

## **Response rates on various request and response channels**

- a test carried out in the Retail Trade Business Tendency Survey

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### **Introduction**

Statistics Denmark is in the process of transition from paper questionnaires to online questionnaires. The motives have partly been savings on paper, postage and manual work processes, but also that it introduces highly valuable possibilities, e.g. built-in data validation and routing the questionnaire. For mandatory surveys online reporting is already the only option. However, in the case of voluntary surveys, such as the Retail Trade Tendency Survey, and other Business Tendency Surveys, Statistics Denmark still uses paper questionnaires together with online questionnaires and is hesitant towards making online data reporting the only option. To clarify the consequences of removing paper questionnaires, a six-month split test was therefore undertaken. In this paper is presented the results from the test.

A challenge, which voluntary surveys, such as the Retail Trade Tendency Survey has to deal with when using online reporting, is to offer a both unhindered and secure way to turn in the responses. The questionnaire is targeted at the manager of the companies, who is not necessarily in possession of the Digital Signature needed to login to the online questionnaire. In this case, the old fashion paper questionnaire offers a convenient alternative for responses that otherwise would have been lost. Others simply find checking a paper questionnaire easier and more in line with the normal workflow for a manager.

Statistics Denmark offers the respondents the option to report online to the Business Tendency Surveys, and many take use of the option. In March 2015, online responses accounted for 39% of the total number of responses to the Retail Trade Survey. This high response rate was reached even though no significant strategy had, so far, been made to increase online response rates, besides simply offering the option.

As of 2015, focus has been set on applying nudging inspired communication techniques, aiming at directing the respondents towards the online response channel. So far, this has led to a complete revision of the information letters and reminders sent to the respondents.

### **Test**

In order to examine the willingness of newly selected respondents in the Retail Trade sample to report online, Statistics Denmark has conducted a test to see how the response rates depend on various channels of sending request to respondents (initially by paper post or by Digital Post, and the following months also by email) and various channels to respond through (either by paper questionnaire or by online questionnaire). Within the context of this paper, “post”, when standing alone, means physical paper mails.

In April 2015, the panel sample of the Retail Trade survey was updated with 492 newly selected enterprises, totalling 1515 enterprises. The ideal size of the survey is 1400 enterprises. Within each size stratum (defined by 5-9; 10-24 and >25 employees), they were randomly divided into three groups of 164 enterprises each.

- **Group A** (*post and paper/online questionnaire*): Request sent by post including paper questionnaire and stamped addressed envelope (SAE), with two response options: paper questionnaire or online questionnaire. This is the regular method used up until now. If answering online, next month's request will be sent by email, otherwise by post.
- **Group B** (*post and online questionnaire*): Request sent by post, but with only one response option: online questionnaire. If answering (online), and entering email address, next month's request will be sent by email.
- **Group C** (*Digital Post and online questionnaire*): Request sent by Digital Post with only one response option: online questionnaire. If answering (online), and entering ordinary email address, next month's request will be sent by email.

The digital setup of Statistics Denmark's online reporting system is based on 3 different technical platforms:

- Digital Signature used for validation
- Digital Post used for online communication and
- A, internet portal called Virk

**Digital Post** is a national secured electronic mail system. By decree of the law, all official mails to private and companies are supposed to go to the associated Digital Post box. So in the context of this paper, Digital Post is not the same as an ordinary email. Access to Digital Post requires login, password, and a Digital Signature (see below).

**Digital Signature:** Access to online reporting requires a username and a password. The typical setup requires a Digital Signature which is a file installed on individual PCs belonging to the person with the associated username and password, so the reporter is automatically identified when responding from the designated PC. For the time being, the functionality on portable laptops, tablets, etc. is not optimal. Also Digital Signature supports login, using a physical code card or physical code token. This solution is more flexible when working from different devices, but is more of a hassle since the user will have to type in codes from card or token each and every time.

**The internet portal Virk:** The online reporting system is named Virk. It is a public and secured communication portal, which is, among others, used by Statistics Denmark. Here, companies can access online questionnaires from all authorities, including the business tendency surveys.

## Results

The respondents of the three test groups were tagged in order to trace request and response channels. Table 1 shows response rates among companies (un-weighted). All percentages are calculated as a share of the total number of requests (164) the initial month, April. Please note that table 2 in the appendix shows corresponding figures in absolute numbers, including more detailed figures on non-respondents.

