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SEMINAR ON BALANCING PRINCIPLES OF PROFESSIONAL AUTONOMY AND  
ACCOUNTABILITY WITH THE MANDATE TO PRODUCE POLICY RELEVANT DATA

SESSION I: RELATIONSHIPS BETWEEN STATISTICIANS AND POLICY MAKERS:  
MAINTAINING INDEPENDENCE WHILE ADDRESSING DEMANDS

**INTERPRETING CHILEAN REALITY THROUGH NATIONAL STATISTICS**

Note by the National Statistics Institute of Chile

*Summary*

The Conference of European Statisticians selected in June 2008 (ECE/CES/74) the topic “Balancing principles of professional autonomy and accountability with the mandate to produce policy relevant data” for a seminar to be held at its 2009 plenary session. The Bureau, acting on behalf of the Conference, approved the outline for the seminar at its February 2009 meeting (ECE/CES/2009/2) and requested Chile to prepare a note to provide basis for the discussion.

The present note gives an overview of the evolution of official statistics in Chile and shows how it has been linked to historical development of the country. Furthermore, the note also describes the governing role of the current national statistical system and the main activities of the National Statistical Institute of Chile.

1. A State which knows its people is one that can fulfil its duties better, make decisions which apply more accurately to its society and plan and administer the nation more effectively. Statistics not only show us who we are and how we live at a precise moment in time but also allow us to develop long-term public policies. National Statistical Offices play an essential role in providing the State and its society with adequate data which not only facilitates an informed decision making process but also lets us understand more about who we are as a nation and how we are similar or different to the rest.
2. Policy making in Chile relies on the statistical information the National Statistics Institute of Chile (INE) produces. This is mainly due to the quality, adequacy, timeliness and credibility of social and economic data being produced by the Institute. The majority of INE's statistical products are based on direct data collection through surveys which are then analyzed by the technical and professional staff of INE.
3. The information generated and disseminated by INE aims to be both accurate and credible, as well as to cater for client needs and to be delivered in a timely manner. INE produces reliable and consistent data oriented to complying with updated international statistical standards<sup>1</sup>.
4. Currently, one of the main INE objectives is to improve its products in order to reach the Organization for Economic Co-operation and Development (OECD) statistical standards, in response to the Chilean government's commitment to become a member of this organization. INE has been an active contributor to the "accession process" of Chile to the OECD.
5. INE has understood the importance of planning and policy making within the international agenda. Its legal institutional framework is committed to be proactive in the international arena and to act as 'nexus country' with technical expertise able to liaise between Europe and the Americas.
6. As well as aiming at complying with international standards, INE underlines the importance of technical cooperation among National Statistical Offices around the world and especially in the American region. This cooperation is essential for the development of statistical knowledge and the exchange of important experiences. The United Nations Statistics Division (UNSD) supports and promotes regional cooperation and INE has been working towards this goal constantly by providing answers to statistical requests from National Statistical Offices of Latin America as well as from the rest of the world. INE also encourages and actively seeks training missions amongst these institutions, and participates in methodology exchanges and technical discussions that may be of help to other institutions. Collaboration certainly sends a strong message about the region and the desire to attain higher statistical quality standards.
7. At a national level, INE also cooperates with other government agencies and private institutions, providing them with quality information. Data provision by INE is useful for the

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<sup>1</sup> As defined by the United Nations System, United Nations Statistics Division (UNSD), United Nations Population Fund (UNFPA), International Labour Office (ILO), Economic Commission for Latin America and the Caribbean (ECLAC), United Nations Food and Agriculture Organization (FAO) and others. More recently the INE aims to improve its products to reach OECD statistical standards.

government at all levels where, by means of inter-institutional agreements, statistical information is shared with a wide range of public bodies and academic counterparts. Since 2007, INE provides free data bases to academic institutions and to the public in general, contributing to knowledge enhancement, to ensure capacity building and for the development of informed public policy making and monitoring.

8. In the absence of adequate information to answer users' requests, INE provides sample frames allowing public or private clients to conduct and develop statistical products according to their needs. These practices have been an institutional policy of sharing experience regarding statistical data collections, and are possible due to the ability of the INE staff to innovate in several data production areas and to improve the quality of INE's indicators.

9. For 166 years, INE has maintained the tradition of sharing its data with other national bodies which freely use such statistical information, as well as to respond to national data requirements.

10. INE has recently considered the use of administrative data collected by other government bodies for statistical production. However, the Institute faces the challenge of consolidating the information generated and held by other government bodies such as the Ministry of Health, the Ministry of Labor and the Civic Registry Service. There is a consensus that all data collected are a valuable resource which needs to be properly organized and transformed into statistical information.

11. The next chapter of the current paper focuses on the question of what do the statistics of a country really measure. An analysis is made of Population Censuses in Chile over time and how the census contributes to policy making, the construction of a national identity and the study of social issues. Surveys as tools for interpreting our society and their use in public policies are also looked at. Chapter III presents a brief history of INE and a description of its role in the country's statistical patrimony. Finally, Chapter IV presents challenges that INE currently faces.

## **II. WHAT DO THE STATISTICS OF A COUNTRY REALLY MEASURE?<sup>2</sup>**

### **A. Population Censuses in Chile and national identity**

12. Censuses are the most recognized area of work and the largest statistical activity of National Statistical Offices. They provide a good foundation to build a strong national statistical system by improving credibility and confidence in the data collected, enhancing policy relevance, and promoting better data dissemination.

13. Statistics measure a society's reality by obtaining relevant data on its values, family structure, beliefs and customs. It is important for the State to obtain these facts in order to project and plan national progress. The scope of work of a national statistical office is conditioned by the reality of the country; therefore it is important for these offices to be able to incorporate new phenomena in its measurements.

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<sup>2</sup> Michel Volle, "Revista Económica", 1884. Paris, France.

14. Population and Economic Censuses in Chile have been crucial in the definition of the 'Chilean identity' and, by looking at the history of the evolution of censuses, we can better understand and recognize a nation.

