

**Introduction**

This paper will primarily deal with achievements and projects carried out in France by the official statisticians in the field of the electronic collection of data from private businesses. By certain aspects, it will also approach the data collection from public institutions, such as hospitals or schools.

The French statisticians, like their colleagues in other countries, have been interested in this topic for several years, and at least since the beginning of the 90s, during which the question of the use of electronic data interchange (EDI) has been strongly discussed.

However, this interest did not translate in France into substantial achievements<sup>2</sup> and one can say that, whereas the development of these techniques had raised some hopes to reduce the cost of statistical data collection, for the businesses as well as for the statisticians, and to improve the quality of collected data, these hopes have been deceived.

The quick development of the Internet at the end of the 90s led the statisticians to re-examine the question of the electronic transmission by the businesses of their answers to the statistical surveys, particularly through the use of webforms. The French statisticians can give a report on operational achievements, as well as on projects under development, the deployment of which is close.

In addition, the present government, which has been there since 1997, is the first one which has really attached a great importance to new technologies. This interest has been conveyed by the publication of many official reports and by the definition of successive programmes of "modernization" for the administrations. The topic in which the electronic business data reporting naturally fits is that of the development of so called "teleprocedures" or "teleservices", these two words having about the same meaning.

It was initially requested from the administrations to make available on the Internet the whole set of forms that citizens, businesses, institutions or communities can have to fill in. In the field which interests us, it is naturally feasible and not very difficult to put on line, for example in PDF format, all the survey questionnaires we send to the businesses. However one can wonder whether so doing is very attractive and useful for the businesses, if it is not accompanied with additional services, such as the possibility to fill the questionnaire on line and above all the possibility to send the responses on line towards the statistical administration.

Taking such remarks into account, profiting also by the progress of data-processing and communication technologies and by the progress of the computerization of households and businesses, the government has come to set a new objective to the French administrations in November 2001: by the year 2005, they should allow citizens and businesses to fill in all their formalities on line by means of teleprocedures or teleservices. It should be observed that the majority of the Member States of the European Union have defined such programmes, in which 2005 seems to be a privileged target: it is the case in Germany and in the United Kingdom. Indeed, the European Union as a whole is mobilized on the topic of "e-government", some time after the United States.

In the case of a statistical survey, a teleprocedure is an electronic system which allows every business belonging to the survey sample to fill out on line the questionnaire which is addressed to it and to send its response to the statistical administration through the Internet.

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<sup>1</sup> Head of the department "System of Enterprise Statistics", INSEE. The views expressed in this paper are attributable to the author and do not necessarily reflect those of the INSEE.

<sup>2</sup> On occasions, it can happen that some companies, in general big ones, wish to answer particularly heavy survey by providing a file they have produced from their internal housekeeping system. Insofar as it is not always simple to define a "standard" file format, this wish, which the statisticians cannot in general escape, often involves overcosts during the processing of these files.

### Teleprocedures: EDI of webforms<sup>3</sup>?

These two methods have already been mentioned. EDI is, at least in theory, the most accomplished form of teleprocedure. It may raise hopes of the highest benefits, in terms of efficiency, of speed or quality. The past experiments show also it may require a considerable initial investment, the profitability of which is not obvious. But in the case of repetitive formalities, whatever the periodicity, monthly, quarterly, annual or multiannual, the most significant difficulty may be the evolution of the teleprocedure, in order to face new needs. The maintenance of the software involves additional costs, for all the actors, and the synchronization of the updates poses complicated problems.

In France, only the largest administrations, Tax, Customs and Social Security, have been able to solve these problems and have obtained very significant successes, in terms of number of forms and of volume of information thus collected<sup>4</sup>. Concerning the businesses, the largest ones have been those which in majority could use EDI-based teleprocedures. However, we should not forget the very significant contribution of intermediaries such as the chartered accountants. For more than 10 years, these auditing firms have indeed contributed to develop the use of those EDI-based teleprocedures, through discussions with the Tax and Social Security administrations. In their situation, it is possible to reach return on the investments they are obliged to make through the very significant improvements of the productivity of their staff and, if necessary, by an increase in the rates of their services.

