quality management systems are based on recognised models for quality frameworks, such as the IMF Data Quality Assessment Framework (DQAF), the European Foundation for Quality Management, European Code of Practice, the European Statistical System Quality Assurance Framework, Total Quality Management and ISO EN 9001, etc.

146. The quality management is associated with the national Code of Good Practice in Statistics for Peru which is based on the European Code of Practice for Official Statistics and the Regional Code of Good Practice in Statistics from ECLAC, through a set of indicators that monitor their implementation in the National Statistical System.

8.4. There are regular and thorough reviews of key statistical outputs involving external experts where appropriate.

147. A culture of continuous improvement included in the national Code of Good Practice in Statistics is encouraged and linked to statistical assessments that systematically promote statistical quality management. The quality of key statistical outputs, such as poverty estimates or national accounts, is regularly reviewed and involves external experts. There are no procedures in place at INEI to implement systematically quality reviews and there is no reference documentation for quality reviews available.

8.5. Quality assessment and certification processes guarantee the official nature of statistics produced in various parts of the NSS.

148. The various validation processes and quality assessment procedures in place guarantee that scientific methods are used in compiling official data. However, INEI does not perform certification processes on official statistics.

8.6. The organisational structure of the entities belonging to the NSS and governance arrangements are appropriate and regularly reviewed to assess and justify new statistical demands and related costs.

149. The organisational structure of the entities maintaining statistical offices belonging to the National Statistical System is sometimes not located in an appropriate organizational structure. It is recommended to have a level of "General Management", i.e. visible in the second level of the organization, after INEI Senior Management. INEI issues technical opinion of this situation and guides towards the statistical use of administrative records. The demands of statistical information that cannot be served by these offices are usually taken by the governing body.

150. According to Article No.17 of Legislative Decree No.604 (Law of Organization and Functions of the National Institute of Statistics and Informatics), the sectoral statistical offices are responsible for the production of statistics and for the provision of statistical services. They are often supporting bodies of Ministries, and regional and local governments, and they depend hierarchically on these institutions.

151. The Peruvian government recently decided to restructure the state entities, with the aim, among others, to reduce the number of employees. This action affected the organizational structure of government entities and impacted significantly the production and dissemination of official statistics, leading to the creation of the Inter-agency Coordination Committee of Statistics (CCOI-E, its acronym in Spanish). The CCOI-E is currently composed of 76 representatives of different government institutions, of which 24 representatives (32%) belong to statistical bodies, 15 representatives (20%) are civil servants developing statistical activities but working in planning and budget bodies, other representatives belong to information technology and computing bodies, research and development bodies, economic studies, management policies, among others.

152. The situation for the regional governments is similar because some Sectorial Regional Secretariats have not properly implemented their statistical bodies. For Local Governments, districts with more than 25,000 inhabitants have statistical bodies, or staff who develops statistical functions.

153. INEI being responsible for the coordination of statistical activities put in place arrangements with the highest authorities of the Peruvian State to ensure that statistical standards are effectively implemented. However, budget issues matters and staff shortages limit the possibility of ensuring that statistical standards are systematically implemented. As INEI does not decide on statistical work in the various entities of the National Statistical System, its influence remains relative. The various producers of statistics commit to produce indicators as stated in the National Strategic Plan for Statistical Development, which is approved by Supreme Decree; and they carry out the statistical activities as approved in their relevant Institutional Operational Plans into the System of National Statistical Plan - Inventory of Statistical Production.

8.7. Information and communication technologies are regularly monitored and assessed for use in data collection, data processing and data dissemination.

154. New technologies of information and communication are evaluated to facilitate data collection, processing and dissemination. For example, economic surveys based on printed forms migrated to spreadsheets with macros and output in text format in 2001, then Delphi formats in 2011, and finally online forms for filling in real time (2014).

Accuracy

8.8. Source data, intermediate results and statistical outputs are regularly assessed and validated.

155. There is an assessment of the source data that are stored without alterations. The intermediate results are also regularly assessed and the final results are analysed and validated.

8.9. National Statistical Authorities put in place processes to ensure that sampling and non-sampling errors measured, systematically documented, and that information is made available to users.

156. The sampling error and non-sampling are presented in the document "Report of the Sample Design", available on the INEI website.

8.10. Studies and analysis of revisions are regularly conducted according to transparent procedures and are the results made available to users.

157. Information on survey methodologies is made available to users on the INEI website. However, INEI does not carry out analysis of statistical revisions.

Timeliness and punctuality

8.11. Timeliness meets international statistical release standards.

158. As shown in chapter 3 on national accounts statistics, it is recommended that Peru improves timeliness in annual national accounts. The present statistical review did not encompass sufficiently other indicators to assess their timeliness. However, detailed information on the length of time between the reference period and when statistics are made available to users should be systematically published in metadata.

8.12. The periodicity of statistics takes into account user requirements as much as possible.

159.Planning of statistics in terms of periodicity depends on international recommendations and user requirements; for example, in presentation of short-term indicators (indicator of domestic production and price indices).

8.13. A standard day time for the release of statistics is made public.

160.INEI usually schedules the release of statistics at 10:00 in the morning.

8.14. Preliminary results of acceptable aggregate accuracy are released when considered useful.

161.Preliminary results of acceptable aggregate accuracy are released when considered useful for users by INEI, and appropriate information is provided to users about the quality of the published results. However, when there are inference or estimation problems, the information is considered as "referential". There is no specific policy in place at INEI as regards the publication of preliminary results.

Coherence and comparability

8.15.Official statistics are consistent within datasets (i.e. elementary data are based on comparable concepts, definitions and classifications and can be meaningfully combined), across datasets (i.e. data are based on common concepts, units, definitions and classifications, or that any differences are explained and can be allowed for) and over time (i.e. data are based on common concepts, definitions, units, classifications, and methodology over time, or that any differences are explained and can be allowed for).

162.Official statistics in Peru are consistent, they adopt: concepts, methods and standards that facilitate international comparability. Any change is announced by a methodological note and as far as possible it attempts to maintain time series.

8.16. Statistics from the different sources and of different periodicity are compared and reconciled.

163.The comparison and reconciliation of data from different sources (arbitration) are essential, in particular for the compilation of national accounts statistics. Analysis to reconcile data is carried out even when there is different periodicity.

8.17. Statistics are compiled according to common standards with respect to scope, definitions, classifications, and units in the different surveys and sources.

164.Data collection is carried out after establishing common standards, i.e. concepts, classifications and nomenclatures that applies to different surveys.

Relevance

8.18. Processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs, and consider their emerging needs and priorities.

165. INEI consults users directly, through comments and suggestions received on main requirements for statistical information[12]. In addition, INEI sends an annual report to the Presidency of Council of Ministers on fulfilled and unfulfilled requests of information. From this report, it is possible to determine the most common needs of users.

8.19. Are user satisfaction surveys undertaken on a regular basis? Are the results publicly released and considered as an input for decisions about plans and priorities and are they reflected in the statistical work programmes.

166. INEI does not carry out user satisfaction surveys.

Overall assessment on Recommendation 8:

167. Quality of statistical outputs and processes is certainly an important dimension of INEI work and the Peruvian statistical legislation is broadly adequate to support quality of statistics. INEI applies the principle of continuous improvement based on the identification of weaknesses and the search for upgrading processes. However, the work on quality would benefit from the design of an explicit policy on quality for the National Statistical System as a whole. In this context, INEI is encouraged to develop an integrated quality management system and appropriate detailed guidelines describing in detail its implementation, and how to promote quality management in the statistical production system as a whole. This quality management would be devoted to a specific unit at INEI also in charge of monitoring its implementation and evaluation, and/or to a committee responsible for the promotion of quality management and the identification of the various needs and options as regards quality. The responsibility should be clearly assigned to a senior expert in quality, reporting directly to the Chief of INEI. Training activities should be linked to the quality management, and while INEI regularly requires feedback from users, a proper user consultation survey would allow further engaging with users on quality issues.

Recommendation 9. Ensure user-friendly data access and dissemination, so that statistics are presented in a clear and understandable form, released in a suitable and convenient manner, including in machine-readable form ('open data'), can be found easily, and are available and accessible on an impartial basis with supporting metadata and guidance. This also entails a commitment to respond to major misinterpretations of data by users.

9.1. Statistical information is available through different dissemination tools, including media channels, Internet, online database and paper publications and easily downloadable in different formats.

168. In accordance with its dissemination policy, INEI has opened its databases to the web and statistical information produced by INEI is now freely accessible through the use of different tools of dissemination: printed publications, electronic publications, databases, online consultation systems, and others. Statistical information can be easily downloaded by users in various formats: Excel, Word, PDF, DBF (importing data into R software), SPSS, etc.

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12   https://www.inei.gob.pe/usuarios/encuesta/

169. The main dissemination platforms for official statistics are as follows:

    1. System for Regional Information for Decision, covering 601 indicators at the district level, 669 indicators at the provincial level, and 2909 indicators at the departmental level;
    2. System of consultation on population centres, including 60 indicators on population centres in Peru,
    3. Dissemination system of national Censuses,
    4. National time-series, covering 300 indicators at the national level,
    5. Monthly economic information, also with 300 indicators at the national level,
    6. System of geographical information on entrepreneurship, include 9 indicators for 80 municipalities,
    7. INEI microdata,
    8. National Data Archive (ANDA).

170. In addition, a glossary of statistical terms is freely accessible and aims at providing basic information on statistical definitions.

9.2. There is a dissemination policy ensuring the free dissemination of official statistics.

171. INEI dissemination policy guarantees open access to official statistics and is based on the following legislation:

    •   Supreme Decree N°043-2001 PCM, which approves "Regulations of Organisation and Functions of the National Institute of Statistics and Informatics - INEI" (N°043-2001-PCM), reaffirms the objectives as well as general and specific functions of each body: Senior Management, control body, advisory bodies, supporting bodies, line bodies, decentralized bodies and other NSS bodies. Also, it specifies the operational instruments, information sources, indicating the commitment of natural and legal persons to provide information, on penalties for failure in providing of statistical information, statistical confidentiality, confidentiality of information and the use of official statistical information and inter-institutional relations with NSS bodies. Finally, with regard to the confidentiality, Article 97 of Supreme Decree N°043-2001 PCM states that: "the information provided by sources, has a private nature and may not be disclosed on an individual basis, even if there is administrative or judicial order. It may only be disclosed or published in non-nominative form. The information provided, may not be used for tax or law enforcement purposes";
    •   Law N°27816 of August 2002 on transparency and access to public information;
    •   Law N°29733 of July 2011 on the protection of personal information;
    •   Supreme Decree N°072-2012 PCM of July 2012 on the approval of the national Code of Good Practice for Statistics of Peru;
    •   Chief resolution N°237-2014-INEI-Directivea N°002-2014-INEI of September 2014 on the guidelines for the implementation of the national Code of Good Practice for Statistics of Peru within the National Statistical System.

172. According to the Peruvian Code of Good Statistical Practice, the dissemination policy implemented by INEI is based on the principles of transparency, equity, and timeliness and places great importance on the protection of individual information and safeguarding statistical confidentiality.

9.3. English-language statistical information (data and metadata) is available on websites of National Statistical Authorities, in order to ensure equal access to national statistics for international users.

173. Statistical information (data and metadata) available on the website of INEI is in Spanish only. At this time, INEI does not have plans for providing detailed methodological information in English.

9.4. A corporate strategy and appropriate guidelines are in place for the preparation of statistical publications (paper and electronic).

174. INEI increasingly disseminates statistical information through various means, such as the INEI website[13], printed publications, and electronic form published on the institutional website of INEI. INEI gradually produces guidelines for the various types of dissemination format.

9.5. There are a corporate database and glossaries promoting the use of standard statistical concepts and definitions.

175. A glossary of statistical terms promoting the use of concepts and definitions has been published by INEI and most of the INEI publications include a glossary of statistical terms[14].

9.6. Users are kept informed about the methodology of statistical processes including the use of administrative data.

176. Users are informed about the methodology of statistical processes carried out in the production of official statistics, including those involving the use of administrative records. For this purpose, INEI collects methodological information from other institutions within the National Statistical System. In addition, users can make requests and suggestions on statistics through a variety of channels (phone, web, institutional library, social networks) and INEI focusses as sharply as it might on the use made of statistics.

9.7. Metadata are documented according to standardised metadata systems.

177. Statistical metadata are disseminated through the National Data Archive (ANDA, by its acronym in Spanish), which allows users to download data and metadata related to ten statistical operations (censuses and surveys) since the year 2002 in various formats (SPSS, Excel, PDF, etc.). Metadata are directly attached to the variable or data point and refers to methodological information available in Spanish on the webpage of INEI. The System is being reviewed in order to make a correct setting of ANDA sites according to the criteria established by the Accelerated Data Program (PAD, by its acronym in Spanish) developed by the World Bank. Likewise, the review and improvement of statistical researches and documented administrative records are being carried out[15].

178. In addition, INEI, BCRP, the Superintendency of Banks and Insurance Companies, the Lima Stock Exchange, and the Ministry of Labour and Promotion of Employment, disseminate metadata on the IMF SDDS webpage since 1996.

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13   www.inei.gob.pe
14   https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib0900/Libro.pdf
15   http://webinei.inei.gob.pe/anda_inei/index.php/catalog/central/about

9.8. A corporate strategy and appropriate guidelines are in place 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, geographical coverage, etc.

179. INEI approach to metadata is articulated with quality management, as described in principle four of the national Code of Good Practice in Statistics. INEI, as governing body of the National Statistical System, has established a set of strategies and guidelines based on recognised international standards for the preparation and dissemination of official statistical information. The main guidelines are presented in the following documents:

   • Manual for the Submission of Statistical Tables
   • Guide for the Submission of Statistical Graphics
   • Best Practices for a Sample survey
   • Basic Glossary of Statistical Terms

180. A guide with guidelines to document metadata in the National Data Archive was developed by the INEI in 2016.

9.9. Processes 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.

181. Most statistical researches performed by INEI produce indicators on the reliability of estimates as well as procedural errors. Results include a data sheet containing the sampling and non-sampling error margins.

9.10. Internal guidelines are made available by statistical authorities to respond to erroneous interpretation, comments, and misuse of statistics. These guidelines are well known by staff.

182. INEI produced internal guidelines and regulations for responding to erroneous comments and misuse of statistics, in application of regulations in Article 40 of the Supreme Decree N°043-2001-PCM on Organisation and functions of INEI (paragraphs c on the functions of INEI). This material is made available to INEI staff through the institutional Intranet. The Technical Office of Dissemination, support body in coordination with the body line, proposes an official statement for the respective clarification to the public, and issue an opinion on the information to the media and public opinion regarding actions and activities of INEI and the National Statistical System.

9.11. Access to micro-data is allowed for research purposes and is subject to specific rules or protocols.

183. Anonymised microdata are freely accessible from INEI internet website for research purpose, in accordance with the Statistical Secrecy and Confidentiality of Information, established in the Regulation of Organization and Functions of the National Institute of Statistics and Informatics (Supreme Decree No. 043-2001-PCM).

9.12. Where a pricing policy exists for specific services or custom-designed products, the conditions of sale are clearly communicated.

184. For specific services or custom-designed products, the conditions of sales are communicated through pro-forma and/or quotes to users. In accordance with the current legislation, INEI, as public entity, is not allowed to realise profits.

9.13. Educational material is developed with the aim to enhance the use of official statistics and to avoid their misuse and misinterpretation.

185. Educational materials developed by INEI aims to "promote statistical culture" of population in the proper use of statistical information. This material is published on the website in the section "ABC of Statistics".

9.14. Official statistics are released in machine-readable form ('open data') that encourage reuse and analyses.

186. Statistical information produced by INEI is open access and can be easily downloaded and reproducible by users in the various formats (Excel, Word, PDF, DBF, SPSS, etc.) for reuse and analysis.

Overall assessment on Recommendation 9:

187. INEI provides extensive and valuable statistical services through its internet website. The dissemination policy is based on the openness of data, accessibility statistics, including to anonymised microdata for research purposes, availability of metadata in Spanish, transparency, timeliness, and the protection of individual information. The statistics produced are disseminated in various formats and significant efforts have been made in providing statistical literacy through appropriate metadata, the release of glossaries of statistical terms, and the development of educational material to promote statistical culture. INEI introduced a corporate metadata strategy and produced guidelines for the presentation of data and metadata as well as procedures for responding to erroneous comments on official statistics. There are a variety of channels through which users of statistics can make requests or suggestions to INEI (phone, web, institutional library, social networks, e-mails) and INEI focuses as sharply as it might on the use made of statistics. With the aim to enlarge the audience of international users of Peruvian statistics, INEI is encouraged to launch the process of translating in English statistical information available on its website, and to develop a common portal for all official statistics produced in Peru, including a common advance release calendar.

Recommendation 10: Establish responsibilities for co-ordination of statistical activities within the NSS. To this end, Adherents should ensure that:

- the co-ordination of statistical activities among statistical producers is done through the use of standard concepts and classifications and avoids the duplication of effort;
- responsibilities for such co-ordination function are clearly laid out and anchored in statistical legislation.

10.1. The role and responsibilities of all producers of statistics are clearly determined by law. A co-ordinator of the NSS, such as the NSO, is also designated by law.

188. The roles and responsibilities of all producers of official statistics are clearly framed in Decree Law Nº 21372, the Law on the National Statistical System. The rule states that INEI is the governing body of the National Statistical System. In addition, the Decree Law N°604 on the organisation and functions of INEI identifies a list of entities of the National Statistical System, and establishes the functions of INEI, including the coordination of statistical activities. The Supreme Decree 043-2001-PCM reaffirms the functions of INEI. In addition, INEI Chief Resolution N°243-2001-INEI establishes the regulation of the Intern-institutional Coordination Committee on Statistics.

189. The coordination of the National Statistical System is assumed by Statistics Deputy Chief of INEI. The Article No. 14 of the Regulation of Organization and Functions of INEI (No. 043-2001-PCM) states that the Deputy Sub-Chief of Statistics is responsible for directing, coordinating, supervising and promoting the development of statistical activities in the country.

10.2. The designated co-ordinator has responsibility to co-ordinate the statistical activities of official producers in the NSS and to represent the NSS as a whole. This concerns in particular the use of appropriate statistical concepts and procedures, the implementation of international standards and efforts to minimise duplications in data collection, production and dissemination of official statistics.

190. The Deputy Chief of INEI is responsible for coordinating statistics activities of the official producers in the NSS and for representing the NSS as a whole. Its functions and powers include: directing, coordinating, monitoring and evaluating the implementation of statistical activities of INEI and NSS; coordinating the implementation of programs, projects and actions with other public and private entities within its competence; and guaranteeing the confidentiality of the information produced by the system agencies.

10.3. Procedures, mechanisms, tools, guidelines, or agreements are in place to ensure effective co-ordination within the National Statistical System. Examples of such tools and procedures include:

- Establishment of a National Statistical Plan
- Co-ordinated data dissemination, e.g. through a single data portal
- Assistance with implementation of international standards and classification
- Common quality management processes

191. INEI and NSS's activities are referred to in the National Strategic Plan for Statistical Development 2013-2017 (PENDES, by its acronym in Spanish) and annual operational plans of INEI and sectoral statistical offices. These plans allow a close coordination between INEI and various entities of the National Statistical System.

192. The main procedures for ensuring the coordination of statistical activities relates on the regular meetings held by the Inter-institutional Coordination Committee for Statistics, that allow the implementation of technical commissions, enabling the implementation of international standards and classifications, the implementation of surveys upon request, the improvement of administrative records, the training courses and pilot surveys. The meetings (between one and seven annual meetings) are headed by the Chief of INEI and include representatives from seventy-six entities of the National Statistical System.

10.4. Exchange of statistical information between statistical agencies is actively undertaken.

193. Permanent exchanges at the request of the applicant are possible. The development of temporary and structural statistical indicators by INEI and bodies of NSS enables the exchange of statistical information on a permanent basis. The development of national accounts, the calculation of monthly and quarterly production indicators and the processing of statistical compendia, among others, require permanent and intensive exchange of information.

Overall assessment on Recommendation 10:

194. The legal framework for official statistics in Peru clearly assigns INEI with the responsibility of coordinating statistical activities within the National Statistical System. The role is endorsed in INEI corporate's vision, as stated in the National Strategic Plan for Statistical Development 2013-2017, which indicates the importance of the coordination of statistical activities within the National Statistical System. One strategic objective of INEI is working towards the improvement of the framework conditions set for official statistics. However, the procedures in place to ensure an effective coordination of statistical activities are mainly limited to the activities of the Inter-institutional Coordination Committee for statistics. Some decisions of this Committee are implemented at the level of the National Statistical System through Supreme Decrees. As well as engaging in a more structured and assertive way to foster recognition of, and shared knowledge about, the work of all the bodies that contribute to the production of official statistics, INEI should establish a more cohesive and mutually supportive statistical system. This could be done by developing a common portal for all official statistics with a common advance release calendar, by implementing a common quality framework for all official statistics. This would help to establish a better understanding, internally and externally, of the characteristics and functioning of the National Statistical System, with information on the role and contribution of the different bodies involved in the production of the Peruvian official statistics. This would also allow INEI to play a more active role at the centre of the system, supporting over time the efficient coordination of the statistical work of all the parties. It would also contribute to facilitate the integration of data from different sources, in particular administrative sources.

Recommendation 11. Commit to international co-operation. To this end, OECD Members and non-Members adhering to this recommendation should:

- encourage statistical producers to achieve common goals in statistics jointly with the statistical producers in other countries and with international organisations, with a view to developing internationally comparable statistics, to designing international standards and to exchanging information on good practice.
- provide the necessary data for the OECD's reporting system and analytical work, in compliance with international statistical standards as recognised by the OECD and preferably using the Statistical Data and Metadata eXchange method/standard in particular for domains with internationally agreed Data Structure Definitions (DSDs).

11.1. Do the national statisticians participate actively and regularly in international expert groups, conferences and workshops?

195. INEI and representatives of the entities from the national statistical system actively participate in expert groups, conferences and international workshops. Senior Management of INEI regularly attends international conferences and workshops in regards to policy on statistical issues. Officials, directors and professionals of INEI line agencies participate and integrate statistical work groups at sub-regional and global levels on various topics, such as:

- SCA-ECLAC
- Harmonization of Statistics on Income Poverty and Public Transfers
- Population Census
- National Accounts
- Environmental Statistics
- Gender Statistics
- Institutional Strengthening
- Measurement of Information and Communications (ICT) Monitoring of Sustainable
- Millennium Development Goals (ODM)
- International Classifications
- Household Surveys (GTEH)
- Agricultural Statistics
- Statistics on children and adolescents
- Statistics of Public Security and Justice (GTESPJ, by its acronym in Spanish)
- Labour Market Indicators
- Knowledge Transfer Network
- OECD
- Committee on Statistics and Statistical Policy (CSSP)
- UNITED NATIONS
- Statistical Commission of the United Nations
- OIT
- Pilot Task Force Program
- ANDEAN COMMUNITY
- Andean Statistical Community

196. In some cases, participation is limited due to resources constraints.

11.2. The National Statistical Authorities participate in joint projects with other countries to share development burden.

197. The participation of the Peruvian national statistical authorities is carried out through inter-agency agreements or through South-South cooperation. Currently, INEI has signed Cooperation Agreements with Central Statistics Bodies from Chile, Bolivia, Ecuador and Cape Verde. Horizontal cooperation is also involved with national statistical agencies from Latin America and the Caribbean countries.

11.3. The Heads of NSOs, or their staff, chair international statistical bodies.

198. Peru was elected, through the Head of the National Institute of Statistics and Informatics, as member of the Executive Committee of the Statistical Conference of the Americas of ECLAC for the period 2016-2017 together with representatives of national statistical offices from Bolivia, Ecuador, Colombia, which are the countries of the sub-region members of the Andean Community.

11.4. The National Statistical Authorities participate in the main international statistical fora to exchange on their statistical practices, to participate in research and conceptual work and to contribute actively to the definition and design of international norms and statistical standards.

199. INEI participates regularly in meetings organised by the Statistical Commission of the United Nations, the Andean Statistical Community, the OIT, and the OECD.

11.5. Access to micro-data by international organisations is explored as a mean to reduce the burden of countries responding to questionnaires.

200. Since 2006, a strategy of broaden access to statistical information, including micro-data, was implemented. All information contained in the databases managed by INEI is freely accessible to any foreign or national citizen. Until 2005, requests to access micro-data were recorded in a register managed by INEI and including information on the types of request and characteristics of the applicants (written request, e-mail, phone, etc.). The number of accesses to the institutional website looking for information was also recorded.

11.6. The National Statistical Authorities provide complete and timely answers to the questionnaires of international organisations.

201. INEI and BCRP provide complete and timely information through their responses to the questionnaires sent by international organisations. INEI transmits Quarterly National Accounts to the Andean Community, annual and quarterly indicators to the Economic Commission for Latin America and the Caribbean (ECLAC), and National Accounts statistics to the United Nations. In 2016, INEI and BCRP started to implement data and metadata transmission to the OECD.

11.7. The producers of official statistics use modern statistical and IT tools, such as SDMX[16] for the regular transmission of data and metadata to international organisations, notably the OECD.

202. INEI is in the process of implementing SDMX for data transmission, notably with the OECD. However, there is no date for the achievement of this implementation at this stage.

Overall assessment on Recommendation 11:

203. INEI actively participates in regional and international statistical cooperation and contributes to the design of harmonised methodology and the production of comparable statistics in Latin America. INEI developed bi-lateral cooperation with international organisations and with national statistical agencies on a number of statistical subject domains. The participation of INEI is carried out through inter-agency agreements which may include exchange of data. In this context, it should be emphasised that INEI committed to use modern statistical IT tools such as SDMX for the regular transmission of data to international organisations.

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16 Statistical Data and Metadata Exchange (SDMX) refers to an initiative to foster standards for the exchange of statistical information, sponsored by the Bank of 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.

Recommendation 12. Encourage exploring innovative methods as well as new and alternative data sources as inputs for official statistics, and in particular encourage statistical agencies to actively explore possibilities to use new data sources (including large datasets owned by the private sector) or to combine existing and new data sources as input for official statistics. At the same time, these opportunities are weighted against the limits of using modern information technologies and the need to maintain the quality of official statistics.

12.1. The National Statistical Authorities actively encourage and undertake research on new sources and new methods for official statistics, including in the private sector and through combination of existing sources.

204. In 1999, INEI implemented the Centre for Statistical Research and Development (CIDE), an entity responsible for promoting, guiding, developing, and coordinating socioeconomic and statistical researches with the support of the Programme for the Improvement of Living Conditions-MECOVI, driven by the Inter-American Development Bank and the World Bank. These researches are financed by public treasury, international organizations, and non-governmental organisations. In 2014 and 2015, public tenders have been carried out for the development of researches, involving individual researchers and universities.

12.2. The National Statistical Authorities develop methodological work and IT infrastructure to ensure the quality of official statistics when new and alternative data sources are used as input.

205. INEI has developed an IT infrastructure through technological platforms. A centralized database meets requirements in terms of data processing for generating timely and reliable statistics. Likewise, consultation systems meet the information needs of internal and external users. In addition, INEI currently promotes the implementation of web services to facilitate internal and external exchanges of data, managing data sources with different formats, and ensuring the use of SDMX-based transmission and dissemination standard of data as far as possible. Similarly, a qualitative technological leap with a new ICT infrastructure is expected for the completion of the 2017 National population Census and for the production of statistical surveys, automate administrative records that are formed as baselines for various investigations, the use of geomatic technologies (management of maps) enabling georeferenced data, business intelligence, virtual classrooms, video conferencing, among others.

12.3. An explicit policy is formulated towards the use of "Big Data[17]" and private data that considers legal, technical and methodological implications.

206. Currently INEI does not have an explicit policy focused on the use of Big Data for the production of official statistics, although it is planned to develop standards, and to start projects initiatives as "Data Peru" (data warehouse institutional), techniques focused on open data solutions, and electronic government.

12.4. Implications for statistical infrastructure, statistical methods, and analytical tools are systematically assessed.

207. This work is developed directly and permanently by line agencies of INEI and the Centre for Research and Development. In this framework, INEI developed technical consultancy with the World Bank and the United Nations Population Fund from 2011 to 2015.

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17 ***Big data*** refer to data sources that can be generally described as high volume, velocity, and variety of data that demand cost-effective, innovative forms of processing for enhanced insight and decision making

12.5. There are explicit agreements between producers of official statistics and owners of private data; and legislation which regulate access to this information and deal with privacy issues.

208. INEI access to private data is regulated by the Legislative Decree N°604. Specific agreements have been signed to access tax records with the tax authority, although there are still limitations regarding the disaggregation of information.

12.6. The National Statistical Authorities participate in the development of capabilities to process geospatial data.

209. The participation of INEI in the development of capabilities to process geospatial data includes:

- Participation in the Spatial Data Infrastructure of Peru – IDEP as coordinator of the Interagency Working Group on Populated Centres;
- Development of a set of statistical activities in application of its functions: planning, organizing and leading, by assignment or contract, and in turn, training staff in management of cartographic documents and geospatial data;
- Membership of the National Disaster Risk Management System (SINAGERD), which provides statistical information associated with geospatial information, expressed in thematic maps;
- In the context of the preparation of the 2017 National Census: XII population and VII housing, INEI is using technology to develop cartographic documents, collect geospatial data in field, implement automated segmentation and disseminate information; and has signed an agreement with the National Commission for Aerospace Research and Development (CONIDA) in order to access to information from satellite images;
- Finally, INEI has a repository of geospatial data from different statistical activities that performs.

Overall assessment on Recommendation 12:

210. INEI actively undertakes research on the use of geospatial information for the production and dissemination of official statistics and develops appropriate IT infrastructure and methodological work to ensure the quality of statistical information. However, there is no specific policy on the use of private information and INEI is encouraged to explore the development of such standards to further enrich the quality framework of the national statistical system.

CHAPTER 2. STATISTICAL INFRASTRUCTURE

2.1. Introduction

211. Statistical infrastructure can be considered those activities seen as horizontal across a statistical authority and which, in most cases, have a direct impact on the compilation and dissemination of the statistical activities being undertaken and are vital for their compilation.

212. In some cases, such as classifications, no statistics are directly derived. However, for others, such as business registers, population and agriculture censuses, as well as providing core components in the compilation of a majority of the other statistical activities being undertaken in the statistical authority they also have their own outputs which are disseminated.

213. This chapter presents a review of the following essential collections, activities and services which support activities within the Peruvian National Statistical System[18]:

- Population and Housing Census
- Agricultural Census
- Statistical Business Register
- Economic Census
- Classifications
- Labour Force Survey and Household surveys
- Business surveys

214. In Peru, the INEI is responsible for all these activities. The main statistical surveys include the National Households Survey (ENAHO, acronym in Spanish), the National Survey on Households Expenditures (ENAPREF), the Survey on Demography and Health (ENDES), the National Survey of Strategic Programs (ENAPRES), the National Special Survey on Incapacities (ENEDIS), the Continuous Employment Survey (ECE), the Survey on the Transition from School to Employment (ETET), etc.

2.2. Population and housing census

Background

215. A population census is the total process of collecting, compiling, editing, analysing and disseminating demographic, economic and social data pertaining, at a specified time, to all persons in a country. A housing census is the total process of collecting, compiling, editing, analysing and disseminating statistical data pertaining, at a specified time, to all living quarters (as defined in the UN Principles and Recommendations for Population and Housing Censuses, Revision 2) and occupants in a country. In general, both censuses are conducted jointly.

