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Underestimation in Innovation Measurement in
Danish Farming

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Abstract

Point of departure is taken in a data set from the *FEAT2015* research project at Aalborg University, with which the goal is to create more knowledge about innovation among Danish primary producers. Focus in this specific article is on farmers, and measurements from *FEAT2015* show somewhat low levels of innovation. The validity of these measurements, which are survey data, is investigated, and the application of a different survey method reveals somewhat higher levels of innovation. Thus, evidence concerning underestimation of innovation in Danish farming is presented. The investigations relate to sampling in innovation studies, method of conduct, definition of innovation and its novelty, and finally the impact of the systemic nature of innovation.

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Point of departure is taken in a data set from the *FEAT2015* research project at Aalborg University, with which the goal is to create more knowledge about innovation among Danish primary producers. Focus in this specific article is on farmers, and measurements from *FEAT2015* show somewhat low levels of innovation. The validity of these measurements, which are survey data, is investigated, and the application of a different survey method reveals somewhat higher levels of innovation. Thus, evidence concerning underestimation of innovation in Danish farming is presented. The investigations relate to sampling in innovation studies, method of conduct, definition of innovation and its novelty, and finally the impact of the systemic nature of innovation.

1 Introduction and Presentation of Data

In 2007 *The Directorate for Food, Fisheries and Agri Business* (Direktoratet for Fødevarerhverv) started a project called *FEAT2015*. The project is running over a two year period from 2007 to 2009. Among a few other things, the project aims at creating more knowledge about innovation in the agri-food business in Denmark. The project will utilize the creation of future scenarios, case studies and regional analyses to reach the goal. The term *agri-food business* covers all primary producers including agriculture, animal husbandry, fisheries, forestry, and services related to these business areas (FEAT2015, 2008, p. 1-5.). Investigations cover production links from primary producers to retailers with special focus on primary producers. The basis for the research to be conducted in the project is survey data collected by *FEAT2015* in the autumn of 2007.

The *FEAT2015* investigations of innovation in the Danish primary sector lays basis for this article. The purpose is to assess the innovation levels indicated in survey data used and commissioned by the *FEAT2015* project group¹, with special emphasis on farmers. This principally implies an investigation of the *validity* of the survey data from *FEAT2015*, and there are several aspects connected to the concept of validity: *External validity* refers to the extent to which the results of the study are *generalisable* or *transferable*. *Internal validity* refers to two different aspects of the study: (1) The rigor with which the study was conducted in order to make correct measurements etc. (also known as *construct validity*), and (2) the extent to which the designers have taken alternative explanations into account (also known as *content validity*). A special emphasis will be put on *internal validity* in this article.

The definition of *farming* is done via a process of delimitation using categories. The categories are constructed from a business database administered by the previously government controlled Danish telephone company, *TeleDanmark*. The so-called *NACE-codes* enable the categorisation of businesses on the basis of different criteria, and it is on the basis of these criteria, the sample for this report is selected. The sample consists of the following lines of business:²

- Agriculture
 - 11110: Grain-growing
 - 11190: Other agriculture
 - 13000: Mixed operation (e.g. plants, animal husbandry)
- Animal husbandry
 - 12110: Dairy cattle
 - 12190: Bull breeding (tyrestation) and other cattle breeding
 - 12210: Stud farms
 - 12300: Pig breeding
 - 12400: Poultry breeding

¹ A research group consisting of DTU Management Engineering at the Technical University of Denmark, Department of Business Studies at Aalborg University, GEMBA Innovation and the Research Centre Innovative Fisheries Management at Aalborg University

² Own translations

When looking across the entire data set from *FEAT2015* the following innovation levels are indicated:

