Incomplete Notifications
Company Registration Form
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This report was drawn up based on the results of an experiment carried out in 2014. The report’s recommendations are solely those of the project group. The Danish Business Authority has not taken a stance on the recommendation at this time.

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Incomplete Notifications – Company Registration Form

Background
This report describes the results obtained and the lessons learnt from the “Incomplete Notifications – Company Registration Form” experiment. It also focuses on lessons learnt that the Danish Business Authority can apply to other business areas. The purpose of the experiment was to try out nudging elements included on a form. The lessons learnt from the experiment can be used to improve other forms which the Authority asks businesses to fill in. The lessons learnt are also applicable in part to the Authority’s digital solutions.

Company registration form
When someone wants to establish or modify a company (public limited (A/S), private limited (ApS) or other limited liability company), the digital “webreg” solution should be used in most instances. Some modifications and special cases at the time of formation require the formation to be processed manually, such as the formation of a start-up company (IVS), the formation of a company by a foreign owner, or if the form is used to report matters which change the corporate status (e.g. liquidation or reorganisation). In these instances the companies use the “Company Registration Form”.

The company registration form can be found as a PDF file on virk.dk. It can be filled in on-screen and submitted using a digital signature or printed and sent by ordinary post.

Normal procedure
Business Support registers incoming notifications from companies. If appendices required for processing the notification are lacking, the case will not be processed. The case officer will either reject the case and write to the business indicating what needs to be submitted in order for the case to be processed, or the case officer can suspend the case and send a letter to the business specifying the documents that must be submitted by the business before the case can be processed. Which of these approaches Business Support chooses is of no practical significance to the businesses.¹

Roughly 80 new cases are submitted every day. In the autumn of 2013, 500–600 cases were waiting to be processed (autumn is an off season; the number of cases usually increases from mid to late November).

The company registration form can be used for all types of formations and modifications. There are only a very few instances in which appendices are NOT required to be enclosed; these are:

- resignation of an auditor/accountant;
- resignation of a member or members of management;
- change of domicile address to another address within the same home municipality;

¹ But it can be significant if a business is approaching compulsory dissolution.
• change of domicile address to a different home municipality if the articles of association do not stipulate a domicile;
• commencement of employment by a director in a business registered with a board/supervisory council;
• commencement of employment by a chairperson/vice-chairperson if the individual is already registered as a member of the board.

As a minimum, the following information MUST be filled in on page 1 in order for the notifier to access the subsequent pages. The information is: The business registration number (CVR-nr), basic information on the person doing the notifying, name, address, postalcode. Also you need to fill in basic information on the business, i.e. the type of business, postal-address of the business.

Once page 1 has been filled in, no additional information is required to be filled in on the form until the notifier reaches the signature page where the notifier MUST declare whether the information is correct. Once a notifier has ticked this declaration, the form can be submitted to anmeldelse@erst.dk with a digital signature.

Statement of the problems
Documents submitted for manually-processed cases often contain errors. If there are any errors in registrations or modifications done on webreg, the process cannot be completed (although enclosed documents, for instance, can contain errors). This is usually discovered if data buyers contact the Authority.
Appendices submitted for manual case processing contain many errors and deficiencies; for instance, they frequently lack information needed for the case to be processed. This means that the Authority spends time getting the companies to submit the correct information. The cases cannot be processed until the businesses have submitted the correct documents.

A manual count done in February and September/October 2013 showed that errors were found in roughly 20% of the cases (usually missing appendices). The count in February 2013 showed that 68% of the errors were due to missing appendices; the figure for the count in September/October 2013 was 60%. This equates to 12% and 13% respectively of all (counted) notifications having errors due to missing appendices.

**Preferred behaviour**

We want to get companies to submit the correct documents (appendices) the first time they use the “Company Registration Form”. Reducing the number of notifications lacking appendices would reduce the number of suspended cases, incoming phone calls with questions and correction letters. This, in turn, would shorten the overall case-processing time.²

**Experiment**

To achieve the preferred behaviour and reduce the workload for Business Support and businesses, we decided to make a few changes to the form. We based these changes on the diagnosis. The experiment ran over two two-week periods with one two-week control period in between.