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18 The purpose of this chapter is to give an overall assessment of the situation in Peru for what should be considered a core area for statistical authorities, ensuring the quality of other statistical programs. In most cases the OECD Statistics Directorate doesn't have any actual data collection programmes for these activities.

216. A population and housing census plays an essential role in all elements of a national statistical system, being used as a benchmark for statistical compilation and as a sampling frame. A vital aim of a census is to ensure that topics covered are appropriate for meeting the needs of all users (including, importantly, the national statistical system) taking into account considerations such as cost-effectiveness. This can be achieved through consultation with users through all stages, incorporating measurable standards into the process and adequate testing of all stages of the process.

Legal basis

217. In Peru, the Law N°13248 of July 1959, the "Organic Law of Census in Peru", gives the responsibility of conducting Census to the INEI and establishes that the maximum period between two successive national population and housing censuses is ten years: "as of 1960, Housing and Population Census will be carried out every 10 years throughout the territory of the Republic and in their jurisdictional waters". The last population Census was conducted on 21 October 2007, in accordance with the United Nations recommendation to undertake a population and housing census at least once during the period 2005-2014 (around the year 2010). The Population Census is usually conducted during a single day, jointly with the Census of Indigenous Communities of the Peruvian Amazon and the Housing Census. The 2007 Census was the 11th population census, and the 6th housing census, providing continuity to a statistical series of ten population censuses, dating back to 1836, the year of the first Peruvian Population census. The previous population censuses have been undertaken in 1836, 1850, 1862, 1876, 1940, 1961, 1973, 1981, 1993, and 2005. The first housing census was carried out in 1961, jointly with the population census.

218. In Peru, it is mandatory to respond to the census questionnaire. Article 87 of Supreme Decree N° 043-2001-PCM, states that "Natural and legal persons who refuse to provide data, falsifying the truth maliciously, or without justification delay established terms, will receive penalties established in Article 89, without prejudice to civil or criminal liability that might arise," and the Article 88 introduces penalties in case of non-compliance: "Penalties will be applied by NSS governing body for improving the production of statistics." According to Article 89, penalties are designed as fines. The response rate for the 2007 Population and housing census was approximately 97%.

219. The next population census will be carried out in 2017. The 2015 Supreme Decree N°066-2015-PCM declares that the XII Population Census, the VII Housing Census, and the III Census of Indigenous Communities of the Peruvian Amazon that should be conducted in 2017 are a national priority and refers to the Law 604 for empowering the INEI for undertaking the Censuses. The INEI is actively engaged in the preparation of the 2017 Population and Housing Census.

Definition and organisation

220. Peru produces census data on population and housing through a traditional survey based method without administrative data or through a combination of sources.

221. The 2007 Population and Housing Census measures population de facto, i.e. relates to the persons present in the Housing unit at the time of the Census. Due to the short enumeration period (a single day), specific measures are adopted by the Peruvian government: (i) the Census day is declared as a public holiday, and (ii) persons are asked to avoid moving during the day.

222. The adoption of a single day enumeration period may avoid some difficulties in particular if people often move during an extended enumeration period. However, this procedure requires a large number of interviewers for the completion of the enumeration and their effective supervision might be difficult to ensure. Moreover, errors could be more frequent and the content of the census may need to be limited.

223. The organization of the census in urban and rural population centres of the country is the responsibility of the INEI, through the National Directorate of Censuses and Surveys (DNC). The functional organization of the census enumeration is structured as following:

224. At the departmental level, the Departmental Head, is the highest official census level, is directly dependent on the National Directorate of Censuses and Surveys, and oversees sub department heads and provincial chiefs.

225. At provincial level, the Provincial Chief, is the highest level official census, reports directly to the Head of Departmental and to the Chief or Sub-Department, and oversees chiefs of sub-provinces and chiefs of district.

226. At the district level, the district chief, is the highest-level official census depends directly from the Provincial Chief or Deputy Provincial, he is responsible for the sub chiefs district, area managers, heads of rural section, chiefs special voter registration and Heads of registration of indigenous communities.

227. A level area, the Area Manager depends on the District / Sub District Head has his under the heads of sub urban area and section chiefs. The Head of Special Enumerator at the level Area Manager, depends on the District chief, is responsible heads of special section. Chief Electoral Register of Indigenous Communities has the level of Head of Area, for census purposes indigenous communities, Rural Section Chief and Enumerator Rural indigenous communities are the same officials for rural registration.

228. A level section, Section Chief Urban depends Zone Chairperson, has his urban enumerators charge. Section Chief District Rural depends, is responsible for the rural enumerators.

229. It has to be noted that a continuous (de jure) population census was undertaken over a month in 2005 in Peru. The questionnaire covered only basic question and the government asked the INEI to conduct a de facto census in 2007 to collect more information. At that time, it was concluded that the move to a de jure population and housing census was difficult, due in particular to the practices and habits as regards the way to conduct a population census in Peru. However, the population census is conducted over a longer period of time in the remote areas for practical reasons.

Coverage

230. The Peruvian Population and Housing Census cover the whole country, including all the rural and urban population centres of the country.

231. The 2007 Census was a de facto census, meaning that each person was interviewed in his/her current residence, even if he/she was not present on the electoral roll, each person and dwelling was registered separately. The habitual residence was considered as six months living in the country. The Census was carried out in the whole country, over a single day in the urban areas (21 October 2007) and over fifteen days in the rural areas, between May 30th and June 3rd, 2011.

232. The estimated population was 28 220 764, of whom 13 626 717 men (49.7%) and 13 792 577 women (50.3%). In 2007, 75.9% of the Peruvian population lived in urban areas (8 445, 2 thousands in Lima).

233. The Census questionnaire includes twenty six questions covering a wide range of topics and domains, allocated in five distinct domains: (i) localisation of the households, (ii) Characteristics and services of households, number within the dwelling; head; emigrants; remittances (iii) Characteristics of the dwellings, type (individual or collective, ownership); walls, ceilings, floor materials; quality and condition of dwelling; access to basic services (e.g. water, electricity, toilet); access to ICT; tenure of appliances; overcrowding; waste disposal, (iv) Persons composing the households, and (v) characteristics of the population.

234. The thematic domains can be broken down as follows (with a non-exhaustive list of variables):

    • Dwelling – type (individual or collective, ownership); walls, ceilings, floor materials; quality and condition of dwelling; access to basic services (e.g. water, electricity, toilet); access to ICT; tenure of appliances; overcrowding; waste disposal.
    • Household – number within the dwelling; head; emigrants; remittances.
    • Population – relationship to kin; structure by sex and age; migration; ethnic self-identification; social security; language; disability; education; using ICT; marital status; employment; fertility.
    • Other – population density; demographic dependency ratio; type of dwelling; average schooling; educational underachievement; open unemployment; non-satisfied basic needs; poverty, population projections.

235. A number of technological improvements were introduced for the 2007 Census, including the introduction of a digital mapping service, and the use of scanning questionnaires, resulting in less processing time and enabling the INEI to generate preliminary estimates more quickly.

Dissemination

236. The census results are disseminated in accordance with a communication plan established by the INEI. The plan includes extensive guidelines for the communication of statistics from the Census through press releases, media campaign (newspaper, radio, television), promotional campaign (panels, posters, banners, etc.), and public relations campaign (interviews, statements, panels, etc.). Disclosure and dissemination of results is carried out by a wide range of electronic and printed media, especially through the INEI website where the plan tables of tabulated and anonymised database including anonymised micro-data are available with all the investigated variables in the Census.

237. A large number of publications available in Spanish and including the 2007 census results have been produced and sold by the INEI. An online digital mapping service is also available with the following main indicators:

    • Results of the 2007 population and housing census.
    • Database of the population and housing census results by centre of population.
    • Poverty indicators by district.
    • Maps of poverty and extreme poverty indicators and non-satisfied basic needs.
    • Main demographic, social and economic indicators.

- Main social and demographic indicators (map of chronicle under-nutrition by district.
- Maps of indicators according to the Millennium Goals.
- Population projections by administrative department until the year 2025.

238. Based on the census results, the INEI estimates and disseminates population projections by period of five years until the year 2050, and projections by administrative department until the year 2025. Projections are estimated according to the methods of components: based on the census results, projections about fertility and mortality are estimated and then projections of international migrations are computed. The methods used to establish these projections follow the United Nations recommendations, especially those aspects related to the assumptions about fertility. The INEI co-operates with ECLAC notably on the projections of fertility rates.

Compliance

239. The 2007 Population Census in Peru complies with the international standards, in particular with the UN Principles and Recommendations for Population and Housing Censuses, Revision 2. International classifications, notably the classification ISIC, are used for the processing the population census information in order to codify the economic activities.

240. The INEI cooperates with the UN and other international organisations (e.g. Community of Andean Nations, ECLAC) in the design, compilation and dissemination phases of the census. While extensive metadata are available in Spanish on the website of the INEI, methodological information in English is very limited at this stage.

241. The population census is based on international classifications. The International Standard Industrial Classification of all Economic Activities (ISIC) is used for the processing of the population census information in order to classify the economic activities. Similarly, an own code compatible with the international classification was used for the classification of the occupations, as well as for the classification of professions and jobs. In addition, an UBIGEO code (geographical location codes for Peru) is used to geo-classify the administrative units of the country.

242. From all the metadata available, the 2007 Census appears compliant with the fundamental principles of universality within a defined territory, simultaneity, defined periodicity and individual enumeration.

Overall assessment of population and housing census

243. From a statistical point of view the census process (collection, compilation and dissemination) as undertaken by the INEI looks solid and in line with experiences in OECD member countries. However, from an overview point of view there are some issues (some serious) that need to be addressed. It should be noted that most likely some or all of these points are probably repeated in other parts of this review.

244. The current statistical legislation ensures that the INEI has the necessary authority to force respondents to complete the census questionnaire. An obligation to respond to the census is a common feature of statistical laws in OECD countries.

245. During the review process, the INEI committed to provide metadata and methodological information in English.

2.3. Agricultural Census

Background

246. A census of agriculture is the statistical operation covering the collecting, compiling, analysing and disseminating of data on the structure of agriculture in the whole country. An agricultural census is an essential part of the statistical infrastructure of a country, providing a clear view of the agricultural situation in the country, a sampling frame for agricultural based sample surveys and providing the basis for an integrated agricultural system.

247. Typical structural data collected in a census of agriculture are size of holding, land tenure, land use, crop area harvested, irrigation, livestock numbers, labour and other agricultural inputs. Data are normally collected directly from the agricultural holdings and normally involve collecting key structural data by complete enumeration of all agricultural holdings. While the FAO encourages national statistics offices (NSOs) to undertake a census at least every ten years (the latest round being the 2006-2015 round), this organisation of this statistical operation requires subsequent resources and is costly for a statistical office. However, understanding the cost and the burden on NSOs (as well as respondents), the FAO World Programme for the Census of Agriculture 2010 (WPCA) methodology recommended a moved to a modular approach (for the census survey and questionnaire) to try and ease some of these resource constraints.

248. Agricultural planning and policy-making present broad statistical needs, a census of agriculture provides fundamental data on the structure of agricultural holdings, such as farm size, land use, land tenure, livestock numbers, and the use of machinery, as well as the number of holdings with each crop and livestock type.

249. In Peru, the fourth and most recent agricultural census (IV CENAGRO, its acronym in Spanish) was conducted in 2012 after those conducted in 1961, 1972, 1994. The implementation of IV National Agricultural Census is legally based on Law No. 13248 "Law of Census", dated on 24 August 1959, which is still in force and stipulates that the State's permanent function is to conduct Agricultural Census every five years.

250. The Emergency Decree No.055-2011, of 14 October 2011, declared the fourth National Agricultural Census as national interest and priority, and gave the responsibility to the INEI to carrying out the specific actions related to the planning, organization and management of this activity, in cooperation with the Ministry of Agriculture and Irrigation.

251. Although the law stipulates that the tax resources, upon request of the INEI, shall be entered in the corresponding annual laws of General Budget of the Republic from Peru, in the Specification of Ministry of Treasury, the implementation of Agricultural Census also depends on the availability of resources and political will. The IV National Agricultural Census was executed after 18 years of the previous census of 1994. The other components of the legal framework for the agricultural census in Peru are as follows:

- Law No. 604 of Organization and Functions of the INEI that assigns to this institution census surveys.
- Cooperation Framework Agreement between the Ministry of Agriculture (MINAG) and the INEI.
- Supreme Resolution No.004-2012-AG sets the operation and composition of the Advisory Committee of the IV CENAGRO
- Departmental Resolution No. 017-2012 establishing the inter-institutional technical commission with representatives from the Ministry of Agriculture and from the INEI.
- Ministerial Resolution No. 0238-2012-AG approves the Guideline Plan, Census Program and census form.

252. Agricultural censuses in Peru follow international norms and standards, including those of the FAO 2010 World Programme for the Census of Agriculture. Experts from the Ministry of Agriculture and Irrigation and the INEI proposed methodological guidelines and procedures for its enforcement, in compliance with practices recommended by international agencies specialized in agricultural statistics, and with the suggestions and recommendations of researchers and qualified specialists, mainly from the Ministry of Agriculture and Irrigation which is the main user of census information. A list of variables to be covered by the agricultural census is prepared by the Ministry of Agriculture and Irrigation and the INEI to the relevant advisory committee, in accordance with the Supreme Resolution No.004-2012-AG.

253. The main characteristics of IV CENAGRO are as follows:

- The IV CENAGRO was a structural in order to obtain basic data that are updated over time.
- The IV CENAGRO was based on a complete enumeration, characterized by obtaining data for each agricultural unit in order to determine its characteristics, production, location, and plots.
- The statistical unit was the agricultural unit, defined as the field or set of land used entirely or partially for agricultural production including livestock, or as an economic unit driven by a farmer, regardless the size of holdings.
- The IV CENAGRO provides statistical information with a gender perspective with the aim to better estimate the participation of women in agricultural activities in Peru.
- Data was collected directly from agricultural holdings.
- A single form, approved by the Ministerial resolution No. 0238-2012-AG was used for data collection.
- The IV CENAGRO was developed using the same definitions and concepts as the III CENAGRO, investigating possible structural variables, allowing comparison of results between the two censuses and international comparability of the main results.
- Statistical units had to be registered for the IV CENAGRO during a 30 day-period, from October 15 to November 15, 2012.
- The census was conducted simultaneously in all administrative political fields in the registration period established.
  - The periods considered for the data collection were as follows:
  - Year: from 1st August 2011 to 31 July 2012.
  - Day Interview: the day of the visit to the farmer to get the information.
  - Day before the interview.
- The territory was divided into "Enumeration Agricultural Sectors" (SEA) corresponding to a portion of territory clearly defined with identifiable boundaries and located within a district, where hundred agricultural units on average are located.

- The IV CENAGRO was designed in a way that adequately contemplates the demands of the main users of information on agricultural sector, providing an essential design plans and policies for rural development input.

254. The following actions are considered by the INEI to further integrate the agricultural census into the system of integrated agricultural censuses and surveys:

- Create a list of Agricultural Units that allowed drawing up an updated framework of agricultural units to be used in the implementation of continuous surveys in charge of the Ministry of Agriculture and Irrigation.
- Implement an improvement process of Agricultural Statistics, through financing and signature of framework agreements (MINAGRI, by its acronym in Spanish), in order to generate a set of quality statistical information on key sector variables.
- Conduct continuous agricultural surveys (NAS) which allows the continuous evaluation of the evolution of these indicators; and contributing to the design and orientation of public policies to improve life conditions of field population. This survey is being performed to a sample of approximately 30 thousand small and medium agricultural producer(s).

Coverage

255. The IV CENAGRO census covered all the farms in the national territory over all administrative divisions (district, province, and region), undertaken by field work in areas identified as having agricultural units and with all properties geo-referenced. At all stages the design of the census followed the FAO WPCA recommendations. The questionnaire covered all structural variables, such as the use of the land but didn't include 'temporary variables' e.g. production and prices.

256. The following subject areas were covered in the 2012 agricultural census: general aspects of the producer and farm (producer status, farm's main purpose, geographical location, name, etc.); use and land tenure; agricultural crop area; cattle and pigs stocks by age, sex and main purpose; horses and other minor species; aquaculture and forestry activities; employment; participation by gender; use of fertilizers and pesticides; presence and type of irrigation; use of machinery and equipment; agricultural support services; and environmental conservation practices.

257. The definition of the subject areas were designed jointly by the Minister of Agriculture and Irrigation and the INEI in accordance with the recommendations of the FAO WPCA. Experiences in other countries who had recently undertaken agricultural censuses, and additionally national needs that were expressed for meeting specific agricultural requirements, were also taken into account.

258. The 2012 census enumerates 2 260 973 farms corresponding to an increase of more than 28% in the number of producers. 38 742 465 hectares of land were devoted to agricultural production.

259. The results of the Census were largely disseminated, in various formats on the website of the INEI, including microdata and maps.

Compliance

260. The Food and Agricultural Organisation of the United Nations is recognised as the lead international organisation for agricultural censuses. A system of integrated agricultural censuses and surveys, Volume 1, World Programme for the Census of Agriculture 2010, (FAO 2005) is considered the accepted international standard for undertaking agricultural censuses (for the 2006-2015 round). The INEI, with the Ministry of Agriculture and Irrigation, established the fourth national agricultural census of 2012 in accordance with the FAO World Programme for the Census of Agriculture 2010 (WPCA) methodology.

261. In terms of coverage, the WPCA recommends 16 core items (referred to as module 1). These are: identification and location of agricultural holding; legal status of agricultural holder; gender and age of agricultural holder; household size; main purpose of production; area according to land use types; total area; land tenure types; presence of irrigation; types of permanent and temporary crops; number of animals for each livestock type; presence of aquaculture on the holding; presence of forest and other wooded land; other economic production. These variables were covered in the IV agricultural census.

262. The following classifications were used in IV National Agricultural Census:

- International Standard Industrial Classification of all Economic Activities, Rev 4 at the fourth digit level.
- In terms of crops, a listing is used that contains typical products of our country as well as those contained in the Central Product Classification.
- Classification of Occupations 1995 (developed based on International Standard Classification of Occupations- 1988) at the first-digit level.

263. 45513 interviewers participated to the 2012 agricultural census in Peru, requiring subsequent guidelines and appropriate training ensured by the INEI, in particular as the Census was conducted over a single day. Census officials were trained in two groups responsible for the organization, conduct, etc. and responsible for gathering information.

264. Guidelines and questionnaire for the agricultural census are available in Spanish on the website of the INEI; no decision has been taken yet regarding this information being translated into English.

Overall assessment of agricultural census

265. The fourth agricultural census conducted jointly by the Ministry of Agriculture and Irrigation and the INEI in 2012 appears solid and broadly in line with international practice. However, the legal basis for the agricultural census clearly specifies that the maximum period between two successive agricultural censuses should be five years. At the time of the review, there is no indication that the fifth agricultural census will be conducted in 2017, in accordance with the legislation.

266. Article 33 also states, as for the population census, that funding needs to be sought from the government in addition to the normal budget to fund the activity. Clearly the legal basis for the agricultural census needs to be revisited and clarified. Part of any such clarification should involve the Ministry of Agriculture and Livestock and the 9071 Act which indicates that MAG is responsible for developing the agricultural census.

2.4. Statistical Business Register

Background

267. A business register is an essential part of any national statistical system, providing the sampling frame for economic surveys, the core basis of economic statistics and 'business statistics' (covering topics such as entrepreneurship, and business demography). It is therefore of fundamental importance that a country has an exhaustive business register to aid in the compilation of economic statistics, both short-term indicators and structural economic developments.

268. The introduction of business statistics has increased the need for business registers and turned the register into a provider of statistical data itself. Additionally, globalisation has given rise to new requirements for information on the structure of enterprises and with the rapid growth in the internationalisation of enterprises, namely multinational enterprises, new data requirements have emerged that can only be met through business registers.

269. Good business registers allow surveys to be distributed more effectively and economically between various enterprises (thus reducing respondent burden) and, by the use of the same information for different purposes, the total amount collected can be reduced. Good registers also allow for efficient structural changes that would allow for the register to meet new data requirements from users and the international community.

270. To ensure international harmonisation, the OECD encourages national statistics offices to follow the recommendations as outlined in the Eurostat "Business registers; Recommendations manual, 2010 edition". While the manual is directed at national statistics producers in the European Union, for example with the legal structure determined by European Commission regulations, the core recommendations for could be applicable to all national statistics offices.

271. In this regard, the Eurostat manual sees five core areas of harmonisation:

- definition of units – three units are seen as mandatory, namely the enterprise group, the enterprise and the local unit (all of which are defined in Regulation (EEC) No 696/93);
- coverage – all enterprises (and associated legal and local units), enterprise groups (e.g. multinationals) and all-resident enterprise groups that are active in the national economy, in other words contributing to GDP;
- updating – the business register needs to be updated regularly enough to ensure that it accurately reflects the situation in the country (and at least annually);
- characteristics – while Regulation (EC) 177/2008 provides a full list of all the mandatory variables required in a business register, characteristics that should be considered include a unique identifier for each unit (a common identifier across all administrative databases is best), time stamps, activity status, size measures (value added, employment etc.), and ownership control (e.g. majority ownership (over 50%), and SPEs); and
- quality – all measures should be taken to ensure the quality of the business register including the undertaking of quality reports (reviews).

272. In Peru, the creation of the statistical business register is relatively recent (less than ten years ago in 2008). It was developed in response to needs for better economic statistics in Peru (in particular to provide sampling frames for economic surveys) and to address needs for information on business statistics (business demographics, births, deaths and other business dynamics).

273. The INEI is legally responsible for the maintenance of the Central Business and Establishment Register (Directorio Central de Empresas y Establecimientos, DCEE, its acronym in Spanish). The DCEE is the central repository of information on businesses in Peru and is based on information received from the National Superintendency of Tax Administration (SUNAT), and updated by the Executive Directorate of Census and Surveys on Enterprises and Establishment Surveys at the INEI, which has the following functions:

- Determine the methods and strategies for the implementation of Censuses and Surveys on Enterprises and Establishments.
- Design and/or develop the basic technical documents: the program, the questionnaires, the Plan tabulations, Manuals, Codes and other documents for censuses and surveys of Companies and Establishments.
- Coordinate the development of Sectoral Directories for implementing Censuses and Surveys Enterprises and Establishments.
- Formulate and develop quality control plans for the consistency of the information Censuses and Surveys Enterprises and Establishments.
- Standardize and harmonize definitions, concepts and variables on Censuses and Surveys Enterprises and Establishments.
- Participate in the Technical Committee Censuses and Surveys.
- Organise training for staff responsible for carrying out censuses and surveys of enterprises and establishments.

274. Legally, the DCEE was created in accordance with the supranational legislation (Decision 698) of the Andean Community of Nations (CAN) on the creation and maintenance of the business registers of 9-10 December 2008. In that regards, Article 3 of the Decision 698 requires from member countries to create and to maintain a statistical register "Member Countries, through the National Statistical Offices, create and update a national directory of companies, for statistical purposes, according to the definitions and scope specified in the following articles." Article 6 establishes that "Member Countries update annually: a) high, low, fusions and divisions of statistical units in the directories; b) variables related to the name or company name, address, and legal form; and c) other variables according to data availability. Member Countries keep the historical archives of the changes made in the directories."

275. According to Article 7, this business register should be based on administrative records: "National Statistical Offices responsible for creating and updating directories set out in Article 3 of this Decision shall be authorized to collect the necessary information from administrative records maintained by public and private entities. The use of tax sources for updating at least the information contained in paragraphs a) and b) of Article 6 of this Decision is required."

276. The INEI maintains DCEE in accordance with the Legislative Decree N°604, the Statistics Law, which requires from INEI to ensure the coordination and execution of the production of the registers. In addition, a specific framework agreement was signed by the INEI and the National Tax Superintendency

(SUNAT) on 6 December 2001 on the exchange of information, and an inter-institutional committee including representatives from thirteen institutions including the INEI and SUNAT was put in place following the resolution N°024-2010-INEI signed on 17 December 2010 and allowing the INEI to access and use administrative data from the SUNAT for the maintenance of the DCEE.

277. The main sources for updating the DCEE are the administrative Unique Register of Taxpayers (RUC its acronym in Spanish) of the SUNAT, the annual economic survey conducted by the INEI, various surveys carried out by the INEI, and information from the Superintendency of Banks, insurance and SFP, from the Superintendency of market values, and from the Ministry of Energy and Mining. In accordance with a specific framework agreement on the exchange of information signed by the INEI and the SUNAT on 6 December 2001, the SUNAT transmits to the INEI information from the RUC on a yearly basis, and information on business demography (births and deaths of enterprises) on a daily basis. Internally the INEI updates the DCEE (on a rolling basis) using new information sourced from its economic surveys.

278. However, while the institutional organisation allows the INEI to access administrative data from the SUNAT for compiling official statistics, all the information required for updating and maintaining the business register is not accessible to the INEI due to legal restrictions regarding confidentiality.

279. The INEI is involved in activities on Business Registers at the international level. A representative from the INEI has participated in the International Workshop on Economic Census, Business Registers and Integrated Economic Statistics organised jointly by the INEGI Mexico and the UN Statistics Division on 29 September – 1 October 2015 in Aguascalientes in Mexico.

280. It has to be noted that the INEI also conducts a National Economic Census. While the statistical legislation establishes that the Economic Census should be organised every five years, the last one was organised in 2008, after those conducted in 1964, 1974, and 1993-1994. The 2008 Economic Census refers to the year 2007 and covered 940 336 establishments. The objective of the census is to obtain basic economic information at the national, regional, provincial, and district levels. This information is be used in the sample design of the business surveys. The census is conducted in accordance with the Supreme Decree N°006-2008-PCM, which declares the census of national interest, and the Resolution N°063-2008-INEI. The census covers urban areas over the whole territory of Peru (1833 districts, 24 departments, and the Constitutional Province of Callao). The statistical unit is the establishment. Data collection is ensured through the use of printed questionnaires for establishments which realise sales under 220 775 USD, and through electronic questionnaires for the other enterprises. Economic activities are classified in accordance with the classification ISIC Rev.4. INEI plans to carry out a National Economic Census in 2018.

Coverage

281. The statistical units of the DCEE are the enterprises, establishments and production units. There is no cut-off threshold for small units. The overwhelming majority (95%) of the 1.883.531 enterprises registered in the DCEE in 2014 were micro establishments. The small and micro enterprises represented 99% of the production units registered in the DCEE.

282. The DCEE includes eight categories of business units, in accordance with the law on corporations: natural persons or individual, individual enterprises of limited responsibility, private company, commercial limited liability company, civil society, association, cooperative and other.

283. In terms of variables, the DCEE includes information on the number of enterprises, their specialisation, size, and type of organisation, allowing to process information at the national level, business level, and by economic activity. To determine the size of the range of sales companies providing the Superintendencia Nacional de Administración Tributaria (SUNAT) based on a cooperation agreement is taken. In other cases, specific sales statistics are obtained through investigations by the INEI. Another variable to determine the size of company is the range of employed persons. It should be noted that some complaints are also made mainly in micro-enterprises because no state sales recorded or special regimes with the tax agency. Each enterprise in Peru has a unique identifier.

284. In terms of time coverage, the DCEE includes annual information from 2012. Quarterly information on Business Demography is available from the first quarter 2013.

285. In terms of population coverage, the DCEE is a structured register of all national (resident) entities engaged in economic activity (production of goods and services) in Peru. The statistical business register contains information on businesses and excludes governmental and non-governmental institutions. For each enterprise, the DCEE contains a reasonable number of variables (name, address, contact details etc.) as well as additional variables for secondary activities at the same location and for the establishment. The DCEE includes information on number of employees, economic activity (based on the classification ISIC Rev.4), exporting/importing identifier, and foreign branches.

286. The INEI provides detailed mapping across the country through a geographic location code ("Codigo de Ubicacion Geographica", UBIGEO its acronym in Spanish), in accordance with the Resolution N°149-2001-INEI which gives to the INEI the responsibility to create and maintain the six-digit UBIGEO codes referencing administrative departments, provinces and districts.

287. The INEI undertakes a number of quality control measures when adding new enterprise units into the DCEE, these include correcting and excluding out of range data, updating classifications (ISIC Rev.3 to 4), excluding records with missing data, validating identity numbers, ensuring the business has a unique identity number, and removing units outside the set criteria (mostly this involves removing government units).

288. The INEI disseminates data based on the DCEE in various statistical outputs: the annual publication on business structures, the quarterly publication on business demography, and a number of press releases. These publications include information on enterprise by economic activity, size, employees and geographical area, changes in the 'most important' variables; and employment generated from new enterprises. The INEI does not make the full database available to users. Non-confidential information from the DCEE is accessible on request.

289. Future projects foreseen by the INEI include the integration of information on wages and salaries from the Ministry of Labour and Employment, the coordination with municipalities, and the coordination with the Superintendency of Public Registers to include fusions, takeovers that would be useful for analysing business demography. The INEI did not provided timetables for these projects.

Compliance

290. The main references for the concepts, definitions, and technical recommendations and best practices identified for the creation, updating and ongoing improvement of directories of enterprises and establishments are: (i) UN-ECLAC's *"Compendium of Technical Recommendations and Best Practices for Preparing Directories of Enterprises and Establishments"*, published in November 2013[19] and funded by the Regional Public Goods Program of the Inter-American Development Bank (IDB); (ii) in the Eurostat *"Business registers; Recommendations manual, 2010 edition"*; and (iii) the Decision 698 of the Andean Community of Nations (CAN).

291. The DCEE contains a wide selection of variables essential for a business register which are updated regularly via range of methods, including surveys, direct contact with businesses and administrative records. In regards to classifications, enterprises are coded according to ISIC Rev.4 for business activity to a six digit level.

292. The INEI sees quality as very important for its business register and attempts to ensure that all possible updates are verified as well as quality controlling on an annual basis by undertaking a census of a selected district. INEI visits some establishments in order to validate information and information collected from the SUNAT on a daily basis is validated continuously.

293. While the DCEE does not exclude informal sector enterprises, it is very difficult to find these businesses in the administrative records of public institutions (which is normal) and so records of micro-establishments of the informal sector are mostly obtained through field work (depending on these businesses having a fixed structure).

294. The DCEE includes economic units from the private sector resident in Peru and their establishments engaged in activities producing goods and services. Government institutions, such as public schools, state institutions, public hospitals, etc., are also included.

Overall assessment of the statistical business register

295. The Peruvian statistical business register complies with OECD quality requirements in most respect. The DCEE is statistically robust and meets most of the INEI's needs for the production of business statistics, business demography, and for the production of samples for undertaking economic surveys.

296. The large share of micro establishment and small enterprises raises the issue of quality and the INEI is invited to disseminate more detailed information on the procedures in place for ensuring the quality of information in the statistical business register, notably through comprehensive metadata in English.

297. Moreover, the INEI capacity to access the most up to date administrative information from the SUNAT, and to cooperate with the owners of administrative sources with the aim to improve the quality of administrative records could be strengthened.

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19 http://www.cepal.org/deype/noticias/documentosdetrabajo/7/51327/LCL3707i.pdf

298. The Secretariat encourages INEI to conduct an economic census no later than 2018, i.e. ten years after the previous one, with the aim to refresh important information from establishments. The INEI is also encouraged to consider using the enterprise and local units, in addition to the establishment, as statistical units when conducting the next economic census.

2.5. International standards and classifications

Background

299. International classifications and their appropriate use represent a fundamental pillar in ensuring comparability and in improving the quality of data at both the national and international level. The OECD is a large collector of national data, across a vast array of subject areas and statistical fields. The only way in which this body of statistics can make sense and be useful at the international level is adherence to international classifications.