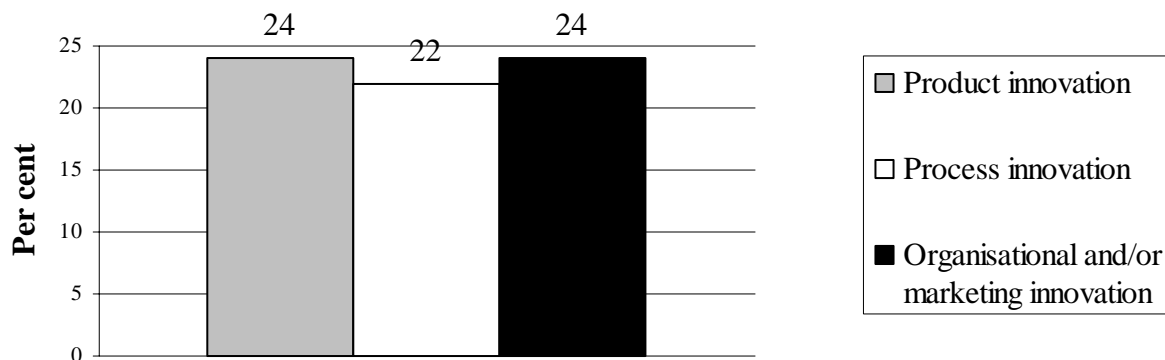


Figure 1: Innovation in the Danish primary sector

These data cover the entire Danish primary sector, including agriculture, fishery and forestry. As the sample data are stratified and thus includes only business units with employees, and has disproportionately high shares of larger firms, weights have been added based on the total population of firms. The weights adjust the results to be representative for the population rather than the realised sample only. The data show innovation levels at 22 and 24 per cent across the different innovation types.

The data from *FEAT2015* enables a special focus on farmers, and by focusing solely on the data from this particular group of respondents the following levels of innovation³ over the last two years have been measured (see figure 2 for an overview): 16 per cent of farmers have carried out one or more product innovation(s) within the last two years. 21 per cent have implemented one or more process innovation(s) within the last two years, and 21 per cent have implemented one or more marketing and/or organisational innovation(s)^{4, 5}.

³ It should be noted that *development* is used as a synonym for *innovation*, and it should also be noted that to these data *have not* weights have not been added

⁴ It should be noted here that the question was formulated as “*any development besides product or process, such as organisation or sales*”. This is interpreted as being either organisational or marketing innovations.

⁵ It should also be especially noted here that no weights have been added to make up for e.g. regional differences. Unlike the data covering the entire data set from *FEAT2015* (figure one), the data shown in figure two are un-weighted.

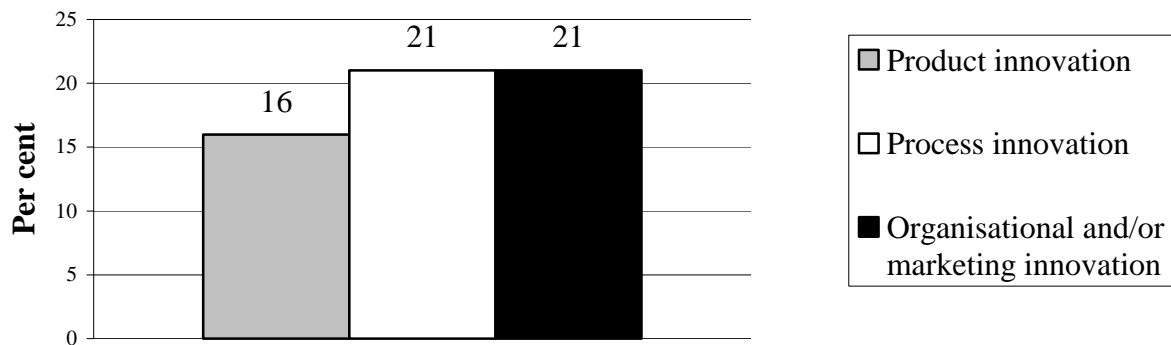


Figure 2: Innovation in Danish farming according to the FEAT2015 data

Compared to other studies in innovation, these levels appear to be low (e.g. Martinez & Briz, 2000, and Drejer et al., 2004). For this reason, an investigation of the potential presence of underestimation in the FEAT2015 data has been conducted and the results are presented in a later section in this article. In the present article, investigations will be based on a comparative study, based on another survey conducted under similar conditions as the FEAT2015 survey. The investigations follow recommendations on methodology by Kleinknecht (1987 & 1989), and relate to the underestimation of R&D in small firms which section three will shed further light on. The conduct of this investigation relates directly to the data: Establishing the quality of the data from FEAT2015 will provide a better basis for future investigations of innovation in the primary sector.

