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TOPIC 4: Quality Management: strengths and weaknesses in products among NSOs´ different practices.

Re-using the users´ information on products and services to improve the Quality Management System at Statistics Spain (INE)

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Abstract.

Detecting strengths and weaknesses in the delivery of client-oriented services provides statistical organizations with a measure of compliance. Going beyond tools for reporting on relevant areas to other partners or institutions —ESS Code of Practice— and assessments of quality based on subjective responses —such as satisfaction surveys—, a framework built upon internal and objective information, ready to be promptly processed, can be developed when the organization's commitments have been clearly expressed and well documented.

Since 2005, a Letter of Services (LoS) is mandatory for every public body within the Spanish Public Administration, and that is also the case for the National Statistical Institute. The LoS establishes objectives and informs users and citizens in general on the services provided by the INE, alongside the corresponding legal framework and terms of use.

On the basis of the LoS, a set of indicators is constructed to verify the extent to which goals and commitments assumed are met as regards the system of services that is made available to the customers —encompassing the Web server, personalized services, tailor-made requests, certifications, virtual headquarters, and subscription to news and publications. Such flow of information is managed and coordinated by the Quality Unit, which reports to the relevant Unit and monitors the evolution of key areas where specific actions should be undertaken.

1. Introduction.

Users can be considered as the cornerstone on the European Statistics Code of Practice (CoP). This is recognized in different principles, being the main the Principle 11 "Relevance", which is appropriately defined in CoP as "European Statistics meet the needs of users". A key objective within statistical offices is to meet users' expectations on information providing quality statistics. For that purpose, the INE is helped by a range of adequate tools and a system of quality management which allows to detect and analyses such expectations and to follow up their compliance for implementing improvement actions.

The Quality Management System of the INE of Spain is built upon two complementary frameworks:

1. The Common Quality Framework underpinned in the CoP and the Quality Assurance Framework, whereby the INE, as the main responsible of official statistics, lines up with the European Statistical System (ESS).

2. A common Quality Improvement Framework (QIF) for the whole Spanish public administration; this framework, inspired by the EFQM Excellence Model, was developed by and for the government sector.

Both quality frameworks share a basic ruling principle for the INE: users-oriented quality management; relevance according to the CoP and its monitoring is one of the cornerstones of this approach.

With regard to the European Common Q Framework (CoP based) this user´s approach is achieved through several tools:

-   User's Satisfaction Survey (USS), which are conducted every three years since 2007, the last published in 2017 with data from 2016.

-   Results from the USS used as an input for the design of the National Statistical Plan (NSP).

-   Involvement of the representatives of users and producers of statistics through the Higher Statistical Council (HSC).

-   Follow-up and assessment of the economic impact of official statistics on the media.

Regarding the QIF, a Letter of Services (LoS) is included along with a set of yearly indicators with the purpose of assessing the evolution of the quality of the products and services provided by the INE

All those instruments developed by the INE, which have helped to gain a momentum when it comes to facing users` demands, are introduced and described throughout this paper.

The document is split into four sections: section two, describes the role of Users' Satisfaction Surveys as the cornerstone of all the system of user services and showing some indicators obtained from the last USS (2016); section three outlines others INE's procedures used to meet users' demands on information, such as the number of downloads from the webpage, the impact assessment of INE's releases on the media and the trend indicator of the yearly number of claims in accordance with the Letter of

Services (LoS); section four describes how outcomes derived from those methods are used as an input in drafting the National Statistical Plan. Finally, section five, includes some remarks on new methods when measuring needs, and new channels of participation in the statistical process are pointed out.

2. Users' Satisfaction Surveys (USS).

The National Statistical Institute of Spain carries out a user satisfaction survey on a triennial basis. The first was conducted in 2007 and the fourth wave was compiled in 2016. Although similar in aims and structure, there are some justified differences among the three USS: for example, USS 2016 includes novelties such the inclusion of international users; the users' satisfaction index and a specific module for the media.

The scope of those surveys is to assess the satisfaction with the information provided by official statistics and dissemination services, broken down by statistical domains and variables.

The survey is addressed to qualified users: academia, researchers, public administration, or international organizations and experts. In 2016, a specific survey for media was also conducted.