300. In Peru, the INEI is responsible for the implementation of international standard and classifications over the whole National Statistical System. Like most national statistics offices and producers of official statistics, the INEI implements international classifications either by 'Adoption', (using the international classification following its original structure), or 'Adaptation' (adapting the international classification to its national needs). The bottom line for the OECD is the ability for the country to provide statistics as requested, therefore if a country decides to adapt an international classification this isn't an issue as long as it can still supply the required statistics by the requested classification (i.e. this will normally require the country to have relevant conversion tables).

301. In accordance with the statistical legislation, the INEI is responsible for the adoption and adaptation of international economic classifications in the Peruvian statistical system, i.e. for the purposes of the production of its statistics and for the National Statistical System as a whole. The INEI uses Jefatural resolutions for the implementation of specific classifications, as for example the Resolution N°024-2010-INEI in 2010 for the adoption of the classification ISIC Rev.4. The INEI is also leading a technical committee in charge of the discussion about the adaptation of international classifications.

302. The Table 1 below presents the various classifications either adopted or adapted for the production of official statistics in Peru.

Table 1. International Classification Usage in Statistics of Peru

Name	Adoption or non-adoption	Plans for adoption	National classification and correspondence table
COICOP Rev.2 (12 divisions)	Adoption		No
COPNI 2010	Non Adoption	A plan will be prepared in 2016.	No
ISIC Rev.4	Adoption		National classification, no correspondence table.
CPC Version 2	Adoption		No
HS 2012	Adoption		It has the Customs Tariff of Peru 2012 by SUNAT tariff subheading. Electronic copy is attached.
ISCO 1988	Adoption		National Classification at 3-digit level, no correspondence table.
ISCED 2011	Adoption		Correspondence table available. The adaptation of the Ministry of Education was carried out taking into account the characteristics of data sources used (especially the School Census carried out by MINEDU). Table is attached.
ICD Version 10	Adoption		No
CIS 2008	Adoption		No
COFOG 2000	Non-adoption	COFOG correspondence has been working with national classification. It is expected to have series of expenditure by the end of the second quarter of 2016.	
SITC	Non - Adoption	There are no future plans for adoption.	
EBOPS 2010	Adoption		BCRP has not provided the correspondence table yet.
MIG (GSI based on NACE Rev.2)	Non - Adoption	Review and evaluation for the adoption and adaptation of the classifier NACE Rev. 2 according to Regulation (EC) No. 656/2007 - Nace Rev. 2, 2016	
ICSE			The national classification includes: categories Employer, self-employed, employee, worker, domestic worker. In the case of Peru, the occupation category that allows identifying this classification of "contributing family workers" includes unpaid family workers of other household (registered in alternative "others"). A particular case is the occupation category "Domestic workers" that we classify as dependent workers, i.e. are classified as employees. (CORRELATION TABLE IS MISSING, ICSE-93 with Peruvian classification – Technical Direction of Demography and Social Indicators)

Source: **ISCO 1**/ it has a one-digit level correspondence

303. The Table 2 below presents the various classifications used in the main statistical programs.

Table 2. Statistical Programs and Classification Use

Statistical programme	Classifications
Annual National Accounts	ISIC Rev.4, CPC Version 2, CSI, COFOG, EBOPS, Customs Tariff of Peru 2012 by SUNAT tariff subheading, COICOP Rev. 2, ICSE-93
Quarterly National Accounts	ISIC Rev.4
Financial Accounts and Financial Balance Sheets	SUNAT provides information according to ISIC Rev.3, the INEI ensure the conversion in ISIC Rev.4
Public Sector Debt	COFOG
Business Statistics	ISIC Rev.4, ICSE-93
International Trade	Customs Tariff of Peru 2012 by SUNAT tariff subheading
International Trade in Services Statistics	EBOPS at eleven large groups level. BCRP, not yet ratified
Consumer Price Indices	COICOP version 2, twelve Divisions
Producer Price Indices	ISIC Rev.4
Balance of Payments	EBOPS at eleven large groups level. BCRP, not yet ratified
Labour Force Survey	ISIC Rev.4, CO 1995 (Based on ISCO 1988) three digits, ISCE-93
Other Household Surveys	ISIC Rev.3, ISIC Rev.4, Classification of occupations 1995 (Based on ISCO 1995)at three digits, COICOP, ISCE-93
Population Statistics	
Indexes of Production and Demand	Physical Volume Index of production in ISIC Rev. 4 and Aggregate Demand with Nomenclature for Goods and Services in CCP version 2.

304. The classification ISIC Rev.4 is also used in other statistical programs in Peru, beyond those of INEI and the BCRP:

- Industrial Opinion Survey: Perspectives and opinions of enterprises on the productive development of manufacturing industry. Used classification ISIC Rev.4 (Ministry of Production – PRODUCE)
- Surveys of Department Stores and Retail Hypermarkets and Shopping Centers: Survey to measure the development of sales of subsector domestic trade in Department Stores and Retail Hypermarkets as well as Shopping Centers. Classification used ISIC Rev.4 (Ministry of Production – PRODUCE)
- The National Survey of Monthly Variation of Employment helps to determine the causes of the increase or decrease of workers by activity fields and occupational category (employees and workers). Classification used ISIC Rev.4, the Ministry of Labor and Promotion of Employment (MTPE, by its acronym in Spanish)

Overall assessment of international standards and classifications

305. In general, statistical classifications implemented in the Peruvian statistical system comply with international standards. According to the statistical legislation, the INEI is in charge of ensuring the creation, monitoring and dissemination of standards and classifications as well as enforcing compliance among entities of the National Statistical System.

306. While the decision to adopt or to adapt international classifications is country specific and depends on many factors (for example specific industries that need further breakdown in the economy), the INEI has decided to adopt the main international classifications to produce official statistics under its responsibility. However, and despite the fact that the INEI provides clear information and guidance for ensuring their implementation by all the entities within the National Statistical System, some other producers decided to adapt, or to delay the adoption of the most recent versions. For example, the INEI needed to prepare concordance tables with the classification ISIC Rev4 for the data received from the SUNAT in accordance with ISIC Rev.3. Although the INEI is legally responsible for the compliance with international standards in the National Statistical System as a whole, the INEI sometimes needs to find a more forceful way, such as specific regulations, to ensure better overall coordination and cooperation on the implementation of statistical classifications among the entities within the National Statistical System.

307. In this context, there is room for improvement in the coordination of the implementation of statistical classifications in Peru. The INEI is encouraged to develop and maintain a catalogue of classifications with the aim to efficiently ensure a coordinated implementation of international statistical classifications among the entities of the National Statistical System and to provide guidance on the use of classifications, on the transition to the new versions, and on the correspondence with international classifications. The catalogue of classifications would include general information on national, and international classifications (scope, originating authority, structure, relevant legislation, implementation date, etc.), as well as information on their use (responsible institution, purpose of introduction, area of use, availability, etc.). The maintenance of the catalogue should be incorporated in the statistical program of work.

2.6. Labour force surveys and Household budget survey

308. Labour Force Surveys are a mainstay of labour data for National Statistics Offices across all OECD countries and probably the most reliable of household surveys and therefore offer a great potential for analysing the employment conditions of the population. These data are a cornerstone for governments in designing and measuring the impact of social and employment policy. The main reason for undertaking a Labour Force Survey (LFS) is to split the population of working age persons into three mutually exclusive (and exhaustive) groups: the employed, the unemployed, and the inactive. The LFS can then provide full information on each of these groups and for the working age population as a whole via the sampling frame.

309. Understanding better the labour market is critical not only for the functioning of the economic system but also from the perspective of individuals. The great variety of employment forms in developed and developing countries, the implications for households of unemployment, migration, work-life balance, and a wide set of well-being issues have created an urgent demand to analyse household type survey data more thoroughly.

310. In general, Labour Force Surveys are rotating random sample surveys of persons living in private households. These surveys are designed to collect information on the labour market. The samples of households are normally drawn from population census addresses databases and are stratified geographically.

311. Over the past few decades, much progress has been made in the content of Labour Force Surveys. Their content has become more uniform across countries (due, in particular, to the existence of ILO guidelines and of the Eurostat framework for European Union Member States).The Labour Force Survey (LFS) is one the master pieces of work on labour market indicators (employed, unemployed by age, sex, educational level, kind of economic activity, occupation in the current (for the employed) or last (for unemployed) job, etc.). Furthermore, the LFS is the only source which enables employment to be measured in accordance with the internationally agreed concepts and definitions as established by the 13th International Conference of Labour Statisticians (ICLS 1982) convened in 1982 by the International Labour Organization (ILO).

312. This section covers two main statistical surveys carried out by the INEI: the Permanent Employment Survey (Encuesta Permanente de Empleo, EPE its acronym in Spanish), which main objective is to obtain quickly through a short questionnaire monthly indicators for policy makers, geographically limited to the region of Lima; and the National Households Survey (Encuesta Nacional de Hogares, ENAHO its acronym in Spanish) which is a multi-purposes survey on employment, informality, social indicators and life conditions of households over the entire country. The ENAHO survey can deliver, as a sub-product, indicators of employment and incomes at national level. In addition to these continuous surveys, INEI organises some years a Household Budget Survey, the ENAPREF.

Permanent Employment Survey (EPE)

313. The Permanent Employment Survey (EPE) is carried out by the INEI since 2001 and became a continuous survey conducted every month in March 2011 providing quarterly estimates of employment and earnings of the members of households.

314. The EPE survey is carried out by the means of direct interviews. The questionnaire includes sixty questions and data collection uses PDA technologies since February 2012 and digital technology since May 2015. Twenty interviewers, six local coordinators, one departmental coordinator are included in the group of 29 persons in charge of field work. Each collector interviews twenty households per week and each household is visited approximately three times per year. It is mandatory for the respondents to provide information and the response rate approximates 95%, with large variations between urban and rural areas. Quality is improved by the use of double interviews for approximately 20% of the households.

315. The EPE survey is based on a two-stage probabilistic sample stratified implicitly by socioeconomic strata, drawn from the results of the 2007 Population and Housing Census (since October 2010). The primary sampling unit is the conglomerate (conglomerados in Spanish) or cluster (including 140 households in average) and the second sampling unit is the selected household (there are four selected households per cluster). 50% of the sample (125 clusters) is new and the remaining 50% (125 clusters) corresponds to a sample panel and the sample frame comes with source in the 2005 Population and Housing Census. This procedure was carried out over a period of three months, from October to December 2010. From January 2011, all sample clusters have been renewed, according to a rotation by step of 400 clusters per month.

316. The sample includes 19 200 private homes in the year corresponding to 4800 households. From January 2011 the sample has been increased to 1600 monthly housing distributed in 400 clusters. This sample size considered an over 20% due to non-response. Collective dwellings are not covered by the survey, but the INEI conducts ad-hoc surveys with the aim to collect information on collective dwellings.

317. The main indicators, published monthly each mid-month, on the basis of the moving average of the last three months of responses to the survey, are:

- Number of occupied persons and total of hours worked, by week,
- Number of persons unoccupied, by type of inoccupation,
- Number of persons with adequate job,
- Number of persons underemployed,
- Number of new entries in the labour market,
- Percentage of persons occupied who have health insurance,
- Average of monthly revenue (total and principal).

318. Indicators by moving quarters are obtained, employment indicators are obtained per quarter and per year. The results of the annual indicators are not equal to the arithmetic mean of monthly, quarterly or half-year results.

319. The results are disseminated via a press conference and press releases, a monthly bulletin, on INEI's web site and through a system of micro-data.

Coverage

320. The geographical coverage is limited to the Metropolitan Area of Lima and Callao and the reference population consists of all resident population aged 14 and over including national armed forces stationed abroad, merchant seamen at sea, diplomatic personnel located abroad, civilian aliens resident in the country, and excluding foreign armed forces stationed in the country, foreign diplomatic personnel located in the country, and civilian aliens temporarily in the country).

321. The survey covers:

- Main characteristics of the members of the household (sex, age, level of education, career, ethnic group, disabilities)
- Employment and Revenues (main occupation, branches of activity, category of occupation, size of firm, date of entry into work, hours worked)
- Income (frequency of payment, type of payment received)
- Unemployed (search of jobs, availability, experience, duration of unemployment, previous jobs)
- Health insurance.

322. All occupations are covered. Unemployed persons refer to those aged 14 or more, who were not working but were available for work during the reference week and will continue to seek work for pay or gain. The definition of unemployment is consistent with the internationally agreed concepts and definitions as established by the 13th International Conference of Labour Statisticians (ICLS 1982) convened in 1982 by the International Labour Organization (ILO).

323. In terms of variables, the EPE survey provides quarterly estimates of the main aggregates of labour market and some social indicators (household's demographic characteristics (gender, age, position in the household, etc.), characteristics of the labour force (employment and earnings), characteristics of the working age population (activity status), commuting trips, health insurance, handicaps, and ethnic characteristics).

324. Quarterly data are presented as three-month moving averages in a number of paper and electronic publications. Microdata are also made available by the INEI on its website. The main indicators include the following: number of occupied and non-occupied persons, employed, unemployed, hours worked, number of persons with a health insurance, etc.

Compliance

325. In terms of classifications, the EPE survey refers to international standards: occupations of employed persons are classified in accordance with the International Standard Classification of Occupations (ISCO-1988), and economic activities are classified in accordance with the classification ISIC Rev.3 for the years between 1998 and 2011 and with ISIC Rev.4 for the years since 2012.

326. Since 2015, the INEI is preparing the implementation of the new standards adopted during the 19th ILO Conference in October 2013. The INEI is conducting pilot studies with statistical offices from nine other countries with the aim to draft implementation guidelines. Experts from the INEI are cooperating closely with ILO statisticians for this two-stage program implemented over the period 2015-2017: the first phase (2015-2016) concerns the main pilot tests and the second phase consists in additional pilot tests.

National Households Survey (ENAHO)

327. The ENAHO is a national multi-purpose survey carried out since 1995 with the aim to produce a wide range of indicators including data on the evolution of poverty, labour market indicators (with a module including 86 questions), incomes, well-being, and life-conditions of households in Peru. The headline indicator of the ENAHO survey is the poverty indicator but the survey also includes a module on employment and revenues (module 500) with 86 questions which is the source for the estimation of labour market indicators at the national level. From 1995 to 2002, the ENAHO survey was carried out on a quarterly basis. Since May 2003, the survey is carried out continuously, allowing the production of monthly, quarterly and annual indicators. Since 1998, the survey includes a panel component.

328. The ENAHO survey is carried out by the means of direct interviews. The survey is composed of five questionnaires (housing, households expenditures, education, health, and employment and income), with a total of three hundred and fifty two questions. One hundred and twenty-five interviewers at the national level, supervised at the departmental level by twenty coordinators and at the local level by fifty supervisors, composing a group of 202 persons in charge of field work (92% of the group is composed of women). Data collection uses PDA technologies with GPS.

329. It is mandatory for the respondents to provide information and the non-response rate approximated 7% at the national level in 2013-2014, with large variations between urban areas (8.8 %) and rural areas (2.3%) and among socioeconomic categories (higher non response rate for the higher income levels).

330. The size of the sample is related to the topics covered by the questionnaire. In the year 2014, the sample included 31 690 housing units, of which 19 410 in urban areas and 12 280 in rural areas. Approximately 30% of the households are surveyed on a panel basis. The sample covers 4 770 clusters at the national level, of which 3 235 in urban areas, and 1 535 in rural areas.

331. The ENAHO survey is based on a probabilistic, stratified, multi-stage, and independent sample in each department (state or region). A panel of housings units surveyed every year was implemented in 2008 with the aim to measure changes in the behaviour of some specific populations.

332. The sampling frame for sample selection is based on information from the Population and Housing Census and cartographic material updated for this purpose.

333. In urban areas, the Primary Sampling Unit (PSU) is populated urban centre with 2,000 inhabitants and more (Village). The Secondary Sampling Unit (SSU) is the cluster with has in average 120 housing units in average. The Tertiary Sampling Unit (TSU) corresponds to the housing unit.

334. In rural areas, the Primary Sampling Unit (PSU) is of two types: (i) populated (Village) urban centre with 500 to less than 2 000 inhabitants; and (ii) the Rural Enumeration Area (REA) which includes 100 housing units in average. The Secondary Sampling Unit (SSU) is also of two types: (i) the conglomerate corresponding to 120 housing units in average, and (ii) the selected housing. The Tertiary Sampling Unit (TSU) is the housing unit.

335. In the not sample panel visit each year the same clusters in the same month survey but different households are selected. The confidence level of the sample results is 95%.

336. The quality of the survey is monitored through thirty-seven quality indicators by the Advisory Commission on Poverty Estimates (Comision consultativa para la estimacion de la pobreza), in accordance with the Supreme Resolution N°097-2010-PCM on 13 April 2010. The main functions of the Commission are to assess, monitor and validate the quality of the National Household Survey-ENAHO survey, to validate the methodology for measuring poverty indicators, to ensure the comparability of indicators, and to propose amendments to the methodology. The Commission is composed of national institutions (Ministry of Finance, BCRP, etc.), international organisations and foreign research institutes (World Bank, French Research Institute on Development (IRD), United Nations Population Fund (UNFPA)) and independent experts.

Coverage

337. The ENAHO survey covers the whole country of Peru, i.e. the 24 departments and the Province of Callao. The reference population consists of all resident population aged 14 and over including national armed forces stationed abroad, merchant seamen at sea, diplomatic personnel located abroad, civilian alien resident in the country, and excluding foreign armed forces stationed in the country, foreign diplomatic personnel located in the country, and civilian aliens temporarily in the country).

338. All occupations are covered. Unemployed persons refer to those aged 14 or more, who were not working but were available for work during the reference week and will continue to seek work for pay or gain. The definition of unemployment is consistent with the internationally agreed concepts and definitions as established by the 13th International Conference of Labour Statisticians (ICLS 1982) convened in 1982 by the International Labour Organization (ILO).

339. The main results of the ENAHO cover:

- Indices of monetary poverty, non-satisfied basic needs
- Number of persons occupied, unemployed, under-employed, informal employment
- Incomes and Expenditures
- Access to health indicators, to social programs, to quality water, to waste systems, to electricity, to Internet.
- Indicators of education (attendance, level reached, average of years of study, illiteracy, main competences).

340. The ENAHO survey covers households and individuals incomes including imputed incomes:

- Household incomes, constituted by:
  - Labour incomes
  - Current Transfers (national and foreign)
  - Property Income (monetary income and/or in kind)
  - Extraordinary incomes of household (like accident or old-age insurance, heredity, gambling, compensation for occupational accident or dismissal, among others)
  - Own home rent[20]
  - Use value of durable goods.
- Labour incomes, composed of:
  - Labour incomes of the main and secondary occupation of dependent and independent workers
  - The income received in monetary form and in kind (dependent worker) and/or by self-consumption/self-supply (independent worker)
  - Extraordinary incomes for dependent work (main or secondary occupation) as bonuses for Christmas and holidays, education bonus, profit sharing of company, among others

341. Results of the ENAHO are disseminated via quarterly bulletins containing reports on living conditions, gender statistics, situation of adults, children and teenagers, statistics on use of new technologies. Annually are published: the report on poverty, with regional profiles, indicators of employment and income by department, indicators of education by department and gender gaps. Results are included in on-line databases and graphs accessible from the website of the INEI, alongside with Microdata.

342. Employment and unemployment statistics from the ENAHO survey are published in the following documents:

- Annually: the publications "Peru: Evolution of the indicators of Employment and Income" and the "Statistical Compendium", include annual information on the labour force participation, employment (levels and rates), unemployment, informal employment, etc., disaggregated by departmental, geographical area (urban and rural), sex, age groups, educational level, etc.
- Quarterly: the publications "Living conditions" and "Statistics with a Gender Focus" are published in the technical reports. Quarterly information refers to the urban national area, and includes figures on the activity rate, employment, unemployment, etc. by group of age, sex and educational level. Peru does not publish unemployment data for the rural area, for which the concept of unemployment is not adapted. Quarterly data are presented as three-month moving averages in a number of paper and electronic publications.

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20 It is still unclear whether there is an imputation of owner-occupier rents

343. The continuous data collection and the ENAHO sample allow the production of socio demographic estimates for different levels of inference, as follows:

1. Integrated sample (panel and non-panel)
- •   Annual
  - National
  - National urban
  - National rural
  - 24 departments (states or regions), each as study domain
  - Urban coast
  - Rural coast
  - Urban Mountain
  - Rural Mountain
  - Urban jungle
  - Rural jungle
  - Lima and Callao Metropolitan area
- •   Quarterly
  - National
  - National Urban
  - National Rural

2. Sample panel
- •   Annual
  - National
  - National Urban
  - National Rural
  - Coast
  - Mountain
  - Jungle

344. In terms of timeliness, the results of the ENAHO survey are released in a press release seventy-five days after the end of the reference period (the last month of the moving average quarter).

345. The ENAHO survey is also used by the INEI for data collection on informal employment defined under three conditions: (i) own-account workers and employers employed in their own informal sector enterprises, (ii) employees without social security funded by their employer, and (iii) unpaid family workers.

346. As regards informality, the ENAHO survey allows to produce a measure of informal employment annually. The definition of informal employment is basically based on the criterion of not being covered by social security by the employer. INEI is currently assessing whether this information could be obtained bi-annually. In May 2015, INEI published a "Satellite Account of the Informal Economy" covering the period 2007-2012.

Compliance

347. The definitions in the ENAHO survey comply with the recommendations of the 13th Conference of Labour Statisticians (1982). The INEI is actively preparing the move to the definitions recommendations 19th International Conference of Labour Statisticians (ICLS) of October 2013.

348. The classification used for occupation is ISCO-1988. Economic activities are classified in accordance with the International Standard Classification of Occupations (ISCO-1988), and economic activities are classified in accordance with the classification ISIC Rev.3 for the years between 1995 and 2011 and with ISIC Rev.4 for the years since 2012.

National Family Budget Survey (ENAPREF)

349. The ENAPREF is a classical Household Budget Survey conducted by the INEI. As in many OECD member countries, it is organised on an irregular basis, with the main aims to: (1) update the detailed weighting structure of the CPI, and (2) contribute to the quality of the detailed supply and use tables of the national accounts. The organisation of the ENAPREF is coordinated with the timing of the base year of the national accounts and the last ENAPREF survey was conducted in 2008-2009. INEI intends to organise the next ENAPREF survey in 2018-2019, with the aim to contribute to the new base year which results are expected by 2021.

350. The ENAPREF survey covers the entire country (urban and rural areas) and takes place during 12 months. Collective households are excluded. The domains covered are:

- Characteristics and global expenses of the Household and its individuals
- Other expenses
- Employment and revenues
- Daily journal of expenditures
- Incomes of agriculture

351. Two methods are in place for the data collection: (i) a direct interview for the three first domains, and (ii) a questionnaire filled by the household for the fourth one (daily journals of expenditures). The sample framework is the Census of Population. As for the ENAHO survey, the primary unit of the sampling is a "conglomerado urbano" (120 dwellings) for the urban areas. The secondary unit is the dwelling. The sampling is probabilistic, by stratum, and independent in each department.

352. The size of the sample of the last ENAPREF was of 34 680 dwellings for the urban areas and 1 536 for the rural areas. The results of the survey are significant at the following levels: national, national urban/rural, Metropolitan region of Lima and Callao, and 25 departmental capitals.

Overall assessment of labour force surveys and household budget survey

353. The INEI has a satisfactory set of three main social surveys, the EPE, a continuous survey, which corresponds to a classical Labour Force Survey, the ENAHO, a continuous survey, which corresponds to a Living Conditions survey, and the ENAPREF, similar to a classical household budget survey.

354. While the main Labour Force Survey, the EPE, is an efficient survey in terms of methodology and timeliness and while the Lima region gathers one third of the population of Peru, the fact that it is limited to the Lima region questions the relevance of the statistics of employment/unemployment of Peru. At the same time, the ENAHO can give results on the labour market for the whole country, but they are essentially annual. INEI is currently evaluating the possibility of further (assessment of robustness of the results) dissemination of bi-annual information related to the labour market based on ENAHO, with urban national results and by region. The INEI committed to go further in the short-term by publishing indicators of unemployment quarterly for the urban areas of the whole country. Given the importance for social policy of statistics on formal/informal employment, the OECD recommends also that these efforts lead to publish quarterly statistics on informality, based on EPE and/or ENAHO.

355. In the longer term, INEI is encouraged to consider the implementation of a Specialised Survey on the Labour Market with national coverage, by department and major city.

CHAPTER 3. NATIONAL ACCOUNTS STATISTICS

3.1. Introduction

356. The objective of the OECD's National Accounts Statistics Programme is to disseminate a complete set of national accounts that are comparable between countries, analytically useful, timely and available for a period as long as possible.

357. This chapter covers: (1) annual non-financial national accounts, (2) quarterly non-financial national accounts, (3) general government accounts and (4) financial accounts.

358. The INEI has been very helpful in actively contributing to the review process of national accounts. The documentation received (both in English and Spanish) is rich and appropriate. The Central Bank (BCRP), Superintendencia Nacional de Aduanas y de Administración Tributaria (SUNAT) and Ministry of Economy and Finance: Integrated Financial Management System (SIAF) contributed to the fiscal statistics and the financial accounts.

3.2. Annual non-financial national accounts statistics

359. The present assessment is based on the data and the very complete metadata (in English and in Spanish) supplied by Peru via the OECD questionnaires, the documentation obtained through the first OECD fact finding mission (23-27 November 2015), and the examination of the existing national and international sources (IMF) for Peruvian national accounts statistics. The present chapter has also used the content of the sections on national accounts of the IMF Report on Observance of Standards and Codes (ROSC) for Peru (October 2003)[21] and of the IMF Special Data Dissemination Standards (SDDS) on Peru.

OECD data and metadata requirements

Coverage – annual non-financial accounts

360. The OECD Annual National Accounts (ANA) database contains data collected from all OECD member countries and some other major economies on the basis of a standardised questionnaire as well as according to countries' own definitions and classifications.

361. The data requested cover the following domains:

- Table 0101: Gross value added at basic prices and GDP at market prices, current price (code V) and volume, ISIC 4/A10 breakdown of industry.
- Table 0102: Gross domestic product (expenditure side): final consumption breakdown, gross capital breakdown, exports and imports of goods and services, current price and volume, AN_F6 breakdown for GFCF.
- Table 0103: Gross domestic product (income side): compensation of employees in ISIC 4/A10 breakdown, current prices.

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21   There has been significant progress since this report.

- Table 0107: Disposable income, saving, net lending/borrowing, current prices.
- Table 0110: Population end Employment.
- Table 0111: Employment by industry, breakdown by ISIC 4/A10, in persons, hours worked and jobs.
- Table 0117: Final consumption expenditure by durability, current prices and volume.
- Table 0119: Simplified non-financial accounts by institutional sector, current prices.
- Tables 0200: Main aggregates of general government and its subsectors, current prices (see section 1.3).
- Table 0301: Output and income, breakdown in ISIC 4/A21/A38/A64/A88, current prices, volume for value added and consumption of fixed capital.
- Table 0302: Capital formation, breakdown in ISIC 4/A21/A38/A64/A88/AN_F6, current prices and volume.
- Table 0303: Employment, breakdown in ISIC 4/A21/A38/A64/A88, in number of persons, hours worked, jobs.
- Table 0501: Final consumption expenditure of households by purpose, in COICOP, current prices and volume.
- Table 0502: Final consumption expenditure of households, from domestic to national concepts, current prices, volume.
- Table 0800: Non-financial accounts by institutional sector (detailed), current prices, employment by institutional sector in number of persons and hours worked.
- Table 0900: Detailed tax and social contribution receipts by type of tax or social contribution and by receiving sub-sector, current prices (see section 1.3).
- Table 1100: Expenditure of general government (and sub-sectors) by function, current prices (see section 1.3).
- Table 2000: Cross-classification of fixed assets by industry, breakdown by ISIC 4/A21/A38/A64/A88 and by non-financial fixed assets, An_F6, current prices and volume.
- Table 2200: Cross-classification of gross fixed capital formation by industry, breakdown ISIC 4/A21/A38/A64/A88, and by non-financial assets, AN_F6, current prices and volume.
- Table 2600: Balance sheets for non-financial assets, by sector, current prices.

362. Time series are expected to cover 1970 to the latest year. Historical data before 1970 are also welcome, if available.

Compliance – annual national accounts

363. The conceptual reference is SNA 2008.

Interpretability (Metadata requirements)

364. For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. 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.

Timeliness – annual accounts

365. The OECD expects the transmission of annual accounts at the latest at Y + 9 months (Y+6 months for Table 0200).

Data and metadata transmission – annual non-financial accounts

366. The OECD expects the transmission of annual accounts on the same day of the national release.

Evaluation of Peru's annual non-financial accounts

367. The annual non-financial national accounts of Peru are compiled by the National Directorate of National Accounts of the INEI. The Directorate has 47 staff, of which 12 are assigned to the compilation of quarterly national accounts. Of the 47 staff, 45 are professional employees and 2 carry out administrative duties. The Directorate consists of three executive branches: non-financial goods and services accounts (Supply-Use Tables, Institutional Sector account of S11, environmental statistics), government and financial sector accounts (Institutional sector account of S13 and S12, estimation of public sector production), household accounts (Institutional sector of S14 and S15, employment matrix, export and imports, satellite accounts for informal economy and unpaid domestic work).

368. The INEI has a long experience of national accounts. It took over the compilation of national accounts from the BCRP with the base year 1973 and has developed four successive sets of national accounts: base year 1973 (SNA 1968), base year 1979 (SNA 1968), base year 1994 (SNA 1993) and, the most recent, base year 2007 (SNA 2008).

369. The National Directorate of National Accounts has already planned for a new base year[22]. A work plan has been set up, with technical assistance from the IMF. The objective is to publish the new accounts in September 2021 (year of the bicentenary of Peru's independence). The new base year will use the structural information collected through the various large statistical operations scheduled by INEI for the coming years: 2017 Census of Population and Housing, 2018 Economic Census, National Agricultural Census (to be scheduled), National Survey of Family Budgets (ENAPREF, scheduled for 2018-2019). INEI intends to create an Inter-Agency Commission to coordinate the many operations linked to this project, which will require additional human resources in the Directorate.

Coverage

370. The current set of annual national accounts for Peru uses 2007 as the base year. Time series published by INEI span from 1950 to 2014 for the main aggregates, 1994 to 2014 or 2007 to 2014 for the goods and services accounts, depending on the level of detail, and 2007 to 2012 for institutional sector accounts (although these remain to be published). The main classification is in 14 industries/products but publication also exists at the level of 54 economic activities. In principle, a given year is published there times: as "estimated", "preliminary" and "definitive".

371. All tables for the goods and services accounts that are typically compiled by countries are available in Peru. Except for other changes in volumes and balance sheets, the complete sequence of institutional sector accounts has been developed for all sectors. However, they lack the most recent updating and remain to be published.

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22   This is likely to be 2017 or 2018, depending on the availability of source data.

372. It is also to be noted that data on GDP by region (departamento) and production accounts by industry and by region are available for 2007-2014. INEI also develops the Tourism Satellite Accounts along with the Ministry of Foreign Trade and Tourism; likewise, the Satellite Account of the Informal Economy has been developed, as well as the Satellite Account of Unpaid Domestic Work and the Satellite Account of Culture is moving forward, with the Ministry of Culture.