**Diagnosis**

The diagnostic process analysed, categorised and evaluated the form to identify areas that would benefit from being changed. The diagnostic process was carried out by iNudgeyou/DNN. The underlying principle for this process is to identify areas with room for improvement, based on behavioural knowledge derived from behavioural economics, cognitive psychology, social psychology, etc. Specifically, the diagnostic process was made up of several components. Part of the diagnosis involved knowledge about interventions that work or have worked in other situations. Another part comprised using the form to promote a behavioural pattern to ensure that notifiers who use the form remember, and do, the right things.

**Diagnostic element 1: Position of signature**

According to Business Support, businesses tend to overlook certain elements on the forms, including the “fine print”. The diagnosis of the company registration form shows that the current sequence of signing and enclosing appendices does not help users to remember to enclose appendices. The signature field is positioned at the bottom of page 8 on the form.

² Gross case-processing times are measured from the time a business initially submits a notification until the processing of the notification is completed. If appendices are lacking, the case is not fully elucidated and the case is incomplete. The net case-processing time does not begin until the case is fully elucidated, the Danish Business Agency has received all the documents required and is able to complete the case. Businesses often associate the prolonged case-processing with the overall case-processing time, however.
There is no reminder about, reference to and support for adding appendices until page 10, however:

When the notifier is asked to sign, this signals that the notifier has finished filling in the form. Placing the enclosure of appendices after the signature field is not expedient, because it makes it easy to overlook the fact that appendices must be enclosed.

**Diagnostic element 2: Lack of instructions about what should be done at the end**

Given that the signature indicates the end of filling in a form, this is a good place to get the notifier to consider whether he/she has remembered everything. The original form also contains this element by virtue of the mandatory ticking of “The signatory hereby declares that the information is correct and that the changes will be reported to the Danish Business Authority”.

This mandatory ticking of the box does not involve reminding the notifier about enclosing appendices or about other types of general errors which a notifier risks making, however. The mandatory/compulsory ticking of the box makes this a good place to draw the notifier’s attention to relevant actions that the Danish Business Authority would like to have the notifier take.
Elements of the experiment
Both intervention forms focused on appendices, but they also included other elements. All elements of the first intervention were also included in the second intervention. The specific elements are reviewed below:

The following changes were made during the first period:
1. The signature field was moved to the last (separate) page.

Based on the assumption that the signature indicates the end of filling in the form, the signature field was moved to the page after the appendix-enclosure page.

2. A compulsory tick box was added to the signature field with the words “I hereby declare that I have enclosed all the appendices required for this notification”.

Given that the signature indicates the end of the action, it is an ideal place to actively employ the elements which provide success feedback. Success feedback is feedback which signals that an action has been performed properly. Writing “I hereby declare that I have enclosed all the appendices required for this notification” ensures this success feedback: the text gives a specific consideration whose accomplishment requires the ticking of a box, clearly indicating that the action is completed, which gives the notifier the feeling of having achieved his/her goal.

3. The following text was added to the signature field:

“AVOID DOING IT AGAIN: Please note that if you do not make sure to enclose the correct and appropriate appendices, you will be asked to fill in this form a second time.”

The above text was inserted to nudge towards loss aversion. “Loss aversion” refers to people’s tendency to strongly prefer avoiding losses to acquiring gains. In other words, someone who loses DKK 100 will lose more satisfaction than another person will gain by receiving DKK 200 from a windfall. In this specific instance, “duplicated effort” is a (potential) loss. The fact that the loss is potential also plays on the risk aversion, i.e. our general tendency to avoid running risks if at all possible. Note that a financially rational player does not attribute significant psychological weight to either loss or risk. Instead, he/she solely bases his/her actions on what the anticipated usefulness is calculated to be. As human beings, however, we rarely act with this level of rationality when it comes to loss and risk.

4. The following text was added to the signature field:

“Are you uncertain about which appendices you must enclose? Then phone 7220 0030.”