15. Before the Chilean independence, a first general census was conducted in the territory. On this occasion, the classification criteria of the questions responded to the main variable that distinguished individuals during this period; phenotypical characteristics. Thus the inhabitants of the territory were divided into four categories: whites, mestizos, indigenous and blacks.<sup>3</sup> Slowly these categories changed from census to census reflecting the reality that needed to be measured at the moment: differentiating Spaniard descendants from the natives in the early 1800s, then Chileans from foreigners in the 1900s as a way to homogenize the population; questions about nationality instead of ethnicity in order to strengthen the nation-state; and finally reaching in 1992 the inclusion of 3 different categories for people who identified themselves as indigenous, which were later extended to 8 categories in 2002.

16. Historically in Chile, the notion of citizenship and being a citizen was mainly established due to the application of the national Population Censuses. The contents and questions included in each Census questionnaire over the years have led the inhabitants to think about themselves as members and a vital part of this particular country.

17. The need to know 'who were those whom identified themselves as Chileans' was expressed early by the 'criollos'<sup>4</sup> as a politically active sector wanting to create 'a self-identity' on the basis of their 'belonging to a common territory'. This sense of belonging was created politically and also utilized by the authorities to reinforce the installation of a political Republican system in order to guide and rule the emerging societal groups and to take over the territory, placed on the Pacific coast of the Southern Cone of America.

18. One of the main tools to achieve a 'national identity' was, without doubt, the elaboration, application and dissemination of data collected by the first trial Population Census in this new territory, which was applied in Chile as early as 1813, just three years after the Declaration of the Chilean Independence from Spain in 1810.

19. The authorities in the 1800's realized the social and political importance of having accurate information on the country's population. Therefore, the first Population Census of Chile was conducted with the utmost attention, even though the information collected by the newly formed Chilean government was of an unofficial character. The data collected at that time was crucial for proving the importance of the use of national surveys and other data collection instruments and their value for political purposes. Each Census held in Chile during the 19<sup>th</sup> century provided valuable information, useful for defining the scope and character of the local political arena.

20. Later on, the application of more accurate population census instruments lead by new ideas and concepts - held by the 'criollos' - helped to clarify and justify the information collection on an 'empirical basis'. Ensuring the acceptance of the data provided by the Chilean Population Censuses created the basis of a deep sense of credibility towards statistical institutionalism and

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<sup>3</sup> "Historia de los censos de Población, retrato de nuestra identidad" INE Chile, unedited.

<sup>4</sup> Spaniard children born in the Americas during the colonization period (XVII and XVIII centuries).

therefore created the need for the establishment of a permanent data collection body in the country. Almost a century later, this body became independent, as INE is today.

21. The results of the second Population Census were released in 1835, after 4 years of intense data collection work which started in 1831. Its aim was to collect information nationwide, including extremely isolated regions defined as Chilean territory at the beginning of the 19<sup>th</sup> century<sup>5</sup>.

22. During the 19<sup>th</sup> century, various Population Censuses were held, i.e. in 1843, 1854 and 1865. All major authorities throughout the American region proclaimed their commitment to these libertarian ideas and supported individual libertarian icons. In fact, they joined forces against Spain and deferred their pre-Hispanic differences in order to gain the so-called American Political Independence, as defined by the 19<sup>th</sup> century American inhabitants.

23. Soon after, this same popular pro-independent American ideology became a key aspect for the instalment of the nation-state model, based on both accurate, but also distorted, ideological images, held by the few empowered Chilean citizens who were allowed to participate in the decision making processes<sup>6</sup>. The idea was to impose the European liberal model as the 'only political alternative' for the recently created countries in the American region. Most of them were facing poverty derived from the colonial exploitation model, and had no resources to establish the new political structures needed to consolidate their status as free, independent nations.

24. Chile, being a poor and isolated country, with Spanish presence, had a better opportunity to establish a new social order, breaking with the colonial structure, the Inquisition of the Catholic Church and the dependency on Spain exercised through the Virreinato of Peru. Nevertheless, it is important to acknowledge that this 'European model', followed by national spokespeople, created the basic ideological framework for the emergence of a democratic participation by society, even though still precarious.

25. Most of the 'free, wealthy and literate' Chilean (male) inhabitants, who held the right to vote by law had agreed that consolidating the independent nation-state model generated the need to create a unique identity based on a common territory. These two characteristics were essential for establishing the liberal democratic model, since support from empirical and reliable scientific data was required to consolidate the best form of governing the newly formed free nation-state.

26. The need for the production of independent statistics was acknowledged by the citizens holding political power in the country, i.e. those who had the right to vote (due to ownership of property and level of education), generally the same sector that held the wealth and economic power by owning and/or managing the main productive resources in the country.

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<sup>5</sup> In the beginning of the 19<sup>th</sup> century, the Chilean territory included most of the Patagonia (currently Argentinean) with little territory on the north, reaching close to the Copiapo Valley in Atacama (1810).

<sup>6</sup> Only the Chilean males over 25 years of age and/or owners of land had the right to vote until 1925. Women gained voting rights in 1949 and the peasantry and illiterate only gained voting rights in 1962. Finally, liberal democracy was consolidated, which was violently interrupted in 1973. Therefore, the peasant and illiterate Chilean population, exercised their voting right only in 1964 and 1970, then in 1990 after the recovery of democracy.

27. The emergent Chilean political aristocracy was able to acknowledge its own deficiencies which were put out in the open, such as the lack of basic capacities to unite common women and men of lower status in Chilean society and who constituted the majority of the Chilean population at that time.

28. INE has conducted Population Censuses every 10 years since 1952. Due to the enhancement of a deeper democratic government model, the character of the census changed to a Population and Housing Census in 1970. This was done mainly in recognition of the existing social gap between rich and poor which needed to be measured, understood and shown to the whole society. At the same time, censuses became the most efficient tool for consolidating the nation-state political model and the incipient democracy of the country.

29. During the 1960's and 1970's, men and women from all social backgrounds, including long term immigrants, shared the view of a 'possible radical change of the Chilean social structure'. All those excluded and at the margins of society, mainly the poor and outcasts, expressed their desire to integrate into the social structure and their will to be part of the process of creating a new Chilean society.