373. At this stage, the following datasets have been transmitted to OECD, for the years 2007 to 2014[23]:

- Table 0101: Gross value added at basic prices and GDP at market prices, current price (code V) and volume, ISIC 4/A10 breakdown of industry.
  - The table is complete, at current price and in volume. It confirms that there is no statistical discrepancy between the three approaches of GDP.
- Table 0102: Gross domestic product (expenditure side): final consumption breakdown, gross capital breakdown, exports and imports of goods and services, current price and volume, AN_F6 breakdown for GFCF.
  - The table is complete, at current price and in volume. It confirms that there is no statistical discrepancy.
- Table 0103: Gross domestic product (income side): compensation of employees in ISIC 4/A10 breakdown, current prices.
  - The table is complete. It confirms that there is no statistical discrepancy.
- Table 0107: Disposable income, saving, net lending/borrowing, current prices.
  - The table is complete except for the consumption of fixed capital and for net disposable income.
- Table 0110: Population end Employment.
  - The table is complete.
- Table 0111: Employment by industry, breakdown by ISIC 4/A10, in persons, hours worked and jobs.
  - The table is complete. Source is mainly the National Household Survey ENAHO.
- Table 0117: Final consumption expenditure by durability, current prices and volume.
  - The table is complete[24].
- Table 0119: Simplified non-financial accounts by institutional sector, current prices.
  - The table is complete.
- Tables 0200, 0900, 1100: Main aggregates of general government and its subsectors, current prices (see section 3).
- Table 0301: Output and income, breakdown in ISIC 4/A21/A38/A64/A88, current prices, volume for value added and consumption of fixed capital.
  - Complete except for consumption of fixed capital.
- Table 0303: Employment, breakdown in ISIC 4/A21/A38/A64/A88, in number of persons, hours worked, jobs.
  - The table is complete.
- Table 0501: Final consumption expenditure of households by purpose, in COICOP, current prices and volume.
  - The table is complete.
- Table 0502: Final consumption expenditure of households, from domestic to national concepts, current prices, volume.
  - The table is complete.

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23 2015 is included for Table 0200.
24 Minor inconsistencies on total final consumption with Table 0102.

- Table 0800: Non-financial accounts by institutional sector (detailed), current prices, employment by institutional sector in number of persons and hours worked.
  - The table is complete. It shows a statistical discrepancy between the non-financial accounts and the financial accounts but this is common for nearly all OECD countries.

374. The following datasets are still lacking:

- Table 0302: Capital formation, breakdown in ISIC 4/A21/A38/A64/A88/AN_F6, current prices and volume.
- Table 2000: Cross-classification of fixed assets by industry, breakdown by ISIC 4/A21/A38/A64/A88 and by non-financial fixed assets, An_F6, current prices and volume.
- Table 2200: Cross-classification of gross fixed capital formation by industry, breakdown ISIC 4/A21/A38/A64/A88, and by non-financial assets, AN_F6, current prices and volume.
- Table 2600: Balance sheets for non-financial assets, by sector, current prices.

375. Overall, the data transmitted show the capacity of INEI to compile, develop and transmit to the OECD a quite complete set of national accounts data, illustrating the results of the remarkable effort engaged by INEI to implement the new base year 2007 and develop a process of regular estimation. Three points remain below OECD standards:

- The timeliness of the set of annual data. The objective should be the publication of the "estimated" annual national accounts (goods and services accounts and institutional sector accounts) at the latest at Y + 9 months (Y +6 for general government).
- The inclusion of longer time-series in the tables transmitted to the OECD in the past by linking the current new base year with the previous one, at least for the main aggregates (tables 0101, 0102, 0119, 0200).
- A methodological investment in a program to estimate the GFCF by industry and the stock of non-financial assets and obtain data on consumption of fixed capital by industry/sectors.

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

376. The current accounts (base 2007) are consistent with SNA 2008. Transactions and flows are recorded on an accrual basis, market output is valued at basic prices, non-market output is valued at total costs including consumption of fixed capital (estimated using an experimental method, based on PIM, with a simplified depreciation rate of 16.6% per year), intermediate consumption and final consumption are valued at purchasers' prices.

377. Further, in accordance with the new recommendations of SNA 2008:

- Output of non-life insurance services is using a method based on expectations of claims tailored to a model based on previous patterns of claims paid by companies,
- Financial Intermediation Services Indirectly Measured (FISIM) are estimated using the reference rate of the Central Bank, and are allocated to intermediate consumption and final consumption by type of users,
- The production of Central Bank is calculated based on sum of costs,

• Plantations and cattle rising, R&D, weapon systems and mineral exploration are capitalised,
• Cost of transfer of ownership is classified as GFCF,
• Volume calculations are based on chained previous year prices.

378. However, the treatment of goods for processing is not conducted on imports and exports, as recommended by the 2008 SNA, because, so far, the information sources available do not allow such estimates.

379. The detailed classification used in the compilation process is a specific classification in 365 products in three levels, compatible with ISIC rev 4 and CPC Rev 2 at level 1 and 2 (54 and 101 activities/products). Peruvian national accounts are also compliant with the SNA 2008 recommended classifications as they use:

• Classification of Individual Consumption by Purpose: COICOP
• Classification of the Functions of Government: COFOG
• The SNA asset classification.

380. Classification within institutional sectors is also essentially compliant with SNA 2008. Units are classified based on ownership, legal status, control and financing. The following sectors and sub-sectors are categorised:

• S11. Non-financial corporations
    - S11001. Public non-financial corporations
    - S11002. Private non-financial national corporations
    - S11003. Private non-financial corporations controlled by RoW
• S12. Financial corporations
    - S121. Central bank
    - S122. Deposit corporations,
            o S12201 Commercial banks
            o S12202 Other deposit corporations
    - S125. Other financial intermediaries, Money Market Funds, captive institutions and money lenders.
    - S126. Financial auxiliaries
    - S128. Insurance corporations
    - S129. Pension funds
• S13. General government
    - S131. Central government (exc. Social security).
    - S132. Regional governments
    - S133. Local governments
    - S134. Social security.
• S14. Households.
• S15. Non-profit institutions serving households.
• S2. Rest of the world.

Methods for compiling the base year of annual national accounts

381. INEI has heavily invested during the recent years (2009-2012) in the compilation of a very complete new base year 2007. The new data was published in March 2014, with a delay of one year compared to the initial timetable[25] (see explanation in box below). INEI has benefitted for this vast project from the advice of an international expert. This base year draws on a broad set of specific information relating to the year 2007:

- Census of population and housing of 2007;
- Economic Census (IV CENEC) 2008, in which 940 000 establishments were taken into account and data on economic and financial variables from 687 000 establishments were collected, finding 12 000 establishments with equal or higher net sales than 2900 soles;
- Census of manufacture on year 2007 (111 000 enterprises);
- Continuous National Household Survey ENCO 2006 (380 000 households);
- National Household Budget Survey (ENAPREF) 2008-2009 (36 000 households);
- National (and regular) Household Survey (ENAHO) (23 000 households);
- The business registers of SUNAT;
- The databases of BCRP and the Superintendencia Nacional de Banca, Seguros y AFP (SBS for its acronym in Spanish) on financial institutions;
- The SIAF-SICON database on government entities.

382. The base year methodology includes an "intermediary system of establishments and enterprises accounts" allowing to bridge the variables of the business accounts at individual level with those of national accounts, in particular for production (using sales and detailed change in inventories), and for intermediate consumption (using current expenditures minus detailed change in inventories). The bridge table covers also the attribution of production and intermediate consumption by CPC Rev 2 and ISIC Rev 4.

383. A matrix of production (101*101) was developed that assigns the production of products (in line, 101 products) to industries (in columns, 101 industries). An input/output matrix (101*101) was also developed, as well as a table of generation of income by industry (101 industries). A comprehensive Supply table (101 products) is associated with a comprehensive Use table (101 products, synthetizing detailed supply/use tables. Overall, INEI disposes of a complete set of goods and services accounts for 2007 at a detailed level of 365 products and 101 industries.

384. A matrix of supply/use of GFCF products was constructed, using on the supply side: the detailed data on imports (SUNAT), the IV CENEC (chapter 18 of the questionnaire), a specific estimate of construction of dwellings based on administrative statistics of quantities (number * surface) multiplied by prices/square meter.

385. The base year estimates benefitted also from several special one-off studies on: informal production of gold, urban transports, street trading, informal fishing, illegal exports/imports and illegal production of coca and derived coca pasta, benefits from slaughter of livestock and poultry to produce meat and studies on distribution margins and non-profit institutions serving households.

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25   The delay was due to the fact that estimates for current years and long time series (1950-2013) were developed; annual accounts had to be reconciled with series of quarterly accounts and series of departmental accounts 2007-2013; the main sectoral indicators had to be updated with base year 2007, among them, the Physical Volume Index of the Manufacturing Output and the Price Indices. It was also deemed appropriate that dissemination take place beginning of a calendar year.

386. After several years, a complete set of non-financial institutional sector accounts was developed, from the production account to the capital account allowing the calculation of an Integrated Economic Table (Cuadro Económico Integrado).

Exhaustiveness

387. In accordance with the importance of the informal sector in Peru, INEI has heavily invested in the quality of the exhaustiveness of the national accounts.

388. A first step towards exhaustiveness of GDP estimates consists of estimating informal employment. The method used in Peru starts with the construction of an "equivalent matrix of employment" for the base year as well as for normal years.

Figure 1. Methodology for developing the Employment Matrix
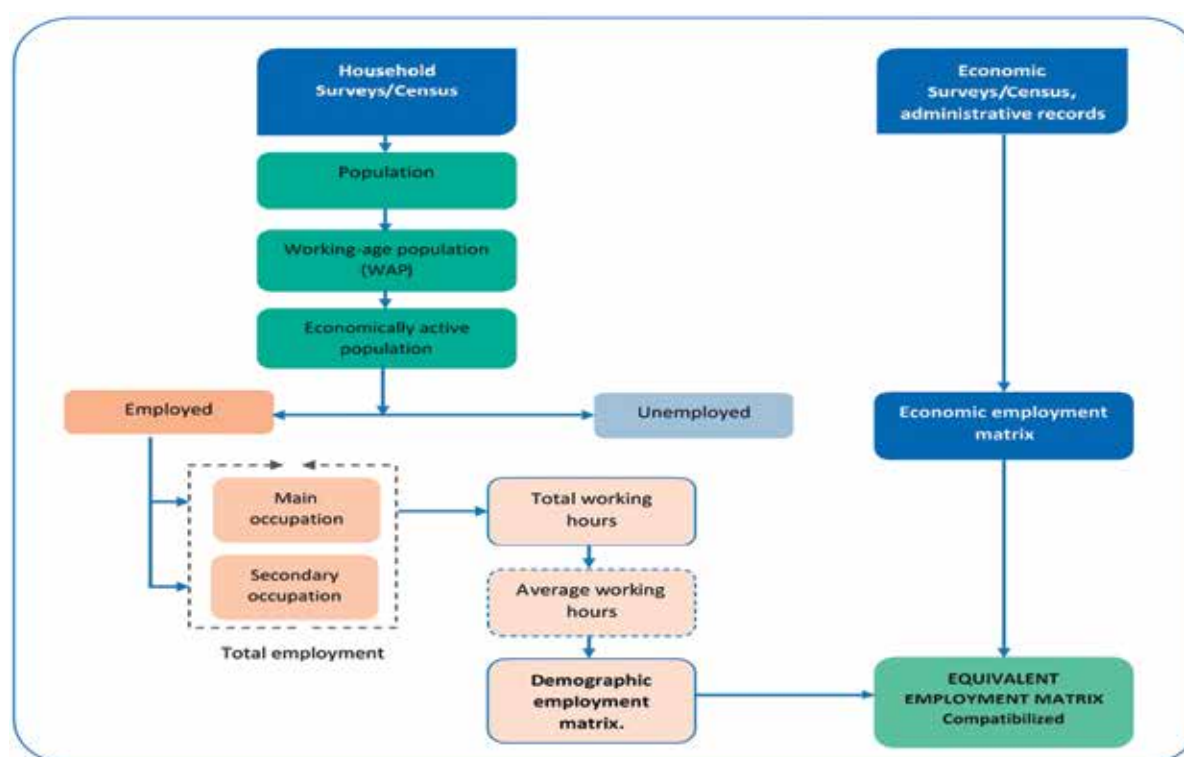
389. The Equivalent Employment Matrix shows, for 101 economic activities and for each institutional sector, the number of jobs, with homogeneous hours, occupied by people on their principal occupation as their secondary occupation. It is obtained by combining information from a 'demographic' employment matrix and an 'economic' employment matrix (Figure 1).

- The demographic employment matrix is calculated based on information from population censuses and/or household surveys (employment module) that provide information on the economically active population employed by economic activities in their principal and secondary occupation, as well as hours worked in those occupations. With this information, average hours by economic activity are calculated and used to estimate 'equivalent employment' from the perspective of labour supply.

- The economic employment matrix is obtained from information of the economic census and/ or economic surveys of enterprises as well as administrative records that provide information of jobs occupied in economic activities of contributing enterprises. The resulting matrix shows the perspective of labour demand.

390. The establishment of the equivalent employment matrix consists in retaining employment data by economic activity based on the strength of information sources. For example, in case of the activity of government, its administrative records provide more accurate data than estimated by household surveys. Therefore, administrative information is selected for the equivalent employment matrix. Overall, the equivalent employment matrix provides the best available and most comprehensive estimation of the Economically Active Population (Población Económicamente Activa–PEA). Information on average hours worked allows transforming this matrix into a matrix of hours worked by economic activity.

Table 3. Equivalent Employment Matrix by Institutional Sector 2007

EMPLOYMENT CATEGORY / ECONOMIC ACTIVITY	INSTITUTIONAL SECTOR					
	Total economy	Non-financial corporations	Financial corporations	Government	Households	Non-profit institutions serving households
TOTAL EMPLOYMENT	15,330,461	2,640,944	71,534	1,088,372	11,455,049	74,562
Extractive	4,844,390	212,096	0	0	4,632,294	0
Transformation	2,437,401	959,070	0	0	1,478,331	0
Services	8,048,670	1,469,778	71,534	1,088,372	5,344,424	74,562
SALARIED EMPLOYMENT	7,130,783	2,640,944	71,534	1,088,372	3,255,371	74,562
Extractive	1,226,059	212,096	0	0	1,013,963	0
Transformation	1,549,507	959,070	0	0	590,437	0
Services	4,355,217	1,469,778	71,534	1,088,372	1,650,971	74,562
EMPLOYERS	844,602	0	0	0	844,602	0
Extractive	282,847				282,847	
Transformation	190,793				190,793	
Services	370,962				370,962	
OWN ACCOUNTS	5,100,348	0	0	0	5,100,348	0
Extractive	1,783,387				1,783,387	
Transformation	579,174				579,174	
Services	2,737,787				2,737,787	
AUXILIARY FAMILY WORKERS	2,254,728	0	0	0	2,254,728	0
Extractive	1,552,097				1,552,097	
Transformation	117,927				117,927	
Services	584,704				584,704	

391. In a second step, INEI proceeds with the estimation of the informal sector in terms of employment. According to the definition adopted by the National Institute of Statistics and Informatics, the informal sector refers to household enterprises (unincorporated productive units, excluding quasi-corporations) that are not registered with the National Superintendence of Customs and Tax Administration (SUNAT). In case of the productive units of households performing extractive activities (agriculture, fisheries and mining) it is considered that they all belong to the informal sector.

392. The ENAHO, in its employment module, compile the following information to identify whether a productive unit is informal or not:

1. Identification if the productive unit is unincorporated.
2. Identification if the unincorporated productive unit is registered or not by SUNAT.
3. Economic activity of the productive unit.
4. Occupation category of the employed population.
5. Size of the productive unit.

393. From this information, one can disaggregate the equivalent employment of the institutional sector Households in: employment in Informal Sector and employment in Formal Sector. In order to do that, the following criteria are used:

1. In the case of the productive units of extractive activities of the institutional sector Households, all its employment is allocated to the informal sector.
2. In the case of the productive units of transformation activities (Construction and Manufacturing) and Services (all other activities except for extractive and transformation) of the institutional sector Households:
   a. Employer, self-employed, employees and auxiliary family worker: the productive unit where they work belong to the informal sector if it is not registered by SUNAT.
   b. Domestic workers are excluded from the informal sector.

394. The result of the estimation of the informal economy in terms of employment is provided in Table 2 where the employment matrix of national accounts is shown that identifies informal activity of the institutional sector Households.

Table 4. Total Employment by Institutional Sector 2007

EMPLOYMENT CATEGORY / ECONOMIC ACTIVITY	INSTITUTIONAL SECTOR				
	Total economy	Other resident sectors	Households	Informal household enterprises (Informal sector)	Household enterprises outside the informal sector
TOTAL EMPLOYMENT	15,330,461	3,875,412	11,455,049	9,326,194	2,128,855
SALARIED EMPLOYMENT	7,130,783	3,875,412	3,255,371	1,858,641	1,396,730
EMPLOYERS	844,602	0	844,602	592,869	251,733
OWN ACCOUNTS	5,100,348	0	5,100,348	4,658,841	441,507
AUXILIARY FAMILY WORKERS	2,254,728	0	2,254,728	2,215,843	38,885

395. In a third step, INEI proceeds to the estimation of the informal sector in terms of value-added. The process for calculating the size of the informal sector in terms of gross value added is as follows:

1. Extractive activities of the institutional sector Households: all gross value-added generated by these activities belongs to the informal sector.
2. Non-extractive activities of the institutional sector - households: the gross value added of these economic activities is broken down between "formal" and "informal" using the National Household Survey:

a. The National Households Survey has a Module that collects economic information from unincorporated enterprises of employers and self-employed or own-account workers (ENAHO.04). This module identifies whether a company or productive unit belong to the informal sector as defined by INEI (not registered with the tax authorities).

b. Using the National Household Survey, the proportion of the gross production value of informal enterprises is calculated regarding the total of households' institutional sector according to economic activity. The gross value of production in the informal sector with levels of national accounts is obtained by applying these proportions to the values of national accounts.

c. The Gross Value of Production in the informal sector is improved by analysing the productivities which were calculated using the equivalent employment matrix breakdown between "formal" and "informal".

d. The Intermediate Consumption of the informal sector is calculated using technical coefficients obtained from Module ENAHO.04.

e. The Gross Value Added is obtained as the difference between Gross Production Value and Intermediate Consumption of non-extractive economic activities in the informal sector, the measurement is developed in the context of National Accounts iterative method.

Figure 2. Flowchart for Calculating Value Added of the Informal Sector
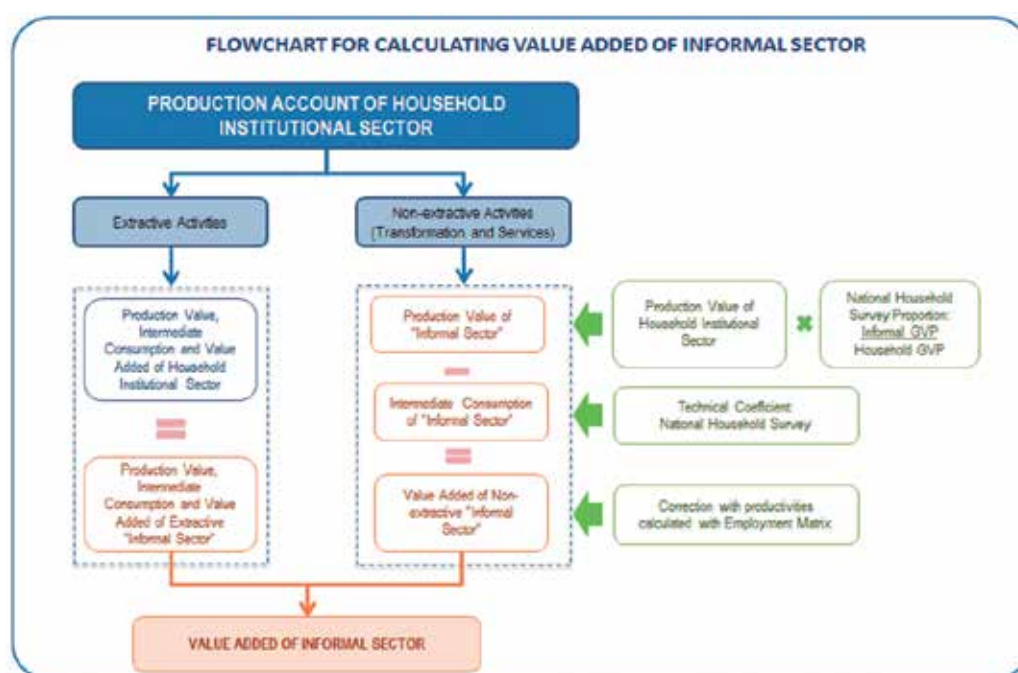
396. As regards the illegal economy, an estimate is made of smuggling and illegal drugs. Figures for smuggling are based on contraband estimates of the SUNAT and within the supply and use tables. Margins from dealing with illegal drugs were estimated via special studies.

397. Compared to the results of the main household survey (ENAHO), the national accounts estimates of global revenues of households are 28.5% higher. Compared to the results of the household expenditure survey, the national accounts estimates of global final consumption of households are 22.4% higher.

398. INEI published a comprehensive satellite account (production and employment) for the informal sector in Peru, 2007-2012 and publishes regularly the structure of the PEA[26]. In 2007, 3.2 million persons were classified as formally employed (21.0% of total employment), 2.8 million as informally employed by the formal sector (18.2%), and 9.3 million as informally employed by the informal sector (60.8%). In 2014, these percentages were: 27.2%, 17.0% and 55.9%.

Owner-occupied housing: base year calculation

399. Owner occupied housing estimation has been improved compared to the pre-2007 base year, using the ENAHO. In the base year 2007, the production value of owner-occupied housing service was estimated from the total of occupied dwellings (excluding lease holders) reported by the Census of Population and Housing 2007 and from rental average prices. The average price assigned by type of housing and by urban-rural areas were estimated based on information from the National Family Budget Survey (ENAPREF), implemented between May 2008 and April 2009, in households of 25 cities across the country. For urban areas, the average prices of actual rental housing were considered and for rural areas, the imputed average prices of rural dwellings were considered. Otherwise, estimates were carried out on the basis of actual rental. This was made at prices of 2007 with the Consumer Price Index for each city obtained from the National Household Budget Survey (2008-2009) adjusted with the Consumer Price Index (CPI) by cities.

400. The production value of imputed housing rental was determined as product of the number of occupied dwellings in urban and rural areas of each department (region) for an average price. To verify consistency in the information, a calculation of the number of dwellings and average prices by type of housing was conducted according to: main material for walls and floors, type of access to water, drainage and electricity, housing type, and built area.

Owner-occupied housing: normal years

401. In recent years, gross values of production at constant prices have been measured by extrapolation. For each year, constant values of the previous year are extrapolated using the Physical Volume Index of the stock of owner-occupied housing (imputed rental) taken from the National Household Survey (ENAHO). The values at current prices are estimated by including the price effect to constant values with the Consumer Price Index of Housing Rental. To verify consistency in the information, a calculation of the number of occupied housing is conducted according to: main material for walls and floors, type of access to water, drainage and electricity, housing type, and built area.

Methods for compiling the normal years of the annual national accounts.

402. While the construction of the base year and the definitive accounts corresponds to best practices, the processes for the compilation of "normal" (recent) years is not yet stabilised. This stems from the fact that the new base is quite recent (it was first published in March 2014).

403. As in other countries, one has to distinguish methods used for the "definitive" account from methods used for the "estimated" or "preliminary" accounts. For the definitive accounts, the detailed supply and use tables in 365 products and 101 economic activities are compiled annually. The output approach of the definitive account is very much based on the use of the effective accounts of firms obtained via the

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26   A satellite account for non-remunerated work is in preparation.

SUNAT (see Chapter 3 Annex) and incorporated in the national accounts via an "Intermediate system" in which the business accounting variables are transformed (and sometimes adjusted) to respect the definitions of the SNA. Current price values thus obtained are then deflated using appropriate price indices. The method of the definitive account, which is the richest in terms of information, is therefore dependent on the timing and format of the availability of the data from the SUNAT (see recommendation at the end).

404. For the preliminary and estimated accounts, the process is yet not stabilized and documentation is limited. As, at time of establishing the preliminary and estimated accounts, the information from the SUNAT is not yet available, the method is based on a simplified "global" Supply and Use table, based on partial volume estimates which are then inflated using appropriate price indices. In the preliminary accounts, the sources Production Accounts are developed at the level of 54 economic activities and GDP by expenditure components. Information is used from the Superintendence of Banking, Insurance and Private Pension Funds (SBS), the Integrated Financial Management System (SIAF) of the Ministry of Economy and Finance, the National Household Survey (ENAHO), National Customs and Tax Administration (SUNAT), Central Reserve Bank of Peru (Balance of Payment), performing an overall balance of the economy, from the last Supply and Use Table. This process still has to be stabilised so that detailed supply and use balances at the level of 101 products and 54 economic activities are derived in the preliminary estimates. The estimated national accounts are presented at the level of 54 economic activities, calculating the Production Accounts and expenditure variables. The price and volume indicators are used as well as the administrative records available.

405. The timetable for the publication of normal years is not fully determined as well as the exact set of tables available for the latest years. The policy as regards the cycle of revisions of annual accounts (estimated vs. provisional vs. definitive) is not yet clear and needs to be documented.

Sources and Methods: GDP production approach

406. The annual accounts use a large array of sources, the most important of which is the information provided by the SUNAT, although only available at the time of the "definitive" account, and elaborated via the Intermediate system. Below appears a short summary limited to the sources for the volume growth in annual terms. The main sources for the definitive and preliminary accounts are:

- Agriculture: volume of production, production prices and yield of 176 products per region. Source: Ministry of Agriculture and Irrigation.
- Fishing: maritime and continental disembarkment in volume and in nominal by destination and port of 291 products. Source: Ministry of Production.
- Mining: quantities in metric tons per type of mineral and productive entity. Source: Ministry of Energy and Mines.
- Petroleum: quantity and price per type of hydrocarbon. Source: Petroperu.
- Electricity: volume of production and turnover, amount of tolls, average prices per region. Source: Ministry of Energy and Mines.
- Water: volume of production, per region. Source: National Superintendence of Sanitation Services, SUNASS.
- Manufacturing: Monthly Index of Physical Volume by ISIC Rev 4 class for 176 products. Source: Ministry of Production.

- • Construction: production of cement in metric tons. Source: Association of Cement Producers ASOCEM.
- • Transport: Maritime traffic by type of port, containers, boats. Source: Autoridad Portuaria Nacional.
- • Commerce: Monthly survey of trade deflated. Source: INEI.
- • Hotels: Number of nights, national and foreigners. Source: Ministry of Foreign Trade and Tourism.
- • Restaurants: Monthly survey of restaurants deflated. Source: INEI.
- • Services to enterprises: Monthly survey on services to enterprises deflated. Source: INEI.
- • Insurance services: Is estimated using the SNA compatible formula: Premiums + Supplementary Premiums – Effective indemnities +/- increases or decreases of adjustments of technical reserves.
- • Telecommunication: Traffic of calls. Source: OSIPTEL.

Sources and Methods: GDP expenditure approach

Household final consumption expenditure

408. For the definitive accounts, Household Final Consumption Expenditure, HFCE, is estimated in great detail at the level of CPC 4-digit (365 products). For goods, the main source is the ENAHO from which physical volume indices are calculated by products. These indices are applied to the national accounts aggregates for each product and adjusted using the Supply and Use balancing approach at the most detailed level, taking into account other volume indices available (production, imports, exports). Current prices are obtained by inflating constant prices (of the previous year) using the CPI. For the preliminary accounts, the same method (ENAHO volume indices inflated by CPI) is used but in the framework of a more global "Supply and Use" balance.

Government final consumption expenditure.

409. For the definitive accounts, it is estimated at the most detailed level (365 products). GFCE at current prices is obtained using exhaustive public finance data (FCE = production – sales – partial payments by households). Volume is obtained by deflation with appropriate price indices. For the provisional accounts, the method is the same, but applied at a higher level of classification.

Gross fixed capital formation (GFCF)

410. INEI indicates that the measurement of GFCF is fully in line with SNA 2008, including own account fixed capital formation, mineral exploration whether successful or not, computer software (including in-house), communication equipment, R&D, military structures and weapons, entertainment, literary and artistic originals.

412. For machinery (transport, office machinery, radio television and communication equipment, other machineries), the method used in the definitive accounts is based on the movement of fixed assets and depreciation compiled from the business accounts obtained from SUNAT and the accounts of the public sector. These current price values are broken down in imported GFCF and national GFCF, using import data. The constant price amounts for imported GFCF are obtained by deflation and for national GFCF using the volume indices coming from the physical production surveys of the Ministry of Production. For the preliminary accounts, in absence of data from SUNAT, the national GFCF is obtained first in constant prices via the surveys of physical production and inflated by appropriate wholesale price indices.

413. For residential buildings and for the definitive accounts, there are two sources: the ENAHO and the statistics of the Peruvian Chamber of Construction Market. Current prices are obtained first and are deflated by appropriate price indices. In the preliminary accounts, the information is limited to an extrapolation in volume based on the production of cement, which is then inflated. For non-residential buildings, the business accounts obtained from SUNAT and the accounts of the public sector are used for the definitive accounts. For the preliminary, only the public sector accounts are available, and the private part is extrapolated using the production of cement.

Exports and imports of goods

414. The sources and methods follow good practices of OECD countries. The source is the extensive SUNAT database which maintains the daily register of exports and imports monitored by the Customs administration. These data are available already for the estimated accounts. Constant prices are obtained via deflation using import and export price indices. To be noted that an addition is made in the national accounts of an estimate of illicit drug exports. More detail can be found in the Addendum.

Exports and imports of services

415. They are consistent with Balance of Payments data in dollars, converted by a quarterly bank exchange rate. Constant prices are obtained by deflation by a price index of services, taking into account exchange rate movements.

Changes in inventories

416. INEI indicates that the definition of inventories is fully in line with SNA 2008, including agricultural work-in-progress and all goods stored by government. In annual definitive accounts, changes in inventories are calculated by products at the level of the 365 products and are not estimated as residuals but using direct sources (see Addendum).

Sources and Methods: general considerations on volume/price breakdown.

417. Volumes are at constant prices of the year 2007. INEI will move to chained accounts on the occasion of the new 2017 base year expected to be published in 2021.

418. The method used for obtaining value-added in constant price at ISIC Rev 4 3 digit level is not exactly double deflation. Output is estimated at constant prices as described in the section on the GDP output approach. Intermediate consumption at constant price is obtained based on the use of a fixed technical coefficient. This amounts to assuming that intermediate consumption in volume follows exactly the movement of output in volume. Value-added in volume is obtained then by subtraction, implying that volume growth of value-added equals volume growth of gross output. This simplified method has the advantage of not being subject to biases in value-added in volume originating for scissors effects between output and import prices.

Sources and Methods: institutional sector accounts

419. At this stage, institutional sector accounts have been compiled and published for 2007-2012. Accounts for 2007-2014 are about to be published. An appropriate method for recent years needs to be developed. The main sources for estimations for institutional sector accounts are:

- • For general government: the complete financial accounts of entities of the central government and local government (SIAF and SICON).
- • For households: the annual ENAHO and the Permanent Employment Survey EPE (see chapter 2).
- • For the rest of the world: monthly imports/exports (SUNAT) and the quarterly Balance of Payments from BCRP.
- • For non-financial enterprises:
  - - The Annual Economic Survey (EEA) organised by INEI, see box below.
  - - The important aggregate economic data compiled by SUNAT on the request of INEI, following a memorandum of understanding between INEI and SUNAT (see Chapter 3 Annex below).
  - - Specific data on energy and mines from the Ministry of Energy and Mines
  - - Some specific data (Planillas Mensuales Electrónicas) from the Ministry of Employment and Production
- • For financial entreprises: accounts of financial institutions from the SBS, AFP and from the Superintendencia de Mercado de Valores (SMV).

