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Topic IV: Improving data dissemination strategies

**IMPROVING DATA DISSEMINATION TECHNIQUES AND STRATEGIES:  
CASE AND STRATEGY OF THE NATIONAL STATISTICAL INSTITUTE OF ITALY (ISTAT)**

**Contributed paper**

Submitted by the National Statistical Institute of Italy (ISTAT)<sup>1</sup>

**I. INTRODUCTION**

1. In the second half of the 1990s, Istat dissemination activities were developed through the constant adjustment of three main tools: the implementation of local areas and web-based networks; better quality of publications, floppy disks and CD-rom; and greater attention to special events, such as conferences and meetings, as independent communication channels.

2. Over the past three years, new Internet-based technologies speeded up, and Istat's approach to dissemination and that of the most important European and North-American statistical institutes has greatly changed.

3. However, publications and events were not replaced by the extensive use of the Internet, rather there was an indirect pressure toward improvement, and a new balance has been established.

4. The introduction of new Internet technologies gave way to the usual fear that older media would soon become obsolete, though such a threat was not confirmed. Moreover, European statistical institutes carried out surveys to gather information on user preferences - the Internet or printed publications - and findings have shown that user preferences are evenly distributed. The widespread diffusion of new technologies to favour the access to information is determining an increase in demand and creating new needs; quality has increased because every available instrument has been used, from the most traditional to the most innovating tools. Further evidence is provided by a recent Istat survey where it was found that young people who are more familiar with PCs read more. The "*Rapporto sull'editoria in Italia*" (Report on Publishing in Italy), published by the Associazione italiana degli editori, compares the penetration of computer hardware and the habit of book-reading in several European countries; the results show that the penetration of new

1 Prepared by Vincenzo Lo Moro and Gerardo Giacommo.

technologies to access digital data and e-texts increases the reading habits in the countries studied: in the United Kingdom there is 76% of readers and 3.47 of 100 people own a PC; in Germany figures are 72% and 3.72; France 69% and 2.9; Spain 45% and 1.36, and Italy 56.9% and 1.44.

5. It should be underlined that, three years ago, to meet this challenge better we decided to merge in one area - the Dissemination and Databanks Department - several tasks: corporate communication, dissemination and selling of electronic and paper products, organisation of special events.

6. This paper examines in the first part the recent development of three groups of tools - new, old, odd - determined by more dynamic Internet-related instruments. It has been a "fine tuning" process, the main adjustments and their interaction are analysed.

7. In the second part the general dissemination strategy to be adopted in the future is discussed. This issue is analysed from an "informational approach" viewpoint, assuming that statistics is a basic asset to the information society, which implies that statistics is given a different importance.

## II. THE DEVELOPMENT OF DISSEMINATION OVER THE PAST YEARS: FINE TUNING

### II.1 New media

8. Istat first used the Internet to communicate and disseminate statistical information in 1996, when the Institute's web-site was presented at the celebration of its 70<sup>th</sup> anniversary. In May 1998, the Istat web-site was redesigned, taking into account comments, suggestions and advice from several sources: users and their needs first of all, and the experience of other Institutes. Constant improvements and changes were introduced to assist users in retrieving information. At the end of 1999 further changes were made. The balance between web pages to disseminate data and pages for corporate communication has changed. In 2000, the fourth release will be available, the main aim being the creation of a single easy access to data available in the Internet, in spite of the growth in the amount of information. On the whole, the lifecycle of a web-site has halved, from two to less than one year, with the revision of pages made between two subsequent releases (in 1998 Statistics Netherlands reported that the average lifecycle was 18 months).

9. The current design of our web-site is a synthesis of the Institute's communication needs, pages describing products and services, careers at Istat, the description of Istat, the need of users for a rapid access to statistical information, pages with on-line data, statistics on the web, and link to the Bulletin board system. In this way, Istat can easily communicate its mission, activities and goals to different typologies of users, and the role of traditional media is definitely reduced.

