Relationships network for viability of National Statistical Systems  
Motivations for a future study  

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Abstract  
Three pillars of the National Statistical Systems (NSS) are emphasized here: the relevance of the statistical information plan; qualification and technical independence of the institutions participating in the System; and relationships with broad range of stakeholders. Motivations are presented for future project that aims to study NSS taken into consideration stakeholders that interfere in the systems and those who are impacted by NSS. Relations of NSS with the following entities and bodies are considered: the International Statistical Community; Governments, politicians and government agencies; academic circles, the media and public or private producers of data; workers in the production of official statistics; and citizens and several organizations in their role of users or respondents. Actions, through which relationships with NSS are expressed, are associated with each of these entities or bodies. It is argued here the importance of being adopted, in a future step, theoretical support in Social Sciences and Information Sciences, to advances in the understanding and refinement of such relationships, which are assumed as to occur by means of power relations, exchange of knowledge and that also are related with expectations about NSS and of NSS about their stakeholders.

Keywords: relationships; power; knowledge; expectations.  

1. Introduction  
There is a common sense that official statistics are essential to democratic societies. The production of these statistics, in general, is carried out by the National Statistical Systems (NSS), set of institutions that are structured to enable complementary and integrated statistics. It is considered that NSS rely on three pillars: the relevance of official statistics for societies; the technical qualification and technical independence of NSS institutions; and relationships of statistical systems with broad range of stakeholders. Motivations are presented for a project that will address NSS taking into consideration the interested parties that contribute defining guidelines, creating conditions for the production of information and producing them. Also it will address those actors who interfere with the systems and that are impacted by the statistical outcomes.

The following stakeholders will be seen: the International Statistical Community; Governments, politicians and government agencies; scientific community, the media, and producers (public or private sectors) of data, with potential to cover topics of interest to society; workers in the production of official statistics; citizens and various entities, acting as users or respondents. Concern about NSS network of relationships is not new. In Fellegi (1996), for example, stood out "the intrinsic vulnerability to statistical systems due to depend heavily on various support actions". This statement is one of the motivations for the study proposed here.

Also, it is inherent nowadays the consciousness that information, that is a basic instrument to assert democracy, is to be shared and that the reliability of data produced by NSS is an essential requirement. There is strong pressure for establishing new paradigms for the production of statistics. Internationally, the expansion and deepening of measurement issues is a need. Questions relating to peace, security and environment protection are situated at the same level of importance of traditional approaches on demographic, social and economic topics (United Nations, 2012). The continuous advancement of

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Information and Communication Technologies, while facilitating access to and analysis of statistical data, provide information of various natures, obtained from alternative databases, which become more accessible. These data are perceived with potential to be used for the monitoring of quality of life in several dimensions. As part of the global mobilization for the post-2015 agenda for sustainable development, was identified the data revolution context, which is the possibility of using official statistics and the cited profusion of data for the monitoring of the agenda goals (United Nations, 2014). The scenario described reinforces the need of NSS to rely on relationships that underpin the importance of the system and ratify the relevance and the reliability of the statistics in order to provide adequate service to society.

Actions are focused representing interactions with the entities and bodies mentioned above. In more detail, it is observed that in these relations are intertwined or occur bilaterally power relations, exchange of knowledge and different expectations of NSS members and also of the stakeholders towards NSS and their products. The proposal is, as a future step of the project, seek support in theoretical fields of Social Sciences and Information Sciences in the direction of get if these three dimensions (power relations, exchange of knowledge and expectations) are sufficient to characterize the diversity of relationships involving NSS. The goal is to achieve the objective understanding of these relationships, which should be placed also in the theoretical perspective, in the level of ties that, as the empirical field demonstrates, are valuable but have vulnerabilities and require ongoing enhancement (Fellegi, 1996).

The following section shows the institutional composition of NSS, deals with the relationships among its members and also the scope of their duties. Some of the main lines of action and expectations that occur among NSS and the various stakeholders mentioned are presented in the remaining sections, as the empirical approach proposed here.

2. NSS and their scope of action

The choice here is to define NSS as the institutions that operate with some degree of interaction in order to carry out the official statistical plan (Guimarães, 1990). In general there are legal frameworks that: establish statistical plans and mechanisms for updating; define the organizations that implement the plans; and address the coordination of NSS, which can be centralized or decentralized. In the centralized model embed themselves countries where there is an agency that assumes the production of all, or almost, the official statistics produced through census, sample surveys and administrative records, and, in general, the assignment of coordination of systems.

Regardless if NSS are centralized or not, leading role is attributed to the National Statistical Offices (NSO), responsible for the production of relevant part of the national official statistics and, in many cases, to conduct the coordination of the system. It is worth mentioning that how NSO are perceived in terms of credibility (Fellegi, 2004), efficiency and expertise is critical to the recognition (in addition to any legal authority) as a leadership of NSS. It is up to NSO for their competence, promoting and encouraging the adoption of the United Nations Fundamental Principles for Official Statistics by all members of NSS, as well as of best practices in the production of statistical information.

