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Abstract

This paper investigates National Statistical Institutes’ (NSIs) practices concerning response burden in their business surveys based on a survey of 41 NSIs from 39 (mostly European) countries. The results show that 1) most NSIs monitor some aspects of the response burden in their business surveys; 2) the methods used for this vary largely, both between and within NSIs; 3) many NSIs have implemented actions to reduce response burden but 4) there is hardly any research on the costs and effects of burden reduction actions. To get more insights in effectiveness and efficiency of response burden management practices, more research is needed into effects of burden reduction actions as well as a standard methodology for measuring response burden.

Keywords: Administrative burden, data collection methodology, establishment surveys

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1. Introduction

Response burden in official business surveys has been a concern for National Statistical Institutes (NSIs) for several decades (e.g. Sunter 1977, Astin 1994, Willeboordse 1997, Hedlin, Dale, Haraldsen and Jones 2005). The importance of managing response burden is underlined by the European Statistics Code of Practice (European Commission 2011) which states “The reporting burden should be proportionate to the needs of the users and should not be excessive for respondents. The statistical authority monitors the response burden and sets targets for its reduction over time.” There are two main reasons why response burden matters. First, business resources spent on statistical reporting cannot be spent on profitable activities. To increase the competitiveness of businesses, administrative burden should be kept as low as possible. Second, if response burden is perceived as too high this may have a negative impact on data collection, as a too high burden may decrease the quality of reported data and increase the costs of collecting and processing these data (e.g. reminder letters, editing costs). Some evidence for the detrimental effect of a too high response burden on response behaviour is, among others, reported by Hedlin et al. 2005, Bavdaž 2010, Lorenc, Kloek, Abrahamsson and Eckman 2013, Berglund, Haraldsen and Kleven 2013, Giesen 2013).

The objective of this research is to bring together NSIs’ experiences and knowledge in the area of the measurement and reduction of response burden in business surveys, given that NSIs face similar challenges. This paper aims to answer the following research questions:

1. How do NSIs measure response burden caused by business surveys?
2. What actions do NSIs use to reduce the response burden caused by business surveys?
3. What is known about the effectiveness of these burden reduction actions?

Section 2 of this paper describes the design of the research project, Section 3 presents an overview of the results regarding burden measurement and Section 4 discusses the findings regarding response burden reduction actions. Section 5 concludes with a summary and discussion of the findings.

2. Research method

To answer the research questions we followed a two-step approach. First, an extensive literature search was done for the period 2006-2010 (for more details see Giesen and Raymond-Blaess 2011). In this review we did not find information about all NSIs in the European Statistical System and we expected that many relevant reports would not be publicly available or updated to reflect the latest situation. This lead to a survey conducted in the second step.

Based on the literature review, we developed a questionnaire that aimed to provide an overview of 1) whether and how NSIs measure response burden in businesses surveys; 2) whether and how they try to reduce this burden and 3) which relevant reports (additional to the ones found in our literature search) NSIs have documenting response burden
measurement, response burden reduction actions and the effects of response burden reduction actions.

The questionnaire was pre-tested at the NSIs of the Netherlands, Norway, Slovenia and Sweden and then adapted. As expected, surveying NSIs is as complicated as surveying any other large organisation. One of the findings of the pre-test was that it was difficult for respondents within NSIs to have an overview of all types of burden reduction actions. For example, knowledge on questionnaire design was typically in other departments than knowledge on sampling and estimation strategies. Therefore, we tried to establish a presurvey contact with all NSIs to inform them about the survey and find the right respondent or response co-ordinator. To keep the response burden for our questionnaire as low as possible we asked only very general questions, and not, for example, about the exact numbers of surveys or respondents specific actions were applied to. Also, we only asked about a limited number of possible reduction actions. We focused on the actions that we expected to be used by many NSIs and that would be easy to capture with a single question.