In the same way that the signature field was used to direct attention to enclosing appendices, it is used here to make it possible for the notifier to get help for filling in the form in the event of uncertainty. Offering assistance helps to emphasise the importance of enclosing the correct appendices.
5. “Form A” was highlighted on the first page of the form.

This indication is for internal use only to make it easy to distinguish between the various versions of the forms.

The following changes were made during the second period:

1. Changes 1–4 from version A.
2. “Form B” was highlighted on the first page of the form.
3. A checklist was added on the last page just before the signature field and all tick boxes were made compulsory (see below).
The idea behind using a checklist is in part to draw attention to the appendices, in part to weed out other general errors (identified by Business Support staff – though it is not possible for us to gather data about its efficacy) and in part to provide a more comprehensive range of final instructions for action and success feedback (by ticking a box).

If the more comprehensive checklist is successful, it will provide leverage for efforts moving forward to structure and fine-tune a final checklist for other forms, which could remedy a series of general errors, instead of focusing on only one type of error (e.g. appendices). Further testing to find the optimal elements is required.
Results
Due to a few internal procedural errors, some of the data was not collected which means that our sample is significantly smaller than anticipated. There is no reason to believe, however, that the lost data is systematic in relation to the three groups, and therefore the problem should only consist of a smaller sample and should not result in data bias.

The total data collected covers 1,070 registrations, relatively evenly dispersed over interventions 1 and 2, and the control group. In addition, 109 registrations submitted on old forms were received during the experiment period, and we will omit these from the rest of the analysis as they were not part of the experiment.

Figure 1: No. of registrations collected

After speaking with case officers, we identified two factors which, in our view, may have a significant impact on the number of errors in the registrations: the first is a matter of whether the notification is submitted by a professional consultant (lawyer or accountant) or by the business itself. The second concerns the type of registration involved.

The breakdown of who is responsible for notification is relatively similar for each of the three groups. There were more businesses in intervention group 1 that registered themselves and a correspondingly lower number of other notifiers, however.  

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3 “Other” covers the group of notifiers who are not categorised as accountant, lawyer or the business itself.
Figure 2: Cases broken down by notifier

Figure 3 shows that the types of case are relatively evenly dispersed over the three intervention periods. Change of management cases (tysa code 900) are significantly over-represented in intervention period 1. To prevent special errors from affecting the results, this type is not included in the results.

Figure 3: Cases broken down by type

*Others ("Andre") are the tysa codes that do not constitute more than 5% in any group.
As shown in Figure 4, appendices were lacking in 13.6% of the registrations on average. This does not include other errors (9.1%).

The Figure also shows that the three groups are very similar as regards the percentage of appendix errors. The two intervention periods are slightly above the control group, but the difference is not significant. There is a slightly bigger difference for other types of error, where intervention 1 is highest (10.5%) while intervention 2 is lowest (8.7%), which is not significant, however.

Looking at the results without tysa code 900, which was significantly over-represented in intervention group 1 and also has a relatively low error rate, the results are as shown in Figure 5. At the same time, this removes roughly 15% of the data, however.

Figure 5 shows that both appendix errors and other errors are higher for intervention group 1. In relation to the control group, there are 3.7% more appendix errors and 3.2% other errors, which is a significant difference.
In terms of notifiers, we have been able to identify that business notifiers make 7% fewer appendix errors compared to lawyers and 12% more “other errors”. “Other notifiers” make 11% more appendix errors and 13% more “other errors” than lawyers. Both aspects are very significant. Accountants make the same number of errors as lawyers.

**What was the effect of making a checklist?**

The data shows that the checklist did not affect the number of appendix errors. However it is possible that a checklist that helps the notifier check which specific appendices should be attached could have worked better.

We have not collected data about whether the first four items on the checklist, dealing with other errors, had any effect.
The checklist may have prompted more notifiers to attach general-meeting minutes and/or new articles of association. Yet even so, if additional appendices should have been attached, this would still have been registered as an appendix error in our data. Therefore, we cannot conclude whether the checklist had this effect.

**Conclusions**

The experiment did not have the desired effect of reducing appendix errors.

The reason that the experiment did not manage to reduce the number of appendix errors might be that the companies are not aware of which appendices need to be attached. Therefore, pointing out that appendices need to be attached before the notifier completes his/her registration is not an adequate solution. Nor is emphasising the two most common appendices.