10. Our home page lists the six areas of the site which can be accessed:

- i) On-line data: statistics for experts and common users, with press releases, *Statistiche in breve*, *Note rapide*;
- ii) Products and services: new publications, products and dissemination strategy, on-line publications and products, tailor-made and standard services, Data shop Eurostat, Library, *Quality Charter*;
- iii) Events: information on conferences, meetings and workshops, whether organised by Istat or with the participation of Istat, with available papers;
- iv) Competitive examinations, grants stages: job opportunities and training at Istat;
- v) Statistics on the web: selected links to main Italian sites, international organisations, domestic and foreign statistical Institutes;
- vi) Istat: history, mission, international relations, programs and the Institute organisation chart.

Access to news is on the left of the home page; it includes links to new data and information available on the web site, listed by date and typology.

11. A toolbar, at the bottom of the page links to the English pages, the Bulletin board system, Cens.istat.it, and Sistan (National Statistical System), the search engine and shows the copyright. The English pages are arranged as the Italian pages, though shortened information is given, as in other European sites where the English translation offers reduced content. Following the link to the Bulletin board system, resident data can be downloaded.

12. The number of accesses to our web-sites, counted through products and based on a log file in the server, shows that user interest is growing. For example, in the four weeks of January 2000, the requests to the Istat web-site rose from about 124,000 to more than 150,000, the growth rate was 24% and the daily average increased from 18,000 to 22,000. These new tools are being used with traditional surveys on demand, carried out on users accessing information centres, purchasing products by mail or on subscribers.

13. A trend, which should be developed further is the link to other producers of statistical information, even though we already list a large number of them. The Istat web-site should become a link to access public and private producers of statistical information, who share resources and specific know-how through collaboration, partnership and agreements. Thus a detailed information scenario would be available, covering every field. This approach is the future of dissemination, and IT experts believe it will be the next development, based on sharing ideas and increasing "collective intelligence".

## **II.2 Old media**

14. Our publications (more than 120 volumes per year), which have been redesigned from the mid-1990s, are continuously revised to offer better data quality, to increase their readability and improve specific details related to specific publishing issues. The *Annuario statistico italiano* (Italian Statistical Yearbook) is an example. Three years ago, this volume was completely redesigned, and now quality is constantly checked: each chapter contains an introduction explaining tables, suggestions for further readings, a bibliography, a glossary, methodological notes and a CD is enclosed. The constant revision of the *Annuario* (Yearbook) is the necessary preparation to standardise all the specific and thematic publications, collected in five collection and 14 sectors.

15. Besides paper publications, electronic media, floppy disks and CD-rom, are offered, thus assuring a release time cut and the possibility to process a large amount of data.

16. In 2000, Istat products will be distributed all over the country by a private company. Even this approach changes the relationship with users. Until 1998, to have an Istat publication, users would ask the main office in Rome or regional centres in capital cities, during office hours and with all the problems arising from mail delivery or they would go to offices. Now, with domestic distribution, more than three hundred bookshops have our Catalogue and our most important publications. The overall supply includes more than 100 press releases, *Note rapide* and *Statistiche in breve*, information on specific topics is timely released, before volumes are printed.

17. However, adjustments were made in this field as well: in 1999 the radio was used again, with communications, weekly programmes and interviews based on daily events. A growing interest arose and this approach will probably be enhanced and better arranged.

## **II.3 Odd media**

18. Since the 1950s, Istat has been participating in all events that could favour the access to statistical information. From 1996, Istat has been involved in specific sectorial events, with about 93,000 people contacting Istat stands and about 46,000 people attending Istat meetings and seminars. We should add the thousands of users (more than 278,000 in the examined period) who go to the 18

Information Centres, Istat regional offices, to consult or buy publications and tables.

19. As we did for publications, "events/meetings" were redefined within dissemination activities to improve their effectiveness. In spite of the important role that communication over the Internet plays, a direct contact with users is still required. Internet cannot replace the importance of direct contact and the suggestions Institutes receive from several sources are a basic tool to measure user satisfaction and assess the amount of resources that should be allocated to produce standard or tailor-made products.

### III. CURRENT AND FUTURE DEVELOPMENT: A STRATEGY

#### III.1 The demand for official statistics

20. Individuals and communities use statistics to limit *information uncertainty* in making decisions. The most convincing theoretical pattern is based on a model of information economy in which individuals search for an unknown figure required to limit their uncertainty and improve conditions for making decisions.