30. At the same time, the native people of the territory, such as the Mapuche, Aymara and other original ethnic citizens, were expected to become invisible for the implementation of this new national identity based on the Law and Order established by the recently created Chilean Nation-State. The main purpose was to convince every person in the territory of their own desire to become "Chileans" with no distinction of race or ethnicity. This was perceived more as an imposition for people to feel and declare themselves as Chileans than as a gradual process of integration which allowed minorities to recognize themselves as Chileans if they so desired.

31. The inclusion of ethnicity questions in censuses is nowadays seen as an important source of data for defending human rights. Nevertheless, there were times in the past when population censuses had a negative perception from the public because they were seen as a way to identify people either for taxation or discrimination purposes. Censuses are no longer seen as an instrument for social control but as an instrument for public policies.

32. The 2002 Population and Housing Census in Chile included 8 categories for people who identified themselves as indigenous to choose from. The answers to this question depend on and reflect the level of ethnic consciousness and sense of belonging that the indigenous peoples of Chile have. This is extremely relevant considering that self-recognition is part of their right to self-determination. Results are also useful to understand how these minorities perceive the census process and its validity.

33. In the historical process described above, it is relevant to note that the role of Chilean authorities, who gave high priority to information collection regarding population issues, set a tendency that was maintained by different governments over the years. All Chilean governments shared the recognition that it is necessary to have up-to-date and accurate statistical information.

34. The latest Population and Housing Census was conducted in 2002. Currently, INE is planning and working towards the 2012 Population and Housing Census. Its preparation

activities began in 2008, and will continue until 2012 with the government's commitment to generate quality information nationwide.

## B. Census results and social indicators

35. Censuses provide data which can be used to produce important social indicators. Aside from the answer to the question "How many are we?", there is also a need to provide an answer to "Who are we?" in terms of age, sex, education, occupation, economic activity and other crucial characteristics, as well as to "Where do we live?" in terms of housing, access to water, availability of essential facilities, and access to the Internet.<sup>7</sup>

36. Until the 1970's, Chile had a relatively young population structure; almost 40% were under 15 years of age and only 8% were over 60 years old. Middle-aged people, active and available for work, presented a certain homogeneity during the period 1952-1970, comprising around 56% of the population.

37. In the last two decades, this situation has changed drastically. In 2002, people under 15 years of age represented 25.7% of the total population; 11.4% were persons 60 years of age and over, and the intermediate group grew to 62.9%. If these tendencies continue, the young population will lose their representativeness (21% by 2030) and the percentage of people over 60 years of age will represent 59% of the whole population by 2030. Please see Table 1 below:

Table 1

### Selected indicators: censuses 1970 to 2002 and projections 2010-2020

INDICATOR	CENSUS				PROJECTION	
	1970	1982	1992	2002	2010	2020
<b>Dependency ratio</b> (1)	79	62	56	51	50	51
<b>Ageing ratio</b> (2)	19	26	33	44	50	70
<b>Youth ratio</b> (3)	64	48	42	35	33	30
<b>Average age</b> (in years)	26	28	29	32	33	35

\*Notes: (1) Population under 15 + 65 years of age and more / Population between 15-64 years of age x 100.

(2) Population aged 60 years or more / Population less than 15 years old x 100.

(3) Population less than 15 years of age / Population aged 15 and more x 100.

Sources: INE, Demographic Report of Chile, Census 1992 (Spanish)

INE, Census 2002

INE-CELADE, Chile: Estimations and Projections, Ibid.

<sup>7</sup> United Nations, ECOSOC. "Principles and Recommendations for Population and Housing Censuses". Revision 2 pg. 1, 2008.

38. The indexes above show how census information provides knowledge about the demographic changes occurring in the country and their correlation to socio-cultural aspects of society. These indexes constitute a primary step towards the introduction of creative and efficient policy measures to improve the wellbeing of the different target groups from all sectors of the country<sup>8</sup>.

39. If we analyze the questions shown below which correspond to the 2002 Population and Housing Census of Chile, we can observe the set of values by which Chilean society is defined within family relationships by sex and age.

40. Question 17 asks who is the head of the household and defines all the other members in relation to this person. This figure can be a man or a woman and must comply with the socially accepted definition of head of household in Chile which is: the main provider of the family income and, at the same time, the person who is recognized by the rest of the household members as the one who contributes to the larger part of their income and is, therefore, an authority figure.

41. This same question 17 includes the category number 15: member of a collective household, but does not inquire deeper into this type of household, leaving us no possible chance of understanding their intra-household organization. This is expected in the Chilean context where, until now, there is no recognition of the increasing importance of this type of household.

42. As the United Nations Recommendations on Population and Housing Censuses explain, “the household, a basic socio-economic unit in all countries, is often central to the study of social and economic development. The number, size and structure of households and changes in the rate of household formation are useful for planning and for developing special policies for selected groups of the population such as children, the elderly and persons with disabilities. Therefore, the distribution of individuals within households is used to determine the living arrangements of families, the patterns of family structure observed, the time when new families are formed and changes in family structure due to death, divorce, migration or the departure of children to form their own households.

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<sup>8</sup> The Dependency Ratio reflects the share of potential economically active population. Countries with high fertility rate present the highest share due to the large amount of children, as was the case in Chile in 1970. Currently, the fertility rate is quite low (1.9) and the country presents an accelerated demographic aging transition process, the dependency ratio has lowered and will reach 50 by 2010. From 2020 onwards, the dependency ratio will increase continuously due to a larger ageing population.

The Aging Ratio reflects the aging of the population. After 2002 a higher increase of this index is expected. By the year 2020 there will be 70 elders for every hundred persons under 15 years of age. Towards 2034 this index will be of one hundred, i.e. the number of elderly people and children under 15 years of age will be the same.

The Youth Ratio behaves in an opposite manner to the Aging Ratio: it has been decreasing in time, due to the decreasing number of the population under 15 years of age and the low fertility rates.

The Average Age expresses the average age of the population of the country. It shows over time the aging of the Chilean population. Therefore, the increase of population in the middle-age age group will be more intense, and by 2034 when the Aging Ratio reaches 100, the average age would be of 38 years for both sexes.