However, an important proportion of SMEs have stood apart of this movement, even though the simplification of the formalities which relate to them has been for a long time a governmental slogan, the use of new technologies being analyzed as one of the preferred ways to reach this objective of simplification.

In this context, webforms have appeared to be "the" solution. The Internet technologies indeed make it possible to rather simply put "electronic forms" at the disposal of every business, whatever its size. The only prerequisites are a PC, an access to the Internet and the adequate version of a browser, such as Microsoft Internet Explorer or Netscape Navigator<sup>5</sup>. There is no need, a priori, for the administrations to install other software components on the computers belonging to businesses. The set of difficulties raised by the installation of "new" programs in not controlled system environments are indeed well known.

One can think that it is by the way of webforms that the French administrations will try to reach in 2005 the goal which has been assigned to them by the government. Concerning the statistical surveys, it is the way which has begun to be followed.

In the field of statistical business surveys, webforms appear as a "simple" alternative to the mode of data collection traditionally used in France, namely the paper questionnaires. The priority objective that is pursued when making it possible for the businesses to electronically respond to the statistical surveys is an objective of modernity and simplification. Objectives of reduction of the costs, for the administration, and of improvement of quality appear as secondary objectives. We will reconsider these topics later.

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<sup>3</sup> We call EDI any automated process of exchange of informations between data-processing applications belonging to two different organizations. The fact that this information is exchanged according to a standardized format, for example Edifact, ANSI-X12 or XML, is not regarded here as fundamental. On the contrary, webforms necessitate a human intervention: a human being must carry out the effective data entry of the information on a computer screen, before this data can be exchanged.

<sup>4</sup> We can also point out the fact that the agencies which control the activity of the banking houses and of the insurance companies have made compulsory, according to various methods, the supply on electronic medium of all the data they request from these companies. Some of these data is the basis for the production of some official statistics on the financial sector and of financial or of "flow of funds" accounts within the framework of the national accounts.

<sup>5</sup> We will come back later on the questions related to security. Extreme security requires to dispose of other components on the PC, such as a software certificate or a smart card reader. On the other hand, we will not touch on the delicate, but well-known question, of the compatibility of the webforms between different versions of different browsers.

## The context

As a preliminary, it is necessary to recall that the organisation of the French Statistical System is characterized by a significant decentralization<sup>6</sup>. There is the National Statistical Institute, INSEE, a rather powerful administration coming under the Ministry of Economy, and statistical offices established in the majority of the Ministries: Industry, Agriculture, Construction, Transport, Employment, Education, Health, Environment, etc<sup>7</sup>. INSEE holds a highly significant capacity of coordination, but this one is "limited" to questions such as working out the legal environment of official statistics, arranging the statistical programs, defining the major statistical concepts and classifications, managing the basic registers, such as the business register and the register of individuals, etc. INSEE also puts most of the managerial staff at the disposal of the statistical offices in the ministries.

This decentralization is particularly significant in the field of business statistics, insofar as a great number of statistical business surveys are actually carried out by the ministerial statistical offices; INSEE does not hold, far from there, the monopoly of their realization.

Another characteristic which deserves to be pointed out is the fact that the French business statistics make a significant use of administrative data, under conditions close to what can be observed in the countries of Northern Europe. Several of the major administrative sources mobilized by the statisticians have been covered by important dematerialization projects carried out by the competent administrations (Tax, Social Security, Customs), which have produced very significant results, as previously mentioned<sup>8</sup>.

## The situation of the electronic data collection in France at the beginning of 2002

They are integral part of the Ministry to which they belong. They depend on it completely concerning logistics, information technology and telecommunications networks, security policy, etc<sup>9</sup>. Consequently, the development of electronic data collection in the different ministerial statistical offices is not coordinated. In this domain, each office takes the initiatives it is able to take, within its budgetary and human capacities. It cannot neglect the possible instructions or incentives coming from the Minister or from his advisers, because the topic is considered politically important.

The methods by which the software instruments are designed and implemented are varied according to the offices: the drafting of the requirements is in general, but not always, realized by the offices themselves. The writing of the programs as well as their maintenance may be partially or completely sub-contracted, but they can also be written and/or maintained by in house programmers. The data collection web sites can be hosted either internally or externally.