In September 2015, consistently non-respondents (over the past 4 months) were removed from the test samples, thus resulting in a significant drop in total sample rates and total non-response rates. Also the number of positive responses might have been affected indirectly, if some (very few) of the erased non-respondents this month, for the first time, would have answered to the survey. Therefore, in the following, focus is put on the first five months of the test results.

**Group A** shows the highest response rates both in the initial month, April (72%), and four months later in August (65%). As mentioned above, Group A represents the traditional request and response channels used up until now. In April, all companies received the requests by post, and answered either by paper questionnaire or by online questionnaire. Response rates were respectively 34% and 38% totalling 72%. In the next month, May, those who reported online in the previous

month - and entered an email address - got requests sent by email. The others again got requests sent by post including paper questionnaire. And so on in August, online response rate were in total 42% of the initial sample, while paper questionnaire accounted for 23%.

**Table 1. Response rates of three test groups within the Retail Trade Survey**

| 2015                                    | Request channel | Response channel          | Apr.       | May       | June      | July      | Aug.      | Sept.*    |
|---|-----------------|---------------------------|------------|-----------|-----------|-----------|-----------|-----------|
| <b>Response Rate Percentages</b>        |                 |                           |            |           |           |           |           |           |
| <b>Group A</b>                          | Post (paper)    | online                    | 38         | 18        | 8         | 7         | 7         | 6         |
| (post and paper questionnaire)          |                 | post or others**          | 34         | 27        | 24        | 25        | 23        | 20        |
|   | Email           | online                    | ..         | 26        | 38        | 35        | 35        | 32        |
|   |                 | <b>Total responses</b>    | <b>72</b>  | <b>71</b> | <b>70</b> | <b>67</b> | <b>65</b> | <b>58</b> |
|   |                 | <b>Total online resp.</b> | <b>38</b>  | <b>44</b> | <b>46</b> | <b>42</b> | <b>42</b> | <b>38</b> |
|   |                 | <b>Total non-resp.</b>    | <b>28</b>  | <b>29</b> | <b>26</b> | <b>27</b> | <b>29</b> | <b>18</b> |
|   |                 | <b>Sample total</b>       | <b>100</b> | <b>99</b> | <b>96</b> | <b>95</b> | <b>94</b> | <b>76</b> |
| <b>Group B</b>                          | Post (paper)    | online                    | 58         | 11        | 2         | 6         | 7         | 4         |
| (post and online questionnaire)         |                 | post or others**          | 3          | 0         | 0         | 0         | 1         | 0         |
|   | Email           | online                    | ..         | 41        | 48        | 43        | 40        | 38        |
|   |                 | <b>Total responses</b>    | <b>61</b>  | <b>52</b> | <b>50</b> | <b>49</b> | <b>48</b> | <b>42</b> |
|   |                 | <b>Total online resp.</b> | <b>58</b>  | <b>52</b> | <b>50</b> | <b>49</b> | <b>47</b> | <b>42</b> |
|   |                 | <b>Total non-resp.</b>    | <b>39</b>  | <b>44</b> | <b>43</b> | <b>40</b> | <b>40</b> | <b>17</b> |
|   |                 | <b>Sample total</b>       | <b>100</b> | <b>96</b> | <b>92</b> | <b>89</b> | <b>88</b> | <b>59</b> |
| <b>Group C</b>                          | Digital Post    | online                    | 56         | 11        | 5         | 5         | 3         | 5         |
| (digital post and online questionnaire) |                 | post or others**          | 1          | 1         | 1         | 1         | 0         | 0         |
|   | Email           | online                    | ..         | 40        | 45        | 42        | 41        | 37        |
|   |                 | <b>Total responses</b>    | <b>57</b>  | <b>52</b> | <b>51</b> | <b>48</b> | <b>44</b> | <b>42</b> |
|   |                 | <b>Total online resp.</b> | <b>56</b>  | <b>51</b> | <b>50</b> | <b>47</b> | <b>44</b> | <b>42</b> |
|   |                 | <b>Total non-resp.</b>    | <b>43</b>  | <b>45</b> | <b>43</b> | <b>45</b> | <b>46</b> | <b>15</b> |
|   |                 | <b>Sample total</b>       | <b>100</b> | <b>96</b> | <b>93</b> | <b>92</b> | <b>90</b> | <b>57</b> |

\* Consistently non-respondents (during the past four months) were erased from the sample in September, and consequently figures are not directly comparable to the figures for the previous months.

\*\* Some few responses are on rare occasions manually typed directly into the database, e.g. via telephone calls from the respondent.