Figure 1  
Excerpt from the questionnaire of the 2002 CENSUS of Population and Housing of Chile

*Example of Questions*

**17. ¿CUALES SU RELACION DE PARENTESCO CON EL JEFE O JEFA DEL HOGAR?**

JEFE/A HOGAR	1 Cuñado/a	9
Espos(a)/Cónyuge	2 Padres	10
Conviviente/Pareja	3 Suegro/a	11
Hijo/a	4 Otro Pariente	12
Hijastro/a	5 No Pariente	13
Yerno/Nuera	6 Servicio doméstico puertas adentro	14
Nieto/a	7 MIEMBRO	
Hermano/a	8 HOGAR COLECTIVO	15

**18. SEXO**

Hombre      Mujer

**19. ¿CUANTOS AÑOS CUMPLIDOS TIENE?**

-Si la persona aún no cumple 1 año, anote 00.

-Si la persona tiene 1 a 99 años anote 01,05,10,19,43,.....,99.

-Si la persona tiene 100 años o más, complete las cifras faltantes

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**27. ¿CUALES SU ESTADO CIVIL O CONYUGAL ACTUAL?**

Casado/a	1 Anulado/a	4
Conviviente/pareja	2 Separado/a	5
Soltero/a	3 Viudo/a	6

**Question 17: What is your kinship relation to the head of household?**

- |                             |                                   |                                  |
|-----------------------------|-----------------------------------|----------------------------------|
| 1. Head of Household        | 2. Spouse (wife/ husband)         | 3. De facto partner/ concubine   |
| 4. Son / Daughter           | 5. Stepson/ Stepdaughter          | 6. Son in law/ Daughter in law   |
| 7. Grandson / granddaughter | 8. Brother / sister               | 9. Brother in law/ sister in law |
| 10. Parents                 | 11. Father in law / mother in law | 12. Oother kin                   |
| 13. Not kin                 | 14. Indoors domestic servant      | 15. Collective household         |

**Question 18: Sex**

Man      Woman

**Question 19: How many years of age do you have?**

- if the person is not one year old yet, write 00
- if the person is between 1 and 99 years of age, write 01, 05, 10, 19, 43...99
- if the person is 100 years or more write down the lacking figures

**Question 27: Which is your current marital status?**

- |             |                       |                   |
|-------------|-----------------------|-------------------|
| 1. Married  | 2. Concubine /partner | 3. Single         |
| 4. Annulled | 5. Separated          | 6. Widower/ widow |

*\*Note: unofficial translation of the above census questions by Veronica Oxman*

The relationship among household members can be used to determine family structure and the existence of households ...<sup>9</sup>”

43. The social bias presented in the 2002 census' questions is clear when considering question 27 on Marital Status: when looking at the 6 categories, we find the absence of the category 'divorced'. This was due to the fact that, in 2002, Chile did not have a divorce law. Nevertheless, the Code of Family Legislation allowed the annulment of the marriage through a relatively simple procedure at court, consisting of the declaration that one of the members in the marriage did not live at the address shown in the marriage certificate or other explanations of this kind. The lack of divorce legislation was mainly related to the conservative parliamentarians -who followed the guidelines of the Catholic Church authorities - and their denial to accept all the motions to legislate on marriage breakdowns presented by the more progressive members of Parliament. The next census will include 'divorced' as a category since a divorce law was passed in 2006.

### **C. Surveys as tools for interpreting our society**

44. Surveys are useful to disclose interpretations made by Chileans of their own society and to acknowledge true and/or mistaken concepts being used by the State for policy making. The information provided by the different surveys applied by INE lead to an understanding of prevailing ideas (prejudgments and misconceptions) that impact the formulation of public policies and orient the visions and missions of government bodies.

45. Usually, knowledge generated by a specific survey depends on previous knowledge and/or experiences already identified by the different levels of government which use survey data to confirm their observations derived from experience, administrative records and/or users' requirements at the local level. Surveys are not necessarily useful for measuring 'what we do not know'.

46. Surveys are determined by a set of principles, prejudices and values which will not necessarily consider facts and issues that the same society does not want to see. Therefore, surveys are not an accurate representation of reality and their use must always contain a critical perspective of its results. INE does not conduct surveys of political opinion, nor does it question the household's private lives.

47. Surveys are useful tools for interpreting social, political and economic phenomena and therefore contribute to informed decision making by governments. They are used to conduct market research for goods and services and other economic aspects needed for informed policy making. Studies aimed at organizational development, especially of public institutions and their structures and management, benefit from the use of this tool as well as studies particularly designed for public policy, macroeconomics and microeconomics such as unemployment and educational levels of the population.

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<sup>9</sup> United Nations, ECOSOC. "Principles and Recommendations for Population and Housing Censuses". Revision 2, pg. 238, para. 3.70, 2008.

48. The results obtained from surveys are based on social constructs present at a certain time and already accepted by Chilean society. Certain issues have to be taken into account when using surveys, such as methodologies and conceptual and operational definitions, defining the phenomenon to be considered; the population and/or target groups, and research being conducted at the national level by the academic and/or private sector. International recommendations coming from the United Nations and other international organizations should be taken into consideration especially regarding monitoring of minimum quality standards in the various fields, updated sampling frames, sample selection, field application, results analysis and results dissemination.

49. Although INE recognizes that this tool does not cover all social and economic aspects of its society, the greater part of Chilean official statistics are based on surveys rather than on administrative registries or records.

50. A good example of how surveys can help us interpret our society and explain how our population spends its time is time-use surveys. “These are quantitative summaries of how individuals “spend” or allocate their time over a specified period - typically over the 24 hours of a day or over the 7 days of a week.”<sup>10</sup>

51. Time Use Surveys are considered one of the most innovative and useful tools for providing information and guidance to public policy making, particularly for the design and implementation of policies towards women and families. These surveys are based on the concept that personal and societal wellbeing are sustained both by work done for the market as well as work in domestic and private relationships and at the existing social organizations<sup>11</sup>.