Concerning INSEE itself, the requirements for the planned webforms are internally specified, programs are partially subcontracted and no decision has been taken up to now concerning the hosting of the data collection web site.

## The SESSI experience

The statistical office of the Ministry of Industry, the SESSI, designed the first French webform at the beginning of 2000<sup>10</sup>. The survey which was chosen for this experiment was an obligatory monthly survey about the production of industrial companies. This very important and well established survey feeds in particular the computation of the industrial production index. The size of the sample is close to

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<sup>6</sup> For more details, refer to Grandjean (1997).

<sup>7</sup> In this paper, we call statistical administration the group composed of INSEE plus all the ministerial statistical offices.

<sup>8</sup> See Grandjean (2000) for a description of some of these projects.

<sup>9</sup> The Prime Minister office has just published a set of recommendations aiming at the compatibility between the information systems of the administration and those of enterprises, institutions and others. Among these, one may note the presence of Internet standards such as TCP/IP, HTTP, SMTP, FTP, LDAP, SSL, XML. Some digital formats are recommended such as UNICODE, TXT, PNG, MPEG2, MPEG3, CGM, STEP, others are accepted such as PDF or RTF. XLS or DOC are excluded.

<sup>10</sup> See Béguin and Deroin (2000) for a detailed description of this operation.

3500. The Sessi offered the service first to a limited number of businesses in February 2000, then to a second wave in June 2000, and eventually to the whole sample, in September 2000.

The principal options taken were: to set up a reliable and simple system able to minimize the response times<sup>11</sup>; to reproduce on the screen the questionnaires exactly as they appear on paper<sup>12</sup>; not to make any on line validity checks; to give access to personalized statistics to the responding companies<sup>13</sup>; to authenticate the web site and to secure the data exchanges between the responding companies and the web site through the use of a certificate and of the SSL v3 protocol; to authenticate responding enterprises with identifiers and passwords, which are sent by mail to the usual correspondents of the survey within the enterprises.

The mail announcing the opening of the service was sent to the questioned businesses at the same time as the paper questionnaires. The surveyed businesses are regularly reminded that they can use a webform if they want. The shipment of the paper questionnaire is stopped as soon as a given enterprise has answered 3 times by means of the webform.

When the enterprises consider using the webform or when they start using it for real, their phone calls to the hot-line have primarily to do with questions related to the passwords, to the problems associated with the SSL protocol and to the parameter setting within the browser. In the course of the survey, the questions can relate to the formats of the values or to the visualization of the data. On the whole, the workload of the hot-line is not very heavy.

The initial rate of response via the Internet, computed as the ratio of the number of responses made with the webform to the total number of responses, was measured at 5,5 %. This rate slowly increased to reach 18 % by fall 2001. The large companies more readily use the webform than small and medium ones. Electric and electronic industries use it definitely more than average, furniture industries use it much less than average.

These results were considered to be disappointing, whereas the rate of connexion to the Internet was estimated to be close to 80 % within the range of surveyed businesses. Several causes can however explain this low score. It is likely that all the correspondents of the survey within the surveyed businesses have not yet an access to the Internet: businesses seem to be restrictive in opening such accesses to their staff, inter alia because of the security problems. But other reasons are possible: the person in charge with the response may not want to change its way to answer, because she does not consider high enough the advantages carried out by the webform<sup>14</sup>, the Internet access may be not fast enough, which may have a negative impact on the response time, etc.

The SESSI has planned to sub-contract two customer satisfaction surveys. The first one will target a sample of businesses which don't use the webform, in order to understand why they have so decided; the second will target a sample of businesses which use the webform, in order to identify ways of improving the current service. The results of these investigations are being awaited for quite impatiently.

### **Experiments achieved by other statistical offices**

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<sup>11</sup> It is a significant characteristic and a real difficulty of webform projects intended for businesses: even to set up a pilot project or an "experimentation", it is necessary to build a highly reliable and about functionally complete system. If the system is bugged or very incomplete, businesses will hardly want to use it. Is the word "experimentation" really adequate?

<sup>12</sup> In addition to the business identification data, the codes and headings of the products for which the business is questioned as well as the answers given by the business at the 3 previous surveys are preprinted on the questionnaire. The reminder of the preceding answers allows the respondent to evaluate "at sight" the plausibility of its response for the current month. The respondent has the possibility of modifying the responses he had provided to the 3 preceding surveys.