The following dimensions are considered: relevance, accuracy, punctuality, reliability, timeliness, coherence, comparability and accessibility.
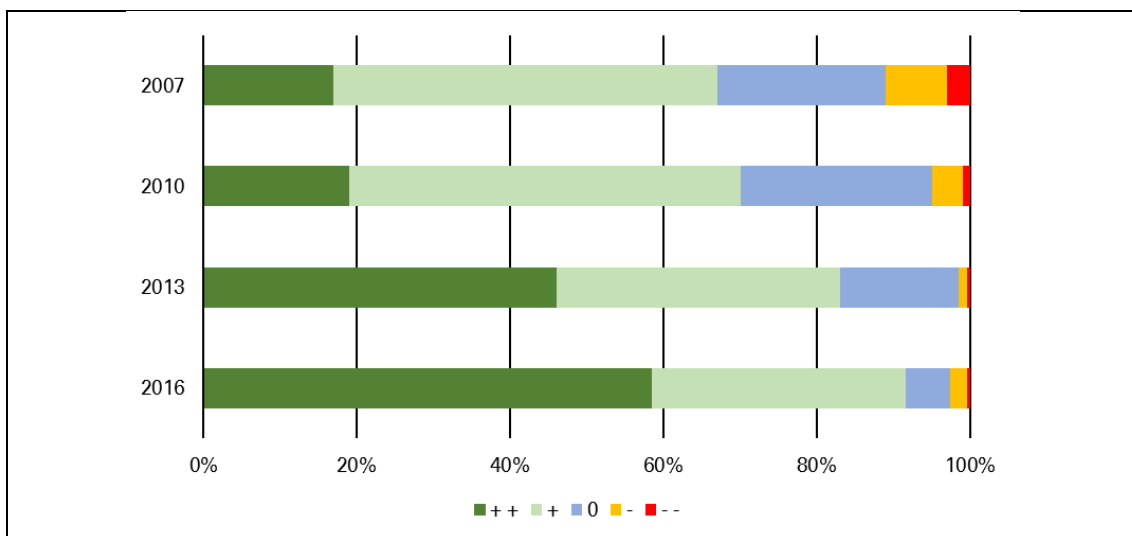

Chart 1 – Assessment of overall data quality in User Satisfaction Surveys (2007, 2010, 2013, 2016 rounds). Source: INE (2017)

Chart 1 shows the evolution of the number of answers on the assessment of the global quality perception along the five USS compiled since 2007.

As a novelty, a synthetic indicator on quality for every statistical domain has been estimated with the data of the last round in 2016, where users have been asked on a self-reported value for every dimension in quality, depending on the importance they gave to it: respondents assign a value in a scale from 1 to 5 to those statistics they retrieve, considering the different dimensions. The average weightings, for the six dimensions researched in the USS are graphically shown in chart 2.
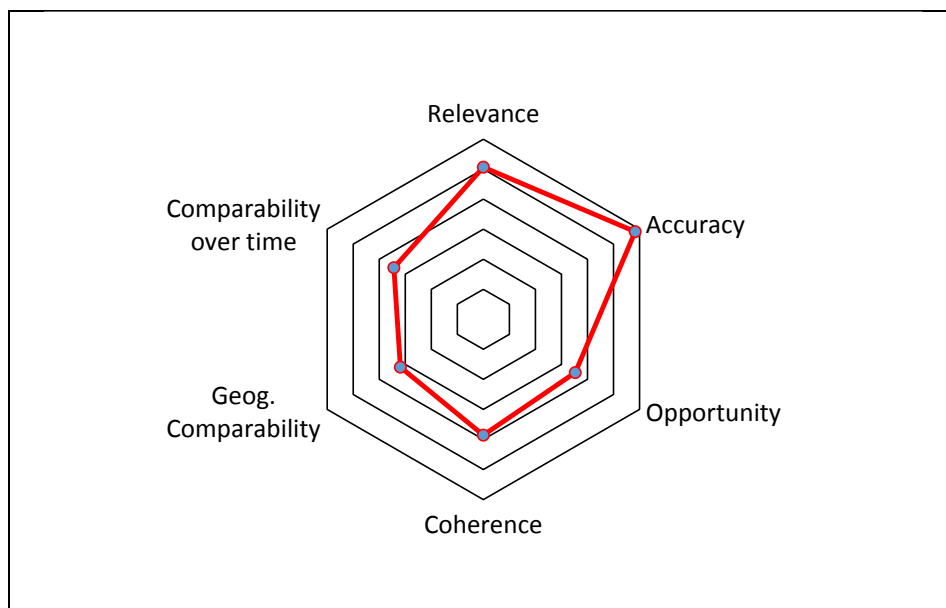
Chart 2 – Subjective weights for quality dimensions. User Satisfaction Survey 2016
Source: INE (2017)

Upon the weights (α_j, j = 1 ...6) assigned for every dimension, a Users' satisfaction index have been obtained, as a linear combination of ratings. Let I_{ij} be the average level of satisfaction regarding the i-th domain on the j-th dimension, then we obtain

$$I_i = \alpha_1 I_{i1} + \alpha_2 I_{i2} + ... + \alpha_6 I_{i6}$$

Being α_j, j = 1 ...6, the weights, and I_i would be the global level of satisfaction for i-th group of statistics.