A letter with the invitation to participate in the web survey was sent to all NSIs of the European Statistical System, the (potential) candidate countries and prominent NSIs in four other countries (Australia, Canada, New Zealand and the USA). In total, we approached 45 NSIs in 42 countries. As an attachment to the invitation letter, we included a request for relevant literature. We listed the literature we had already found related to that specific NSI (if any) and asked respondents to send us (references to) any other reports they could share with us. We specifically indicated that we were interested in any reports that describe the effects of burden reduction on, for example, burden and data quality. This call for reports was also included as a question in the survey.

To assess the measurement methods we asked about whether and how NSIs measure actual response burden (defined as the money and/or time it takes to comply with data requests) and perceived burden (defined as the respondents’ assessment of how burdensome they find it to comply with the data request). As the perceived legitimacy of the survey request is probably an important aspect in how businesses perceive response burden (Dale and Haraldsen, 2007), we also asked if NSIs had conducted any studies on how businesses perceive their organization. Furthermore, we asked about any registration of the NSI response burden experienced by specific businesses and about any national registers of response burden caused by the government. See Appendix 1 in Giesen (2011) for a copy of the questionnaire used.

To assess which actions NSIs use for reducing response burden in business surveys, we asked two sets of questions. The first set referred to the last five years (2006-2010) and the following actions: reduction in sample sizes, reduction in the frequency of data collection, reduction in the number of requested items and reduction in the number of recontacts with businesses; while the second set referred to the current situation and three kinds of actions (reducing the amount of information asked, making questionnaire completion easier and improving communication). The answer options referred to the
share of all business surveys these actions were applied to, namely none, some (some but less than 50%), most (50% or more, but not all), all, and do not know.

The web survey was on-line from November 2010 until February 2011. 41 of 45 NSIs from 39 of 42 countries responded, most of them electronically (a paper version was produced for others when requested) and after sending a reminder. For a few respondents we had follow up contacts by telephone or e-mail to clarify their answers or in an attempt to get substantial answers instead of “don’t know”. From our contacts with respondents we learned that it was sometimes challenging for them to answer questions for all business surveys at their institute. For example, burden measurement practices can vary over surveys and often there does not seem to be one person or department responsible and informed about burden measurement.

The answers to the survey are treated as confidential, so we do not publish the results per country or NSI. Where possible, we have included reference to examples that can also be found in publicly available documents.

3. NSI practices in measuring response burden

3.1 Measurement of actual and perceived burden
The majority of the surveyed NSIs measure actual burden; 34 of the 41 NSIs answered positively to the question “In the last five years, 2006-2010, has the actual response burden incurred by businesses to comply with survey requests of your organisation been calculated?” 20 NSIs do this annually. Several NSIs that measure actual burden explained that this was only done for certain surveys, for example, some EU surveys or all mandatory surveys. From our follow-up contacts we learned that at least one respondent had interpreted our question as whether a total response burden was calculated (for all survey requests). This unclearness in the question phrasing may have caused some other NSIs to answer negatively while in fact they do some kind of burden measurement. NSIs measure perceived burden less frequently: only 12 out of 41 NSIs have measured perceived burden in the past five years, 11 of those have also measured actual burden. 8 NSIs measure perceived burden every year. 17 NSIs reported that they had conducted studies on businesses’ perceived usefulness of statistics

3.2 Details on actual burden measurement
16 NSIs calculate actual burden in time costs only, 16 calculate both time and monetary costs, often by multiplying the time spent responding to surveys by some average wage rate. One institute calculated actual burden in neither time nor money but used the number of questionnaires sent out to businesses as an indicator. Some other NSIs also mentioned that they have something like this, for example, a monitoring system for the mean number of questionnaires which are filled in by each business for a given time period. One NSI could not tell whether burden was calculated in time, money or both.