Group B and group C show pretty similar response rates. First **group B**. Here, companies received request by post, but only including the letter asking the respondents to fill in the online questionnaire. Most (58%) reported online, while 3% of the responses came in either by paper questionnaire (sent later upon request) or on rare occasions typed in manually, e.g. by phone call. In the next month, May, those who reported online - and entered an email address - got requests sent by email. The rest got requests by post again. And so on in the following months. Status by August was a drop in the response rates from 61% in April to 48% in August. It is worth noting that online responses in August account for 47%, which is 5 percent points higher than for Group A.

**Group C**. Here, companies received requests by Digital Post. The digital post included a letter asking the respondent to go online and fill in the questionnaire; 57% did so the first month. In May, those who reported in April - and entered an email address - got email requests and contributed to the total response rate with 40 %, while those who did not respond in April again got Digital post, and, here contributed to the response rate with 11 % for May. And so on in the following months. By August, the response rate was 44% - all by online reporting. It is noted that the majority of respondents prefers an email as requests rather than Digital Post requests.

## New cover letter layout

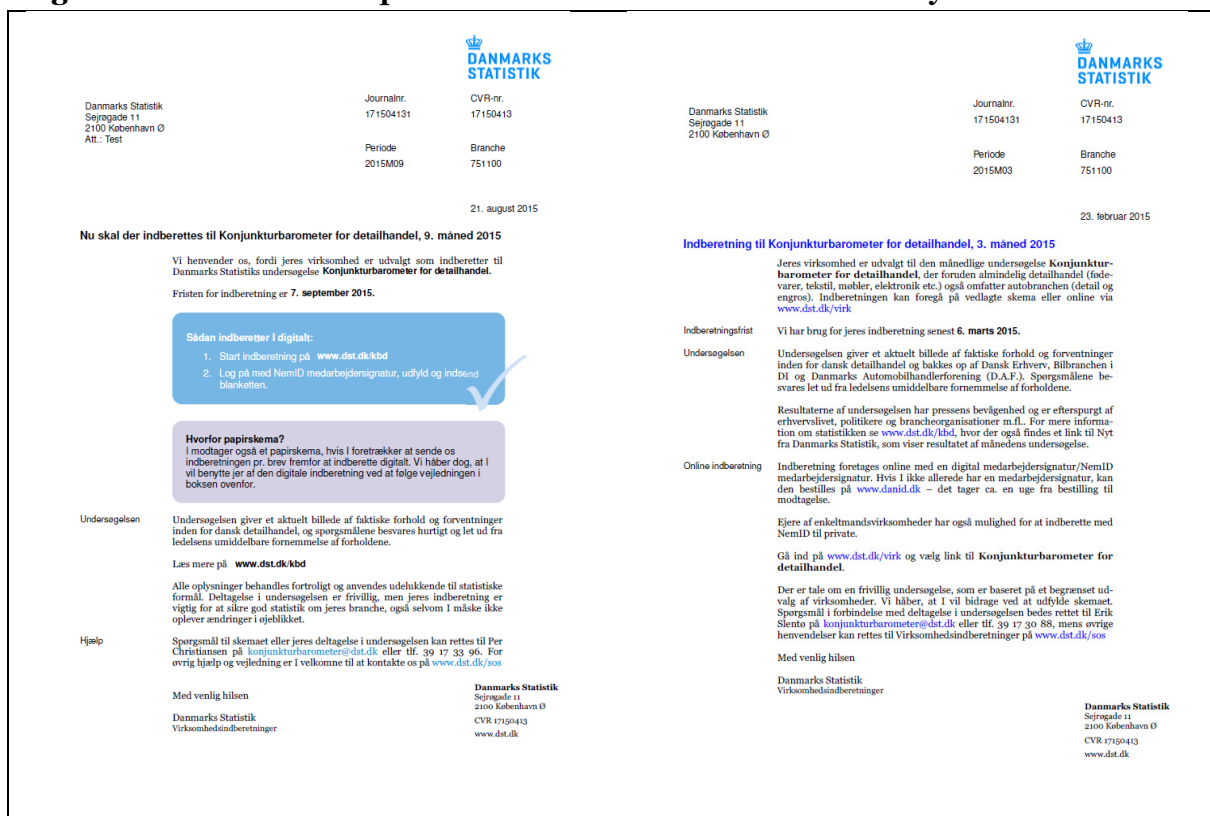
At the beginning of 2015, a pilot project was initiated to develop a new package of standard letters used during the data collection process. The package covered letters across the entire automated communication process, from the initial advance information, through the request to start reporting, and several reminders. The letters is a part of the nudging inspired techniques that Statistics Denmark has applied in order to make online reporting more appealing.