<sup>13</sup> The French statistical administration has committed itself to quickly return first survey results to any business which answers its surveys. These information returns are understood as a kind of counterpart to the costs the companies incur to supply their answer.

<sup>14</sup> The industrial companies, in particular the small and medium ones, are extremely sensitive to the cost they have to "pay" to answer the statistical surveys. They often regard answering a statistical survey as a chore they want to get rid of as quickly as possible.

The statistical offices of the Ministry of Education and of the Ministry of Health have also implemented webforms. Even if these achievements have been less precisely documented than that of the SESSI, some characteristics deserve to be underlined.

During these last 2 years, the statistical office of the Ministry of Education has conducted several light surveys (2 pages maximum, in general) uniquely by means of webforms (they didn't send any paper questionnaire for those surveys), with very significant rates of answer, often higher than 70.%, sometimes equal to 100 %! However, these surveys are addressed to services which may find it beneficial to answer, for various reasons, and this situation may explain these very high response rates.

For its part, the statistical office of the Ministry of Health has set up two webforms. The first one has been designed for a quarterly survey into the activity of the hospitals. 500 establishments are being surveyed, 300 private and 200 public. The questionnaire is a one page table of quantitative questions. The webform was launched at the beginning of 2000. For the third quarter of 2001, the response rate via the Internet was 48 % and was continuing a slowly growing trend.

In 2001, the same office implemented another webform to carry out an annual survey the sample of which is made of 4200 health care establishments, both public and private. It is a complex and heavy investigation. The paper questionnaire has forty pages. The response rate via the internet was, for the first year, close to 50 %.

In these last two cases, the private establishments have been using the webform in a very significant way, definitely more than the private companies questioned by the SESSI. Why? We do not know. It is possible that the fact that all these establishments, including private ones, depend very much on the Ministry of Health, for many sensitive questions such as applied tariffs, authorizations to create new activities, authorizations to install new equipments, etc. encourages them to react more favorably to the incentives of the administration. It is also possible that the clerks which manage the housekeeping within these establishments are much more accustomed to the Internet than those in the enterprises surveyed by the SESSI.

### **Projects in progress**

A statistical office situated within the services of the Prime Minister, which is in charge with the statistics about newspapers and journals, is preparing webforms for two surveys it carries out. The first one is a quick and short survey addressed to the 300 most important publishers. The webform should be available in the next few days. The second one is a detailed survey concerning all the 1900 French publishers. It comprises a page for each published newspaper or journal. This second survey may be rather heavy for some very big publishers.

The statistical office of the Ministry of Transport is preparing a webform for a survey in the domain of the road transport of goods. The survey sample consists of 86000 trucks belonging to approximately 23000 enterprises, among which a lot of very small ones<sup>15</sup>.

The statistical office of the Ministry of Research is launching a project aiming at setting up a webform for an important survey about research and development expenses of French enterprises.

INSEE has also started a project of "portal" intended to put together most of the relations we maintain with the businesses we survey. The idea is to gather at a single address (URL) a number of services intended for these enterprises: first, webforms; second, information returns, which may be either statistical or "personalized" (in this last case, they will be individually available only to each responding business); third, links towards other informational resources useful for the companies.

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<sup>15</sup> An EDI type solution is also being considered, which would be proposed to the large road hauliers. It is however significant to note that the preliminary discussions held with two or three large companies of the sector have been lasting for several years. Until now, none of these companies considered the matter to be important enough that they were able to spend the few resources which would have allowed the installation of a pilot system.

Concerning the webforms, the first two surveys which will quickly be subject to experimentations are a monthly survey of industrial product prices (sample size 4800) and a bi-monthly survey about the economic trends in the wholesale sector (sample size 4000). This second survey will be the training ground which will precede the implementation of webforms for the whole set of monthly, bi-monthly and quarterly surveys carried out by INSEE about the economic trends in a number of sectors. It can be noted that INSEE has chosen to test webforms with short and high frequency surveys.

INSEE also considers the implementation of webforms to allow the hotels and camp-sites to respond to monthly surveys about their activity measured in number of nights<sup>16</sup>.