Table 1 shows the Users' satisfaction index by domain.

Product	USI
Population Statistics	4.0
Social Statistics	3.7
Labour Statistics	4.1
Consumer Price Index	4.4
Income & Living Conditions Survey	3.8
National accounts	4.0
Industry	3.7
Services	3.8
Agriculture	3.7
ICT Statistics	3.8
Other	3.7

Table 1. – Users' satisfaction index by Statistical products. User Satisfaction Survey 2016
Source: INE (2017)

Besides the development of satisfaction indicators, the USS also have a complementary objective: to identify statistical needs not covered by the current statistical output; in this respect an open response item on the unmet users' needs was included in the USS. As discussed subsequently (section three) this information are used as an input in drafting future statistical activities.

3. Other INE´s procedures and tools in place at the INE for detecting user´s needs and expectations with products and services: an overview

3.1. Number of downloads from the webpage and requests to the user's support system.

As stated previously, the USS is the main tool to assess perceived unmet users' needs. However, those are not the sole instrument which allows detecting different users' 'opinions as well as to monitor the use of statistics: a tool of direct contact with users is based on the INE website. In 2016 a total of 14 m. visits were recorded, 240 m. pages

Table 2 shows the number of downloads from the Webpage by group of statistics together with the number of users.

Statistical Product	Answers to the USS 2016		Accesses to the INE's web in 2016	
	number	%	number	%
Population Statistics	153	15.9%	3,894,791	28.4%
Social Statistics	63	6.5%	1,494,225	10.9%
Labour Market Statistics	141	14.6%	2,188,073	15.9%
Consumer Price Index	96	10.0%	1,228,726	8.9%
Income & Living Conditions Survey	110	11.4%	320,984	2.3%
National Accounts	106	11.0%	966,118	7.0%
Industry	67	7.0%	537,636	3.9%
Services	95	9.9%	1,034,080	7.5%
Agriculture	21	2.2%	212,899	1.6%
Science and Technology Statistics	72	7.5%	309,679	2.3%
Environmental Statistics	26	2.7%	93,49	0.7%
Other	13	1.3%	1,449,779	10.6%
TOTAL	963	100.0%	13,730,480	100.0%

Table 2. – Users' downloads from the Webpage and number of users by statistical products

Nevertheless, a more accurate way of knowing user needs is the User support Service. In 2016, a total of 8,406 requests were made by this channel. In 2016, there was a total amount of 5,160 customized requests

3.2 INE's releases: Assessment of its impact on the media according to a standard methodology

As of 2013, the Press Office conducts a daily follow-up among 1,327 written publications (newspapers and magazines), 18 radio stations, 28 TV channels and 6,410 digital channels, to estimate the impact of the "INE brand", measuring how much is it worth in monetary terms, both as a global trademark as well as detailed by short and long-term statistics. An internal monthly report is issued, including breakdowns by communication medium.

In a preliminary phase, a comprehensive review of the media produced an initial set of keywords that was subsequently tested to obtain a smaller subset, which is regularly used to seek news about the INE's statistical products and services.

An economic value, which corresponds to the cost of a standard advertising spot, is computer for every item of news. Such cost is assigned depending of the type of medium and its related audience panel-driven measurement:

News on broadcasted media are valued according to the number of seconds, where the criterion is the rate of a 15-seconds (radio) or 20-seconds (TV) spot; press news is weighed considering newspaper or magazine's circulation, as registered in official circulation rankings (EGM); news published on-line are valued according to the Cost-per-thousand (CPM).