2 Systemic Nature of Innovation in Danish Farming

Observations show that local *Farmers' Unions* are the main source of knowledge for farmers. They provide knowledge and counselling that supports business development, and these knowledge flows are valued as being even more important than the farmer's own experience (DFFE, 2003, p. 57). There is a general tendency for farmers to gain their overview over new knowledge and technologies from mass media and fairs of different kinds, e.g. cattle shows. Farmers also use the so-called *ERFA-groups* (*erfaringsgrupper* or experience groups) that essentially are small societies of farmers who gather at frequent informal meetings to exchange knowledge and ideas.

Knowledge from these different sources is not necessarily directly implementable on farms, but instead information about technological and market developments are collected here (DFFE, 2003, p. 63). Besides this, it is established that incremental innovations dominate the farming sector (DFFE, 2003, p. 57), and it is also observed that farmers to a large extent *import* their innovations.

There is a basis of knowledge from education, which acts as an important precondition for innovation. Farmers often innovate on the basis of internal learning and competences which often result in implicit incremental innovation activities. Along with this, much of the applied knowledge stems from science and development organisations, but has been channelled through the *Danish Agricultural Council* and local *Farmers' Unions* where this knowledge has been mediated so that the knowledge is applicable on the farms. The knowledge comes from many different sources, including universities and *The Danish Institute of Agricultural Sciences*. This means that scientific

organisations do not contribute directly to innovation among primary producers in the farming sector, but still they play an important role in the innovation system as the knowledge they produce reaches the farmers through the linkages in the innovation system.

The *Danish Agricultural Council* has a department devoted exclusively to innovation and development. They serve as a collective/central department for development for farmers, and they employ a range of different tools, including hiring external consultants to special tasks, external financial advice, recruiting, etc. (Christensen et al., 2007, p. 52, 57 & 59). The *Danish Agricultural Council* work closely with *Farmers' Unions* but also directly with farmers. This means that development often is done *collectively* in the entire sector, and when innovations have been tested, farmers *implement* the innovations.

The preconditions for innovation among primary producers in the farming sector described above, provide a unique and very characteristic picture of the structural influences on innovation: Because of the systemic nature of innovation, knowledge flows are organised in a unique way in Danish farming. Innovation is most often a collective activity and a sector-wide activity where innovations are developed via the knowledge flows in the innovation system, and later implemented by the farmers.

The implications of the above are that innovation surveys addressing firms directly are likely to underestimate innovation because respondents do not see the knowledge or innovation as developed in-house.

3 Underestimation of R&D in Small Firms

Over 20 years ago, Kleinknecht noted that measuring R&D presented a number of problems, especially in small firms. He noted that a problem with measuring R&D is that in small firms R&D is often mixed with other, more daily activities, and that often no formal R&D budget is present. Besides this, R&D often occurs outside normal working hours. This measurement problem is general, but a problem with surveys is that detailed and specific questionnaires often serve as a barrier to small firms: In spite of them having small levels of R&D, they answer *none* to the question on R&D spending, just to get rid of the survey, resulting in underestimation of R&D (Kleinknecht, 1987, p. 254-255).

Moreover, it has been pointed out in Kleinknecht's later work that incorporating a question on R&D expenditures in surveys on innovation better reveals the true share of R&D-performing firms, as respondents are able to differentiate innovation from R&D better and realise that some of the activities related to innovation are in fact included in the R&D Frascati definition.

Roper confirmed this underestimation problem with the perspective that small firms focus most on the *D* in R&D. The reason for this is that small firms are more concerned with translating known research into products and processes, rather than purely creating knowledge. As a result of this premise, small firms are more likely to have R&D activities distributed in operational functions rather than in formal R&D departments. For the same reason, and because many small firms may put emphasis on the *R* in connection with *using the term R&D*, R&D in small firms is often either underestimated or completely unidentified (Roper, 1999, p. 131).

3.1 Formulating Questions

Kleinknecht sought the answer to the problems with underestimation described above, in the formulation of survey questions. In his investigations of the problem, Kleinknecht compared evidence from an official Dutch postal survey, investigating R&D in the Dutch manufacturing sector, with results from a postal survey he conducted himself in which he used different methodics. The official survey showed low levels of R&D in small manufacturing firms (Kleinknecht, 1989, p. 215), while his own results showed somewhat higher R&D levels in the same population: Although a share of small firms had no R&D, a much larger share of small firms conducted *some* R&D compared to the results from the official survey (Kleinknecht, 1989, p. 221).