The ambition of the package was to:

- Encourage faster feedback.
- Increasing the total coverage.
- Harmonize the information offered to the respondents.
- Simplify the workflow across many surveys through a generic letter package.
- Optimize for digital delivery

In the case of the Retail Trade Business Tendency Survey, the package is simplified including only a request letter and one reminder. Figure 1 below shows at the right the previous request letter. At the left is shown the present request letter – as sent to test group A. The letters to test group B and C are similar in layout, while the information is adjusted to the design of the test groups.

Figure 1. New and old request letters for the Retail Trade Survey



In short, the new request letter has been shortened considerably compared to the former; the layout has been simplified and made more vibrant. The information has been reprioritized according to relevance for the respondent and the focus is on a call to action: get started.

The highlighted blue box guides how to report online, while the grey box below treats the attached paper questionnaire (Group A) as a secondary reporting option. It says, translated into English: *Why paper form? You also receive a paper form to use, if you should prefer to send the reporting by post instead of by digital reporting. However, we hope that you will use the digital reporting channel by following the instructions in the box above.*

## Discussion and conclusion

In August, the share of online reporting as compared to the total number of responses has increased for the total Retail Trade Survey sample (including both the new test groups and the old panel). The share has increased from 39% in March, before the test, to 58% in August.

Clearly, the traditional method with optional paper and online reporting channels (Group A) results in the highest response rates. In August, the response rate was at 65% and showed the smallest drop at 7 percent points from 72% in April. Next best result came from group B (post request and online questionnaire), ending with a response rate at 48% in August dropping from initially 61% in April. The final test group C (Digital Post request and online questionnaire), showed a slightly worse performance, having a 57% response rate in April dropping to 44% in August.

If the goal is to achieve the highest online response rate, group B and group C outperform group A. Group B had in August 47% online responses of the initial test population, Group C had 44% and group A had 42%. However, the differences account only for at maximum 6 companies. In absolute figures the number of online responses in August are 70 (A), 78 (B) and 72 (C) – refer to table 2 in the appendix. Therefore, taking uncertainty into consideration, roughly all three test groups results in a close to equal number of online responses after five months. This means that the loss from abolishing paper questionnaires for newly selected respondents would be 37 respondents, accounting for 23% of the initial test sample, according to the August results of Group A.

It can be argued that this loss could be acceptable. However, in a small country like Denmark each company counts, and in the case of the Business Tendency Surveys, the samples are under pressure. Within the cut-off limits all possible companies within some industries are selected for the panel, or have specifically asked not to participate in the survey. This means that in some minor industries within the survey, it is critical to include those who are not ready to report online, and thus stresses the need for accepting paper questionnaire reporting as an option.

This certainly also goes for the “veteran” respondents that have been in the sample panel for years. The sample of the Retail Trade Survey is stratified into three strata: 5-9 employees, 10-24 employees and above 25 employees. In principle, all existing companies within the Retail trade sector in Denmark with more than 25 employees are selected. Some have asked not to participate and are excused. The remaining companies are therefore very important for the survey since answers are weighted by the number of employees. If traditional paper questionnaire respondents are “forced” to switch to online reporting, and then choose to drop out, this will affect the results more than if some small companies were lost.

Also a point of view is, that it is better to get respondents “on the hook” by offering paper questionnaire, and hope for a switch later on to online reporting, e.g. when the respondent has installed the Digital Signature file on the PC.

In the future, Statistics Denmark will expand the use of nudging techniques and service design aiming at better service, higher online response rates and staying power of the respondents. Also mobile devices and easier access to the online reporting system are to be considered. In this regard, a smart phone online reporting app is under development, and a search for a new technical foundation for responsive design of the online questionnaire has started.

## Appendix

Table 2 below shows the same data as in table 1, but in absolute numbers. Included are more detailed figures for non-responses.