Statistical Product	Dec-16	Dec-15	Dec-14	Dec-13	Dec-12
Gross Domestic Product (GDP)	4.59	4.3	4.08	4.46	3.34
Consumer Price Index (CPI)	3.75	3.26	3.26	2.76	3.01
Vital Statistics (VS)	3.12	3.15	2.73	2.75	1.68
Mortgages Statistics	2.12	2.22	1.55	2.23	2.26
Survey on Income and Living Conditions (SILC)	2.08	2.17	0.55	2.35	1.74
Survey on the Equipment and Use of ICT in Households (ICT-H)	1.93	2.02	1.54	2.34	1.47
Labour Force Survey (LFS)	1.76	2.12	0.92	1.96	4.66

Table 3. - Assessment (in monetary terms) of the impact of INE's releases on the media by certain statistics (million Euros)

Measuring the impact on the media provides an innovative method for assigning a value to every statistical output since its metrics is underpinned by market prices, though neither quality dimensions nor their perception is monitored whatsoever, thus such technique should be regarded as an ancillary tool for understanding how much a statistical product is worth.

As regards the methodology in use, the identification of every statistical domain is still a challenge since keywords do not always refer to one and only one product and overlaps still exist. Moreover, journalists are not sufficiently familiar with statistical language or statistical operations, and they often fail to differentiate between them (e.g. they can refer to "Census" instead of "Population register").

3.3. The Letter of Services (LoS)

The Letters of Services are documents where the different bodies of the Spanish Public Administration inform the citizens of the services they are entrusted to provide; the LoS serves therefore as a statement of their commitment to quality when rendering such services, and they have become widespread through the public offices.

As of 2009 the INE has its own LoS approved, where it highlights as an objective to meet the highest standards of quality in the compilation of official statistics, including quick and efficient dissemination, easy access to services, and respect for statistical secrecy. The conditions under such services are provided shall be subject to continuous improvement.

Products are enumerated in a comprehensive list and encompasses statistical data and metadata through the web server; personalized services; tailor-made; certifications; electronic headquarters; subscription to news and publications (Twitter -@es_ine- and RSS offer the main headlines of press releases); administrative steps for population and electoral registration; claims, complaints and suggestions management.

Alongside products and services, a set of yearly indicators has been developed with the purpose of verifying the degree of compliance with those commitments undertaken. The set is detailed in Table 4.

INDICATOR	2016 Number	2016 %	2015 Number	2015 %	2014 Number	2014 %	2013 Number	2013 %
Statistical operations published in INEbase	471		482		435		439	
Divergences from the dissemination time schedule	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Querys answered by email	8.406		10.637		10.147		14.647	
Solved within the established term	8.372	99,6%	10.605	99,7%	10.066	99,2%	14.632	99,9%
In more than established time	34	0,4%	32	0,3%	81	0,8%	15	0,1%
Taylor-made requests	5.152		4.695		4.949		5.344	
Solved in less than 10 working days	4.235	82,2%	3.909	83,3%	4.372	88,3%	4.671	87,4%
RSS feeds/Tweets	1.915		1.708		1.500		1.475	
Published <10 minutes following the official publication	1.915	100,0%	1.708	100,0%	1.500	100,0%	1.475	100,0%
Claims received by the Electoral census	16.289		38.345		13.431		3.673	
Solved within the established term	16.289	100,0%	38.345	100,0%	13.431	100,0%	3.673	100,0%
Complaints and suggestions received	363		406		58		NA	
Answered within the established term	328	90,4%	372	91,6%	55	94,8%	:	

Table 4. - Indicators for monitoring compliance with LoS: 2013-2016

Failure to comply with the commitments in the LoS is notified to the Unit responsible of the product, who must report on the causes of the problem. Both causes and measures to solve it are managed by the Office of the Director General.

4. Strategic guidelines towards matching products and users' demands

As CoP indicator 11.2 recommend: "Priority needs are being met and reflected in the work programme". In order to follow this criteria there are two ways of including this approach in the Statistical Plan (See Chart 3):

- On the one hand, information of unmet users' needs, coming from the User Satisfaction Surveys and other tools, are a main input in the INE's planning process. For example, 2010' USS was a main input for the 2013-2016 Statistical Plan, and 2013' USS has been used for developing the 2017-2020 Statistical Plan.

- On the other, there is an involvement of the representatives of users and producers of statistics through the Higher Statistical Council (HSC).