Kleinknecht argued that the principal explanation for the differences between the two surveys lie in the formulation of questions, and that formulating questions the right way is the answer to the problem of underestimation (Kleinknecht, 1987, p. 254-255): *Firstly*, questions in the official survey concentrated on *spending* on R&D. Kleinknecht saw this as a problem, and in his own survey he used a more crude indicator, which is *man-hours*. He found this indicator as more precise for estimation in all firms, especially small firms; estimating man-hours would not pose as great a barrier as estimating spending (Kleinknecht, 1989, p. 216-217). The *FEAT2015* data do not focus on spending, hence, this will not be further elaborated on. *Secondly*, questions in Kleinknecht's own survey differed to a great degree from the official survey: Instead of asking a question about spending on R&D and just leave it at that, regardless the answer, Kleinknecht continued if the firms answered *none* with questions such as:

“If your enterprise does not have an R&D department, R&D activities might be carried out by other departments within your enterprise. For example: the sales department might develop a new product, or the production department might introduce improvements to a production process. Have any R&D been carried out within your enterprise... even though you do not have a formal R&D department?” (Kleinknecht, 1989, p. 216)

This way of formulating questions is decisively different from other studies. Kleinknecht here elaborates the field of interest by making clear to the respondent what R&D *could* be. By including a clear definition in the question and at the same time provide examples for the respondent, she/he has better conditions for answering the questions correctly, instead of answering *no* because the respondent has difficulties estimating the amount of R&D conducted, or because the respondent does not know exactly what R&D is.

A point to be noted by the reader is the applicability of Kleinknecht's methods in the present survey: The sample from *FEAT2015* is constructed from firms with at least one employee only. The majority of responding firms in the *FEAT2015* survey have only one or a few employees and participating firms with 10 employees or more are rare. Hence, the sample consists of very small firms indeed, where Kleinknecht considered firms with fewer than 100 employees to be small (Kleinknecht, 1989, p. 221), and thus his methods are relevant to the present field of interest.

4 Sampling and Method of Conduct in the two Surveys

For the *FEAT2015* survey no business units with no employees were included in the sample (DRUID track D, 2008). The aim of this stratification of the sample is to include more innovative

farmers in the sample, based on the notion that larger business units generally are more innovative, hence, it was also the purpose to exclude *hobby-farmers*. A total of 348 farmers were respondents in the *FEAT2015* survey.

The sample for the survey described in the present article is, however, different: Business units employing only the owner were also included, with the purpose of providing a wider spectrum of the business structure in accordance with the assumption, that this would yield more correct estimation of innovation levels. Out of 48 contacted, a total of 47 responding farmers participated in the present survey.

In order to conclude on comparisons between the two surveys, three basic preconditions for the method of conduct in the *FEAT2015* survey have been acknowledged: *Firstly*, the survey was conducted among primary producers. *Secondly*, both quantitative and qualitative data were created, but quantitative data are primary and qualitative data are used to supplement (and are thus secondary). *Thirdly*, the data was collected via telephone interviewing.

Moreover, extensive pilot tests of the *FEAT2015* survey were undertaken with the aim of ensuring that respondents understood the questions that were asked. Additionally, Computer Assisted Telephone Interviewing (CATI) was used in the collection of data, which was performed by trained and instructed interviewers.

4.1 Sampling and Method of Conduct in the Present Survey

As presented in the previous section, the problems with underestimation, according to Kleinknecht, lie in the formulation of questions. The survey from *FEAT2015* does not ask for an estimate of innovation spending, so obviously this does not pose as a problem.

In the present survey, however, the formulation of questions is a point of difference, compared to the *FEAT2015* survey. The solution is to formulate each individual question in a way that explains to the respondent what she/he is being asked about, rather than a short introduction in the initial phase of the interview. This is done in order to avoid the *fuzziness* of the term *development* in general, by giving a specific definition of each type of innovation/development, and more specifically to avoid that respondents answer *no* to questions on innovation levels simply because the respondent is not aware of what *development* means. However, for methodical purposes and in order to be able to compare the results with the survey data from *FEAT2015*, the term *development* was used in the present survey as well.