52. In this sense, the contribution of time use surveys is varied and wide and they can be applied for knowledge production in different areas such as work and employment where the data provided leads to question the traditional concept of ‘work’ and the nexus between paid and unpaid work. These surveys also provide us with knowledge on gender issues as they deliver information on the interrelationship between gender and poverty or gender and labor. They can provide us with deeper and clearer knowledge about women’s contribution to the economy of the country through their participation in paid work in the labor market and in domestic unpaid work. Time-use surveys also allow us to come up with new concepts, methodologies for data collection, analysis and production of new indicators.

53. Time-use surveys aid in making visible unpaid work and women’s work by assigning a value to domestic activities (unpaid domestic work) on the basis of its relation to paid work and by showing the productive activities taking place inside the households such as provision of food and clothing, especially in rural areas.

54. These tools give visibility to the difficulties and challenges of women to reconcile family and work responsibilities, domestic duties, consumption, and others. They allow us to know about the needs and requirements of social care, including child care, geriatric care and of

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<sup>10</sup> United Nations ECOSOC. “Guide to producing statistics on time use: measuring paid and unpaid work”, pg. 5, 2005.

<sup>11</sup> Time-use surveys section based on a paper by Odette Tacla, May 2008.

the chronically ill, allowing for the creation of specialized services by health and education ministries. These time-use surveys also help us identify family housing needs, such as space by number of inhabitants in the dwelling, housing infra-structure, and basic sanitization. They can present a better understanding of working conditions of all household members, especially women, by measuring issues such as work overload, distribution of family responsibilities between men and women, and service needs such as transport, security and safety.

55. Apart from the importance of the application of these surveys in areas such as allocation of time and workload in households, time-use statistics can facilitate policy making in areas such as transport, for example. Allowing us to understand how much time people spend every day on transport from their home to their workplace can also explain other issues such as quality of life and problems arising from commuting<sup>12</sup>.

### **III. THE NATIONAL STATISTICAL SYSTEM AND THE ROLE OF THE NATIONAL STATISTICS INSTITUTE OF CHILE IN THE STATISTICAL PATRIMONY**

#### **A. Governing role of the national statistical system**

56. Chile has a decentralized statistical system in which 55 institutions (of a total of 119 public institutions with direct fiscal contribution) produce diverse statistics. This statistical system is articulated and regulated by the National Statistical Institute with the objective of establishing quality standards and pertinence of the statistical production based on surveys or administrative registers.

57. The National Statistical Institute of Chile with its current structure and independent and technical character was created with the approval of the Law N° 17.374, which aimed at modernizing data collection and statistical registries in the country. It was presented to parliament under the Presidency of Eduardo Frei Montalva (1964–1970) and approved during Salvador Allende’s government (1970–1973). Before this law, the statistical mandate rested on a statistical office which, with time, underwent different organizational names and structures, finally reaching in the ‘70’s the status of the current Institute.

58. Article 2 of this Law establishes that INE has the responsibility to perform the official censuses in Chile<sup>13</sup>. The enactment of this same Law enforces through to today the official statistics in the country. INE is the only institution in the country responsible for the production of national official statistics and for conducting censuses. It is in the Institution’s mandate to serve as a timely and reliable source of information in all areas of state administration and national activities.

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<sup>12</sup> United Nations ECOSOC. “Guide to producing statistics on time use: measuring paid and unpaid work”, pg. 5, 2005.

<sup>13</sup> Law N° 17,334: Article 1°. The National Statistics Institute [INE] is a legal independent and technical entity, functionally decentralized and with equity of his own, that is in charge of the official statistics and censuses of the Republic. It will interact with the Government through the Ministry of Economics, Development and Reconstruction. It will be based in the city of Santiago, Chile.

Article 2°: The following is incumbent upon the National Statistics Institute: To carry out the collection, technical elaboration, analysis and publication of official statistics.

59. According to the United Nations Fundamental Principles of Official Statistics, “the quality of official statistics, and thus the quality of the information available to the Government, the economy and the public depends largely on the cooperation of citizens, enterprises, and other respondents in providing appropriate and reliable data needed for necessary statistical compilations and on the cooperation between users and producers of statistics in order to meet users' needs.”<sup>14</sup>

60. INE Law supports this principle by establishing in Article 20<sup>15</sup> and Article 2<sup>16</sup> of the same Law the obligation of all natural persons and government and private entities to provide any data or statistical information required by INE for the production of official statistics. INE is also ruled by the law on statistical confidentiality that enforces the protection of the privacy of the data source. Both conditions allow INE to guarantee the suitable quality of the statistical production (coverage and representativeness) and the necessary privacy of the detailed information of every respondent.

61. INE's mission indicates that as a public organization it is responsible for producing, analyzing and disseminating official and public statistics of Chile. In this sense, it provides social, demographic, economic and environmental information and censuses in a transparent and accessible manner so that public service, private agents, researchers and citizens can make informed decisions that will strengthen an open and democratic society.

## **B. Statistical patrimony**

62. Statistical institutions require specialized infrastructure for the continuous production of statistics, which allow for the generation of specific studies that are finally translated into social statistics, short-term indices, and the measurement of specific economic phenomena such as innovation. This infrastructure is constituted mainly by major statistical acts such as population censuses for people-related statistics, economic censuses for providing basic information for the calculation of economic and short-term indicators, and finally the maintenance of a complete register containing all the pertinent attributes of the actors that participate in the economy of a country. This statistical infrastructure maintains a housing master sample based on the latest population and housing census, the agricultural, livestock and forestry census, and the national enterprises register.

### **1. Master Frame for the selection of households' samples**

63. Based on the Population Census, INE constructs an updated framework of dwellings using satellite geographic information and administrative registers of municipalities. This framework allows to create representative and updated samples of the economic, demographic and social

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<sup>14</sup> ST/ESA/STAT/OFFICIALSTATISTICS/WWW - <http://unstats.un.org/unsd/methods/statorg/FP-English.htm>.