The Higher Statistical Council (HSC) is an advisory body gathering producers and customers of official statistics in a balanced representation. It brings together institutional users, trade unions, business and consumer associations, media and scientific community, and thus it includes all interest groups of the Spanish society. The HSC proposes the content of the National Statistical Plan (NSP), and issues opinions on every proposal to introduce new statistics, helping to bring statistics closer to customers' needs. The NSP, where every statistical survey and activity carried out by the National Statistical System is listed and its results and dissemination are defined, is the main instrument for the coordination of the national statistical production.
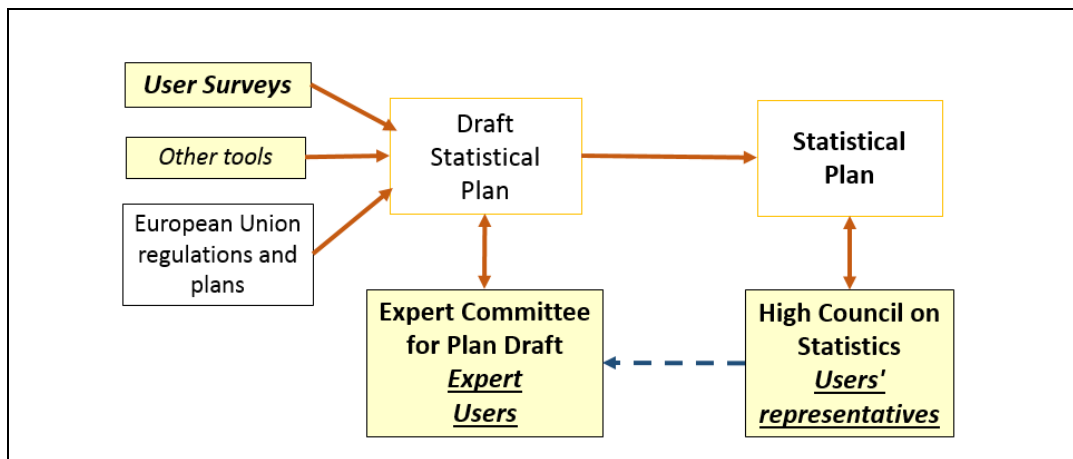
Chart 3 – Scheme of the Statistical Plan development at the INE: the role of users 'opinions and needs

Although HSC supervises the Plans, we can mention other institutional bodies involved in the Planning process, and in which Users have been represented such as the Inter-ministerial Statistical Commission (CIME) and the Inter-Territorial Statistical Committee (CITE). In both cases, representatives come from other public official statistical bodies: broadly speaking, CIME covers the so called ONA ("Other National Authorities) and in their meetings, all the plan statistic initiatives are discussed, as well as all the Statistical Plans tasks. It is obvious that members of HSC are not only producers but at the same time qualified users (in this case from public institutions).

Let it be added an additional remark that proves the engagement of the INE with the users into the statistical planning: a set of strategic guidelines for the future were defined in the NSP including "a) meeting users' needs"; The NSP 2017-2020 establishes the actions to be undertaken for achieving such goals:

- To implement efficient procedures for identifying statistical needs.

- Differentiating by segments of users, with diverse expectations and needs, which will lead to differences in the production process (e.g. NSP considers both national customers, as well needs derived from EU and international requirements, some of them coincident).

- To analyze whether fulfilling those expectations and needs is feasible.

- To engage users into the statistical production process, including their assessment on the different statistical domains and their outcomes.

The aforementioned actions are discussed within a neutral, objective and formal forum which is established by the NSP. This is the Higher Statistical Council (HSC).

5. Conclusions and final remarks

✓ Focusing on user's point of view is a milestone in the INE´s policy: Credibility and reputation on statistics rely on users' perception. These are pre-requisites to involve users and other stakeholders in data collection, the main challenging area in the INE´s tasks: growing demands of information must, at the same time, face decreasing resources and reluctance from respondents (i.e. users) to collaborate (due to excessive burden, confidentiality concerns, and lack of statistical culture).

- ✓ The INE has developed a range of tools for assessing users' satisfaction and needs. So far, the USS has played a major role when collecting information on this issue.

- ✓ The sample frame has been obtained upon a mixture of various sources stemming from diverse units within the INE, e.g. Dissemination Unit, Press Office, Production Units, etcetera. Nevertheless, there is an absence of a unique database containing that information; therefore, a repository managed by units related to assessment of quality, centralized and regularly maintained, where customers are differentiated by segments, is to be sought after.

- ✓ Nevertheless, new challenges have emerged as the internet has become the main dissemination channel: the internet has brought a revolution in the dissemination of statistics; but there is a trade-off: we are losing direct contact with our users. Hence the need to continue exploring and making efforts to know the user's views and needs; both through conventional means (USS) as well as exploring new ways and technologies.

- ✓ The Letter of Services (LoS) is directly linked to a commitment to quality when offering statistical services to the public; thus, its set of indicators is a valuable instrument to collect and process information on the extent to which such commitments are being met. It is necessary to go beyond the mere compilation of those indicators, integrating them into a more developed system, together with and completing the rest of measures that are being currently used.

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