Recruitment of respondents was done with help from *Farmers' Unions* across Denmark, who were asked to randomly pick 5-15 farmers (within specific categories of business, that are associated with farming) from their customer files, to participate in the present survey. Respondents were recruited from northern, mid- and southern Jylland and from Sydhavsøerne. Attempts were made to recruit farmers from Fyn and Sjælland, but *Farmers' Unions* in these two regions were too busy to accommodate any requests. This may serve as a bias, as a considerable part of farming in Denmark is placed on Fyn and Sjælland (23.4 per cent) (calculation based on Danmarks Statistik, 2007, table 259, p. 269)⁶, where this study is meant to cover the entire Danish farming sector. However, most

⁶ Excluded from this share are the farms placed on Sjælland in the former Storstrøms Amt

interviews were conducted with farmers in Jylland and on Sydhavsøerne, and this geographical distribution is somewhat larger (75.4 per cent) (calculation based on Danmarks Statistik, 2007, table 259, p. 269)⁷ than the missing areas in the survey. No further inquiries will be made in relation to this issue, but the possible bias should be noted by the reader.

The *Farmers' Unions*, that were able to, provided names and mostly mobile phone numbers belonging to the respondents in the present survey. This yielded positive results as farmers generally were unavailable on their home phone numbers at the time of year at which the survey was conducted, as farmers were busy in the barn or in the fields. If a farmer was busy, arrangements for a callback were made although most of the interviews were conducted at the initial dial-up. Some needed one or two callbacks and only a few needed more than two callbacks. One respondent did not answer, and after five attempts to reach the respondent, no further attempts were made.

No respondent refused to participate in the present survey, although one respondent did not have the time to do it. The respondent was called two times and at both occasions he gave the same reason for not participating at that particular time, so no further attempts to include him in the survey were made. All of the respondents approved to be contacted by Aalborg University again (except for the two who did not participate), should the need for further inquiries into their answers arise. Only one respondent was a mistake in the sample (a fur breeder), but this respondent was taken out of the list of respondents and his answers were deleted. It is not known whether any of the respondents participated in the survey from *FEAT2015*.

4.2 *Formulation of the Questions in the Present Survey*

This section will describe the application of Kleinknecht's method into the present survey and to the measurement of innovation in farming.

The survey from *FEAT2015* contained an introduction before the questions on the development types were asked. This very short introduction is meant to be a definition covering the questions about *all* the types of development in the survey. In the present survey, elaborations of *each* of the types of innovation are made, thus increasing the chances of respondents being fully aware of what is asked for.

The first four questions are related to the four innovation types as described in the *Oslo Manual* (which are *product, process, organisational* and *marketing innovation*). The difference from *FEAT2015*, and in accordance with Kleinknecht's methods, definitions of what is asked for are provided along with examples of both what it is but also, in three of the cases, what it is not. For instance, part of question one read:

“Process development is if you implement one or more new methods of producing that have not been seen before on your farm. It can be methods that you, as far as you know, are the only one who uses, or it can have been seen in other businesses or on other farms. Process development is not for instance small adjustments or purchasing of machinery to handle increased productivity. But it can be purchasing of new machinery that has a new technology, compared to what you used to have...”

⁷ Included in this share are the farms placed on Sjælland in the former Storstrøms Amt

As a comparison, the question on process innovation in the *FEAT2015* survey read:

“*Has your business... developed one or more new production processes within the last two years?*”⁸

What also is to be specifically noted in this formulation is that a process of mediation has taken place. This essentially means that the complex definitions from *the Oslo Manual* have been *translated/mediated* into daily language which is understood more easily. With this formulation, emphasis is also put on the *new to the firm* perspective in *all* the questions in the present survey; this is because *new to the firm* is only mentioned in relation to the questions on *product innovation* in the *FEAT2015* survey – *new to the firm* is not mentioned in connection with questions regarding other types of innovation in the *FEAT2015* survey. The *new to the firm* perspective is established in order to avoid that the respondent may think that development refers more to an *entrepreneurial perception* of the term and that any development needs to be *new to the world* in order to qualify as a development.

The Oslo Manual defines that the minimum requirement for an innovation is that it is new to the firm. Therefore, an innovation can be new to the world or new to the market, but it *has* to be new to the firm in order to be an innovation. Two main reasons for this are: (1) Adoption of innovations is important for firms, and (2) the main impact of innovations on the economy stems from the diffusion of innovations to and from other firms (OECD, 2005, 38). Another argument has to do with measurement as firms more often know if the innovation is new to the firm, but not if it is new to the market or to the world (Godin, 2005, p. 19).