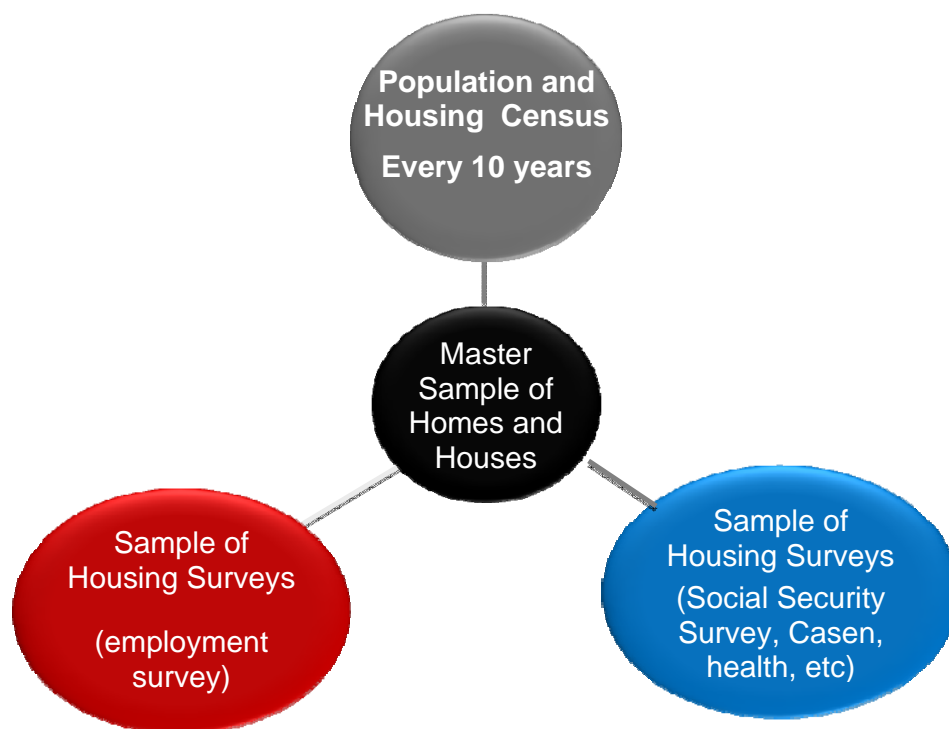
<sup>15</sup> Article 20°: All Chileans, natural or legal persons, as well as residents or passengers in transit are compelled to provide any statistical data, references or information requested by INE's officers, delegates or commissioners, by word or in writing, which by nature or purpose are in any way related to the elaboration of official statistics. (Chile: Law 17,374).

<sup>16</sup> Article 21°: The obligation set out in the previous article applies to officers that head fiscal and semi-fiscal organizations, state companies, municipalities and any other public institution, who because of their functions, are in charge of data of interest for the elaboration of official statistics. They also have to comply with the norms set by INE regarding the collection, compilation and classification of this information. (Chile: Law 17374).

conditions of the Chilean population. The process of sample generation provides the main input for all household and dwelling studies and surveys carried out by the statistical system.

Figure 2

### Master frame for sample surveys of households



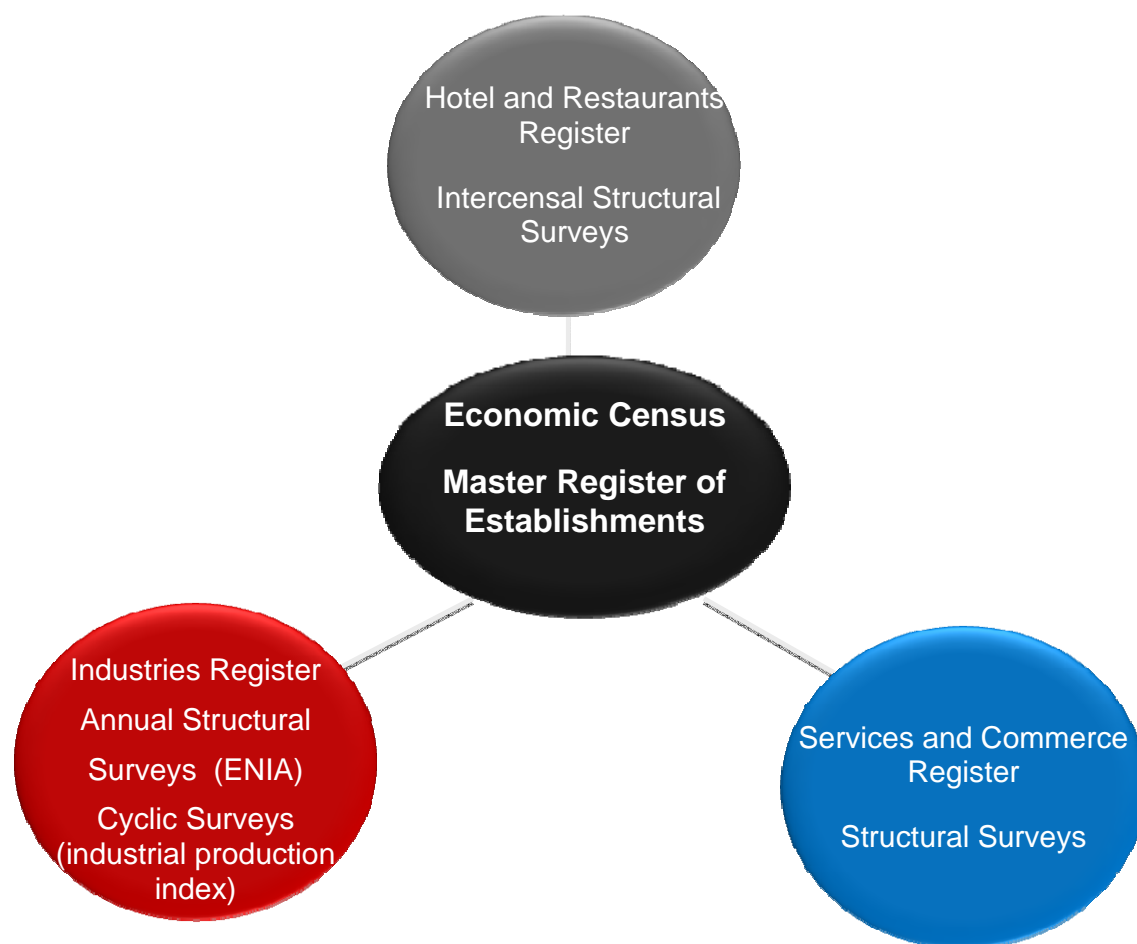
## 2. Main Business Register

64. Based on tax and fiscal registries and other statistical actions, INE maintains a business register which serves the production of economic statistics and national accounts generated by the Central Bank. This business register is permanently updated, providing monthly information on opening and closing of business firms, with feedback from statistical actions of INE and Central Bank, in addition to the administrative registers of several institutions.