NSO are core entities for the relations mentioned here, being under its direct management many of the relationships of power and knowledge that are established in the achievement of NSS. Proposes institutional arrangements, primarily with a view to: strategic definitions of the conduct of NSS; exchange of databases (Quintslr, 2014); harmonization of concepts, definitions, classifications and procedures; mobilization of users to statistical plan validation and other issues; sensitization of governments about the importance of public statistics with quality and reliable and with them negotiate the budget for the implementation of the established work plan.

The other participants of NSS are responsible for making available information generated by them. They must act in accordance with the guidelines of the coordination of the system especially with regard to strategic actions and to the accuracy and harmonization of concepts and definitions. Dynamism is required of NSS to give answers to demands and needs of society. Additionally, international experience has pointed to expansion of services beyond the production of information, suggesting, for example, the enlargement of the action of NSO and members of NSS in data analysis, as well in teaching on public statistics (statistical literacy) (Correia & all, 2014).
3. The International Statistical Community

The role of the official statistics has intensified as a key element for decision making worldwide. It is highlighted the attention given to statistics related to the quality of life on the planet in the preparatory actions with a view to the agenda for the post-2015 Sustainable Development. This agenda has as future vision to ensure human rights, equality and sustainability, which is broadly defined, and encompasses topics on economic and social development, environmental preservation and governance (includes issues on peace and security). (United Nations, 2012) and (United Nations, 2014)

It is evident, also, the importance of accuracy and comparability of statistics between countries and their credibility. These requirements are in several international recommendations on best practices in the production of official statistics. It is noteworthy that the Fundamental Principles of Official Statistics of the United Nations have been adopted since 1994 by the United Nations Statistical Commission (UNSC, maximum forum in the establishment of international statistical general guidelines), in order to strengthen the statistics around the world. In 2013, the principles were adopted by the General Assembly of the United Nations Organizations, formalizing the extension of the commitment to the principles beyond the NSO and NSS. The preamble of the Fundamental Principles was revised in this direction, which is consistent with the thinking proposed here.

The International Statistical Community includes the UNSC and regional bodies such as the Statistical Conference of the Americas, and the European Statisticians Conference. The CEA brings together the NSO of the region and to address specific issues coherently also gathers, by example, Central Banks (prices and national accounts) and the Ministries of Agriculture (agricultural production statistics and food security). This procedure points to the necessary interaction of all members of NSS with regional and international guidelines. There are also the statistical activities of United Nations agencies, such as the International Labor Organization and the Organization for Food and Agriculture, in making recommendations on statistics of its thematic interest in statistical training of NSS members and compiling data on countries. A few years ago, advocacy organizations or organized blocks for economic and social development are important contributors to the improvement of statistics. The actions of the OECD and of Eurostat are notable in this context. In order to improve statistical organization it is relevant the work of PARIS 21 into supporting countries.

There is still the role of scientific organizations, among which stands out the International Statistics Institute (ISI), promoting best practices in the theoretical development of statistical and methodological advances in the production of public statistics, discussions and studies on emerging issues, training in statistical skills and ongoing investment in search the frontier of knowledge in the fields of theoretical statistics, governance and production of public statistics.

In view of the contributions of these bodies among others, NSS use the recommendations on concepts, definitions and classifications and get benefit from the exchange of best practices on technical issues or on the management. In addition, with the support of this community, NSS advance in international connections to promote the increase of statistical cooperation among countries.

4. Governments, politicians and governmental agencies

Governments, politicians and government agencies in general perceive the results of NSS as public goods that contribute to the management and evaluation of evidence-based public policies. They expect that the data are produced accurately and are easily interpretable. Many of them believe that the credibility of the data strengthens public acceptance of the evaluation of their actions, and that occurs transference of credibility, especially for the positive results from the actions. Regarding the relationship with governments, it is worth mentioning that NSO are centers for the production of knowledge. This characteristic differentiates them from other government organizations since that NSO not define or implement public policy (Cunha, 2014).

2 Can be cited the regional development banks, institutions like the IMF and World Bank among others.
Those elements, among others, suggest that the viability of statistical plans is for society at a whole (not tied to specific current government) (Fellegi, 1996) and (Schwartzman, 1996 and 1999). The understanding that the production of public statistics has this status is basic to define the relationships, especially with governments and with the political class which define budget and allocation of resources for the production of official statistics. NSS members should have the ability to prioritize statistics on important issues for the government, politicians and government agency managers of public policies, without, however, move away from comprehensive statistical plan aiming at the diversified interests of society.

In many countries, there are information producers at the local level associated with different spheres of government (states, provinces, municipalities and others). In this context the promotion of statistical use of administrative records obtained from the various spheres can promote: the expansion of thematic and geographic areas of NSS; and the most rational distribution of production information between censuses, surveys and administrative records.