This perception of novelty has been challenged and the arguments include that the introduction of a product in a firm, which was first employed by another firm, is not an innovation, but merely a response to the market. A number of other arguments exist but the central point is that the perspective that an innovation has to be *new to the firm* in order to be an innovation “*does not sufficiently address the competitive environment in which innovation occurs*” (Salazar & Holbrook, 2003, p. 12). Instead, the perspective of *new to the market* is proposed as this gives a better indication of the level of novelty and *uniqueness* that an innovation must possess. Arguably, this would make innovation studies somewhat more interesting as it is more aligned with the *entrepreneurial* perception of innovation. The availability of data poses as a significant methodological challenge for academic researchers who will find it a considerable barrier to gain access to relevant cross-firm knowledge (Salazar & Holbrook, 2003, p. 12), although questions regarding the novelty of innovations (if innovations are new to the world or to the market) are incorporated in some existing surveys.

Returning to the present survey, the process of translation/mediation is done with all four questions relating to innovation. This stands in contrast to the survey from *FEAT2015* where only a short introduction served as a definition of concepts.⁹ The effect is that the farmers have a clear idea of what is asked for in each question in the present survey, and thus the results are very precise.

⁸ Own translation

⁹ Extended definitions were included by means of *help screens* which would *pop up* on the interviewers computer screen in case the respondents had inquiries regarding specific questions

The two questions following the first four on the innovation types are not meant as control questions of the respondent, rather, they are clarifying questions that are asked with the aim of finding out how the respondents understand the term *development*. These questions are, unlike the other questions in the survey, open questions, meaning that they are qualitative. These two questions are where the farmer is allowed to make her/his own formulations: Question five is meant to let the farmer speak freely about the term *development*, while question six is meant for the farmer to put her/his answer into a concrete context, further clarifying the perception of the term.

5 Findings

From the questions described above, the present survey showed the following results in relation to the level of innovation among farmers within the last two years: 17 per cent of farmers have carried out one or more product innovation(s); 64 per cent have implemented one or more process innovation(s); and 49 per cent have implemented one or more marketing and/or organisational innovation(s). An overview of the results can be seen in figure 3: *Innovation in Danish farming according to the present survey data*.

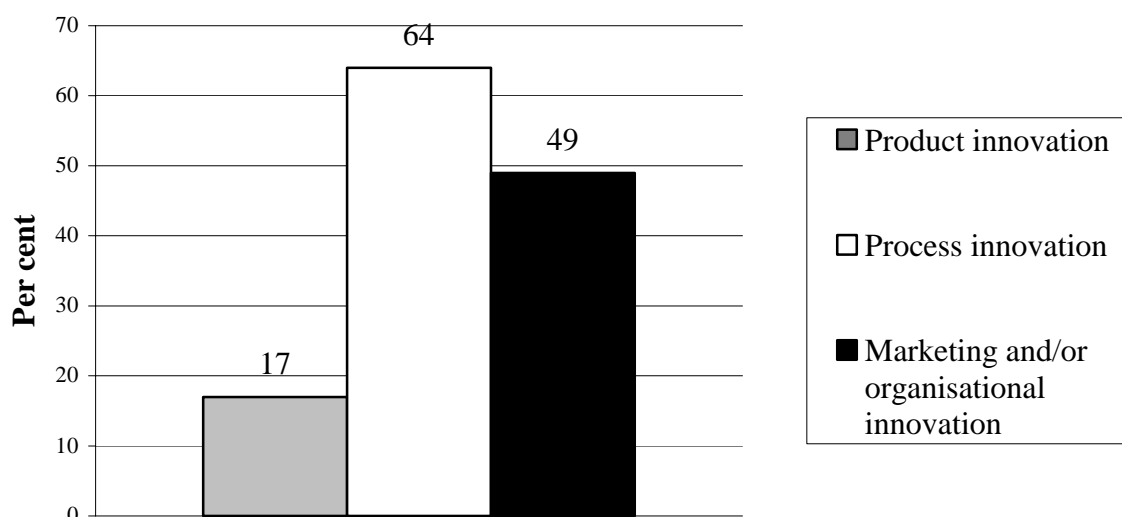


Figure 3: Innovation in Danish farming according to the present survey data

In relation to the types of innovation, and the level of innovation corresponding to each type of innovation, it is clear that process innovations are dominating, product innovations are those least frequent and organisational and/or marketing innovations are in the middle. A clarification of the reason(s) for this distribution will not be initiated in this article, but is served as a suggestion for further research. The distribution *may* relate to the *specific character* of each of the innovations, and a quick glance at the qualitative data reveals that almost each and every of the individual innovations are of different character. Because of this, no further elaborations are made in respects to the *character* of the innovations, as this task is beyond the scope of this article.