65. The Main Business Register supplies an updated platform or universe of economic agents, providing the framework for sample surveys required for carrying out economic studies and production of short-term information of the various sectors of the Chilean economy.

66. Samples derived from the Main Business Register in the different economic statistics are used in compiling structural information, as well as monthly data for short-term indicators. INE collects information through structural surveys of manufacturing, wholesale and retail trade, hotels and restaurants, and services. Short-term indicators are based on the structural survey data, currently with different base periods.

Figure 3  
**Master frame for economic census and surveys**



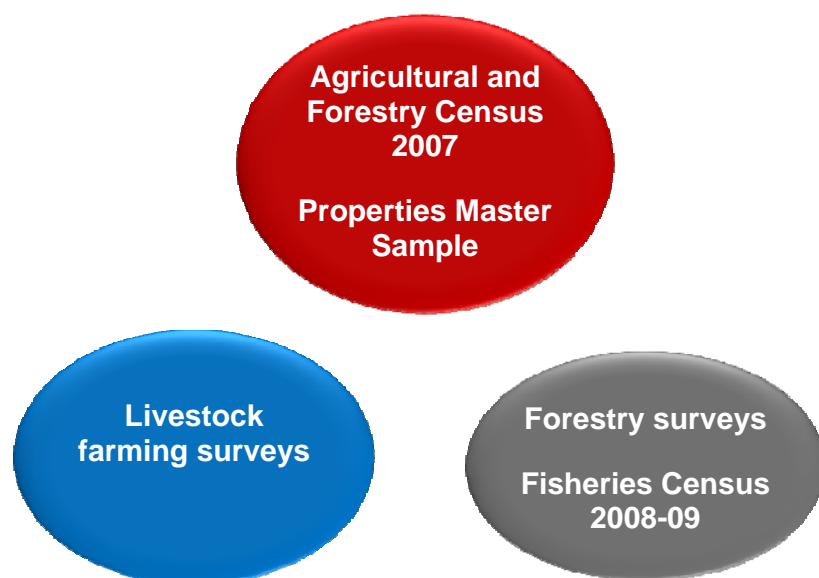
### 3. Agricultural, Livestock and Forestry Census

67. The 2007 Agricultural, Livestock and Forestry Census provided the basic input for National Accounts and for INE's frequent surveys related to crops, livestock, meat production and poultry activities.

68. The Fishery and Aquaculture Census takes place between September 2008 and August 2009 for the first time. It will provide information on the socio-economic and demographic characteristics of the sector and the quantitative information of the fishery and aquaculture activities.

Figure 4

**Master sample for agricultural census and surveys**



**4. Statistical products under the status of Official Statistics of Chile:**

69. Most of the statistical products listed below are part of INE's work and a few others are prepared by specialized agencies and the Central Bank:

- (a) INE:
  - (i) Population and Housing Censuses (every 10 years);
  - (ii) Demographic statistics (surveys);
  - (iii) Vital statistics (based on administrative records collected by the Ministry of Health);
  - (iv) Agriculture and Forestry Census (every 10 years);
  - (v) Fisheries Census (1st in 2008-2009);
  - (vi) Businesses register (updated as needed);
  - (vii) Economic structural and short term data (basis for National Accounts System);
  - (viii) Family Budget Surveys (every 10 years, basis for CPI);
  - (ix) Inflation Measurements (monthly);
  - (x) Employment and Occupation Survey (monthly, by sampling);
  - (xi) Structural and cyclical surveys of different development and planning economic sectors: industry, mining, energy including gas, water & electricity; and others (monthly for some sectors; differentiated by sector)
  - (xii) Distributive Trade;
- (b) Other agencies:
  - (i) Ministry of Health (wide range of registries);
  - (ii) International Trade (Central Bank of Chile);



- (iii) Environmental data (Environmental Commission - CONAMA);
- (iv) Citizens Safety (with Ministry of Justice);
- (v) Sampling for Socio-Economic Characterization Survey (CASEN by Ministry of Development and Planning);
- (vi) Others.

## **5. New Employment Survey**

70. The survey design considers the application of a new Master sampling framework based on the 2002 Population Census, with recent revisions and a new designed questionnaire according to international standards and adapted to the new reality of the labor market in Chile.

71. New urban developments and dwellings, jointly with revised population projections, were used in the sample designed. The sample is stratified in two stages and will be integrated progressively into the current sample to replace the units.

## **6. Supplementary Survey on Household Income**

72. This survey is a suitable instrument for measuring income resulting from employment, especially earnings of employees. The information collected on a sample of household provides data of income by source, characteristics of the household, characteristics of the employee and refers to the fourth quarter of each year. The results allow socio-demographic analysis of the characteristics of the members of the household as affected by the distribution of income.

## **7. Price Indicators**

73. In 1928, the first Consumer Price Index (CPI) was produced in Chile. Presumably, this survey was applied only to the National Statistics Institute (INE-Chile) officials and their families.

74. Chile was relatively late in developing economic indicators. Only in 1957, a household survey on goods and consumption was applied. Later this was institutionalized in order to ensure the continuous elaboration of a CPI. The first basket of goods considered for the elaboration of the CPI only considered prices available in the Santiago Metropolitan Region. This methodology remained the same for many years, and was changed in 2008.

75. Currently, INE has made the effort of elaborating a completely new concept of national consumption, including actualized data of the basket of goods and a new methodology, which allows the creation of a national CPI, taking into consideration the prices of these goods in all country regional capital cities.

76. The basic goods contained in the CPI national basket are derived from the Family Budget Surveys (FBS), which have been carried out every 10 years in the Santiago Metropolitan Region since 1956. The latest, the VI FBS, was held in 2006 with national coverage.