21. Official statistics and government statistics fulfil this task, by providing figures, data and information which limit both uncertainty in making decisions and the cost of private provision. Moreover, official statistics have a number of characteristics: for public goods (no advantage for private production; non-exclusion in the majority of cases); for merit goods (it increases social consciousness, raises education and helps in making emergency decisions); for equity (citizens share the same amount of information); and for common goods (as they are used in the production of all the other goods). Demand and supply conditions are not easy and straightforward for these goods. Especially, as it is very difficult to place the citizen-community user first.

22. Using a Principal-Agent approach, NSIs do not directly receive requests for data. Demand is made through the government-political-electoral system (the Principal) and not directly from citizens. In the western world, the NSIs (the Agent) are very autonomous/independent regarding the methods (processes) and products/services to be supplied (such as surveys to be carried out).

23. Process quality is guaranteed by third parties (in Italy the "Commissione di garanzia dell'informazione statistica"), offices reputation, assessments of the scientific community and deontological codes. In the nineteenth century, Melchiorre Gioia said that statistics were facts and figures that citizens need in their daily life and policy-makers need to take decisions.

24. But users are more numerous than the Principal (as defined in para. 22) and in a correct vision are the true principals. Since the demand is received, at least, by two kind of principals (Principal-stakeholder-shareholder and Principal-user-citizen), the final contract represents a compromise of different needs. This compromise can be easily achieved in a society with a low use of information, while in our information society it is a more controversial compromise. In fact, besides the internal requirement concerning statistical process quality (completeness, reliability, robustness) there are other external requirements (such as timeliness, possibility of further processing, detailed information) and there are new information fields to be investigated.

25. Trade-offs at different levels concerning what is to be included in the NSIs agenda and the acceptable quality level outlines different types of users, that is, differences among the various parties interested in statistics. Examples of trade-off problems are: breakdown and quality for external trade statistics; national data facing local information; providing data directly to the users or feeding the secondary market.

26. As a consequence, future conflicts may arise among users: which statistical data (surveys to be carried out) should be produced will be no longer only determined by stakeholders. In fact future customers may be willing to express

directly their opinion, and not through a system of experts (statisticians, professors, politicians, opinion makers, national accountants, government, people involved in European harmonisation).

27. Though the development envisaged so far will be slow with limited influences, the change from traditional dissemination to new products which can be downloaded from on-line database is already posing a central problem: the requests from users with different needs.

28. Summing up, a number of important changes has affected the public statistical function as well as other public functions during recent years. The agency relationship (that is the relationship established between one principal and his agent) has been rather straightforward for a long time: expenses were completely financed and the official statistical system provided basic data to public bodies, public decision-makers, the scientific community and citizens. *Mass media* were mainly used to disseminate statistical data.

29. Lately, this relationship model has changed, demand has become more complex, NSIs have had to fulfil the needs of a more complex set of customers (not only the so-called *stakeholders*, but occasional and new users, citizens, big enterprises, local institutions). A number of requests are coming from subjects representing different kind of statistical needs.

### **III.2 The information market**

30. Statistical information, whether supplied by public bodies or private institutions, are assets of a complex kind which have not been thoroughly analysed. Information theory has never dealt with statistics, despite its quick development and remarkable dissemination over the last few years.

31. Such a theoretical and practical deficiency can be partly attributed to statistics being considered a sort of "semi-finished goods". To understand the full meaning of statistics, models, comments, analyses or interpretations to disseminate statistical information among non professional users should be added.

32. Moreover, statistics are included in the field of *tout court* Information, which is one of the most complex and difficult fields to measure. It is very difficult to assess the value of information and represent it in any exchange, as it is determined by the number of users who have access to it and by the behaviour of operators. In a private exchange, the contract established between the seller and the buyer should carefully take into consideration any possible use that both parties could make of the information. Often the actual value of the information can only be assessed ex-post, namely after the purchase has been made (if the information was known in advance there would be no need to buy it). If the exchange is completely or partially public, then other issues are to be considered.

33. Information structured in complex information systems, as statistics is, differs from traditional goods and market services in three characteristics: difficult definition of exclusion systems; difficulties in having transparent exchanges; difficult recovery of investments. Statistical information processed for the whole community is affected by the same type of problems. In fact, these difficulties have become more complex and widespread in the "information society". These issues are widely discussed when analysing the problems raised by database protection, where content is often intermingled with the architecture of the database itself. We should not forget that the structure of a database is the result of creativity and hard work. These issues should be analysed one by one, to get some positive suggestions.