5. Public and private organizations – producers of databases, the Academia and the media

Public and private organizations producing databases, academic institutions and the media are entities that have strong identification with the statistical systems. All of them deal with and transmit information, knowledge and learning. The availability of data (produced by public or private entities), with the potential to be organized for use in improvement or evaluation of public policies, puts those producers in a position of direct interlocutors of NSS, especially in the context of data revolution, as identified during the discussion of the post-2015 agenda (United Nations, 2014).

The interaction between NSS and the scientific community is present together to the institutions dedicated to higher educational levels and scientific associations that can act: drawing theoretical frameworks on new themes for statistical measurement; validating methodologies; supporting the improvement of processes; analyzing statistics; and establishing partnerships that reinforce the credibility of NSS.

The media, as do NSS, offers complex and diverse information to the general public. They can be important supporters of NSS in the correct transmission of statistics and of their inherent characteristics such as accuracy, limitations and reliability. Contribute decisively to the perceived credibility of statistical systems by society. Various NSO undertake permanent statistical learning actions for the professionals of the media and promote strategic initiatives directed to the media. The IBGE has relevant experience in this field (IBGE, 2014).

6. Workers in the production of official statistics

There are many aspects involved in the relationship among the institutions of NSS, as employers, and people that work in the production of official statistics. Two basic aspects concern the understanding by the workers that: the reason for the production of statistical information is expressed in its relevance that in the end, is associated with the production of information in order to provide better living conditions in society; in their activities will account for core values such as precision, technical independence, commitment to the statistical confidentiality and the effective and perceived credibility of the results of NSS.

The time required in training for these workers to become experts in the production of statistics is not short. This is a complex activity that must meet the broad aspects, requires attention to details and demands constant adaptability to new scenarios. Investment in capacity building of these teams should be continuous. In addition, incentives for technical and financial rise of these professional are required to attract them to stay in the career, in order to ensure more quality and credibility of information produced by NSS and also to avoid excessive allocation of resources in training of new workers or in recovery of activities of long maturation interrupted by loss of experienced personnel.

There are some studies on the more appropriate term for this occupation and also on the professional profiles required for the production of statistics that is multidisciplinary, requiring, for example, theoretical knowledge in statistics, economics, geography and social sciences and computing among
others. In many countries the occupation is called official statistician, which is consistent with such a multidisciplinary range of duties, which also includes management ability and the fundamental skills for permanent contact with users and with respondents to obtain their cooperation (Plateck, 2001) and (Senra, 2014).

7. Citizens and other entities - respondents and data users
Respondents of Censuses, surveys and administrative records can be individuals, families, households, private companies, public service providers and public agencies. The commitment to confidentiality of individual information is the basis of the relations of NSS with these partners. Also continuous efforts are required to: reduce response burden; ensure the privacy of the respondents; update the legal framework that regulates data collection; and promote statistical literacy (teaching on technical aspects and the use of public statistics). The permanent clarification on the important role of respondents for construction of a more precise portray of society through statistics is within the prior mentioned statistical literacy (Correia & all, 2014).

The relationship with citizens and society in general requires investment in quality of service and adequate perception of these agents on the quality and reliability of the released statistics. It is important they understand that in the end they are the rationale of the production of statistical information and that these are important tools for knowledge of reality, expanding its ability to demand improvements in their quality of life and to monitor performance of many facets of life in society.

For the user of official statistics is important the easy and democratic access of data and also the intelligibility of the information produced. The possibility to compare data over time, between regions in the country and between countries is a basic requirement. Users of statistical information, specifically those more specialized, consider as fundamental the stability of the adopted methodologies. On the other hand, they ask for necessary improvements. The participants of NSS, in turn, must not surprise users with changes in the databases or in the methods. Transparency in the actions contributes positively to this relationship and therefore new surveys, new procedures or routines should be discussed or publicized prior to their accomplishment.

The close proximity to users is relevant to identify their demands for new themes for the statistical measurement and for clarification on what is produced. Lends credibility to this relationship demonstrate openness to meet demands, provide alternatives if necessary, and expose clearly technical difficulties and resource constraints related to the request.

In the end, the positive answers for some questions should be gotten. Do the citizens realize the rights they have on the definition of the production plan of official statistics? Do they value or recognize the scientific standards that underlie the official statistics? Do citizens have positive perception of the usefulness and credibility of official statistics? Do they realize that there are instruments aimed at protection of statistical services regarding their credibility and the accuracy of the results produced?

8. Final remarks
The actions presented here correspond to power relations, knowledge exchange and shared expectations, dimensions that occur with varying intensity, depending on the analyzed stakeholder. Considering the International Statistical Community, the scientific community, the media and other producers is remarkable the knowledge exchange dimension. With the governments and government institutions the power relations are the most intense, with some emphasis on the mutual expectations, which appear strongly in the relationship with users and respondents. That is, for example, a line of analysis that the project proposed here will make possible.

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