NSIs use several types of data to calculate actual response burden. The most popular data source is information provided by respondents in surveys (29 NSIs), followed by
estimates from experts (25 NSIs). 13 NSIs report that they use qualitative studies to assess the costs of complying. 5 NSIs report that they use other data sources, of which 3 were specified: 1) calculation based on the frequency with which a business is drawn in samples (a practice also mentioned by other countries in some surveys); 2) calculation based on a previous survey, suitably amended; and 3) based on interview time.

Of the 29 NSIs that use burden data provided by survey respondents, 14 use samples and 21 collect the burden data at the same time as the survey data they relate to. One institute mentioned the use of Response Analyses Surveys to better understand burden and data error. Often, NSIs use several types of data to calculate response burden: 15 NSIs use 2 different types of data, 10 NSIs use 3 different types of data and 1 NSI uses 4 different types of data.

Table 1: Aspects of actual response burden included (N=33, 1 institute with actual burden measurement is missing)

<table>
<thead>
<tr>
<th>Aspect of actual response burden</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling out the questionnaire.</td>
<td>31</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Retrieving, collecting and compiling requested information.</td>
<td>28</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Reading questions and instructions.</td>
<td>25</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Administrative tasks (e.g. coordination) involved in survey completion.</td>
<td>19</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Record formation specifically done for reporting obligations.</td>
<td>17</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Re-contacts with businesses about the data provided.</td>
<td>13</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Other sources of response burden.</td>
<td>3</td>
<td>18</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 1 shows which aspects of burden are explicitly included in the calculation of burden. Here we see how differently response burden is operationally defined and measured. For example, 13 NSIs include re-contacts as part of the burden, whereas 16 do not. One institute did not include ‘filling out the questionnaire’ as a source of burden. This institute takes only into account the number of surveys a business receives. The other mentioned aspects of burden were ‘out of pocket costs/external costs’ (stated twice) and ‘16 standard activities based on the standard cost model’.

An important difference in burden measurement is whether or not all sent questionnaires are included in the calculation of total burden or only those returned. 13 NSIs use only the number of sent questionnaires for their measurement, 11 use only the number of returned questionnaires and 6 do both (2 do neither, 1 does not know and 1 did not answer). Using both figures may seem contradictory. However, for example, Ireland does in fact publish response burden measurement according to the Standard Cost Model (with the assumption of full compliance) and for the responding units only (Central Statistics Office 2010). The combination of both methodologies may also be explained by the fact that several NSIs have indicated that they use different methods for different surveys. Theoretically, one could estimate burden separately for non-respondents and for respondents.

3.3 Registers of response burden
16 NSIs reported that they have a database (a register) of the burden imposed on each business unit. New Zealand uses this to monitor and control the burden (‘respondent
load’) at the business level (Merrington, Torrey and van Heerden 2009). For each business they calculate the response load and compare this to the relevant load thresholds for a business of that size. If businesses are unfairly burdened they are given some relief.

Also, in some countries registers are kept at the national level to monitor and/or reduce burden caused by all government surveys. Such registers are reported by 9 countries. For example, in Australia the **Statistical Clearing House** ([www.sch.abs.gov.au](http://www.sch.abs.gov.au)) provides a central clearance point for business surveys that are run, funded, or conducted on behalf of the Australian Government. Its purpose is to reduce duplication, minimise the burden on business and ensure that surveys are fit for purpose. In the US, the **Office of Management and Budget** provides oversight of burden for all federal statistical agencies (Office of Information and Regulatory Affairs 2006). In Norway, the **Brønnøysund Register Centre** ([www.brreg.no](http://www.brreg.no)) co-ordinates the governmental reporting obligations of businesses to prevent “superfluous collection and registration of information”.

### 4. Burden reduction actions

Our survey also assessed for 17 burden reduction actions to what share of the business surveys these had been applied. Table 2 gives an overview of these actions, ordered according to the percentage of NSIs that applied this action to any of their business surveys (either to some, most or all).