**Table 2. Number of responses in three test groups within the Retail Trade Survey**

| 2015   | Request channel | Response channel          | Apr.                       | May        | June       | July       | Aug.       | Sept.*     |  |
|--|-----------------|---------------------------|----------------------------|------------|------------|------------|------------|------------|--|
|  |                 |                           | <b>Number of responses</b> |            |            |            |            |            |  |
| <b>Group A</b>                                 | Post (paper)    | online                    | 62                         | 29         | 13         | 12         | 12         | 10         |  |
| <b>(post and paper questionnaire)</b>          |                 | post or others**          | 56                         | 44         | 40         | 41         | 37         | 32         |  |
|  |                 | Non-resp.                 | 46                         | 43         | 37         | 38         | 36         | 16         |  |
|  | Email           | online                    | ..                         | 42         | 62         | 58         | 58         | 53         |  |
|  |                 | Non-resp.                 | ..                         | 4          | 5          | 6          | 11         | 13         |  |
|  |                 | <b>Total responses</b>    | <b>118</b>                 | <b>115</b> | <b>115</b> | <b>111</b> | <b>107</b> | <b>95</b>  |  |
|  |                 | <b>Total online resp.</b> | <b>62</b>                  | <b>71</b>  | <b>75</b>  | <b>70</b>  | <b>70</b>  | <b>63</b>  |  |
|  |                 | <b>Total non-resp.</b>    | <b>46</b>                  | <b>47</b>  | <b>42</b>  | <b>44</b>  | <b>47</b>  | <b>29</b>  |  |
|  |                 | <b>Sample total</b>       | <b>164</b>                 | <b>162</b> | <b>157</b> | <b>155</b> | <b>154</b> | <b>124</b> |  |
|  |                 |                           |                            |            |            |            |            |            |  |
| <b>Group B</b>                                 | Post (paper)    | online                    | 95                         | 18         | 3          | 10         | 12         | 6          |  |
| <b>(post and online questionnaire)</b>         |                 | post or others**          | 5                          | 0          | 0          | 0          | 1          | 0          |  |
|  |                 | Non-resp.                 | 64                         | 62         | 56         | 59         | 60         | 18         |  |
|  | Email           | online                    | ..                         | 67         | 78         | 71         | 66         | 63         |  |
|  |                 | Non-resp.                 | ..                         | 10         | 14         | 6          | 5          | 10         |  |
|  |                 | <b>Total responses</b>    | <b>100</b>                 | <b>85</b>  | <b>81</b>  | <b>81</b>  | <b>79</b>  | <b>69</b>  |  |
|  |                 | <b>Total online resp.</b> | <b>95</b>                  | <b>85</b>  | <b>81</b>  | <b>81</b>  | <b>78</b>  | <b>69</b>  |  |
|  |                 | <b>Total non-resp.</b>    | <b>64</b>                  | <b>72</b>  | <b>70</b>  | <b>65</b>  | <b>65</b>  | <b>28</b>  |  |
|  |                 | <b>Sample total</b>       | <b>164</b>                 | <b>157</b> | <b>151</b> | <b>146</b> | <b>144</b> | <b>97</b>  |  |
|  |                 |                           |                            |            |            |            |            |            |  |
| <b>Group C</b>                                 | Digital Post    | online                    | 92                         | 18         | 8          | 8          | 5          | 8          |  |
| <b>(digital post and online questionnaire)</b> |                 | post or others**          | 2                          | 1          | 1          | 1          | 0          | 0          |  |
|  |                 | Non-resp.                 | 70                         | 64         | 58         | 64         | 67         | 18         |  |
|  | Email           | online                    | ..                         | 65         | 74         | 69         | 67         | 61         |  |
|  |                 | Non-resp.                 | ..                         | 9          | 12         | 9          | 9          | 6          |  |
|  |                 | <b>Total responses</b>    | <b>94</b>                  | <b>84</b>  | <b>83</b>  | <b>78</b>  | <b>72</b>  | <b>69</b>  |  |
|  |                 | <b>Total online resp.</b> | <b>92</b>                  | <b>83</b>  | <b>82</b>  | <b>77</b>  | <b>72</b>  | <b>69</b>  |  |
|  |                 | <b>Total non-resp.</b>    | <b>70</b>                  | <b>73</b>  | <b>70</b>  | <b>73</b>  | <b>76</b>  | <b>24</b>  |  |
|  |                 | <b>Sample total</b>       | <b>164</b>                 | <b>157</b> | <b>153</b> | <b>151</b> | <b>148</b> | <b>93</b>  |  |

\* Consistently non-respondents (during the past four months) were erased from the sample in September, and consequently figures are not directly comparable to the figures for the previous months.

\*\* Some few responses are on rare occasions manually typed directly into the database, e.g. via telephone calls from the respondent.