Cooperation with SUNAT

420. The Superintendencia Nacional de Aduanas y de Administración Tributaria (SUNAT) is a major player in Peru regarding the collection (and statistics) of revenues for government entities and non-financial corporations. It finances 73% of the State budget. SUNAT collects taxes (including VAT), social contributions (of ESSALUD and ONP[27]) and the specific revenues obtained from mines and similar contributors. SUNAT acts also as the custom administration of Peru and collects import duties and is therefore the statistical hub for external trade statistics. All statistics on imports and exports are the responsibility of SUNAT. Overall, SUNAT disposes of an impressive set of data including a comprehensive census of all firms of the formal sector, through the delivery of the "Numero de RUC" (Registro Unico del Contribuyente), the unique registration number of any firm in Peru. Overall, SUNAT is an essential player in the National Statistical System.

421. One important weakness in the process of compilation of annual accounts for normal years is the current impossibility to obtain individual data from the SUNAT, although this important administration has substantial information on all formal companies, in particular the largest ones which represent a substantial part of the economy. SUNAT collects the following information:

- • Annual accounts of all the formal market units
- • Monthly data of the sales that bill the General Sales Tax (IGV)
- • Monthly data on Foreign Trade of Goods
- • Data on the contributions to the social security (Es-Salud)
- • Consequently, the list of all the enterprises included in the formal economy.

422. In principle, this strategic set of information for the knowledge of the Peruvian economy should be accessible to INEI as SUNAT belongs to the National Statistical System. Principle 5 of the OECD Recommendation on Good Statistical Practice, agreed by all OECD Member Countries, "ensures the right to access administrative sources to produce official statistics" and requests that "statistical authorities are authorised by law to use administrative records for the regular production of official statistics".

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27 Oficina de Normalización Previsional, the entity in charge of public pensions in Peru.

423. This principle seems not currently applicable in Peru, taking into account the standards governing tax secrecy. In this context, INEI and SUNAT have a memorandum of understanding whereby SUNAT compiles aggregate statistical results masking individual data (minimum 5 companies). This is a second best solution, however, with two major drawbacks: (1) it does not allow making full use in normal years of the intermediary business accounts developed by INEI for the base year using the results of the CENEC[28] , thus reducing the quality of current year national accounts, (2) it is not conducted in the strict and tight schedule necessary for the timely dissemination of national accounts. Today the results coming from SUNAT arrive with two years delay (see Chapter 3 Annex).

424. In many countries, the statistical compilation of individual business tax returns for the sake of compiling national accounts is carried out by professionals of the national statistical office. This requires the access to the individual tax data. For the reasons given above, the OECD considers essential that this information be available to National Accounts staff in Peru.

425. If, for legal reasons, there is no solution to have INEI staff accessing directly these individual data, there is no other solution but to ask SUNAT to be responsible for the data preparation tasks required for the national account's development, which includes:

- Ensuring exhaustiveness of the data of each period, in particular detecting enterprises that have disappeared and attribute data to the units classified as active but did not return the information in due processing delay.
- Ensuring the ongoing assignment of the economic activity code in ISIC Rev 4.
- Carrying out consistency control of collected data, both in accounting and economic characteristics.
- Lastly, and most importantly, making these data compatible with data coming from other sources (including economic surveys and census) by confronting all this information in aggregates to be defined (under legal status, geographic location, economic activity, production level, and others).

426. It is important to emphasize the National Accounts' need to provide mutually compatible data that appear in the several sub-systems of the SNA: goods and services, accounts by activity and/or institutional sectors, financial and non-financial estimates, capital formation. It is therefore a broad, complex and multidisciplinary task that requires the monitoring of professional national accountants, and should be performed in a tight period.

427. It is an urgent task to achieve an estimation of the formal economy compatible with the best practices of the OECD Member Countries. If an agreement is reached between SUNAT and INEI to obtain this degree of quality of data, it would be desirable that SUNAT provides an appropriate institutional environment to this task, perhaps with the establishment inside SUNAT of an independent team of statistical professionals (including a computer facility dimension). This issue is the subject of a recommendation.

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28 If SUNAT had given INEI access to individual data, the latter would not have had to organise the CENEC, thus saving resources and, more importantly, significantly reducing the statistical burden on firms.

Box 1. The annual economic survey of firms, Encuesta Económica Anual (EEA)

The EEA is organised annually by INEI since 1977. Initiated with a limited coverage (Manufacturing, Fishing and Mining), it is now covering a large part of the economy, including services (but excluding the financial sector). The survey is organised in coordination with various ministries (Produccion, Comercio Exterior y Turismo, Energia y Minas, Vivienda, Construccion y Saneamiento, Educacion, Agricultura y Riego, Transportes y Communicaciones). The survey covers: the identification of the firm, financial accounts (by nature of charges), movements of balance sheet, depreciation, taxes, dividends, compensation of employees, number of employees, and data on subsidiaries. The sample of the 2015 survey was of 13 230 enterprises (those above 200 000 US dollars of turnover). The sample of 2014 was 10 046 enterprises out of a universe of 70 944. The sample for the same period represents 54% of the universe of non-financial corporations in terms of gross production. The classification used is ISIC Rev 4 at the 5-digit level. Products are classified under CPC Rev 2. The survey takes place during May-June of each year and results are available in January Y+2.

Timeliness - annual non-financial accounts

428. Annual accounts are available at Y+8. However, they are not considered in the release calendar of INEI's publications.

Revision policy

429. Methodological changes are not informed opportunely to users. Methodological changes do not usually occur after the base year.

Overall assessment and recommendations for annual non-financial accounts

430. The data transmitted showed the capacity of INEI to compile, develop and transmit to the OECD a quite complete set of annual national accounts data, illustrating the results of the remarkable effort undertaken by INEI to implement the new base year 2007. The OECD welcomed the information that INEI is already preparing for a new base year 2017, thus continuing the investment for preserving the quality of the national accounts.

431. The following points indicate where the Peruvian national accounts do not live up to OECD standards and these points should be addressed in the short term:

- The timeliness and regularity of the set of annual data. The objective should be the publication of the first estimate of annual national accounts (goods and services accounts and institutional sector accounts) at the latest at Y + 9 months (Y + 6 for general government). INEI committed to implement this recommendation during 2017 for goods and services accounts (first annual estimates of 2016 accounts published in September 2017).
- The inclusion of longer time-series in the OECD tables by linking the current new base year with the previous one, at least for the main aggregates (tables 0101, 0102, 0119, 0200). INEI committed to transmit the time series for these tables from 1994 to 2015.

- While the methodology underlying the 2007 base of the national accounts corresponds to good practice, Peru has to quickly invest in an appropriate process of establishing regular publication of current years, respecting the deadlines requested for OECD: Y + 9 months for a complete set of annual accounts (including non-financial institutional sector accounts), Y + 6 months for the non-financial accounts of the general government. This process should also take into account the status of the data (estimated, preliminary, definitive), synchronisation of the information, and come with a precise public and respected timing of publication and documentation of the methods, in particular of the estimated accounts.
- In the current legal context (legislation on tax privacy stated by the Constitution of Peru –article 2/5—and article 85 of the Tax Code, INEI has no access to the individual tax returns in the possession of SUNAT, although these include essential and complete information of the financial statement of firms. This seriously hampers the quality of the current year national accounts for the formal economy and is in contradiction with the OECD Recommendations on Good Statistical Practices. If Peru is not able to implement these recommendations for tax secrecy reasons, SUNAT should set up a team of statisticians, with technical help from INEI, inside its own perimeter that would compile the necessary data within the required timing of the national accounts and respecting a reasonable delay, shorter than the current one. INEI has indicated to the OECD that it will raise this issue to the highest level and that this option should even consider the modification of Financial Statements forms by SUNAT so as to facilitate the development of national accounts information. This recommendation should be implemented via a new official Memorandum of Understanding between SUNAT and INEI.
- Within the framework agreement signed between INEI and SUNAT, the latter institution was to transmit to INEI, based on its VAT collection system, the level of sales of a panel sample of major VAT contributors (PRICOs) at consolidated ISIC Rev 3 3 digits level after 45 days, and of a panel of medium and small enterprises (MEPECOs) after 60 days. This information was used to validate and evaluate the results of the INEI surveys and served to measure the activity of the services sectors, not well covered by INEI. As of today, the transmission of this information is still outstanding. This is a negative outcome that hampers the quality of national accounts and is not in line with the OECD Recommendation on Good Statistical Practice. The OECD recommends prompt transmission of the information.

432. In the medium term, INEI should:

- Publish time-series of the estimates of the GFCF, stock of non-financial assets by type of asset and by sector, together with estimates of consumption of fixed capital. INEI has already put in place a strategy to obtain these estimates with the assistance of IMF experts.
- Implement chained volume measures in the national accounts. INEI has already included this as part of the methodological developments for the new 2017 base year.

3.3. Quarterly non-financial national accounts statistics

OECD data and metadata requirements

Coverage – non-financial quarterly accounts

433. Quarterly national accounts in the OECD are organised under two datasets: QNA and QSA.

434. The OECD's Quarterly National Accounts (QNA) dataset contains data collected from all OECD member countries and some other major economies on the basis of a standardised questionnaire as well as according to countries' own definitions and classifications. It includes a selection of seasonally and non-seasonally adjusted quarterly national accounts widely used for economic analysis from 1960 or whenever available, such as gross domestic product, final consumption expenditure, gross capital formation, disposable income, population and employment, most of them referring to the total economy.

435. The QNA series, grouped in the following subjects, are requested at current and constant prices, seasonally and non-seasonally adjusted:

- T0101: GDP output approach, current prices and volume;
- T0102: GDP expenditure approach, current prices and volume;
- T0103: GDP income approach and compensation of employees by industry, current prices;
- T0107: Disposable income, saving and net lending/net borrowing, current prices;
- T0109: Real disposable income;
- T0117: Household final consumption expenditure by durability, current prices and volume;
- T0110: Population and employment (persons);
- T0111: Employment by industry (persons, hours worked).

436. The OECD's Quarterly Sector Accounts (QSA) dataset contains data collected from all OECD member countries on the basis of the standardised questionnaire designed to collect internationally comparable data according to definitions and concepts presented in the 2008 System of National Accounts (SNA 2008). These accounts record economic transactions by institutional sector, such as value added, operating surplus, saving and net lending/net borrowing, for financial and non-financial corporations, general government, households and NPISH, the rest of the world and the total economy.

437. The QSA series, included in the following accounts, are requested at current prices, seasonally and non-seasonally adjusted, by institutional sector, via two tables (T0119 simplified accounts and T0801 detailed accounts). These tables cover:

- Production account / External account of goods and services;
- Generation of income account;
- Allocation of primary income account;
- Secondary distribution of income account;
- Use of disposable income account;
- Change in net worth due to saving and capital transfers accounts;
- Acquisitions of non-financial assets account.

438. Time series of QNA and QSA are expected to cover at least Q1 1995 to the present reference quarter Q.

Compliance –quarterly national accounts

439. The conceptual reference is SNA 2008.

Interpretability (Metadata requirements)

440. For OECD purposes, complete and clear metadata must be available in one of the official languages of the Organisation, English or French. 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.

Timeliness – quarterly accounts

441. The OECD expects the transmission of the first estimate of GDP at Q+45 days, where Q is the reference quarter.

Data and metadata transmission –quarterly non-financial accounts

442. The OECD expects the transmission of quarterly accounts on the same day of the national release.

Evaluation of Peru's quarterly non-financial national accounts

443. There are 12 staff assigned to quarterly accounts who have also other responsibilities for annual and departmental accounts. Quarterly national accounts do not appear among the main headline indicators of INEI, as quarterly GDP is closely linked to the monthly index of production which constitutes a monthly volume measure of GDP (see below). There is however a regular publication on quarterly accounts even if there is no system of delivery of time series on the web site of the INEI devoted to quarterly national accounts.

444. It appears that the BCRP disseminates its own set of quarterly national accounts on its website, both from the production and the expenditure side and the IMF SDDS explicitly refer to the BCRP as being the source of quarterly national accounts for Peru. The relation to the INEI's quarterly data needs clarifying.

Coverage

445. At this stage, two datasets have been transmitted to OECD by the INEI in September 2016. They cover a set of quarterly data from 2007Q1 to 2016Q2:
   - T0101: GDP output approach, current prices and volume;
     - Data seasonally adjusted at constant prices exist, but the data is not available seasonally adjusted at current prices.
   - T0102: GDP expenditure approach, current prices and volume;
     - Data seasonally adjusted at constant prices exist, but there is no breakdown of GFCF. The data is not available seasonally adjusted at current prices.
   - The tables that were not transmitted are:
     - T0103: GDP income approach and compensation of employees by industry, current prices;
     - T0107: Disposable income, saving and net lending/net borrowing, current prices;
     - T0109: Real disposable income;
     - T0117: Household final consumption expenditure by durability, current prices and volume;
     - T0110: Population and employment (persons);
     - T0111: Employment by industry (persons, hours worked).

- No table for quarterly sector accounts (T0119, T0801) was transmitted because there are no non-financial sector accounts on a quarterly basis in Peru.

446. The set of QNA data does not meet OECD requirements as the coverage of the main aggregates is limited, there are no seasonally adjusted accounts available at current prices and quarterly institutional sector accounts are not available. Also, the time span of the main aggregates (2007-2014) is very limited.

Sources and methods: quarterly non-financial national accounts of the INEI

447. This section is based on information compiled during the first OECD mission and on the regular quarterly publication Comportamiento de la Economia Peruana en el Primer Trimestre de 2016, which includes a very short methodological section. A more complete methodological documentation is not available on the INEI web site and would be welcome.

448. The quarterly GDP is based on the same principles as the annual GDP (and is, together with the monthly GDP, benchmarked on annual accounts using the Denton method), and is therefore consistent with the base year 2007 of the annual accounts. It refers to the SNA 2008. Its sources are however preliminary and its coverage is more limited.

449. Data are available under the output approach (only in volume, in 14 industries) and the expenditure approach (in volume and current prices). Time series are available for 2007Q1 to most recent quarter for both. Quarterly national accounts are seasonally adjusted but the main publication presents mainly non-seasonally adjusted data and comments on changes compared to the same quarter of the preceding year.

Quarterly GDP using the production approach

450. The quarterly GDP is the quarterly average of the Indice Mensual de Produccion Nacional (see below) with some limited adaptation. The preliminary results of quarterly GDP changes and the Índice Mensual de la Producción Nacional have the same trend, as they are based on the same sources of information.

451. However, the results of quarterly GDP are subsequently revised with wider coverage information for both output and expenditure approach. For example, in the measurement of financial and insurance activity, the activity of Banks is not only taken into account but also the activity of rural and municipal Banks, Small and Micro Enterprise Development Agency (SMEDA), insurance companies, Pension Fund Administrator (PFA) and supporting insurance. In manufacturing, direct data provided by companies on the preservation and conservation of fishery products, fishmeal and fish oil, petroleum and metals refining is included in the revised quarterly GDP.

452. Under the production approach, the breakdown in 14 industries is the same as in the Indice Mensual de Produccion Nacional. Quarterly current price data for the output approach of GDP are published later than volume figures.

Quarterly GDP using the expenditure approach

453. Final consumption of households: this aggregate is derived partly using the commodity flow method:

   • Statistics of domestic supply (production plus imports minus exports) for non food products (including durables)
   • Quarterly results of the ENAHO (see chapter 2), which covers 117 goods and 36 services. representing 26% of the aggregate
   • Production statistics for other services.

454. Final consumption of government: this aggregate is derived from the same fiscal expenditure data (MEF SIAF) that is used for annual accounts, deflated by appropriate price indices (Wholesale price index -IPM, Lima CPI -IPCLM, Price Index for machines and equipment -IPME)

455. GFCF: this aggregate is essentially derived via a commodity flow method, using sales of cement in metric tons (construction, in 6 products), domestic supply of machines and equipment (62 products), fiscal expenditure statistics for public investment, and data of Ministry of Energy and Mines, Perupetro for private investment.

456. Exports and imports: sourced from external trade statistics.

457. Changes in inventories: obtained as a residual.

Sources and methods - quarterly national accounts published by the BCRP

458. This section refers to the series published by the BCRP. The methodological note of the BCRP recognises that there are differences in methodologies with the INEI as regards the expenditure side approach towards measuring GDP.

459. Following probably the IMF ROSC of 2003 which noted the lack of quarterly data on the demand side of GDP, the BCRP engaged in the compilation and publication of a limited set of quarterly national accounts. As such, the standard dissemination channels of the BCRP include two tables (Cuadro 82, Cuadro 84) which respectively cover quarterly volume GDP from the production side and the expenditure side. The series are presented as consistent with the 2007 base year. The BCRP makes also available a short (but old and not updated) methodological note on these time-series.

460. GDP from the production side is compiled simply as the quarterly average of the monthly volume GDP published by INEI[29]. It is presented in seven industries[30] and the BCRP publishes a seasonally adjusted monthly GDP.

461. GDP from the expenditure side (in prices of 2007) is presented with a breakdown between private consumption, public consumption, gross domestic investment (itself broken down into fixed investment private/public), and exports and imports. Except for exports and imports which are based on foreign trade data, the methodology makes heavy use of indirect indicators. One important methodological feature is that compilation starts with volume data and current price data are derived subsequently by inflating volume data with price indices, essentially the CPI.

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29   The monthly GDP appears (under this name) in Cuadro 62 of the BCRP.
30   BCRP aggregates in "Otros servicios" the following service industries published by INEI: Transport, Hotels and restaurants, Telecommunications, Financial services, Servises to firms, Administration, Other services.

462. Private consumption is derived from statistics on the supply of consumption goods (after deducting change in stocks) and deflated using the CPI. Public consumption is derived using data on general government wages and intermediate consumption, deflated by the CPI and the Wholesale Price Index (IPM). Private investment is obtained via a supply method, on the basis of statistics of consumption of cement (supposed to be correlated with construction of dwellings) plus imports and local production of capital goods. Price indices used are either the CPI for Lima or specific import price indices. Public investment is based on fiscal expenditure statistics deflated by the Lima CPI.

Timeliness - quarterly non-financial accounts

463. Initial quarterly estimates of INEI are published at Q + 50 days. This delay is sufficiently close to the Q + 45 days, the OECD objective for timeliness of quarterly accounts. There is an entry in the release calendar of the INEI for the publication of quarterly national accounts.

464. The quarterly estimates by the BCRB are published 60 days after the quarter under review and the date of publication is pre-announced in the 3 months ahead release calendar corresponding to the SDDS.

Revision policy

465. There is no formal revision policy (see also Chapter 1)

Interpretability (availability of metadata)

466. INEI is finalising a document on the methodology of the Quarterly National Accounts which will be posted on its institutional website.

The Indice Mensual de la Producción Nacional

467. INEI has long published a monthly volume production index corresponding to the entire coverage of GDP[31]. While its official name is Indice Mensual de la Producción Nacional, this index is systematically dubbed "Monthly GDP" by the BCRP and by the media, and it conceptually corresponds to this definition.

468. This index is one of the headline indicators of the INEI. It is published via a special press release[32] which has substantial media coverage, 45 days after the month under review. The index is basically a Laspeyres volume index using essentially physical indicators, weighted by the value added of the base year 2007. In this sense, it is considered as consistent with the national accounts. It is based on an ISIC Rev 4 classification.

469. The index is clearly aimed to measure monthly GDP as it: (1) includes an estimate of volume net taxes on products; (2) is benchmarked on annual national accounts (using the Denton method). INEI publishes a seasonally-adjusted version of the index, using X12-ARIMA, the overall index being the sum of seasonally-adjusted components.

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31 Other OECD countries generally limit themselves to a monthly volume index of manufacturing and, more recently for some countries, a monthly aggregate index of private services

32 Plus a 50 page technical report.

470. After the IMF ROC of 2003 which found that it was based on direct sources that covered only 54% of GDP, INEI has implemented surveys for activities that were previously measured in an indirect manner. This is the case of commerce, restaurants, services provided to companies and other services. Likewise, the information of National Household Survey (ENAHO) and administrative records of productive sectors is also being used. It is assumed that currently there are direct indicators for economic activities that represent approximately 80% of GDP.

471. Monthly indicators are the following:

- Agriculture and livestock: quantities produced of 157 agricultural products and 12 livestock products. Source: Ministry of Agriculture and Irrigation.
- Fishing: quantities of 73 species disembarked in Peruvian ports and quantities of 13 species fished in continental waters. Source: Ministry of Production.
- Mining and combustibles: quantities in tons of 8 mining products (Source Ministry of Energy and Mines) and 3 petroleum products (source Perupetro, obtained from 13 sub-contracting companies).
- Manufacturing: this category is broken down in two sub-categories: Primary products, non-primary products. The source of these categories is the monthly survey conducted by the Ministry of Production which collects volume data from 3536 establishments[33] supplemented by the survey of 1699 establishments conducted by the Ministry of Agriculture and Irrigation.
- Electricity, gas and water: Production of electricity in Gw/h by the public electricity companies, of water in m3 by the main water companies, of gas by Gaz Natural del Peru. Source: Ministry of Energy and Mines, water and sewage companies.
- Construction: quantity of domestic consumption of cement (production plus imports minus exports); expenditures of the central government related to construction, rehabilitation and maintenance of roads. Source: cement enterprises, external trade statistics and MEF (SIAF).
- Commerce: turnover of commercial companies deflated by the CPI. Source: INEI monthly survey of commerce (3400 firms).
- Transport, storage and postal communication: passenger/freight/kms and turnover (deflated by Lima CPI). Source: Ministry of Transport and Communication; transport companies, port authorities, among others.
- Hotel and restaurants: number of nights (source Ministry of External Trade and Tourism); turnover of restaurants deflated by CPI (source: INEI survey of restaurants covering 1400 establishments).
- Telecommunication: information of telecommunication firms deflated by CPI. Source: telecommunication companies.
- Business Services: turnover deflated by the Lima CPI. Source: INEI survey of 2400 establishments specialised in services to firms.
- Financial services: The calculations of values at current prices are carried out with economic financial information of companies, information provided by Superintendence of Banking, Insurance and Private Pension Fund Administrators. The gross value of production at current prices is measured from services produced by financial intermediaries that are charged directly (explicit commissions and fees) and indirectly (non-explicit) also called Financial Intermediation Services Indirectly Measured (FISIM). The measurement of output at constant prices is carried out by deflation of current values with price indices developed for FISIM and other financial services. The intermediate consumption is developed based on a greater breakdown available in accounting items of expenditure being carried out by economic units in procurement of goods and services involved in the output process. In the estimation of Intermediate Consumption at constant

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33 The Ministry of Production publishes its own Index of Production for the Manufacturing sector based on the same collection of data.

prices, quarterly technical coefficients of base year 2007 are applied. The Gross Value Added is determined by the difference between gross value of output and intermediate consumption. This procedure is carried out in constant and current valuation. Source: Superintendence of Banking, Insurance and Private Pension Funds Administrators ("SBS").

*   <u>Administration services</u>: permanent wages of general government (including regional and local information) deflated by the index of wages of the government. Source: MEF (SIAF).
*   <u>Other services</u>: diverse indicators. Source: INEI survey of services (1800 establishments), Superintendencies of health, of taxes, Ministry of culture, MEF (SIAF), among others.
*   <u>Taxes on products</u>: obtained using the method of the change in the production of goods and services subject to the tax.

Overall assessment and recommendations for quarterly national accounts

472. The quarterly national accounts are the most important macro-economic indicators for OECD countries. While the timeliness of INEI's quarterly national accounts is good, their coverage is limited and the time span of the series short. Quarterly accounts at current prices (output approach), seasonally adjusted, should be published in due time.

473. In its communication and dissemination, INEI should give priority to seasonally adjusted quarterly accounts, in particular on the expenditure side of GDP.

474. There appears to be little reason for BCRP to maintain a separate set of quarterly accounts, even more so as they are not fully consistent from INEI's quarterly series. INEI should become the unique official source of the quarterly national accounts for Peru.

475. INEI should develop additional infra-annual indicators in order as a source for its quarterly national accounts, in particular using administrative data (VAT) of the SUNAT. A review should be carried out regarding the availability of other specific quarterly indicators.

476. The current method to derive production figures for the Construction industry is based on the supply of cement and does not correspond to good statistical practice. There are also a series of shortcomings with the measurement of investment in the quarterly accounts. Specific technical assistance should be sought as regards the calculation of GFCF in quarterly accounts.

477. In a longer time perspective, quarterly institutional accounts should be developed. INEI is already envisaging the compilation of quarterly institutional sector accounts, with technical assistance from the IMF, in the medium term program associated to the new base year.

3.4. General government non-financial accounts

OECD data and metadata requirements

478. The OECD Annual National Accounts (ANA) database contains data on general government collected from all OECD member countries and some other major economies on the basis of a standardised questionnaire as well as according to countries' own definitions and classifications.

479. The annual data requested for general government non-financial accounts cover the following domains:

  • Table 0200: Main aggregates of general government and its subsectors, current prices. The timeliness of the annual table 200 is expected to be, at minimum, June Y+1, even if these first data remain estimated. The consistency of the data with the main headline GFS data transmitted to the IMF has to be ensured, if necessary via a transparent bridge table.
  • Table 0900: Detailed tax and social contribution by type of tax or social contribution and by receiving sub-sector, current prices.
  • Table 1100: Expenditure of general government (and sub-sectors) by function (in COFOG classification), current prices.

480. 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. 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.

481. Time series are expected to cover 1970 to the latest year.

Compliance

482. The conceptual reference is SNA 2008.

Interpretability (Metadata requirements)

483. 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.

Timeliness – annual accounts

484. The OECD expects the transmission of annual accounts for the general government under Table 200 at Y + 6 months.

Data and metadata transmission – annual non-financial accounts for the general government

485. The OECD expects the transmission of annual government accounts on the same day of the national release.

Evaluation of Peru's General Government non-financial accounts

486. The OECD gives priority to the SNA framework for public finance indicators. In Peru, INEI is in charge of compiling the sequence of accounts for the institutional sector "General government (S13)". However, the availability of these data is not acceptable under the standards of the OECD. As of mid-

2016, only the series 2008-2014 were available but have not even been published. In addition, there are neither quarterly accounts for the general government nor financial accounts, whether annual or quarterly. An annual balance sheet was developed for 2008, but was never published.

487. The BCRP is in charge of compiling, publishing and transmitting to the IMF public finance data in the IMF GFS format[34]. Public sector debt is also compiled, published and transmitted to the IMF by the BCRP (see next section on financial accounts). Fiscal policy indicators that are compiled by the BCRP on a monthly, quarterly and annual basis, based partially on the IMF GFSM 2001 guidelines, are extremely timely.

488. The main indicator used in Peru for the monitoring of public finance is the Resultado Económico, the balance of the non-financial public sector (including public enterprises) published by the BCRP.

489. In recent years, the MEF has been compiling and publishing more and more fiscal statistics similar to those compiled by the BCRP. The IMF ROSC of 2003 stated that there was limited coordination between the two institutions. The authorities confirmed to the OECD that the coordination has been strengthened since.

490. In the OECD, public finance indicators are based on the SNA framework, with a focus on the SNA concept of general government (rather than pure Central Government or public sector).

Coverage

491. INEI committed to be responsible for the transmission of the SNA tables on general government, which would be sent in Y+8 months. At this stage, the following datasets have been transmitted to OECD:

492. Table 0200: Main aggregates of general government and its subsectors, current prices. This table covers the entire annual non-financial accounts of the general government (S13) and of its sub-sectors. The table ends with the main SNA headline indicator for surplus/deficit (so-called "net lending/borrowing" and coded S13-B9 in the SNA). The table transmitted by INEI covers 2007-2015 and is complete.

493. Table 200 is at the core of OECD indicators for fiscal monitoring. As such, its quality and the timeliness of its transmission are essential. The expected delay of transmission of the first estimated accounts is Y + 6 months. This should not pose problems for Peru as, already, the INEI has access to 100% of the accounts of the entities of the general government (INEI has access to SIAF, SICON, ESSALUD and all central budget information) and BCRP is currently able to publish monthly general government accounts (including local authorities and social security) less than one month after the month under review. In fact, INEI has been able to transmit to OECD the year 2015 in September 2016, thus very close to the requested delay of Y + 6 months.

494. The compilation of quarterly non-financial accounts for the general government in the SNA framework is envisaged for the medium-term, with technical assistance from the IMF.

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34 Article 84 of the Constitution mandates the BCRP to inform the country on the nation's finances.

495. Table 0900: Detailed tax and social contribution receipts by type of tax or social contribution and by receiving sub-sector, current prices. The table transmitted by INEI covers 2007-2015 and is complete.

496. Table 1100: Expenditure of general government (and sub-sectors) by function, current prices. Table 1100 covers the detailed classification of general government expenditures, using the international Classification of Functions of Government (COFOG) at 2-digit level. This table is one of the most used tables by the Public Governance and Territorial Development Directorate (GOV) of the OECD. The table transmitted by INEI covers 2015 and is complete for this year (see question at the end).

497. The transmission of this table for the year 2015 is a very positive sign showing the capacity of Peru to exploit detailed data on government expenditure at the level of the 2 digit COFOG. At the present stage in which only one year is available, it is difficult to fully assess the quality of these data.

Compliance

498. In Peru, the responsibility of the collection, process and publication of Government Finance Statistics (GFS) lies with the BCRP which is able to publish extremely timely GFS, based on an efficient system of accounting for the public sector (SIAF and SICON -- see below). The Ministry of Economy and Finance (MEF) only publishes annual GFS data, which are consistent with the BCRP data.

Box 2. Public finance accounting is well organised in Peru.

The National Directorate for Public Accounting (GDPA in Spanish) of the MEF is responsible for issuing accounting rules to be applied in the public sector. It published a "Plan Contable Gubernamental" in 2011. All public sector entities without exception (central, local, regional, social security, public enterprises) are subject to these rules. Its legal background is Law 28708[1]. It develops standards, assess their implementation and interpret the accounting rules for public entities[2]. The GDPA is responsible for the implementation of International Public Sector Accounting Standards (IPSAS) in Peru. It is working with the BCRP towards the implementation of the IMF GFSM 2014 and expects it to take place during 2016. Each year, the GDPA publishes the "Cuenta General de la Republica" which is the official annual consolidated account of the public sector.

There is no Court of Accounts (independent audit authority) in Peru which certifies that the accounts are reliable. However, according to Article 2 of Law 29537, the General Comptroller of the Republic (CGR) has many of the characteristics of a Court of Accounts. In accordance with the organic law, the CGR is an entity which enjoys autonomy and the Comptroller General is appointed by the Congress for seven years on the proposal of the Executive Power and can only be removed by Congress as a result of a serious fault. It is the entity in charge auditing the Cuenta General de la Republica. Its financial statement audit includes determining whether the financial statements of the audited entity present fairly the results of its operations and their cash-flows in accordance with the applicable financial reporting framework. It issues the audit report mentioned in Article 81 of the political constitution of Peru, which is submitted to the Ministry of Economy and Finance and to the Review Committee of the Congress of the Republic before August 10 of year Y+1. The Review Committee evaluates the report before October 15. As regards social security (ESSALUD), the GPDA has issued Directive 003-2015-EF/51.01 which sets the basic annual information that ESSALUD (and other public entities) has to follow. The auditing of the accounts of ESSALUD is delegated to a private audit firm nominated by the GPDA (under a public tender).