### **Webforms and security**

The questions of security are of course central as soon as we envisage to collect via the Internet business data protected by the statistical secrecy. The problems associated with the securisation of the Web sites are classical ones and we will not insist upon them. What is prone to more reflexions, at least within INSEE, is first the question of the securisation of the information exchanges between the respondent's PC and the data collection Web site and second the question of the authentication of the respondent within the surveyed businesses.

On the first point, the current practice consists in the use of the SSL v3 protocol, with a key of sufficient length. The French legislation currently allows use, without specific formalities, of 128 bits long keys, which seems to ensure a suitable safety for the time being. It would be difficult for a third party to decipher the information exchanged between the entreprise and the statistical administration. Under the current conditions, we estimate that the level of security of the exchanges is sufficient and that we guarantee an adequate level of confidentiality to the answering companies<sup>17</sup>.

On the second point, the traditional practice is to give each surveyed company an identifier and a password. Such a device is not supposed to be extremely secure. An alternative would be the recourse to the use of certificates managed within the framework of Public Key Infrastructures

If the providers of these technologies say they are mature, it is certain that their use is not yet very widespread. Their deployment within the businesses seems to take time. It is very probable that if we made mandatory as of today the use of such certificates by the companies, we would still decrease their interest for our webforms.

The French Tax administration is showing voluntarism in this field. Since the beginning of year 2002, the teledeclaration and the telepayment of the Value Added Tax (VAT) have been made compulsory by law for approximately 30000 French companies. The Tax administration has set up two technical solutions, one EDI-type, the other being a webform. To be able to use the webform, the entreprises must buy a certificate from a provider whose products have been referenced by the Ministry of Economy, on which the Tax administration depends, within the framework of a certification policy. Today, ten providers, which are in majority affiliates of major banks, have been referenced. It will be very interesting to observe the way in which the use of these certificates will rise.

Is the use of certificates by the businesses essential as of now in the case of the response to our statistical surveys? Our analysis is the following one.

First, it seems to us that an authentication process based upon identifiers and passwords does not give less guarantees to the statistical administration concerning the identity of the respondents than the very simple way in which we send by mail our paper questionnaires to the surveyed businesses. In this case, we do not ask for acknowledgements of receipt.

The question of the authentication of the respondent is also a question which arises within the entreprise. The enterprise is indeed responsible for its answers to our surveys. The enterprise entrusts a designated person with the task to answer.

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<sup>16</sup> An EDI type solution is also being studied with some large hotel chains.

<sup>17</sup> This certificate also allows for the authentication of the collection server for the responding businesses. They can be reasonably assured that they will really send their data to the statistical administration.

We thus propose to initially set up an authentication system based on identifiers and passwords. If some companies think that this device is not secure enough concerning the authentication of the employee who is in charge with the response, they can of course choose to keep answering using the paper questionnaire<sup>18</sup>. We do think that today the number of enterprises which would refuse to use a webform due to the fact that the level of security ensured by an identifier and a password would be insufficient should be very small.

However, insofar as INSEE belongs to the Ministry of Economy, it is likely that we will be lead<sup>19</sup> to set up the device which will allow us to exchange data with businesses authenticated by the previously mentioned certificates.

Let us mention finally that the use of the e-mail is, specially in the context of webforms, but not only, a source of concern. During these last years, the whole staff of the statistical administration has been equipped with e-mail addresses. Some companies spontaneously propose to us to send their responses to our questionnaires through electronic messages. From a confidentiality viewpoint, this practice is dangerous insofar as the electronic mail is not secure. However, we have resolved not to dissuade the companies from doing so. Our current position consists in informing them very clearly that this practice is dangerous and that they do take themselves the responsibility for the possible divulgation of their confidential data.

In addition, we have forbidden the staff of the statistical administration to send to the businesses with which they are in touch e-mails in which confidential information related to these companies would appear. However, we have the feeling that it is not very simple to have this kind of instructions fully respected, as it is so practical to exchange information with the respondents by e-mail whereas it is often extremely difficult to join them on the phone.