The data-collection process shows that fewer errors occur when professionals (lawyers and accountants) are responsible for the notification, rather than of the business itself.

**Recommendation**

The experiment results indicate that appendix errors arise because notifiers do not know which appendices they must enclose. In the experience of Business Support, drawing up an easy-to-understand list specifying the appendices that must be enclosed with specific notifications is not an easy task.

As the company registration form can be used for a wide variety of notification types and at the same time is not a smart digital solution, providing information to notifiers about which appendices are correct for the notification concerned can be complicated. This problem is resolved in the upcoming digital registration
solution, though. There will, however, still be a problem with cases in which the company registration form is used. Therefore, it is recommended that a new identification and diagnosis of the problem be carried out after the new solution has been implemented.

One way to get more people to enclose general-meeting minutes (the most commonly required appendix), could be to use a tactic referred to as “social proof” in the field of behavioural economics. This refers to a human tendency to assume that the actions of others in social contexts reflect correct behaviour for a given situation – and then act in accordance with them. Assisted by social proof, the business is made aware of what most other businesses do.4

Specifically, the Danish Business Authority could write, for instance:

“Did you know that for 95% of all notifications you are required to attach general-meeting minutes to your notification?”

Or “Did you know that 86% of all notifiers have enclosed all the correct appendices?”

Obviously, it is important that the statistics we use in these statements are also correct.

Data from the experiment confirms Business Support’s assumption that more errors occur when companies do not use professional assistance for the notification. This indicates that the greatest benefit would be achieved by focusing on notifiers who fill in the company registration form without professional assistance. Accordingly, new experiments could benefit from targeting this group.

The data collection showed that there are notifiers who use old corporate registration forms, which they have previously downloaded to their own computer, for example. As a result, they will not see how the form has been changed. Accordingly, this is important to consider whenever significant changes are made to the company registration form.

For conducting new experiments we must – if at all possible – find data that can be extracted from our systems, as manual data collection is a cost-intensive process involving substantial uncertainty. In addition, there is a limit to the amount of data that case processors, etc., can be asked to collect before it becomes too burdensome.

If, going forward, we need to use case processors for manual data collection, we must then collaborate with a few case processors who, after receiving thorough training, collect data over a prolonged period of time, to restrict large/small differences in how different case processors register data, which could result in systematic data deviations.

When the Danish Business Authority launches the new ER3 solution, we recommend that the Authority follows up on which errors are made in the new solution for the purpose of identifying faulty behaviour that can be corrected using nudging approaches.

4 We decided not to use the “social proof” tactic in this experiment because, in our opinion, it would not work with the checklist.
If people are still using the company registration form for matters that could be dealt with in ER3, a new experiment could be used to find solutions aimed at nudging users away from the company registration form and into ER3.

If checklists are introduced in new experiments, it must also be possible to perform measurements based on all items on the checklist.

**Facts about the experiment**

**Population**
- We have data for 1,070 registrations
- 306 for intervention 1
- 312 for intervention 2
- 343 for the control group
- 109 for old forms

**What are the data points?**
- Percentage of appendix errors
- Percentage of other errors

**Which business case was used?**
- Additional time spent on incomplete notifications
- Number of cases and number of incomplete notifications in 2013

**Quality assurance**
- Much data was lost during the data collection process; it is estimated that 30–50% of the data is lacking [the final number is awaiting the total number of cases registered].
- The immediate results were verified against differences in notifier and type of case.

**Prerequisites for the validity of the results**
- The data that was lost follows the same pattern as the data collected.

**Population considerations**
- It was expected that about 80 cases a day would arise over the course of 30 workdays, i.e., a total of 2,400 cases during the period of the experiment.
- As the final population was lower than expected, our significance calculations do not have the same force as expected, which means that a bigger effect is needed to get significant results.
- The experiment also studied whether differences in the type of case and/or notifier had an effect.

**Considerations concerning incoming contacts with the Authority**
- The changes to the form are not expected to increase the number of incoming contacts to the Authority.