SUNAT (see section 1.2 above) is the producer of revenue statistics for the Central Government and Social security. It publishes monthly series on taxes (in particular VAT), social contributions (covering ESSALUD, ONP and FCRP [3]) and other revenues of the government, receipts (devoluciones) and declarations (declaraciones), including by department and localities.

The Sistema Integrado de Administracion Financiera para el Sector Publico (SIAF-SP) is the software system which allows to organise the transactions of all entities of the public sector (local, regional, central), control these transactions, and at the same time collect the information needed to derive financial accounting. The system is monitored by the three main operational Directorates of the MEF: Dirección General de Presupuesto Público; Dirección General de Endeudamiento y Tesoro Público; Dirección General de la Contabilidad Público. It covers more than 3000 entities of the public sector. The SIAF system is able to deliver statistics in COFOG and by detailed nature of expenses. SIAF is cash-based but allows having an up–to-date accounting of payables. The BCRP has direct access to the SIAF.

SICON (Sistema de Integración Contable de la Nación) is a database of the Ministry of Economy and Finance (MEF) complementary to SIAF. The SIAF provides information of the executing units (example: Hospitals, Units of Educational Management) and units of Government (example: Ministries, Public Institutions), at the level of National, Regional and Local Government, used for the quarterly estimates of the economic activities of the Government (health, education and public administration). Although it has less coverage, the SICON has more detail in the Constructive Balance that allows comparing the information with the Balance Sheet and the Income Statement. The SIAF provides updated and historical information online, monthly, quarterly and annually at the departmental and national level.

On the other hand the SICON has greater coverage because centralizes information at the level of the public sector (General Government and Public Enterprises), used to develop the General Account of the Republic; the SICON includes information of the Public Benefit Corporations, Provincial Road Institutes, Populated Centers, among other entities at the national level not covered in the SIAF. In the national accounts this information is used for the estimates for the institutional accounts of the General Government and the Public Non-financial Corporations. The SICON provides information of a yearly, monthly and quarterly basis, at the departmental and national level.

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1   The law provides for an Accounting Standard Board which advises on standards for the private sector.
2   In 2014, for example, it published "methodologies" for the estimation of depreciation of buildings, for the valuation of financial instruments of government entities (including derivatives), for the recording of PPPs.
3   Fondo Consolidado de Reserva Previsional.

499. GFS data is recorded on an accrual (modified cash[35]) basis following the guidelines of the IMF GFSM 2001, however with some specificities: income data and accounts of extra-budgetary entities (including ESSALUD) are recorded on a cash basis; the classification of the GFSM 1986 remains in usage for the publications; figures for public investment reflect financial flows rather than work in progress. The BCRP has a plan to move to the classification according to the IMF Manual of 2014 and to generalize the accrual basis. In particular, the team in charge of SIAF and the BCRP are working to record investment data on an accrual basis.

500. Currently, BCRP publishes: (1) a monthly aggregated account for the non-financial operations of the general government around 15 days after the end of the month under review (Cuadro 74), (2) at the same time, a more detailed table on taxes and other revenues of the general government (Cuadro 76), and (3), at the same time, a more detailed table on the expenditures of the general government (Cuadro 79).

501. Currently the GDPA is the entity which publishes the list of entities of the general government, and, as such is responsible, in practice, for the content of the list which is available on the web site of the Cuenta General de la Republica. The INEI limits itself to the classification of the entities within the sub-sectors of the SNA.

502. Peru uses the sub-sectoring recommended in the SNA 2008:

- • S131 Central government
- • S132 Regional government
- • S133 Local Government
- • S134 Social security funds

503. In Peru, Regional Governments are classified in sub-sector S132, since they perform some functions of government at a lower level than Central Government and at a higher level than Local Governments. EsSalud and Standardization Bureau (ONP) are classified in the sub-sector S134 Social Security Funds.

504. Fiscal statistics from the BCRP are not publicly reconciled with general government accounts compiled by the INEI. If INEI starts to compile timely general government accounts under SNA, as recommended by the OECD (and necessary under the compulsory transmission of Table 0200), it would be essential that a bridge table be published regularly, explaining any differences between the main balancing item of the two sets of accounts.

505. As confirmed by the authorities, the main indicator of the situation of the public finances in Peru is the Resultado Económico for the public sector (which includes public enterprises) published by the BCRP under Cuadro 74 (or Cuadro histórico 17). A public bridge table should explain for each year (quarter), and step-by-step, the difference between this central indicator and the main indicator of the balancing item of the general government account in the SNA (S13-B9 of Table 0200). The first step of the bridge table should exclude the balance of public enterprises. The other steps should illustrate other possible adjustments such as accrual accounting in order to arrive at the S13-B9. An example of a possible bridge table is provided below (taking the case of the year 2010):

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35 Revenues are recorded cash and expenditures accrual.

Table 5. Bridge Table BCRP/INEI (illustrative figures correspond to 2010, million soles)

Operaciones del sector público no financiero (Cuadro histórico 17, BCRP) (1) Resultado económico	-912
(2) Contribución de los entes fuera del Gobierno General	-683
Operaciones del Gobierno General (Cuadro histórico 18, BCRP) (3) Resultado económico (1 - 2)	-229
Ajustes para el Sistema de Cuentas Nacionales	
(4) Ajuste 1	?
(5) Ajuste 2	?
(6) Ajuste 3	?
….	
Sistema de Cuentas Nacionales (INEI)	
Prestamo neto/Endeudamento neto (S13 – B9) (3 +/- 4 +/- 5 +/- 6…)	+6 302

Overall assessment and recommendations for General Government non-financial accounts

506. Peru has a coherent and solid information system on public finances. In order to progress towards full compliance with OECD requirements, an effort is needed to raise the quality of general government accounts in the framework of the SNA. This effort should focus on:

- Establishment of a precise definition of the composition of the general government, entity by entity, which is shared by all institutions dealing with fiscal statistics, under the supervision of the INEI, which is officially in charge of national accounts. This list should be made public on the web site of the INEI.
- An effort to compile and publish SNA-consistent general government accounts, even estimated, with the target of reaching publication by June of year Y+1. This is realistic: INEI has already transmitted data for 2015 in September 2016.
- The regular compilation and publication of a bridge table explaining in detail the difference between the headline BCRP indicator of deficit/surplus and the SNA deficit/surplus (S13-B9).
- Taking example from other countries, we recommend the creation of an Interagency Committee for GFS, composed of INEI, MEF, BCRP, SUNAT, the team of SIAF and other appropriate participants. This interagency committee would, among other tasks: (1) ensure that the official list of entities of the general government is updated and used by all actors; (2) put in place and verify the bridge table mentioned above.

3.5. Financial accounts and public sector debt

OECD data and metadata requirements

Coverage

507. 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 INEI, the BCRP and the MEF. For all four databases, the Secretariat requests data in national currency units.

Financial Accounts and Financial Balance Sheets

508. 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.

509. 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 on both a non-consolidated (Table 0620) and a consolidated basis (Table 0610) and financial balance sheets on both a non-consolidated (Table 0720) and a consolidated basis (Table 0710). Country should provide annual and quarterly tables.

510. 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

511. 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.

512. 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 aligned 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

513. "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 in line with SNA 2008.

Public Sector Debt

514. 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.

515. 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

516. In general, the definitions and compilation methods used should comply with the System of National Accounts 2008.

Financial Accounts and Financial Balance Sheets

517. 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. In the OECD questionnaire, both the instrument breakdown and the institutional sector classification follow the SNA 2008 guidelines.

518. 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

519. 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 the Peruvian authorities. The finer breakdown of households' financial assets required by the OECD is consistent with the financial classification of the 2008 SNA.

Institutional Investors' Assets

520. 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 2008 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 2008 SNA, when possible. The breakdown of institutional investors' assets is in line with the SNA 2008. The Secretariat prefers to receive consolidated data.

Public Sector Debt

521. 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 BCRP. 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[36] . 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 the BCRP along with the data template.

Interpretability (Metadata requirements)

522. 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).

523. 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 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 the Peruvian authorities.

Timeliness

524. 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

525. 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.

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36   The revision of the Government Finance Statistics Manual is under way to maintain consistency with the 2008 SNA.

526. 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 Peru's financial accounts and public sector debt statistics

Financial accounts

527. At this stage, there are no published financial accounts for Peru. However, the following dataset has been transmitted to OECD.

- Table 0620: Financial accounts (transactions) by sector, non-consolidated. The table is complete but only for the year 2010.

528. The following datasets are lacking:

- Table 0610: Financial accounts (transactions) by sector, consolidated.
- Table 0710: Financial accounts (stocks) by sector, consolidated.
- Table 0720: Financial accounts (stocks) by sector, non-consolidated.

529. This one-off result on Table 0620 is welcome but Peru still has some ground to cover before being able to compile financial accounts on a regular basis. A new project for the development of financial accounts is being launched, in cooperation between the INEI and the BCRP. A Working Group for the development of sectoral financial accounts (GTECF) was established. The BCRP would even envisage compiling quarterly financial accounts. The Project aims at results in 2019.

Public sector debt

530. The General Directorate of Debt and Public Treasury (DGETP) has the responsibility of scheduling and attending to the debt service of the National Government (Budgetary and Extra-budgetary Central Government); for this purpose, the Ministry of Economy and Finance has a dedicated Executing Unit to fulfil this role. The budget allocated to pay the debt is provided in the Law of the General Budget of the Republic approved for each fiscal year, with an obligation under the Political Constitution (Article 78) that "the budget cannot be approved without record assigned to public debt service".

531. The Executing Unit, which is in charge of paying the debt, is organized in teams that use two computer applications that allow them to ensure that payments are made at time. These are conditions and formalities required by government creditors. In this regard, a) the Integrated System of Administration and Debt Management (SIAD, by its acronym in Spanish) is an internal system for the registration and monitoring of debt agreements signed, disbursements received, calculations of payment schedules, schedules of payments, execution of payments, debt accounting of debt operations and debt management (among the latter, risk coverage with swap), in addition to providing provide complementary processes of debt management; b) the Integrated System of Financial Public Sector Management helps to achieve the process of budgetary and financial execution to pay debt and interfaces with the Banco de la Nácion which is the financial institution in charge of the execution of payment instructions[37].

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37 *Banco de la Nacion* is a public-law company, whose goal is to manage by delegation the sub-accounts of the Public Treasury and provide the banking services for the management of public funds to the Central Government. It is not part of the general government sector but of the Economy and Financial Sector and operates with economic, financial and managerial autonomy. It is governed by the Law of the Entrepreneurial Activity in the State and supplemented by the General Law of Banking, Financial and Insurance Institutions. When the Ministry of Economy and Finance requires and authorizes in the operations framework of the National Treasury System, the Bank will act as financial agent of the State, will address the external public debt and foreign trade operations. It also collects taxes and make payments, without this being exclusive, commissioned by the Public Treasury or when mediating agreements with the bodies of the tax administration.

532. On the other hand, the debt contracted by autonomous entities (regional governments, local governments, financial and non-financial public corporations) without the guarantee of the Republic, is carried out directly by those entities to creditors.

533. The BCRP publishes a quarterly table on the debt of non-financial corporations in the public sector, consolidated, by Q+60 days (Cuadro 112).

534. However, it appears that the headline indicator in Peru as regards debt is the central government debt at nominal value published monthly by the MEF (M + 25 days) and prepared by the General Directorate of Debt and Public Treasury (DGETP)[38]. The MEF publishes also a report of the debt of the Total Public Sector, including regional and local governments, non-financial and financial public companies (in the latter group only external debt is considered). Since 2007, the MEF has been able to compile consolidated debt statistics.

535. Peru successfully transmitted the OECD questionnaire on Public Debt in September 2016. The time coverage is Q1 2010 to Q2 2016, confirming an excellent timeliness. The sectors as well as the instrument coverages are satisfactory. The debt is consolidated (including at Public Sector level). The methodology and classifications have been developed based on the Public Finance Manual of 2011, which is consistent with SNA 2008.

536. In case Peru is, in the future, invited to regularly transmit the Public Debt data to the OECD, the institution in charge of this transmission should be the Ministry of Economy and Finance, through the General Directorate of Indebtedness and Public Treasury (DGETP), line agency of the Vice Ministry of Finance.

Recommendations on financial accounts and public sector debt statistics

537. The OECD recommends the prompt launching of a program for the compilation of annual financial accounts, consolidated and non-consolidated, in flows and in stocks. In the longer term, quarterly financial accounts would be useful. Peru public debt statistics are globally consistent with the requirements of the OECD.

3.6. Overall assessment of Peruvian national accounts statistics

538. The implementation of the new base 2007 has been the occasion for Peru to put in place a very solid set of annual national non-financial accounts tables. Significant improvements are needed in terms of the timeliness of the annual definitive accounts, and the quality and timeliness of the annual estimated and provisional accounts.

539. INEI should at the same time increase the quality of its quarterly national accounts and better promote them as a priority item in its dissemination policy.

540. One strategic condition for this to happen is closer cooperation between SUNAT and INEI. Once achieved, INEI should be able to decide on a regular and adequate organisation of the publication and revisions of annual accounts (estimated, provisional, definitive) and should be able to respect a time schedule (announced in advance) in line with OECD requirements (Y+9 months for estimated annual accounts, Y+6 months for estimated general government accounts). VAT based indicators should be developed and contribute to the strengthening of quarterly accounts.

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38 DGETP announces that an alternative valuation of debt at market value (using amortised costs) will be available soon.

541. The financial accounts are currently missing. INEI and BCRP are working on a project to fill this gap, in priority with annual accounts. In the longer term, quarterly institutional sector accounts and quarterly financial accounts should be developed.

542. INEI is planning improvements in the production of annual and quarterly accounts developing Supply and Use Tables (SUT) and Institutional Sectors Accounts and also Balance-Sheet Accounts. SUT's preparation is part of short and medium term work. Meanwhile, for improving Institutional Sectors Accounts and Balance-Sheet Accounts, arrangements have been made with the IMF to receive technical assistance in the 2016 – 2019 period; as well as for the annual and quarterly accounts.

543. Finally the OECD welcomes that the INEI is already planning for a new base year (probably the year 2017). A work plan has been set up, with technical assistance from the IMF. The objective is to publish the new accounts in September 2021 (year of the bicentenary of Peru's independence). INEI intends to create an Inter-Agency Commission to coordinate the many operations linked to this project, which will require a greater number of people in the Directorate.

CHAPTER 3 ANNEX

The processing of sources from SUNAT on non-financial corporations

Background

544. The National Superintendence of Tax Administration (SUNAT) provides information to the National Institute of Statistics and Informatics about taxpayers' financial statements that pay taxes by Third-category income (business).

545. Taxpayers of Third category income are required to submit the Annual Affidavit of Third Category Income Tax, whether they are natural or legal persons who have obtained third category incomes or losses as tax payers of the general income tax regime.

546. In 2012, the amount of SUNAT's information increased to 1 million 396 thousand companies, in which 575 thousand companies for the General Regime and 821 thousand companies for Single Simplified Regime (RUS) and Special Regime Income (RER).

Procedure for exploiting the information source

547. SUNAT provides information to INEI on Taxpayers' Register on which the annual Directory of 1 million 396 companies for 2012 is developed. For transmission to INEI and for confidentiality reasons, the financial statements of third-category income companies (575,000 companies), are grouped with at least five companies by ISIC class, economic activity of national accounts (101) and institutional sectors.

548. The information of third-category income companies of SUNAT is broken down by: a) Companies that submit only the Telematics Program Statement (PDT); b) Companies that submit PDT and trial balance sheets (Companies that produce revenues over 300 ITU, 1 million 95 soles for 2012[39]).

- For PDT, the following is required: total value of the financial statements (Profit and Loss, Balance Sheet: Assets, Liabilities and Equity and Asset Transaction) by ISIC class in a panel of years n and n-1. The sales value of PDT's informants represents 75% of GDP of non-financial corporations sector.
- For Trial Balance Sheet, the format at level of 101 economic activities is requested; each activity with at least five companies and samples are panelled for both years n and n-1. Organized information is requested for non-financial corporations and institutional sub-sectors (Private, Public and Foreign Control). The sales value of Trial Balance Sheet's informants represents 64% of GDP of non-financial corporations.

Consistency of accounting information

549. Consistency is achieved for each group of companies. The sales and the outcome of fiscal year of business groups of PDT are compared to the same group of companies that reported the Trial Balance Sheet.

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39   The Tax Unit (ITU) of 2012 amounted to three thousand six hundred soles S/.3,600).

550. It is compared with other sources of information such as the Annual Economic Survey (EEA), the Financial Statements of companies that report to the Superintendence of Securities Market (SMV), the National Fund for Financing State Enterprise Activity (FONAFE), for state companies.

551. In order to carry out the calculation of macroeconomic aggregates of the production account and income generation by economic activities, there is information available of the Annual Economic Survey of companies with more than one establishment and based on this information, data breakdown is made by company of SUNAT.

Calculation of National Accounts

552. The "intermediate system" is made up by reclassifying the accounting items with SNA codes for obtaining an "estimate" of the National Accounts. The results are analysed for each group of companies, by comparing to historical series, the technical coefficients, wages, average wages, sales, income tax, among others. For the results of the gross value of production and intermediate consumption by product and input, the information from the Annual Economic Survey is used, which includes a chapter on the main outputs and inputs.

Examples of Formats of PDT: Profit and Loss Statement

Examples of Formats of PDT: Balance sheet – Assets

682 Declaración Pago Anual Impuesto a la Renta 2012 3ra. Categoría e ITF - v 1.0

| Identificación | Estados Financieros | Impuesto a la Renta | Créd. contra Imp. Renta | Determinac. de la Deuda | Información Complement. | Imp. Transac. Financieras |

| Activo | Pasivo y Patrimonio | Estado de Gan. y Pérdidas |

I. Balance general	Valor histórico al 31 de dic. 2012		I. Balance general	Valor histórico al 31 de dic. 2012	
Caja y bancos	359		Existencias por recibir	375	
Inv valor razonable y disp para la vta	360		Desvalorización de existencias	376	
Ctas por cobrar comerciales - terc	361		Activos no ctes mantenidos para la vta	377	
Ctas por cobrar comerciales - relac	362		Otros activos corrientes	378	
Ctas p cob per, acc, soc, dir y ger	363		Inversiones mobiliarias	379	
Ctas por cobrar diversas - terceros	364		Inversiones inmobiliarias (1)	380	
Ctas por cobrar diversas - relacionados	365		Activ. adq. en arrendamiento finan. (2)	381	
Serv y otros contratados por anticipad	366		Inmuebles, maquinaria y equipo	382	
Estimación ctas de cobranza dudosa	367		Depreciación de 1, 2 e IME acumulad	383	
Mercaderías	368		Intangibles	384	
Productos terminados	369		Activos biológicos	385	
Subproductos, desechos y desperdicios	370		Deprec act biol, amort y agota acum	386	
Productos en proceso	371		Desvalorización de activo inmovilizado	387	
Materias primas	372		Activo diferido	388	
Materiales aux, suministros y repuest	373		Otros activos no corrientes	389	
Envases y embalajes	374		TOTAL ACTIVO NETO	390	

Anotar los importes en nuevos soles sin considerar céntimos.

Validar | Grabar | Salir

Examples of Formats of PDT: Liabilities and Net Worth

682 Declaración Pago Anual Impuesto a la Renta 2012 3ra. Categoría e ITF - v 1.0

| Identificación | Estados Financieros | Impuesto a la Renta | Créd. contra Imp. Renta | Determinac. de la Deuda | Información Complement. | Imp. Transac. Financieras |

| Activo | Pasivo y Patrimonio | Estado de Gan. y Pérdidas |

I. Balance general	Valor histórico al 31 de dic. 2012		I. Balance general	Valor histórico al 31 de dic. 2012	
Sobregiros bancarios	401		Capital	414	
Trib y aport sist pens y salud p pagar	402		Acciones de inversión	415	
Remuneraciones y particip por pagar	403		Capital adicional positivo	416	
Ctas por pagar comerciales - terceros	404		Capital adicional negativo	417	
Ctas por pagar comerciales - relac	405		Resultados no realizados	418	
Ctas p pagar accion, directores y ger	406		Excedente de revaluación	419	
Ctas por pagar diversas - terceros	407		Reservas	420	
Ctas por pagar diversas - relacionad	408		Resultados acumulados positivo	421	
Obligaciones financieras	409		Resultados acumulados negativo	422	
Provisiones	410		Utilidad del ejercicio	423	
Pasivo diferido	411		Pérdida del ejercicio	424	
TOTAL PASIVO	412		TOTAL PATRIMONIO	425	
			TOTAL PASIVO Y PATRIMONIO	426	

Anotar los importes en nuevos soles sin considerar céntimos.

Validar | Grabar | Salir

CHAPTER 4.
TRADE IN VALUE ADDED (TIVA) STATISTICS

4.1. Introduction

553. As part of the continued efforts to enlarge the number of countries in the OECD-WTO Trade in Value Added (TiVA) database, and as part of the OECD-Peru country program, OECD and Peru have engaged in a collaboration to review, and develop the capacity where necessary, the data required to integrate Peru into the TiVA database. The first step towards this goal was a 4-day Technical Workshop on Integrating Peru in TiVA (28 September – 1 October 2015 in Lima), where statisticians from Peru (INEI, BCRP, and SUNAT) and OECD discussed in detail the data requirements, and the national data availability and compilation practices. Following this workshop, OECD made available a variety of manuals and technical documents to the Peruvian statisticians, and the INEI, BCRP and SUNAT sent the majority of the data requested. Furthermore, INEI has since completed the OECD National Accounts Questionnaire providing additional data. A second Workshop was subsequently organized from 6 to 9 February 2017 to present the preliminary results of the integration of Peru into TiVA to policy makers and academics, and to discuss with INEI, BCRP and SUNAT about the findings presented in this chapter regarding the quality and availability of the data necessary for the integration of Peru in TiVA.

554. This document describes and reviews that data and assesses how they match with the main requirements for TiVA. It discusses i) Supply and Use Tables (SUTs) and other national accounts data; ii) international trade statistics in goods and services; iii) the national and international consistency of the data received; iv) preparation of Peruvian data for integration in TiVA and v) initial results based on national tables. The document concludes with an overview of Peruvian methodology.

555. **The report provides an assessment of Peru's integration into the current TiVA environment, based on 34 industries following the ISIC Rev 3 industrial classification system and the 1993 SNA**. The TiVA system will however gradually be updated to the ISIC Rev 4 classification system and the 2008 SNA. Peru's national accounts currently conform with the 2008 SNA and there is good comparability of current industrial classifications with ISIC Rev 4, so, notwithstanding the various recommendations regarding future improvements, the assessment made here is generally future-proof.

Summary conclusions and outstanding questions

556. The data that OECD has received from INEI and SUNAT is generally of **very good quality** and provides **more than sufficient** levels of detail required for integration into TiVA. However, as this summary of the review shows, **a few outstanding requests for data remain** (which discussions during the Workshop revealed were, at least in principle, available), after which Peru can be included in the TiVA database from the year **2005** onwards.

Supply and use tables

557. INEI has provided supply and use tables for benchmark year 2007, which are extensive **and provide excellent coverage** in terms of products (365), industries (101), variables, and price bases (purchasers', producers' and basic prices), with a split for import and domestic use. The data are consistent with the 2007 published National Accounts aggregates and are sufficient to meet the OECD requirements for inclusion in TiVA. Additional SUTs – while less detailed – for 2011 are also available. Peru also publishes employment data consistent with the SUTs, for 101 industries (2007, 54 industries in 2011) and 5 categories of workers, which allows for a first analysis of the employment effects of GVCs, and so in this sense, go above and beyond current core TiVA requirements.

558. While the data are sufficient to integrate Peru into TiVA at this stage, there are a number of areas where supplementary data, if made available, could significantly improve the quality of TiVA estimates with respect to supply and use tables:

Strongly recommended:

- *SUTs for 2012*. The Workshop concluded that SUTs for the year 2012 were close to being finalised. Although it is possible to use the SUT tables for 2007 (and to a lesser extent 2011) to project SUT equivalent estimates into later years, this would require a number of assumptions regarding structural change and the pace of integration into GVCs that would introduce a margin of error (as well as some circularity) in the eventual TiVA estimates for the effected years. As such Peru are strongly encouraged to transmit the 2012 tables, broken down into separate import use and domestic use tables, at the earliest opportunity. INEI confirmed that it is working on these tables and they that will be available during 2017.
- *Additional industry breakdowns*. The 101 industries in the 2007 SUT contain only 1 transport industry (TiVA has 2). The 54 industries in the 2011 SUTs present more significant difficulties to align with the TiVA industry classification. Peru is strongly recommended to ensure that the 2012 tables include scope for full alignment with the TiVA industry breakdown. INEI is currently assessing the possibility of breaking down the transport industry.

Strongly encouraged:

- *SUTs for earlier years*. Should supply and use tables be available for earlier years prior to 2007, these should also be transmitted to the OECD if possible. In subsequent discussions with INEI it appears that it will not be possible to provide this information. This will of course mean that long time series of Peruvian GVCs will necessarily be affected, however this is not unprecedented and given the strong focus of policy making on current and recent periods, this will not be overly limiting.
- *Time-series 1995-2015 (or as long as possible) of purchases abroad by residents and purchases in Peru by non-residents*. Although the 2008 System of National Accounts does not explicitly request that countries provide separate estimates of these data by product, it is clear that their provision can significantly improve the interpretability and usefulness of TiVA estimates by creating a clear distinction between cross-border trade and tourism (which is also treated as trade in the national accounts SUTs system). Typically, in most countries, these expenditures are only provided as single items that are added to imports and household final consumption (in the case of Peruvians

expenditures abroad) and deducted from household final consumption and added to exports (in the case of tourists expenditures in Peru). Breakdowns of these estimates do appear to be available according to the presentations provided at the workshop (based on the Tourism Satellite Accounts). These estimates, or data from the tourism satellite accounts, should be transmitted to the OECD. Subsequent discussions with INEI have revealed that it may be possible to provide data for the period 2007-2014. Given the overlap with available SUTs (see also above), the lack of earlier years will not create significant difficulties. That being said, the Ministry of Foreign Trade and Tourism (Mincetur) is working on possible extrapolations from 2001 data, to cover the period 2001-2007, which will be very useful in developing balanced estimates of international bilateral trade and also for use in potential extrapolations of Peru's SUTs to earlier years.

Desirable:

- *Time-series 1995-2015 (or as long as possible) of CIF/FOB national accounts SUT adjustments on imports and exports*. SUNAT has already provided CIF/FOB corrections on imports (by product) in line with the standards of international trade, which is greatly appreciated and goes further than the information currently made available by many other countries. However for complete consistency and adherence to the SNA, it would be desirable to also receive estimates of that part of the CIF/FOB values included in the transmission by SUNAT that reflects provision of the related services by domestic insurance and transportation service providers. Note however that this is not absolutely essential as the omission of such data, which is also the case for some other countries in TiVA, would simply imply that the associated services were exported and then reimported. INEI have indicated that they can transmit these tables for the period 2007-2014, which is very welcome.
- Complementary tables on trade margins, transportation margins, net taxes (taxes less subsidies) and the splits for 2011, 2012 and other SUT years where available. Peru is one of the few countries providing SUTs in a variety of price bases (in particular the chief two most important, purchasers and basic). In addition they should be commended on their provision of a separate table of commercial margins for each individual cell in the 2007 SUT. Although not absolutely essential, similar information for commercial margins, transportation margins and net taxes, for 2011 and any other SUT years would be highly desirable. If this is not possible it would be highly desirable that Peru provided breakdowns of any other SUTs (before and after 2007) in purchasers' and basic prices. INEI are currently working on the estimation of such data for the year 2011, which is greatly appreciated by the OECD.

Time series of value added and gross output by industry

559. Value added by industry is available for 2007-2015 (for 54 industries) and 1994-2015 data (for 14 industries). These data appear of good quality, are consistent with the overall National Accounts aggregates and match the data available in the UN databases. Data has also been provided in the OECD national accounts questionnaire (for 71 industries, 2007-2014) on a 2008 SNA basis for output and value-added. However, **data for gross output by industry have not yet been received** for earlier years, which are *vital* for the production of TiVA data in years where no supply and use tables (see below) are available. The following additional recommendations are:

Strongly encouraged:

- Time series for 1995-2007 (or as long as possible) of gross output, at the same level of detail currently available for value added. These data do appear to be available according to INEI (2014a) which mentions "Serie de Valor Bruto de Producción, Consumo Intermedio y Valor Agregado Bruto 1994-2012 en valores corrientes y constantes, por Actividades Económicas", but it is not clear if these are on a 1993 SNA basis which would make comparison with more recent time series (on a 2008 SNA basis) difficult. Although INEI are not able to transmit data at the 54 industry level before 2007, the impact is only to limit the length of TiVA time-series that the OECD will eventually be able to generate, and so there is no impact on recent, current and future periods.

Time series of main aggregates of National Accounts

560. Data for the main aggregates of National Accounts have been received for 2007-2014, but neither for 1995-2006 nor 2015. They are important for producing data in years where no supply and use tables are available.

Strongly encouraged:

· *Time series (1995-2006 or as long as possible) of main aggregates of National Accounts in SNA 2008*. Although similar data should be available and downloadable from the UN national accounts database, which maintains key aggregates for nearly all economies, it would be preferable to receive the necessary information from Peru (not least because UN data often contain breaks in series). As such Peru are asked to provide 2008 SNA compliant estimates of total imports (preferably broken down by goods and services), exports (again broken down by goods and services), final consumption by households, NPISH, general government final consumption, gross fixed capital formation, valuable and changes in inventories. INEI will be able to transmit to the OECD the time-series of the main aggregates for the period 1994-2015 in the format of the tables 0101 (GDP output approach) and 0102 (GDP expenditure approach) requested by the OECD.

International Trade

561. Information about merchandise trade is extensive and detailed, and includes special series on imports valued CIF and FOB at the detailed product-partner country level, which very few countries are able to provide and for which Peru should be commended. However, with respect to trade in services statistics, the complete lack of information on trading partners (both for exports and imports) means that OECD will have to make estimations and use assumptions in constructing bilateral estimates of trade in services for integration into TiVA. That being said, it should be noted that many, particularly non OECD countries find themselves in a similar situation, and like Peru are working to improve on their current situation, With this in mind, the following recommendations apply in the area of trade statistics:

Strongly encouraged (in the short term) but strongly recommended for the long term:

- *Trade in services, by services category and trading partner country*. From the workshop, we understood that BCRP are currently developing a geographical breakdown for at least certain services trade items. Given the importance of these data, Peru is strongly encouraged to provide these estimates to the OECD as soon as they are available. In the absence of such data the OECD

will necessarily need to estimate these flows with partners. That being said, some perspective is needed here. Trade in services remain relatively insignificant compared to goods, and moreover the situation is not dissimilar to many (generally non OECD) economies already included in TiVA. Fortunately, BCRP is working on the geographical breakdown of trade in services. It has already developed results for 64% of exports (tourism and communication essentially), but not yet exports of transportation services, due to a lack of adequate sources. BCRP intends to explore the breakdown of imports as soon as possible. BCRP will shortly transmit first results on exports to the OECD.

Desirable:

- *Merchandise trade in second hand capital goods, waste and scrap*: If the amounts involved are large, data that separate international trade in second hand capital goods (e.g. second-hand cars, aircraft, ships) from similar goods that are new (not second hand) would be very useful to properly link trade flows with production and value added. Similarly, data that separate out international trade in waste and scrap (e.g. computers that are traded for recycling) by product would be useful for the same reason. Discussions with SUNAT have revealed that it will not be possible to provide this data, however this should be put in a more global context, very few other countries are able to provide this information either…

4.2. Peruvian National Accounts data

562. The first set of main input statistics required for inclusion in TiVA are National Accounts data, including National Account main aggregates, supply and use tables, and annual time series of value added and gross output per industry – preferably as detailed as possible. This section reviews the data that has been received from INEI.