### **Webforms and response burden**

For the time being, we have few elements to ascertain that responding to a survey by the means of a webform reduces the cost of the response for the enterprise. For most of statistical questionnaires, what takes time to the enterprise is to "compute" its answer. When the respondent is well trained, keying the data does not seem very different on a screen and on a paper questionnaire. Using webforms eliminates some clerical work, such as putting the paper form in an envelop and mailing this envelop. This seems marginal within the total time taken to prepare the response.

Some experts think that it is significant that the response to the questionnaire can be checked and validated in line by the respondent, before it is sent: this should objectively reduce the response burden of the enterprise. The main argument in favor of this thesis is that the statistical administration will not have to recontact the enterprise later if the controls it operates on its side on the response would lead to regard it as extremely doubtful and requiring a validation by the enterprise. This does not seem obvious a priori and may be inaccurate nowadays for some surveys and some categories of surveyed enterprises, especially the smallest ones.

For monthly or quarterly surveys, we wonder if it would be very convenient to multiply on line checks, and in particular the plausibility checks, which aim at evaluating the likelihood of the response, compared to other responses previously keyed in by the respondent in the same webform, or compared to responses provided for the previous month or quarter. It seems to us that these checks could as well irritate the respondent by giving him the feeling first that the quality of its answer is questioned and second that the webform makes him waste his time<sup>20</sup>.

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<sup>18</sup> It is of course completely out of the question to make the use of the statistical webforms compulsory.

<sup>19</sup> For the time being, it seems in particular that it would be costly to set up the technical device which would make it possible to check that the validity of the certificates used by the companies, certificates which are nowadays issued by about ten certification authorities.

<sup>20</sup> When a clerk fills in a paper questionnaire within an enterprise, no statistician keeps an eye on him to check the quality of his answer. We suggest it is useless to complicate the learning process of a new technology by adding constraints that are not completely useful. These checks could be introduced later, in particular if the users get at asking for them.

Some other types of checks pose in this respect less difficulties, insofar as to propose them with the answering companies appears to propose a win-win strategy: for example the checks which aim at ensuring that the enterprise has answered at least all the most important questions of the survey<sup>21</sup>.

To conclude on this question, it seems to us that decisions about checks to be made in line are not easy ones and it is a topic on which sharing experiences seems interesting.

Another very debated question relates to the look of the questionnaire on the screen. Should it be similar to the paper questionnaire or not? It is possible that the answer to this question also varies according to the type of survey and according to the categories of surveyed enterprises. For the monthly or quarterly surveys, insofar as the first objective may be to convince of the businesses to use the new webforms, it can be preferable to propose an on screen questionnaire which looks as closely as possible like the paper questionnaire. It could then be simpler to persuade the respondent that the way in which he works will not be revolutionized. It is quite possible that we have more room for manoeuvre in the case of annual or aperiodic surveys.

One can suppose that when the questionnaire is long, the data entry of the response on the screen can be considered as tiresome by the employee who is responsible for it<sup>22</sup>. One of the previously described Ministry of Health statistical office experiments shows however that this is not dissuasive.

When the size of the questionnaire is a function of the size of the business (in terms of a the number of establishments, or of the number of employees, etc), it is likely that it would be useful to allow the largest businesses to import into the electronic questionnaire the data which they will have extracted beforehand from their internal housekeeping system, if they wish to do so. But one is then led to set up a mode of response which is close to EDI. It has been previously stated that the cost of the necessary investments have been dissuasive for a huge majority of businesses.

On the other hand, it is nowadays in our interest to offer as quickly as possible an electronic mean of response to the businesses which ask for it. This is likely to reduce the subjective statistical burden for those businesses.

### **Webforms and response quality**

The SESSI does not mention any obvious effect of the use of their webform regarding the quality of the answers made by the companies which use it, even if they haven't implemented any online check, as it has been previously underlined.

On the other hand, the statistical office of the ministry for health is pleased with the observed gains in quality of the answers provided through their webform, insofar as the electronic questionnaire relating to their yearly survey allows for in line checks of the data keyed in by the respondent.

Generally speaking, one can first think that using a webform has no effect on the quality of quantitative figures that the enterprise "computes" in order to answer a survey. Then, it is quite likely that the ergonomics of the webform and the edits it implements have an influence on the quality of the data which is keyed in the business. It is thus clearly needed to test this ergonomics, if possible with testers who will be real users in businesses. It is finally assured that for every questionnaire collected through the webform the statistical administration saves the data entry errors usual when keying paper questionnaires.