34. Difficulties in exclusion are due to the rigid agreements which should govern the supply of information from one party to another, otherwise information could become a public domain. In other words agreements with purchasers should forbid re-dissemination. Controlling the full enforcement of these agreements is very important. In a society where nets almost rule life, expenses to establish agreements and control their full enforcement (typical transactional costs) would

exceed so much profits that restricting re-dissemination would not be profitable, especially in the case of Government funding.

35. Difficulties in transparent exchanges arise from the same remarks, made from the purchaser's point of view. The price of data can be paid if the purchaser becomes the only owner. In the case that data are shared with other parties, the amount paid may not be appropriate for shared data (there are still doubts on whether the price to be paid is a proper amount). He or she does not know the number of other purchasers and cannot prevent other parties from purchasing data, unless rigid restrictions on the exchange are established in the agreement. Thus, the profit he or she may make in purchasing data may be significantly lower than the amount paid.

36. Difficulties in recovering investments are common when implementing information systems or when carrying out a complex survey (labour force, prices etc.). Expenses to implement an information system may not be recovered unless particular conditions favouring the sale of data occur. On the contrary, the added cost for each supply is very low or insignificant. Data are downloaded from the Internet with no added costs for the producer. For NSIs, the information system should be implemented with Government funds. Any attempt to recover investment may result in very high access costs (with a very high number of chances to fail). On the other hand recovering the few marginal costs would result in the creation of useless barriers and greater management costs. If no cost is recovered at all, access would be free.

37. A further positive principle is to be stressed: the necessity of equal dissemination, to avoid any behaviour discriminating users. In the private field, discounts and gifts are used owing to marketing strategies. In the field of public statistics, until now, discounts and gifts are used depending on the type of user: discounts or free products for government and educational users, full price is applied for private sector users. This was a successful strategy in a "slow dissemination" society, but it may lead to failure in a society where access to data is quicker and easier. In fact, this may lead to inequalities, useless barriers and incentives to avoid rules.

38. Thus, two opposing models can be adopted: one aiming at very strong and rigid agreement, imposing rigid barriers to defend data and database copyright; another where every restriction imposed on dissemination or re-dissemination is to be abolished.

39. As far as public statistics is concerned, the following items are implied in the first model: very high transactional costs; restrictions on overall dissemination; charging citizens twice, once as tax-payer and then as buyer; widespread equity, only if the agreement and controlling system work properly.

40. The second model implies: low management costs; removal of every marketing function (not including promotion, probably); enhancement of on-line dissemination; re-dissemination agreements mainly aiming at making access to data easier.

### **III.3 A new perspective**

41. The informational approach proposed implies a different development and new relationships with partners based on mutual satisfaction besides institutional and economic issues. It should be taken into account that the outside world approaches public statistics to fulfil well determined needs. Everybody would benefit by the fulfilment (as much as possible) of these needs. Moreover the informational approach affects dissemination and communication policies and, to a larger extent, production and internal organisation processes.

42. Limiting our attention to dissemination policies, it is possible to shift from a positive level to a suggesting one. The three sets of instruments we have described, detailing their "fine tuning", would be developed further in the future along a path that has already been determined by current choices.

43. *New media* will be mainly disseminated on-line, replacing traditional volumes and innovations in electronic products will be adopted. Data access and their re-dissemination will be freely available to two types of users: one free and the second, with more detailed information, on payment.

44. The introduction of banners on our sites will be considered, as it could become a self-financing source to support site implementation and management. Statistical data produced by EU NSIs should be available at one site only, disseminating comparable and harmonised data. Two access levels should be established as well.

45. The limited issues of *old media*, mainly for historical documentation purposes, will be integrated by printing on demand. Books will play a new role, owing to partnerships aiming at increasing the value of content and design. Licence agreements with private companies will ensure a wider circulation of publications.

46. *Odd media*, events, would still be important occasions to meet users and stakeholders and to evaluate products and services. Events are a way to extent the relationship between citizens and official statistics. Information centres play a key role, as they represent the place where statistical information can be accessed and because producers and consumers of statistical data can meet there.

47. A central management is required to disseminate services all over the country, and a call centre would be used to ensure the uniform handling of users, training of regional centre operators and a professional approach to complex requests.

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