77. The fact that consumption has become an extremely rapidly changing phenomenon generated important debate on the 'efficiency' and 'effectiveness' of collecting this type of information every 10 years, as well as the nature of its content.
78. Chile has become one of the countries most affected by the globalization processes. It has signed 'Free Trade Agreements' with more than 100 countries, and has introduced innovative technologies in all economic production processes.
79. At the state level, Chile has developed policies introducing 'new technologies' for the past 10 years, for example, children attending public schools have been provided with personal computers and internet access through the education and social equity policies. Chile has also become a country attracting immigrants from Central and South America, lately from the Caribbean (Haiti and Cuba since 2000).
80. Currently, the Family Budget Survey is applied at a national level. INE's authorities expect to shorten the data collection period to every five years in the near future, and it is expected that the next survey will be held in 2012.
81. INE's price indicators are consumer price index, producer price index and whole sale price indicators. INE also calculates indicators on earnings and labour cost.
82. The consumer price index was recently updated with the Household expenditure survey of 2007. The base period is December 2008 and the new basket of products covers 12 divisions of COICOP with 368 products and more than 9000 varieties. This indicator is published within the 8 days following the end of the reference month.
83. The producer price index includes producer prices for 6 divisions of ISIC: A) Agriculture, livestock and forestry; B) Fishing; C) Mining; D) Manufacturing; E) Distribution of electricity, gas and water; and F) Construction. The products were selected to cover at least 80% of the gross value of production of each division. A new methodological updated version is under development. The base period is April 2003
84. The wholesale price index measures the changes in wholesale prices of goods produced by the agriculturw, fishing, mining, industrial, and electricity, gas and water sectors. The basket of products of this indicator was recently updated: it covers 940 products of national and foreign origin. The new base period is November 2007.
85. The indices of earnings and cost of labor, based on January 2006, measure the changes on earnings and cost of labor of workers in enterprises of 10 or more workers classified by occupational group (CIUO), economic activity (ISIC) and size of the enterprise. They are sample based indicators of 1230 enterprises published monthly.

## **8. Short Term Economic Indicators**

86. Short term economic indicators calculated by INE to monitor the main sectors of the economy cover manufacturing, mining, electric energy, retail trade, supermarket sales and construction.

87. The index of volume of production and sales of the industrial sector is a monthly indicator calculated at 3-digit level of ISIC Rev. 3. The coverage is the universe of industrial establishments with 10 or more workers. A basket of products was selected based on their contribution to the cost of production or the cost of sales of their ISIC class, representing 94% or more of the cost of production or sales in the base year. Indices by group of the ISIC (3-digit level) and by economic classification (Consumption, durable intermediate and capital goods) are calculated monthly.

88. The mining sector is monitored through the index of mining production, which is calculated every month monitoring the production of the main metallic and non metallic products. Given that Chile is among the main world exporters of copper, this indicator is very relevant for the analysis of the Chilean economy.

89. The index of sales of the retail trade measures the activity of this sector through the monthly sales of department stores, specialized stores, supermarkets, car dealers, hardware stores and gas stations. The survey is addressed to a sample of commercial enterprises and the resulting indices are classified by ISIC Rev. 3 (Division 50 and 52). Deflators of CPI groups or products are used to calculate the indicator in real terms.

90. The statistics on generation and distribution of electricity are collected monthly by INE from the enterprises in the register of companies of this sector. The information includes energy for self-consumption and the data on distribution includes imports.

91. Another indicator of electric, gas and water activities is an index which measures changes in consumption of electricity, gas and water covering all the establishments engaged in these activities. It is a quantum index, Laspeyres type with 2003 base year. It is calculated on a monthly basis, published 60 days after the reference month.

#### **IV. CHALLENGES**

92. The National Statistical Institute of Chile is continuously seeking new ways of modernizing its products and staying up to date with statistical quality standards. The main challenges that INE faces currently to improve the information it provides are described below.

##### **A. Integrated System of Household Surveys**

93. During the last years, INE has been working to consolidate an Integrated System of Household Surveys (SIEH) as a coordinated strategic planning tool for collection and production of data on demographic and socio-economic characteristics of the country.

94. Such a system will also improve and strengthen communication amongst statistical producers and users. Overall, it will improve coordination between government agencies for better planning and use of public resources amongst public institutions.

### **1. OECD standards**

95. In February 2006, INE became an observer of the Statistical Committee of the Organization for Economic Co-operation and Development (OECD), which shows INE's permanent effort to accomplish high quality standards in its surveys and indicators. INE faces the challenge of following the OECD standards by 2010. This challenge also allows INE to progress in the development of new statistics covering some important social, environmental and economic areas not covered today.

### **2. Short-Term Economic indicators aligned to national accounts**

96. INE is running a project which aims to align structural data to the short-term economic indicators and the base period of national accounts, starting with 2008 information. INE will revise all the basic short-term indicators to establish complete coherence with the national accounts prepared by the Central Bank, updating the base period every five years, allowing the necessary comparison between all the economics indicators. This project is based on the strong coordination with national accounts areas of the Central Bank, which makes possible the exchange of the basic statistical information for the base year required by national accounts obtained through INE's structural economic surveys and short-term indicators.

### **3. The best technological platform for processing and disseminating statistics**

97. One of the most important areas for INE to engage in is developing a modern technological platform that allows a harmonized processing of databases for dissemination and the management of use of administrative records with government institutions. Today, the development of these tools is especially important for certain statistics such as employment and industrial surveys. The application of one of INE's principles of transparency enforces the availability of all databases to users with an adequate interface.

### **4. Use of administrative records in statistics production**

98. One of the main differences between statistical offices is the use of administrative records to produce statistics. This practice requires some conditions such as the availability of high quality records, the coordination with providing institutions and the development of a methodology for the use of those specific statistics. Today, less than 10% of the statistics produced by INE are based on administrative records, despite the advantage of reducing costs.

### **5. Intra-institutional coordination**

99. Better coordination in the use of public resources amongst public institutions and amongst statistics producers and users is needed. Better coverage, quality, comparability and continuity of public statistics could be achieved by creating an institution to ensure methodological transparency of data collection and timely information dissemination to the general public.

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