**Table 2: Burden reduction actions, sorted according to the number of NSIs that have implemented an action in (some, most or all of) their business surveys**

<table>
<thead>
<tr>
<th>Type of reduction action</th>
<th># of NSIs applying the action (N=41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents can contact a help desk if they have questions about a survey (e.g. a specific phone number and/or e-mail address)</td>
<td>39</td>
</tr>
<tr>
<td>Electronic versions of self-completion questionnaires are available.</td>
<td>38</td>
</tr>
<tr>
<td>Respondents can find help on a web site (for example frequently asked questions).</td>
<td>37</td>
</tr>
<tr>
<td>Questionnaires have been tested with respondents to assess how well they understand the questionnaire and are able to provide the data.</td>
<td>35</td>
</tr>
<tr>
<td>Reduction of the number of requested items in survey requests.</td>
<td>34</td>
</tr>
<tr>
<td>(Part of) the data can be provided by non-automatic fixed format files, for example excel files.</td>
<td>33</td>
</tr>
<tr>
<td>Information is provided on the concrete use of the statistical output based on the survey request.</td>
<td>33</td>
</tr>
<tr>
<td>Reduction of sample size(s).</td>
<td>32</td>
</tr>
<tr>
<td>Samples are co-ordinated and/or rotated (survey holidays).</td>
<td>32</td>
</tr>
<tr>
<td>Register information has replaced (part of) the data collected from businesses.</td>
<td>30</td>
</tr>
<tr>
<td>Data of previous reporting periods are pre-printed in the questionnaires (e.g. dependent interviewing).</td>
<td>28</td>
</tr>
<tr>
<td>Respondents can receive personalized statistical feedback.</td>
<td>24</td>
</tr>
<tr>
<td>Reduction of the frequency of data collection.</td>
<td>23</td>
</tr>
<tr>
<td>The contacts with large businesses are managed by a single account manager.</td>
<td>22</td>
</tr>
<tr>
<td>Reduction of the number of re-contacts with businesses</td>
<td>19</td>
</tr>
<tr>
<td>Survey requests are included in a survey calendar that gives businesses an overview of which surveys they can expect.</td>
<td>19</td>
</tr>
<tr>
<td>(Part of) the data can be provided by automatically extracted files from the businesses administrative systems, for example XBRL.</td>
<td>16</td>
</tr>
</tbody>
</table>
On average surveyed NSIs applied 12 of the proposed 17 actions to at least some of their business surveys. Only 1 NSI had not implemented any of the proposed actions and 4 NSIs have implemented 16 of the 17 proposed actions.

The open question to report any other unspecified reduction action yielded many responses. Some of them could be assigned into the closed-ended questions. For example, some respondents interpreted the use of register data as something else than the use of administrative data. Below we give an overview of the remaining other reduction actions mentioned by respondents and the number of times they were mentioned. It must be kept in mind that these actions probably are used at more NSIs, but we did not measure this systematically in our survey.

**Policies outside the NSIs**
- Better co-ordination across public agencies and authorities (3x)
- Seeking access to administrative data (3x)

**NSI policies**
- ‘No gold plating’ rule - implementing minimum requirements only (2x).
- ‘One in one out’ rule (1x)
- Policy not to collect data if information is available in administrative data (3x)
- Policy not to ask the same information in different questionnaires (1x)
- Load Threshold Policy: proactive relief to businesses in accordance to size (1x)

**NSI organisational aspects**
- Establishment of Accounting Practices Unit that seeks to reconcile survey questions with business record keeping (1x)
- Establishment of response improvement research staff to do research on questions (1x)
- Programme of data collection split in two chapters, direct data collection and usages of administrative data from other government bodies (1x)

**Questionnaire Design**
- Regular monitoring / reviewing of questionnaires to detect problems of respondents (3x)
- Testing usability of electronic web-based data collections (1x)
- Offer questionnaires in multiple modes (2x)
- Pre-fill questionnaires with administrative data (1x)
- Reduction of the level of detail asked on a number of questionnaires (1x)
- Development of special shorter questionnaires for small businesses (2x)
- Redesign of questionnaires to align them as far as possible with the Profit & Loss and Balance Sheet account entries (1x)