National accounts data

563. General information about national accounts data in Peru is shown in Table 6 below. Peru compiles and disseminates its national accounts statistics, including supply and use tables, using the most recent methodological standards: the 2008 System of National Accounts. Peru follows the international recommendations by using the establishment as the statistical unit underpinning the data. Consumption of households and government is compiled using the standard international classifications COICOP (Classification of Individual Consumption According to Purpose) and COFOG (Classification Of the Functions Of Government). Products and industries can also be matched to international classifications, namely CPC and ISIC, respectively. Furthermore, Peru completed the OECD national accounts questionnaire for the time period 2007-2014 (with some items up to 2016 Q2). This facilitates international comparison of Peruvian data in general, and also greatly helps the integration of Peru in the TiVA database.

564. *However, the match of industries to the (current) 34 TiVA industries is not perfect*. Breakdowns for 54 industries are available for the period 2007-2015 in constant and current prices, while for 1994-2006, only 14 industries are available. Although the aggregates are fully compatible with the 101 industries used in the 2007 SUT, it should be noted that even for the period 2007-2015 it is not possible to align all activities in a way that satisfies the 34 industry TiVA requirements. Of particular concern in this respect is the single Peruvian industry classification for manufacturing of transport equipment,

which is equivalent to two TiVA industries, manufacturing of motor vehicles and parts, and other transport equipment. Although the activity is not in and of itself significant in Peru, the motor vehicle sector is important in GVC analyses, and provides significant opportunities for countries to integrate into extensive value chains, and so such a split is strongly encouraged, at least in the future. INEI is currently assessing the possibility of breaking down the single Peruvian transport industry into the two TiVA transport industries.

Table 6. Peru National Accounts Statistics: General Overview

Type of information	Status in Peru
Version of System of National Accounts 2008	SNA 2008 (i.e. latest)
Statistical unit underpinning the SUTs	Establishment
Household consumption according to COICOP	Yes
Government consumption according to COFOG	Yes
Match between Peruvian product classification and international classifications	Conversion to CPC possible
Industrial classifications used for activities	In general good conversion to ISIC 4
Industry breakdown used in SUTs	Good conversion to TiVA with the exception of transport industry (2007, 2011), "Fabricación de maquinaria y equipo" and "Otros servicios de información y communicación" (2011). Although not essential for TiVA there is at present no activity in available SUTs for 'Private households with employed persons"
Time series of value added by industry	2007-2015 in constant and current prices for 54 industries, 1994-2015 for 14 industries. The numbers are aggregates of the 101 industries. This is sufficient on the value added part to integrate Peru in TiVA from 2007 onwards.
Time series of gross output by industry	2007-2014 in constant and current prices for 71 industries. This is sufficient t to integrate Peru into TiVA from 2007 onwards.
Time series main aggregates National Accounts	2007-2014. Not yet made available for 1995-2006 and 2015, vital for inclusion in TiVA for these additional years. INEI will transmit a time series for 1994-2015.

565. It is important to note that good quality time series of value added and output estimates are necessary to create an estimated time-series of supply-use tables (noting that presently only tables for 2007 and 2011 are available). Of course this will be harder to do the higher the degree of aggregation and, so, it may not be possible to estimate supply-use tables for 2005 with a high degree of accuracy, given the 14 industry breakdown for the relevant period. However it is important to note that Peru is not alone in this respect and the OECD has developed approaches that make maximum use of trade data (which is more detailed) to ensure that any assumptions on the estimated supply-use tables derived by the OECD have a minimal impact on TiVA estimates (in particular the import content of exports) in and of themselves.

566. In this respect, while it is certainly strongly encouraged to produce a time series of value added and output that meets the minimum 34 industry requirements of TiVA, it is also recognised that doing so may not be possible in earlier periods as the underlying data available in Peru may not be available to do so at this present juncture. That being said Peru is strongly encouraged to consider the scope for reviewing their current 54 industry breakdown in future releases of their national accounts. Ideally this would be achieved by splitting industries where relevant, so that users interested in a longer comparable time series are still able to do so at the 54 industry level.

567. One cannot discount the possibility that the current 54 industry classification may reflect the need to preserve confidentiality of firms in some cases. If so then it may not be possible to produce the required industry split. However, the product breakdown in supply-use tables (as opposed to the activity breakdown) could be aggregated to the equivalent 34 industry breakdown used in TiVA. Furthermore, UNIDO INDSTAT contains data on a 2-digit level on the gross output of Peruvian industries that would allow aggregation to the 34 TiVA industries. Therefore Peru is asked to confirm that confidentiality restrictions do indeed have an impact on the level of industry aggregation so that an action plan can be developed with the OECD for the future. If confidentiality is not an issue, Peru is strongly encouraged to ensure the appropriate level of activity breakdown in their production of future supply-use tables (beginning ideally with 2012). INEI is currently assessing the possibility of breaking down the transport industry.

568. *Notwithstanding the issues above, Peru is however strongly encouraged to provide a time series on gross output by industry at, at least, the level currently available for value added. Similarly,* Peru *is strongly encouraged to produce as long a time series as possible of the main National Accounts main aggregates (household final consumption, NPISH, general government final consumption, valuables, gross fixed capital formation, changes in inventories, exports of goods, exports of services, imports of goods and imports of services).* INEI is not able to transmit data covering gross output in the period before 2007 in the current 54 industry classification but as highlighted above this has no impact on recent, current or future periods of TiVA. INEI will transmit to the OECD the time-series of the main aggregates for the period 1994-2015 in the format of the tables 0101 (GDP output approach) and 0102 (GDP expenditure approach).

Supply and Use table

569. Supply and Use tables are available for 2007 and 2011. For 2007, the base year of Peruvian National Accounts, there is more detail in industries and products than in 2011: the 2007 tables provide breakdowns for 365 products and 101 industries, while the 2011 tables provide breakdowns for 101 products and 54 industries. Peru has confirmed that they will provide the 2012 SUT in 2017 but that SUTs for earlier years than 2007 are not feasible.

Supply table

570. There is no explicit supply table available per se; however the information to produce such a table is readily available: namely the Make matrix (Matriz de Produccion) and additional information on imports, taxes and margins in the Cuadro Oferta Utilizacion. As such, and notwithstanding the comments above concerning the need to split some activities into more detail (for full alignment with the TiVA 34 industry breakdown), **Peru's supply table can be considered to satisfy TiVA requirements, at least for 2007**. Two items that do appear to be missing, and which would be strongly encouraged for good quality TiVA estimates are separate estimates *of purchases abroad by residents (by product) and a CIF/FOB correction to remove any transportation and insurance services from total imports that may have been provided by domestic producers (Table 7)*. This information does appear to be available in the statistical system, as shown in Peruvian PowerPoint presentations. INEI will be able to provide data about purchases abroad for the period 2007-2014, which is very welcome. Mincetur is working on possible extrapolations from 2001 data, to cover the period 2001-2007. INEI will transmit the tables on CIF/FOB corrections for the period 2007-2014.

Table 7. Supply table, 2007 and 2011

Type of information	Status in Peru
Make matrix of product by industry in basic prices	Yes
Columns for margins, taxes and subsidies	Yes
Imports on FOB basis	Yes
CIF/FOB correction in the tables	Exists; not yet provided
Purchases abroad by residents (by product) – not a core SNA requirement but important for good quality TiVA estimates	Exists; not yet provided

Use table

571. Use tables are available for 2007 and 2011 in the Cuadro Oferta Utilizacion. Table 8 shows that for 2007 it is available in all three valuations, namely purchasers' prices, producers' prices and basic prices, for which Peru should be commended as very few counties are able to provide this level of detail. Such information provides an excellent basis for good quality TiVA estimates. In addition, and again Peru should be commended in this regard, Peru provides a complementary matrix of trade margins that together with the other information allows to derive a transport margin matrix in 2007; a net taxes matrix is also indirectly available. For 2011 however there is only a version in purchasers' prices, and at a more aggregated level.

572. Final demand is broken down into the main components of expenditures, namely consumption of households, NPISH (Non-Profit Institutions Serving Households), government, capital formation, valuables, changes in inventories and exports. Financial intermediation services indirectly measured (FISIM) are split by industry and also allocated to household consumption, which is in line with the SNA 2008 recommendations. Furthermore, Peru has a separate product FISIM in its SUTs. Only a few countries do so, hence Peru should be commended. However, **purchases abroad by residents and purchases in the local economy by non-residents** are not shown separately although this information is available in the Peruvian statistical system. INEI covers the period 2007-2014 and Mincetur is working on possibilities to extrapolate data from 2001 to cover the period 2001-2007. As noted above in the discussion on the supply table a CIF/FOB correction should in theory also be added. This does appear to be available from the information supplied to the OECD and should be transmitted and included in SUTs if possible; however it is important to note that this is not of considerable significance and will have only marginal impact on the overall quality of TiVA results. INEI can transmit these tables for the period 2007-2014.

Table 8. Use table, 2007 and 2011

Type of information	Status in Peru
Valuation of use table, 2007	Purchasers', producers' and basic prices
Valuation of use table, 2011	Purchasers' prices only
Trade margins available	2007, separate for national production and imports, on product x industry level. 2011 only on product level
Transport margins available	On product level, can be derived at product x industry level for 2007
Main components final demand expenditures (households, government, NPISH, capital formation, valuables, changes in inventories, exports (in FOB) available	Yes
Detailed information on import use (by product and industry)	For 2007 only
Financial Intermediation Services Indirectly Measured (FISIM) distributed across industries	Yes
Residents' expenditure abroad and non-residents' expenditure in host country, by product (tourism satellite account)	Exists; not yet provided
CIF/FOB correction in the tables	Exists; not yet provided

Input-Output table

573. There are very detailed (101) product by product input-output tables for the reference year 2007. The tables are in purchasers' prices, producers' prices and basic prices. Each of those tables is separately available for total and domestic production. It would be useful if complementary metadata could be provided describing the approach used to convert SUTS into IOTs.

4.3. International Trade Statistics

Merchandise Trade

574. Peruvian international merchandise trade data are collected, compiled and disseminated by SUNAT. Table 9 summarises the data that are available on this subject. It is very detailed, both for countries and products. For example, SUNAT provided imports data on CIF and FOB basis, at the 6-digit level of the Harmonised System and partner country, for the period 1995-2015. Very few countries are able to provide this level of information. Peru provided a concordance table that aligns trade data with the comparable figures in SUTs. The OECD has compiled new information about the trade asymmetries of Peru (see tables 8-11), and although these asymmetries exist for Peru they are not significant, certainly when compared to trade asymmetries that many other countries have.

575. That being said, despite the very good data, it would be **desirable** to better understand the **methodology and sources that the national accounts use to transform the merchandise trade data of SUNAT into SNA equivalents**, in particular for "goods for processing" and "merchanting".

576. Like the majority of the countries, Peru does not have **information on re-exports, a split by new or used products or additional information about waste and scrap**. For re-exports, such information could have a significant impact on the quality of TiVA estimates for certain affected sectors. For scrap and used products, this would allow a better alignment of imports used in Peru with the accounting period (and value added) in which the goods were originally produced, and in turn a better alignment of any exports of second hand goods with the accounting period when the value was added. However, it is not possible for Peru to obtain information on its international trade in second hand products or scrap, although, it should be noted that many other countries are also unable to do so.

Table 9. Merchandise trade information

Type of information	Status in Peru
Available at 6-digit level Harmonised System (HS)	Yes
Imports both on FOB and CIF basis, at 6-digit level HS and partner, 1995-2015	Yes
Known large trade asymmetries	Yes (compiled by OECD)
Concordance table between HS and SUT available	Yes
Description of adjustments made to imports and exports of merchandise to arrive at SUT data, in particular for "Goods for processing" and "Merchanting", including sources	No
Confidential trade: Suppressing 2-digit HS chapter level instead of other 6-digit HS?	Unknown
Information on re-exports by product, origin, destination	No
Additional information about new and old capital goods (e.g. second-hand cars)	No
Additional information about waste and scrap, e.g. computers imported or exported for recycling	No

Trade in Services

577. The Banco Central de Reserva del Peru compiles the information on imports and exports of services. Table 10 summarises meta information that is described in more detail below. The data are broken down into 10 types of services. Namely, transport (freight, passengers, other), travel, communication, insurance and re-insurance, government services, financial services, computer and information services, personal, cultural and recreational services, royalties and license rights and other business services. The last category *"includes mainly sale-purchase services, commissions, construction, leasing of ships and unmanned aircraft and business, professional and various (legal, accounting, management consulting and public relations; advertising, research of public opinion polls markets; research and development and engineering, among others)"*.

578. There is not yet a geographical breakdown of services, although a survey was recently started to collect this information. BCRP has however recently broken down about two thirds of exports by destination, (mostly tourism and communications). However it appears that it will not be possible to provide similar information for transport services. BCRP intends to explore the breakdown of imports as soon as possible. As soon as the export information is ready, it should be transmitted to the OECD, with information on imports also provided when ready, as they will form important inputs to the process the OECD has developed with the WTO, and endorsed by other international statistical agencies, a process

to balance bilateral international trade in services and act as the international reference. It should be stressed that Peru is not alone in this respect; many other countries currently included in TiVA are in the process of improving the quality and developing the capacity to produce such estimates. Peru uses the Balance of Payments Manual 5 (BPM5) and EBOPS 2002, which are not the most up to date. But it has already made the major step from ITRS (international transactions reporting systems) to surveys to collect data. In general, this leads to far higher quality of the statistics.

Table 10. Trade in services information

Type of information	Status in Peru
Totals by service categories	Yes; 10 categories
Geographical breakdown of services	Not yet available; survey started
Known large trade asymmetries	No
Classification system used	EBOPS 2002
Methodology used	BPM5

Trade asymmetries

579. Integrating Peru into the global supply-use table for the estimation of TiVA statistics requires a balanced view of bilateral trade statistics. This section (Tables 11, 12 and 13) reveals the major trade asymmetries for merchandise trade of Peru using 2007 for illustration. The tables show imports (M), exports (X) and the absolute value of the relative asymmetry (RA), which is calculated as the absolute value of the difference between imports and exports divided by the sum of imports and exports. In general, certainly compared to the asymmetries in other countries, Peru's asymmetries are relatively small.

580. By far the largest asymmetry in 2007 was with Switzerland; Peru registers large exports of *Natural or cultured pearls, precious or semi-precious stones* whereas Switzerland registers negligible imports from Peru. However, analysis reveals that this mainly reflects under-recording on the Swiss side, who have recently worked to rectify this issue. Currently these asymmetries have been resolved for reporting years 2012, 2013 and 2014 (Wagnon, 2016), and it is expected that other years will follow soon.

581. Another major export asymmetry is with China (1393 million US$) whereas the largest import asymmetries are with the USA and China (936 million US$ and 865 million US$, respectively). The most common products where asymmetries exist are Mineral fuels, mineral oils and products of their distillation for exports and Machinery and mechanical appliances; parts thereof and Electrical machinery and equipment and parts thereof; etc. for imports.

**Table 11. Top 5 export and import asymmetries (by partner countries) for Peru, 2007
(million USD)**

Exports		Imports	
Partner country	Absolute asymmetry	Partner country	Absolute asymmetry
Switzerland	2343[43]	USA	936
China	1393	China	865
USA	673	Chile	472
Netherlands	424	Brazil	258
Venezuela	383	Japan	256

Source: calculations OECD based on UN Comtrade.

Table 12. Top 5 partner-product asymmetries for Peru, exports, 2007 (million USD)

Partner country	Product	Reported exports	Mirror imports	X-M	% RA (abs)
Switzerland	Pearls, precious stones	2318[44]	0	2318	100
China	Ores, slag and ash	2304	3062	-758	14
China	Mineral fuels and oils	37	549	-512	87
Panama	Mineral fuels and oils	353	30	323	84
USA	Mineral fuels and oils	1108	922	186	9

Source: calculations OECD based on UN Comtrade.

Table 13. Top 5 partner-product asymmetries for Peru, imports, 2007 (million USD)

Partner country	Product	Reported imports	Mirror exports	M-X	% RA (abs)
USA	Machinery and parts	753	1074	-321	18
China	Electrical machinery and equipment	580	339	241	26
China	Machinery and parts	464	226	238	35
USA	Electrical machinery and equipment.	223	357	-134	23
Colombia	Mineral fuels and oils	224	94	130	41

Source: calculations OECD based on UN Comtrade.

582. Peru does not yet publish a geographical breakdown of trade in services; hence it is not possible to produce an asymmetry analysis for trade in services. However, because major trading partners such as the United States and Japan do not specify their trade with Peru, the mirror totals of available data are far less than the Peruvian totals. For example, Peruvian exports of services are about four times as large as the sum of imports from Peru as reported by trading partners for which data is available.

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40 As mentioned in the text, this asymmetry is expected to disappear after the update of the Swiss data on trade in gold.
41 See above

583. An annual survey on the geographical breakdown of trade in services was started for the period 2010-2013 and it is understood that results for the period 2010-2011 will be published soon. These should be transmitted to the OECD as soon as they are available.

4.4. The importance of a SUT time-series or detailed national accounts activity data

584. Ideally for good quality TiVA estimates in all years, countries would be able to provide annual supply-use tables. Many OECD countries are able to meet these needs in line with 2008 SNA recommendations. However many countries currently included in TiVA are not (yet) able to do so. For TiVA this necessarily means that the OECD estimates the underlying SUTs in those years where they are not available. The approach used is based on extrapolating or interpolating (depending on how many SUTs are published) missing years benchmarked to national accounts data for value added and output by activity and national accounts aggregates of final demand and trade. Clearly the more detailed the national accounts data the better the quality of the benchmarking process and, so, the quality of the estimated SUTs.

585. As noted above, prior to 2007 the current national accounts data by activity for Peru are relatively limited (covering only 14 activities), with no estimates of output currently provided to the OECD (although these are available). This will of course have an impact on estimated data for 2005 but it is important to be realistic here – many other countries included in TiVA have similar data limitations. In addition the OECD recognises that producing more detailed data in earlier years may not be feasible. However Peru is strongly encouraged to ensure, going forward, that their national accounts data does have the necessary level of activity detail required for TiVA (both in SUTs and national accounts data), as described above.

586. That being said the degree to which a lack of aggregation matters is also affected by the degree of structural change that may have occurred over the period covered. If, for example, most economic activity is centred on a few industries, which are also responsible for significant exports, and most intermediate imports can be easily allocated to specific using industries, the impact of estimating SUTs on TiVA estimates is likely to be limited. This section provides a broad overview of structural change in the last decade.

587. For Peru, data in the 2007 SUT is internally consistent with the core national accounts (Table 14). Although to some extent obvious, this is not the case for all countries.

Table 14. Comparison of Supply Use Tables (Peru) and National Accounts
(at UN, received from Peru) 2007

	SUT (Peru)	NA (at UN)	Ratio SUT/NA
	Millones de Nuevos Soles		
Final consumption expenditure (FCE)	22574	22574	1.00
Household FCE	192316	192316	1.00
General government FCE	33424	33424	1.00
Gross capital formation	70436	70436	1.00
Gross fixed capital formation	63892	63892	1.00
Changes in inventories	6544	6544	1.00
Exports of goods and services	100774	100774	1.00
Exports of goods	N.A.	N.A.	N.A.
Exports of services	N.A.	N.A.	N.A.
Imports of goods and services	77257	77257	1.00
Imports of goods	N.A.	N.A.	N.A.
Imports of services	N.A.	N.A.	N.A.
Gross Domestic Product (GDP)	319693	319693	1.00
Total Value Added	293190	293190	1.00
Agriculture, hunting, forestry, fishing (A-B)	21438	21438	1.00
Mining, Manufacturing, Utilities (C-E)	104204	104204	1.00
Manufacturing	52807	52807	1.00
Construction (F)	16317	16317	1.00
Wholesale, retail, restaurants and hotels (G-H)	41680	41680	1.00
Transport, storage and communication (I)	24402	24402	1.00
Other Activities (J-P)	85149	85149	1.00

Source: INEI, UN.

588. Table 15 provides a simple overview of structural change in recent years. It shows the share of value added of every industry in total GDP. Important (with respect to value added) industries are *mining, manufacturing, wholesale and retail trade and repair of motor vehicles and motorcycles and other services*. Reassuringly, where changes have occurred, they have done so in activities where there is a comparable level of aggregation to TiVA industries, for example mining and quarrying and construction. However relatively significant changes have also occurred in manufacturing where the correlation of detailed activities does not match one-to-one or many-to-one with TiVA equivalents in the manufacturing sector.

Table 15. Share of industries in Peruvian GDP, 2007-2013

	Share in Peruvian GDP						
	2007	2008	2009	2010	2011	2012	2013
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Import duties	0.9	0.5	0.4	0.4	0.3	0.3	0.3
Taxes on products	7.4	7.6	7.9	8.1	7.7	8.2	8.3
Gross value added	91.7	91.9	91.7	91.5	92.1	91.6	91.4
Of which:							
Agriculture, hunting and forestry (D01T02)	6.0	6.5	6.7	6.3	6.4	6.3	6.0
Fishing and aquaculture (D03)	0.7	0.7	0.7	0.6	0.8	0.5	0.7
Mining and quarrying (D05T09)	14.4	12.6	10.4	12.3	14.7	13.2	11.7
Manufacturing D10T33	16.5	16.3	15.3	15.6	15.5	14.6	14.4
Electricity, gas and water; waste management (D35T39)	1.7	1.8	1.9	1.7	1.7	1.7	1.7
Construction (D41T43)	5.1	5.6	5.9	6.3	6.0	6.5	6.8
Wholesale, retail trade and repairs(D45T47)	10.2	11.1	10.8	10.8	10.5	10.8	11.0
Transportation and storage (D49T53)	5.0	5.2	5.6	5.4	5.0	5.5	5.7
Accommodation and food service activities (D55T56)	2.9	3.0	3.2	3.2	3.4	3.6	3.8
Information and communication (D58T63)	2.7	2.7	2.6	2.4	2.3	2.3	2.3
Financial and insurance activities (D64T66)	3.2	3.3	4.1	4.1	4.1	4.3	4.5
Business activities (D69T82)	4.2	4.4	4.5	4.5	4.5	4.6	4.7
Public administration and defence (D84)	4.3	4.4	5.0	4.8	4.6	4.7	4.9
Other services (D68, D85T99)	14.9	14.4	14.7	13.6	12.7	12.8	13.1

Source: INEI 2014a, Table 2.43.

589. The three most important Peruvian import product groups[42] are *mineral fuels, machinery and mechanical appliances and electrical machinery, equipment and parts*. This is clearly visible in Figure 3 which shows all product groups that had a share of at least 3 percent in total Peruvian imports in at least one year during the period 2005-2015. Not surprisingly the share (and the value) of imports of mineral fuels changed moved in line with movements in oil prices. To some extent these changes can be handled in the system by assuming fixed volumes of intermediate oil for given unit of volume of output in industries (and the volume estimates of national accounts produced by Peru can help in this regard), after adjusting for any domestic production. Other changes, such as the rising share of vehicles and parts, took place more gradually, suggesting that the current problems concerning the aggregation of transportation into one activity may not have a significant impact for the quality of TiVA estimates for the affected sectors.

Figure 3. Share of product groups in total Peruvian imports

Source: UN Comtrade.

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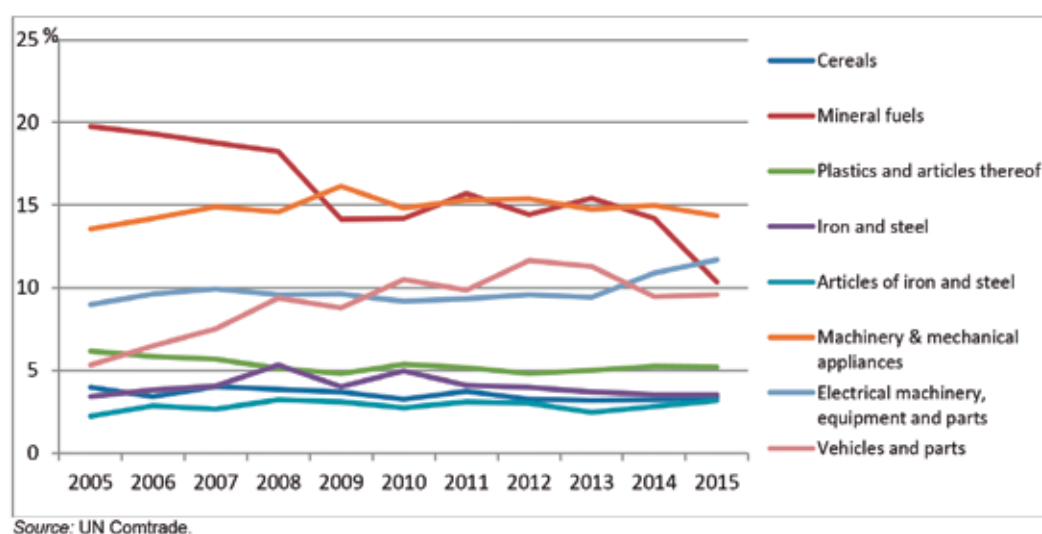
42   The chapters in the Harmonised System, a commodity classification that is used worldwide.

590. As for exports, the three most important product groups are *ores, slag and ash, precious stones and metals and mineral fuels*. This reflects the strong position of the mining and quarrying industry in the Peruvian economy. In 2015 these three product groups represented more than half of Peruvian exports. Figure 4 reveals relatively significant movements in the share of these products over time, reflecting in large part price movement. To a large extent such volatility is not expected to have a significant impact on core TiVA aggregates for Peru as the underlying exports are sourced from the mining and quarrying industry where a good time series exists throughout the period 2007 to 2015 in the national accounts. However if there is heterogeneity in the distribution of these exports by partner countries it may be necessary to implement specific adjustments in the TiVA system (although this will necessarily be carried out by the OECD in constructing the global supply-use table). That being said any additional information that Peru may be able to provide that reveals the heterogeneity in goods produced by the mining and quarrying sector (with separate estimates of intermediate consumption, output and value added of the specific products) would be particularly useful.

Figure 4. Share of product groups in total Peruvian exports

Source: UN Comtrade.
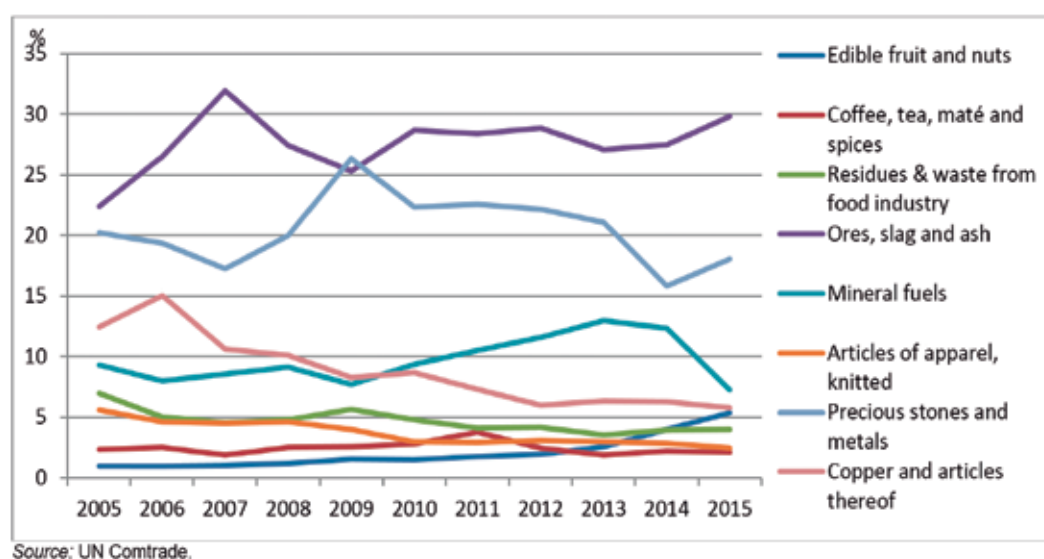
591. Another simple measure that can be used to point to changes in the economy is the import / export ratio in a given product group. If this ratio rises, it is possible that domestically produced products are being substituted by imported products, and vice versa when the ratio drops. There were only four sizable product groups (e.g. a share of at least 1 percent in total imports and exports in time) where the ratio changed by more than 25 percent. These were *residues and waste from food industry, mineral fuels, plastics and articles thereof and machinery & mechanical appliances*. The ratio of imports to exports rose for the first product group and fell for the other three.

4.5. Preparation of Peruvian data for integration in TiVA

592. To provide an illustration of the challenges needed to be overcome, and potential solutions, for the full integration of Peru into TiVA, this section describes how a national input-output table with the 34 TiVA industries was estimated for 2007 and 2011, using the data that INEI sent to the OECD.

593. For 2007, the process to create an input-output table is trivial, as Peru has provided, in essence, all of the necessary information (and indeed more information than many other countries already included in TiVA are able to provide). The main ingredients are a table of use of domestic production in basic prices and a make matrix in basic prices. Using the "fixed product sales structure assumption" (model D in Eurostat (2008)) yields an industry x industry input-output table with 101 industries. However, and as described above, one limitation is that it contains only 1 transport industry (and indeed no industry on "Private households with employed persons"; although this is not a significant issue for TiVA).

594. However the product breakdown provided by Peru in its Make matrix does provide a good basis for estimating a split of the transportation industry shown in the 2007 SUTs into the two respective categories used in TiVA. For the transport industry, the Make matrix shows a domestic production of 701 million nuevos soles of motor vehicles, trailers and semi-trailers and a domestic production of 748 million nuevos soles of other transport equipment. All information on the single transport industry is split using this information into the industries "Manufacturing of motor vehicles, trailers and semi-trailers" and "Manufacturing of other transport equipment", assuming, for simplicity, that the production function in the two sectors is identical (note that this is of course imperfect since it is likely, at the very least that the types of imports used by the relevant sectors differs). This process yields an input-output table with 102 industries that is subsequently aggregated to a 33 x 33 input-output table with 33 TiVA industries. The industry "Private households with employed persons" is added by setting it to have zero supply and use.

Strongly encouraged:

595. Extra information on the split of the single transport industry into the two TiVA transport industries. Ideally, this split would be put in the supply and use tables and INEI is already assessing this possibility. However it is recognised that this may not be practical and so a second best solution, again if possible, is to provide data that splits total value added, gross output, imports and export of the single industry into the two respective parts.

Desirable:

596. Extra information on the industry "Private households with employed persons".

597. **For 2011, the challenges are greater.** There is no table of use of domestic production in basic prices, hence it must be constructed. To do that, one needs estimates for use of imports, for transport margins, trade margins and net taxes, each by product x industry, which is not the case in 2011, unlike 2007. INEI is now working on the estimation of such data for the year 2011.

598. In order to derive the necessary breakdown for 2011, it has been necessary to use structures and relationships presented in the 2007 table. A simple overview of the process used is described in the following paragraph with a more detailed description below.

599. From the use table in purchasers' prices we remove net taxes and reallocate trade margins and transport margins to the respective industries to arrive at a use table in basic prices. This is then split into a table of use of domestic production and a table of use of imports. These tables in basic prices are then modified through a process of iteration (using the 2007 relationships as a pointer) via a reallocation of trade margins and transport margins, net taxes, which yields the original use table in purchaser's prices again. The corresponding table of use of domestic production is subsequently used to create an input-output table. A more detailed description of the various steps follows below:

600. In the first step we remove net taxes from the use table for 2011 in purchasers' prices to obtain a use table in producers' prices. The process takes the implicit margins of net taxes in the 2007 table and applies the effective rates for each consumption cell in the Use table to the corresponding cells in the 2011 table. This provides a first estimate of the net taxes paid/received for each cell in the 2011 Use table. These estimates are subsequently constrained (pro-rata) to the totals for a given product shown in the 2011 table. For illustration an example is given below (Table 16).