Some anxiety appeared within INSEE concerning the project of webform related to the business survey about economic situation. Insofar as the majority of the questions asked for in this type of surveys are of qualitative nature, some people anticipate a biased response related to the use of a collection mode different from the usual one. It is difficult to imagine an experimental device which

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<sup>21</sup> This strategy is a win-win one because in the event of partial non-response concerning very important questions, it is almost sure that the enterprise will be phoned back in order to get the missing answers.

<sup>22</sup> An essential characteristic of the webforms must be, in any assumption, reliability. One can reasonably suppose that if a respondent "loses" some part of the data he has already keyed in because of a bug, it could be very difficult to convince it to try the webform again.



would allow us to a priori estimate such a bias. On the assumption that such a bias will occur, we could try to reduce its effects for example by not simultaneously opening the service to the whole sample<sup>23</sup>.

## Conclusion

The decentralization of the French statistical system allows for the fulfillment of diversified experiments in the field of webforms, concerning various surveys carried out towards diversified populations of businesses, and using different methodologies and tools. It is important that the services which carry out these experiments document them as precisely as possible. The dematerialization of the transmission of information allows, as soon as the necessary management reports have been programmed, a very precise follow-up of the progression of the use of the new applications.

The indicators thus obtained, as well as the results of customer satisfaction surveys carried out simultaneously, such as those planned by the SESSI, should make it possible to define a set of good practices. They should be also used to choose the populations of businesses which would be the best targets to effectively promote the new tools which are proposed to them and also the arguments and the relays<sup>24</sup> which it is necessary to use to carry away their participation. We are in a "favorable" situation insofar as we very often know, for each investigation, an appointed by name correspondent in the surveyed companies. It is very simple and far from expensive to inform these correspondents of the deployment of the new tools that we propose to them. Obviously, this is not enough to persuade them to use these tools! Taking the time to convince them one by one is expensive, a cost which will be added again to the already committed overcosts. Hence the need of using also relays. Maybe, enough would be to be patient.

We have previously mentioned the quickest as possible supply of information returns in the form of first results to the responding companies. It is simpler and less expensive to do that via the Internet than with paper. It is also easy to check if the results put at the disposal of the responding companies are actually looked at. To effectively implement such mechanisms, it is necessary to find the means of informing the companies of the availability of these first results<sup>25</sup>, while being aware that very often the people interested by these results are not those who answer the surveys. Can such a practice be a factor of motivation for the use of the webforms? This is not assured, even within the framework of the general policy described in the footnote n° 12.

If indeed our government asks us to facilitate the response of the businesses which we question in our surveys, we must do the best in order that to get return on our investments as quickly as possible. The relevant indicator seems to be the rate of response per electronic questionnaire and our objective must be, for each survey concerned, to make it progress as quickly as possible.

This occurs in an environment where we are not alone. Powerful administrations, the tax administration, the customs administration, the social security administration, are also launching significant projects to facilitate the administrative procedures of the businesses. We will benefit together by a progressive acculturation of all the actors concerned in the businesses, including the smallest ones, to the use of new technologies, and in particular of those of the Internet, in the specific domain of Business to Administration relationships.

Béguin J.M. et Deroin V. (2000), *Le SESSI expérimente la première collecte statistique par l'internet en France*, La Lettre du SSE - n° 43, 2000 (in French)

Grandjean J.P. (1997), *The system of enterprise statistics*, *Courrier des statistiques – English series* n° 3

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<sup>23</sup> Such a measure can however considered to be useless, insofar as it is probable that all the surveyed businesses will not use the new service as soon as it is open.

<sup>24</sup> One can of course think of the chartered accountants, the trade associations, the Chambers of Commerce, etc.

<sup>25</sup> The question of the management of the e-mail addresses of our different contacts within the businesses does arise here, as it does in a couple of situations related to the survey management, specifically for monthly or quarterly surveys : information of the respondents about the availability of the current questionnaire, sending reminders to non-respondents, etc.

Grandjean J.P. (2000), *Data Collection, Respondent Burden, Business Registers*, Ninth CEIES Seminar on innovation in the production of statistics - Luxembourg - 2000