**Web facilities**
- All questionnaires can be downloaded and sent back electronically through public website (1x)
- Interaction between data collectors and respondents via ICT and Internet in order to complete questionnaires aiming at efficiency of data capture process (1x)
As a response to our request for reports on effects of burden reduction actions, 12 NSIs sent us one or more reports about their efforts to reduce response burden. Some of these were reports that describe the development of response burden over time and, sometimes, separately for specific surveys. Examples of such publicly available reports are Fröhlich, Oschischnig and Rainer (2012) and Central Statistical Office (2010). However, there are very few publicly available studies that investigate the effects of specific actions on response burden (Giesen and Raymond-Blaess 2011). Some exceptions are Ojo and Ponikowski (2010), who did a simulation study to explore the effects of dependent sampling in order to reduce response burden on the precision of estimates; a technical report by the Hungarian Statistical Office of 2004 that describes a study on the expected effects of proposed burden reduction measures on respondents and data users, and a study by Statistics Belgium (2010) that specifically states the effects of the reduction measures both in terms of response burden and in staff costs before and after implementations.

5. Discussion

The majority of surveyed NSIs have – in accordance with the European Statistics Code of Practice – measured actual response burden for at least some of their business surveys, and a part of surveyed NSIs have measured perceived response burden. However, a closer inspection of how burden is measured reveals that there are large differences in methodologies, both between NSIs but also within NSIs. Differences refer to operational definitions of the burden concept, kind and number of data sources used, calculation procedures, inclusion of non-respondents etc.

These differences reflect both differences in the quality and in the purpose of the burden measurement. Measurement practices seem mostly aimed at monitoring the total administrative burden caused by statistics, and hardly ever at monitoring and improving data collection methodology. In order to get high quality and comparable burden indicators, an international standardisation of response burden measurement is called for. Such a standardisation requires a clear definition of the purpose(s) of the measurement and an active dissemination and follow-up (see also Giesen, Haraldsen and Bavdž 2011). Eurostat seems to be the most likely candidate to co-ordinate these activities for the European Statistical System.

Our study also shows that NSIs have implemented many actions that can reduce response burden and usually various types of actions to reduce burden are combined. Burden reduction actions can take various forms: reducing the total number or data items collected, making it easier for businesses to provide data, and promoting the benefits of responding to surveys in order to reduce the so-called “irritation burden”. There is a large
variety in actions NSIs have implemented and to what share of their business surveys. These variations may partly be caused by structural differences such as legal possibilities (particularly with respect to getting access to administrative data) and resources, but more likely, they reflect the fact that little is known about the effects of various response burden reduction actions on response burden, data quality and costs for NSIs. We simply have too little evidence of what good practices for burden reduction are. We therefore recommend more studies comparing alternatives or (at least) “before and after” when a burden reduction actions are planned.

Another important finding from our survey is that most NSIs do not have a central person or department co-ordinating both burden measurement and burden reduction actions. Notable exceptions are the Ombudsman for response burden at Statistics Canada (Sears 2011) and the Respondent Advocate at Statistics New Zealand (Statistics New Zealand 2008).

For the future we recommend that NSIs first of all document and monitor their burden reduction initiatives better, and benefit from sharing of knowledge both within an NSI and between NSIs. To make well-informed decisions, a step forward is indispensable in the research into business survey data collection methodology. This research should take into account that it may not be easy to change opinions and behaviour of the respondents of business surveys who already have established routines and attitudes concerning NSI survey requests. Research into effects of burden reduction actions should include both novel and experienced respondents; and monitor long term effects. Also it seems advisable to design studies that can detect how business characteristics, such as size class, type of industry and past response behaviour affect the reaction to burden reduction actions. It may well be that NSIs actions can be more effective and efficient if tailored to these characteristics.

References