Table 16. Example: estimate net taxes in 2011

			Agriculture	Manufacturing	Services	Total
2007	Use	Known	100	1000	1000	2100
	Net taxes	Known	5	50	100	105
	Share	Known	0.05	0.05	0.1	
2011	Use	Known	100	1500	2000	3600
	Net taxes	Known				308
	Net taxes	First estimate	5	75	200	280
	Net taxes	Final estimate	5.5	82.5	220	308

601. **In the second step the trade margins are reallocated in the use table** using an approach similar to that of removing net taxes (although in this case the trade margin matrix for 2007 is used), and so is not repeated in detail here. The only additional step in this process is the reallocation of the trade margins from the individual products to the product "Servicio de comercialización" to obtain a new use table.

602. **In the third step the transport margins are reallocated**, following identical steps to those listed above (using the transport margin matrix for 2007). The transport margins removed from the individual products are reallocated to the product "Servicios de transporte terrestre de carga urbano e interprovincial".

603. The end result is UseB, **a first estimate of the use table in basic prices**. However, it is a relatively crude estimate, since it did not use all of the available information on imports and domestic production separately. From this we make a first estimate of UseD (the domestic use matrix) and UseM (the import use matrix) using the following approach. For each product, total use of domestic production and total use of imports are known in basic prices in 2011. In 2007, for each product x industry combination the share of domestic production in use in basic prices is also known. Assuming, to begin with, that these shares are the same in 2011 yields a first estimate of use of domestic production by product x industry. A second estimate is derived by constraining these numbers pro-rata to the totals for a given product, provided in the Make matrix. The result is a table UseD of use of domestic production in basic prices, by product x industry. A similar process is repeated for UseM, and subsequent adjustments are made to constrain each cell to UseB, while also satisfying the product constraints for total domestic output and total imports provided in the 2011 implicit Supply matrix.

604. Since UseD contains 54 industries, the resulting input-output table will contain 54 industries as well. However, these 54 industries do not perfectly match the 34 TiVA industries. There are the already mentioned problems with the transport industry and the industry of "Private households with employed persons".

605. But aggregating from 101 industries (2007) to 54 (2011) creates additional problems for the TiVA industries "machinery and equipment n.e.c." and "Electrical machinery and apparatus n.e.c." and in particular the TiVA industries "Pulp, paper, paper products, printing and publishing", "Computer and related activities", "Other community, social and personal services", which are all grouped under "Otros servicios de información y comunicación" in the 2011 table. However, it is possible to derive estimates of the relevant industries using similar approaches to that described for the transportation industry in 2007. In the future, the quality of such estimates will improve since INEI has now filled out the OECD national accounts questionnaire. From this new information the value added and the output of the TiVA industries mentioned above can be derived, which enables a split of better quality.

606. For 2007 estimates the derived TiVA estimates can be considered of very good quality, despite the need to split the transportation sector, as Peru has been able to provide relatively detailed SUTs in both basic and purchasers' prices. A greater degree of assumptions have been necessary to convert the SUT of 2011 into a TiVA equivalent 34 industry table at basic prices. Although the assumptions used in this process are relatively robust, certainly when compared to the assumptions necessarily used for some other countries already included in the TiVA database, additional information in some key areas could greatly improve the quality of the associated TiVA results. Certainly a split of the activities where there is not sufficient disaggregation (in 2011 and to a lesser extent 2007) would be very useful, as would a Use table for 2011 in basic prices split into separate domestic and import components. While the OECD recognises that the data available to undertake such a split may not be possible for historic data, Peru is strongly encouraged to ensure the appropriate level of activity breakdown in their production of future supply-use tables (beginning ideally with 2012). INEI is already considering the possibility of breaking down the transport industry.

Box 3. Extended Supply Use Tables

Although not part of the assessment for TiVA, the OECD are already beginning to look at future developments of the TiVA database that are built around what are referred to as Extended Supply-Use tables. These tables are an important instrument designed to significantly improve the heterogeneity recorded in national supply-use tables and therefore the quality of TiVA estimates. But this is not the only reason why these extensions are important. Depending on how they are constructed, Extended Supply-Use tables also provide a means to better understand the links between trade and investment, the role of SMEs in GVCs, as well as the role of the informal versus formal sector. It's important to note too that the development of Extended Supply Use tables is also an important goal of the recent APEC-TiVA initiative, with whom the OECD are working closely.

As noted, the purposed of this report is not to assess Peru's readiness for Extended Supply Use tables, however in reviewing TiVA it has been possible to gain important insights here. While data do appear to be available to undertake this work, available resources may not be. Given the importance of the work for future extensions to TiVA, and indeed APEC-TiVA (which was endorsed by APEC Ministers at the May 2014 Qingdao summit), Peru may need to consider allocating greater resources to INEI.

4.6. Initial results based on national tables

607. The international fragmentation of production in global value chains (GVCs) challenges the way we look at the global economy. Today, "what you do" - the activities a firm or country is involved in - matters more for growth and employment than "what you sell" - the products that make up final sales or exports.

608. Understanding how GVCs work and how they affect economic performance is essential, as is determining which policies help derive the greatest benefits, and reduce the risks. The OECD-WTO Trade in Value Added (TiVA) database facilitates analysis of GVCs by measuring trade in value added terms to generate new insights about the commercial relations among economies and the process of value creation. Using preliminary estimates for Peru, based on the national input-output derived for 2011 (and described in the following section), this section describes Peru's trade patterns in value added terms, with a view to informing policy debates in a range of areas, including trade, innovation, and investment. To put the numbers into perspective, Peru is compared to the six Latin American countries that are already in the TiVA database: Argentina, Brazil, Chile, Colombia, Costa Rica and Mexico.

609. Accompanying the notes for the countries that are already in TiVA there is a User Guide designed to assist interpretation and provide context to the indicators presented. However, the numbering of the indicators in the User Guide is different from that in this document because until full integration into TiVA some indicators cannot yet be calculated. To be more specific, Figure 2, 4, 7, 8, 9 and 11 in the User Guide are not presented here. Figure 12 is presented but with less detail. The order of the Figures that could be shown has remained the same. The User Guide can be found at: http://www.oecd.org/sti/ind/TiVA_2015_Guide_to_Country_Notes.pdf.

610. Note that because the results are only based on a national input-output table, the import content of exports will also include exports of Peruvian domestic value added that may subsequently be included in Peruvian imports; however in all countries, certainly when looking at imports of a given product alone (and not by partner) this is negligible and the same is almost certainly the case for Peru.


Box 4. Key Findings

- At 15%, the import content of exports in Peru is around half the size of Mexico and very low relative to the 20-40% range among most OECD countries; partly reflecting a high dependency on exports of mineral products but the foreign content of exports is low across all sectors; pointing to relatively weak integration of these sectors in GVCs.

- In 2011, 116 billion Nuevos Soles of value added and 1.7 million jobs (excluding agriculture) were sustained by foreign markets. This amounts to 27% of value added although only 15% of employment (excluding Agriculture), reflecting the large contribution of mining with very high relative labour productivity

- Efficient upstream services can play a significant role in manufacturing competitiveness but the services content of Peru's manufacturing exports (17%) is significantly lower than in other Latin American countries, a pattern repeated across all sectors.

*The role of foreign and domestic value added in exports*

611. Notwithstanding differences in the size of economies, geographical proximity for suppliers and markets, specialisation and access to natural resources, integration within global value chains is often measured using the import content of exports. On this measure data suggest that Peru has a relatively low degree of integration within global value chains. At 15% in 2007 and in 2011, the foreign content share of Peru's exports is one of the lowest amongst Latin American economies. This partly reflects the relatively high export dependencies on food and mining products. Such products usually have low foreign content and high domestic content (Figure 5).

Figure 5. Foreign value added content of gross exports by country, 2011
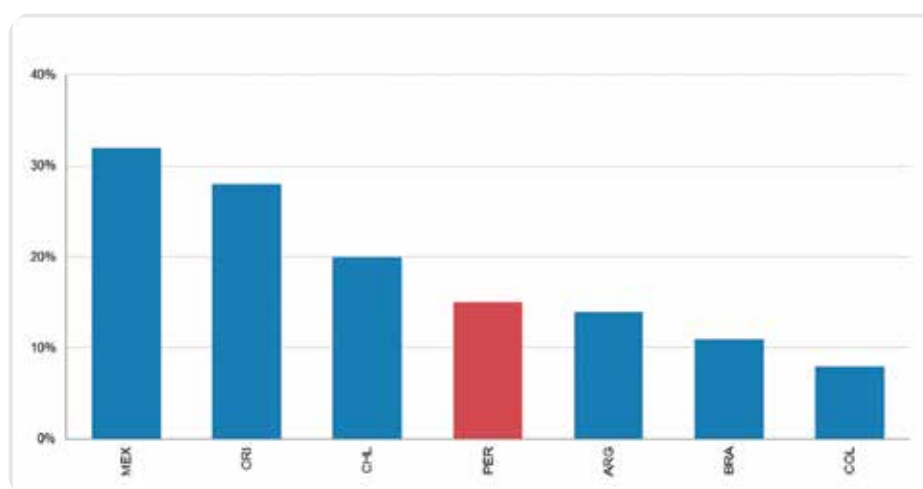
612. Exports of domestic value added by the mining industry (and its upstream suppliers), accounted for 45% of gross exports. The next three most important industries for domestic value added in exports were Food Products (9%), Basic Metals (7%) and Other Manufacturing at 4% (Figure 4a).

Figure 6. Share of domestic value added and imports in Peruvian total gross exports, by industry, 2011
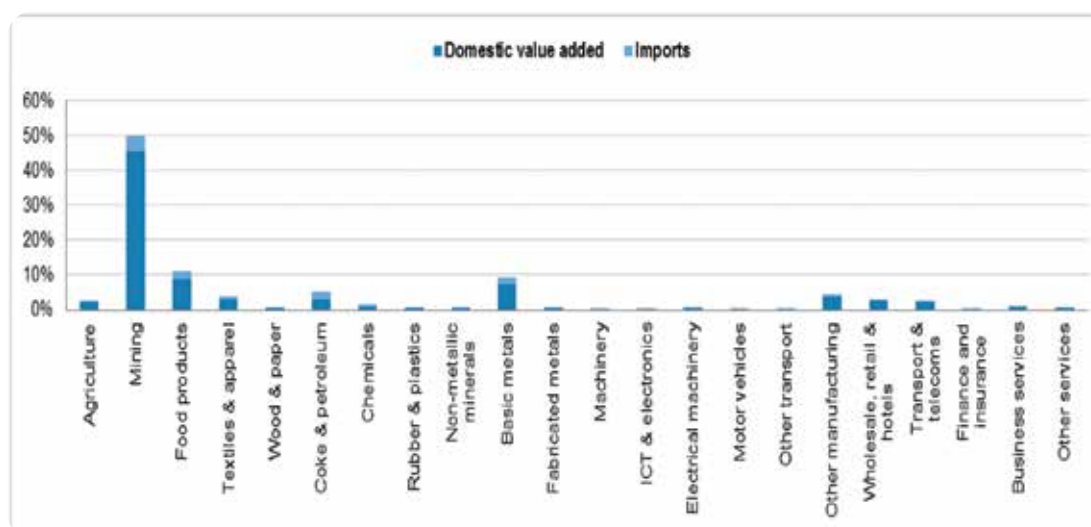
613. Looking at the import content of exports as an indicator of integration within global value chains, the industries within Peru that had the highest degrees of integration in GVCs, relative to their size, were Rubber & plastics, Coke & petroleum and ICT & electronics (Figure 7). However, as shown above (Figure 6) these industries did not account for a large share of domestic value added of exports.

**Figure 7. Peru's foreign value added content of gross exports, 2011**

Note: blue bars depict Peruvian values; red diamonds depict OECD average.
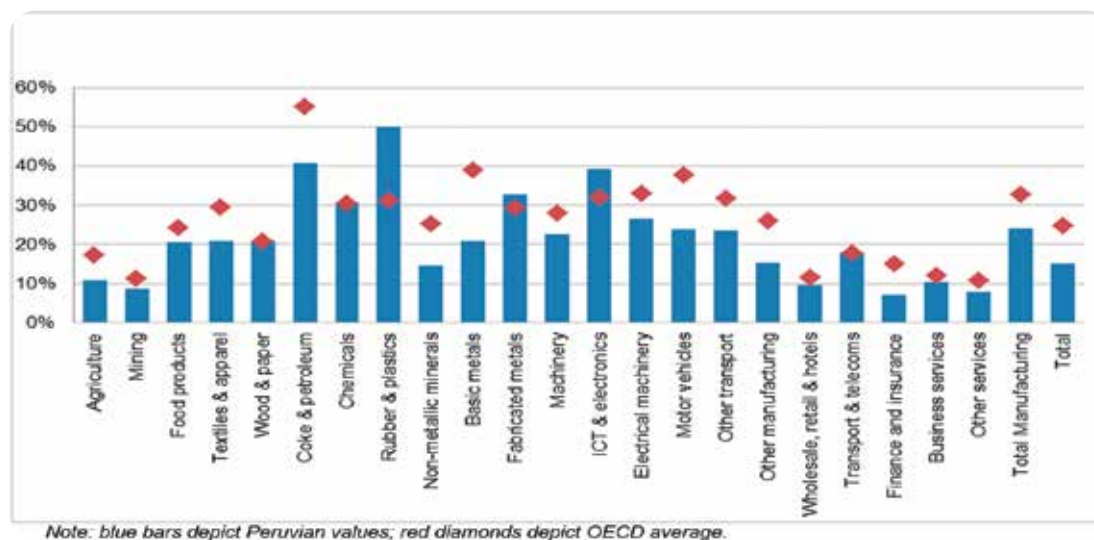
614. Figure 7 also shows that in most industries, the share of foreign value added in gross exports is lower than the OECD average. Notable exceptions are Rubber and plastics and ICT and electronics, that source relatively more intermediates from abroad.

The destination of domestic value added produced in Peru

615. In 2011, 34% of Peruvian manufacturing value added was driven by foreign final demand (Figure 8). This is higher than in some Latin American countries (e.g. Brazil), but lower than in others (e.g. Chile).

Figure 8. Manufacturing domestic value added in foreign final demand by country
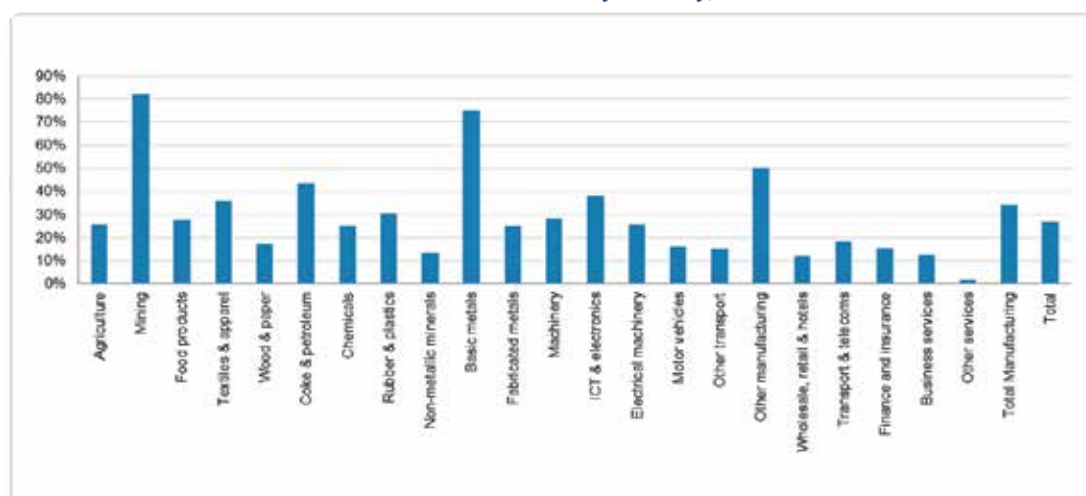**Percent of total manufacturing value added, 2011**
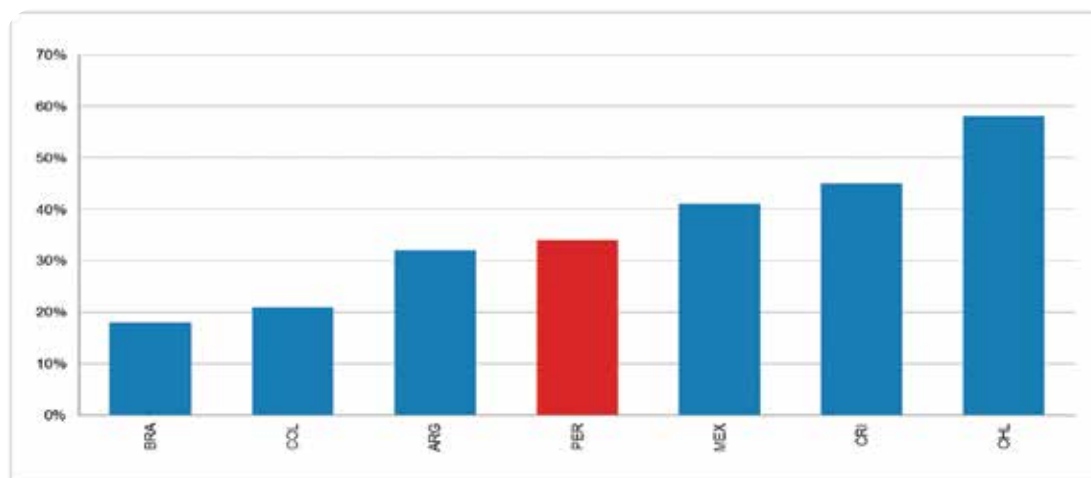

Note: Final demand excludes inventories: See also http://www.oecd.org/sti/ind/TiVA_2015_Guide_to_Country_Notes.pdf

616. The dependence on foreign markets, reflecting integration within global value chains, varies between industries. At the total economy level, 27% of Peru's total domestic value added was driven by foreign final demand, but in some sectors export orientation was very high, with over three-quarters of all Mining value added (82%) and Basic Metals value added (75%) destined for foreign markets (Figure 9).

Figure 9.   Peru's domestic value added in foreign final demand

Percent of value added by industry, 2011

Note: Final demand excludes inventories: See also http://www.oecd.org/sti/ind/TiVA_2015_Guide_to_Country_Notes.pdf

The importance of services

617. Although the contribution of services to gross exports in value added terms (at 17%) is significantly higher than when measured in indirect terms (7%), it remains very low, and the lowest among other Latin American countries in TiVA. While this partly reflects the size of the mining industry, which uses relatively little upstream services, similar patterns emerge at the industry level (Figure 10), pointing to potential for gains in competitiveness in a number of downstream manufacturing activities.

Figure 10. Services value added embodied in gross exports in manufacturing
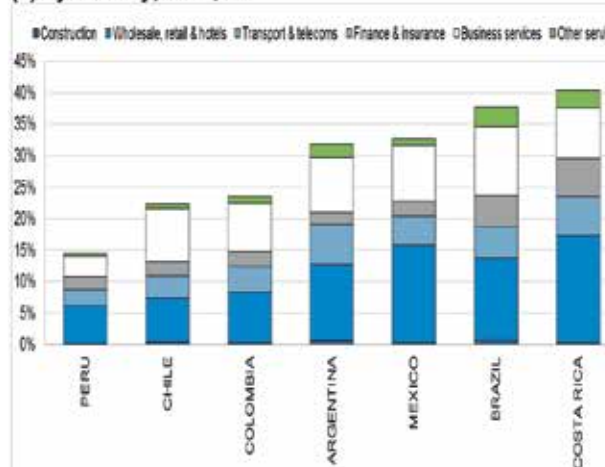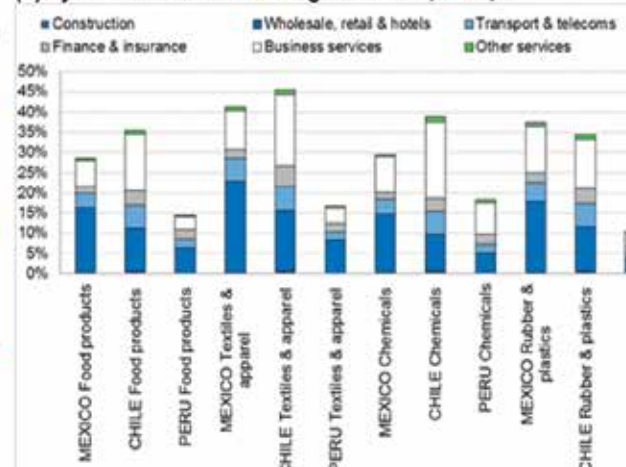

Preliminary estimates based on national data. Source other countries: OECD-WTO Trade in Value Added database

The origin of domestic consumption

618. In 2011, 11% of Peru's total final domestic consumption reflected foreign content, comparable to that of (much larger) Brazil and Argentina but lower than the other Latin American economies (Figure 11).

Figure 11. Foreign value added content of domestic consumption by country, 2011
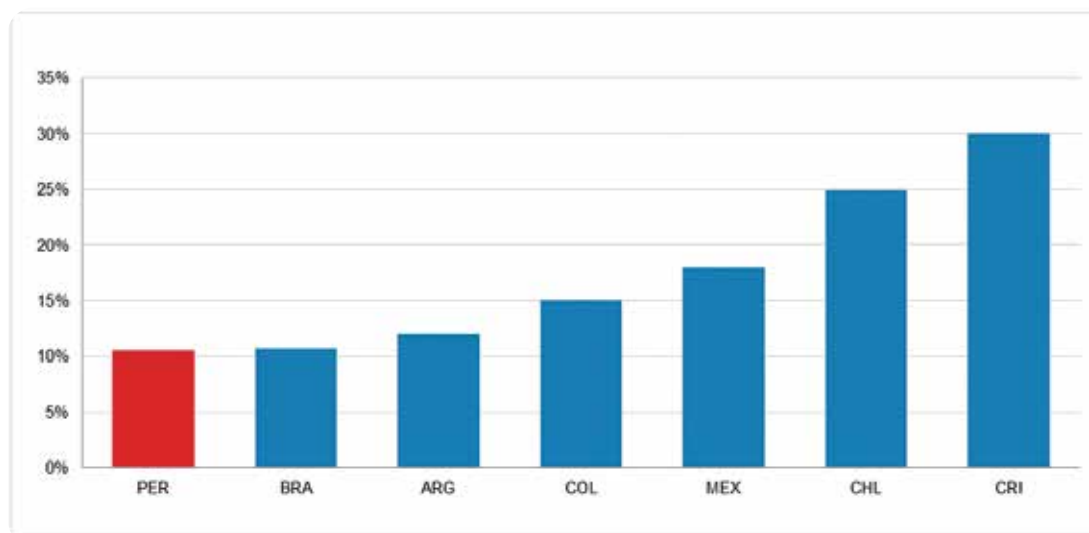

Employment related to exports

619. Due to the excellent Peruvian data on employment, it is possible to produce provisional and illustrative estimates of employment related to exports. In 2011 this amounted to approximately 1.7 million jobs (excluding agriculture), equivalent to 15% of total employment (excluding agriculture). However some caveats are needed here. Agriculture has been excluded to avoid introducing significant distortions from subsistence farming, where the effective labour productivity is very low and certainly lower than formal competitors and where the activities are not generally GVC related. Similar issues are likely to arise in other sectors, where informal activities are significant, such as retail and transportation. As such the estimates presented here should be seen as an upper bound. Note too that it is not just differences in relative labour productivity that may drive this upward bias but also the higher likelihood that exporting firms may have higher import content, and so lower overall value added for given unit of output.

620. With these caveats in mind, the data show that most employment related to exports is located in Wholesale, retail & hotels (477 thousand jobs), Transport and Telecoms (204 thousand jobs) and Mining (202 thousand jobs) as can be seen in Figure 12. Although Mining is responsible for more than half of value added due to exports, it accounts for only slightly more than one tenth of employment due to exports reflecting the relatively high labour productivity in the sector.

Figure 12. Employment due to exports, by industry, 2011
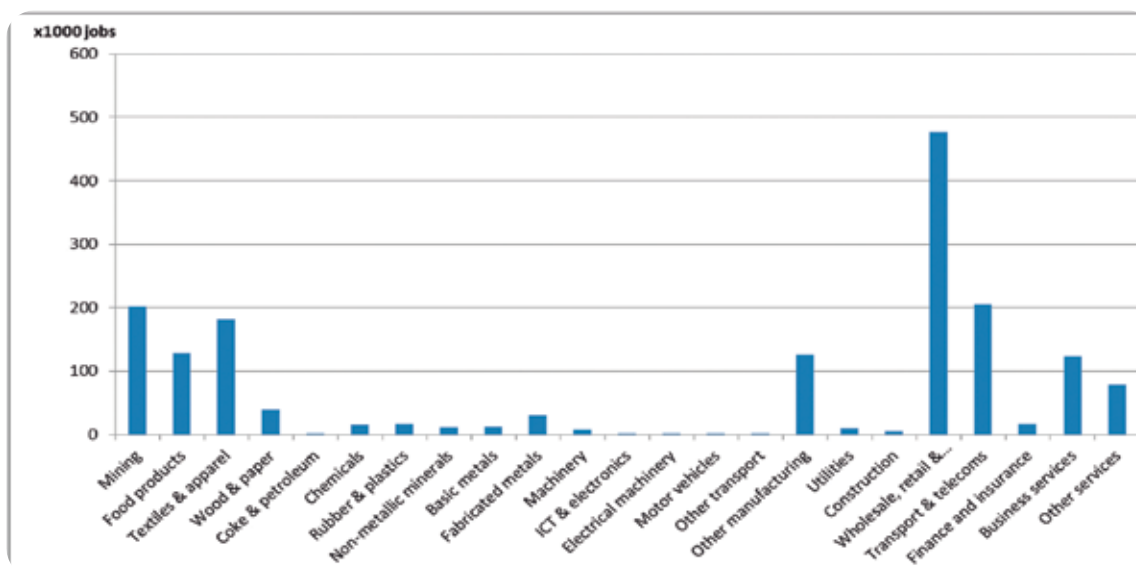
Box 5. Further Information

The information included in this note is based on preliminary results for Peru and the 2015 edition of the Trade in Value Added (TiVA) database

- Access the data for the six Latin American countries in TiVA at http://oe.cd/tiva
- Please contact us with your questions at tiva.contact@oecd.org

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Wagnon, J.-C. (2016), "Swiss foreign trade statistics: a golden change", Presentation at the OECD Working Party on International Trade in Goods and Trade in Services Statistics, 21-24 March 2016.

CHAPTER 4 ANNEX

Overview of Peruvian compilation methodologies

621. This annex discusses several parts of the Peruvian statistical system, based on the information received and information found on the website of INEI. For more information on Peruvian National Accounts, please refer to Chapter 3.

Main data sources for the various elements of the SUT

622. Peru uses a well-thought system of censuses, surveys, administrative registers and other sources. For production and use of the non-financial sector, it uses censuses and surveys for the different industries, supplemented by information from ministries on specific industries such as agriculture or mining. The Superintendencia de Banca y Seguros provides information on banks and insurance companies. The Ministry of Economy and Finance provides data for central government and local government separately. Trade margins follow from the survey for traders. The main source for information about households is the household survey, which is an important source for wages and mixed income as well. Imports and exports of goods are provided by customs (part of the Tax Administration), imports and exports of services by the Banco Central de Reserva del Peru. Tax information is provided by the Tax Administration as well. The Ministry of Labour and Employment promotion provides information about wages. Information about fixed capital formation is mainly delivered by the government (for public investments), the Ministry of Energy and Mining, the Ministry of Agriculture and Irrigation and PetroPeru (the state-owned petroleum company). The main sources for expenditures of foreigners in Peru is PROMPERU (the Peru Export and Tourism Promotion Board) whereas the main source of expenditures of Peruvians abroad is the outbound tourism expenditure survey of the Banco Central de Reserva del Peru.

Estimations of value added (2008 and later)

623. In order to estimate current and constant price estimates of value added after the base year 2007, Peru takes fixed coefficients of intermediate consumption to output in 2007 and multiplies these by output (in volume terms) in the target year. This automatically generates value added estimates in volume terms (at 2007 prices). Current price estimates of value added are arrived at by reflating the components of intermediate consumption in each industry and of output, and subtracting the former from the latter. It should be noted that such an approach presupposes that no structural change occurs, nor no substitution of domestic produced goods and services with imported equivalents, which will generally be cheaper when substitution occurs and display different price movements to the domestically produced products they displace. Peru is encouraged to explore other options, including the use of tax declarations, to derive current price estimates by activity.

Trade and transport margins in the SUT

624. The basic source for trade margins is the monthly survey for traders. It is not clear what the source for transport margins is and how it is integrated in the SUT.

CIF/FOB margins in the SUT

625. CIF/FOB margins are not provided in the SUT (as is the case in most countries and in line with SNA requirements). However, CIF/FOB margins are available in the system of Peruvian national accounts and provided to the OECD. However the SUTs do not contain a separate CIF/FOB adjustment to correct for the related provision of transportation and insurance services provided by domestic producers. INEI will transmit such data for the period 2007-2014.

Data sources for trade in services

626. The quarterly and annual balance of payments surveys are the main data sources for trade in services statistics. The quarterly survey of the Balance of Payments comprises 500 enterprises; the annual survey 2500 enterprises. Additional sources for selected services categories are listed in the table below.

Data sources and compilation of informal economy

627. In Peru, the informal economy is large and INEI includes a number of related questions in its National Household Survey (ENAHO). In INEI (2014b) is estimated that the informal economy accounted for 19% of GDP (2007) and it employed 57% of the workforce (2012). Another 17% of total employment consisted of informal employment in the formal sector[43]. These estimates were basically obtained by splitting up the industry totals in national accounts with the information about formal/informal in ENAHO. Given these totals it would be desirable if Peru could include extensions to their SUTs that separated informal activities from formal activities, at least in those sectors where the informal sector is significant. Not doing so could distort TiVA results, and in particular related indicators relating to jobs.

Breakdown of trade in goods and services in national accounts by goods and services components

628. Official national accounts data showing total exports of goods and total exports of services separately are not currently available but it should be possible to make an estimate; which would help significantly in constructing estimates of SUTs in those years where SUTs are not currently available.

Possibilities to produce extended SUTs

629. Information on Trade by Enterprise Characteristics is available: Traders have a RUC (Registro Único de Contribuyente, tax payer registration number) which is in the Directorio de contribuyentes (directory of tax payers) and can be matched to their activity in ISIC 3.

630. Payment of workers is split into 6 categories: Declared wages and salaries in cash and kind, non-declared wages and salaries, actual pension contributions by employers, actual contributions by employers not for pensions, imputed pension contributions by employers, imputed contributions by employers not for pensions.

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43   The informal sector refers to unincorporated enterprises owned by households and which are not registered in the tributary administration. The informal employment refers to those employments that do not enjoy benefits that local labour legislation stipulates, such as social security, gratifications, paid holidays, etc. (INEI 2014b).

631. Production is split into 5 categories: Sold market production, stored market production, production for own final use, other sold non-market production, other non-market production for own use.

632. Employment data by industry is split up in 5 categories: Declared employees, undeclared employees, owners, working for own account, assisting family members.