In addition to the types of innovation/development, respondents were asked to describe how *they* understand the term *development*. While many of them gave descriptions baring close resemblance to especially the definitions of product and process innovation,¹⁰ many respondents associated the *structural development* with the general term *development*. The *structural development* refers to the ever decreasing number of farms, and that farms are becoming increasingly larger – a process which has been ongoing up until today and presumably will continue in the future. According to estimations made by the author of this article, almost half of respondents (45 per cent) associate the *structural development* with the general term *development*.

6 Conclusion and Perspectivation

Based on the findings in the previous section, it is concluded that the levels of innovation in relation to process, organisational and marketing organisation in the *FEAT2015* survey data are underestimated, hence, this has a negative impact on the validity of the survey data.

The reason for the underestimation relates to the understanding of the term *development* and the lacking definition in each question, in connection with the conduct of the survey by *FEAT2015*. From the evidence provided in this article it would seem that farmers and *FEAT2015* do not perceive *development* to be the same thing, despite the fact that extensive pilot tests of the *FEAT2015* survey were performed. While *FEAT2015* is using the term *development* as a synonym for *innovation*, farmers associate *development* with other things than innovation, such as the *structural development* in Denmark. One could say that in some cases *FEAT2015 is asking in east, and farmers are answering in west*. A solution to the problem of underestimation is provided, as questions on each type of innovation is accompanied by a clear and easily understood definition of precisely what is asked for in each question.

The underestimation may also relate to farmers having a different perspective on development, rather than the *new to the firm* perspective as described in *the Oslo Manual*. Very little emphasis is put on the *new to the firm* perspective in the introduction to the survey by *FEAT2015*, which might have the result that respondents either miss this point or forgets it as soon as the first question has been asked. Thus, insecurity about when a *development* is actually a *development* may arise. Farmers are not fully capable of knowing if the perspective is *new to the firm* or *new to the world*, hence, they may apply the more entrepreneurial view on *development* to be safe, interpreting *development* as having to be *new to the world* to qualify.

Based on the findings presented in this article it is likely that a clear definition of development/innovation is needed for each question in surveys measuring innovation in farming. It would seem that insecurity about the details of, in this case, the term *development*, is likely to be the reason for underestimation of development/innovation in the *FEAT2015* survey data. The reason for the underestimation in connection with this insecurity can be referred to as a *principle of*

¹⁰ This may relate to the explanation for the distribution of innovation across the different types: Because farmers are aware of especially process innovation, they may actively seek it as they are familiar with the concept and what advantages it may include. On the other hand, this does not explain the lower level of product innovation. Hence, this remains speculations only

carefulness^{11 12} among farmers, where underestimation is caused by the respondent applying e.g. a *new to the world* perspective, so that the respondent does not *over-credit* himself in the survey if he answers yes to having implemented any type of development. It could also be that the farmer simply associates, in this case the term *development*, with something completely different, which does not seem to correspond with what is asked for in the survey. Thus, farmers answer *no* to having implemented any developments.

A final point of explanation for the low level of innovation indicated in the *FEAT2015* survey data is related to the organisation of Danish farming and the systemic nature of innovation: Innovation activities among Danish farmers are closely connected to other actors, such as research and development organisations, and other knowledge creating organisations. Strategic decisions, also in connection with innovation, are made in close cooperation with advisory functions, such as the *Danish Agricultural Council*. Knowledge creation and innovation are activities that are spread across a range of actors linked to farmers, and this transforms the risky processes of innovation into processes of *implementation* as innovations most often are tested elsewhere before implementation on farms.

This co-operation is based on the strong linkages between the advisory system and almost all farmers in Denmark – an organisation dating back to the 19th century and the forming of the co-operative movement. This laid a basis for a non-competitive environment *between farmers*, and a co-operative farming industry.

Having presented the findings and conclusions in this article, and taking these into consideration, the *FEAT2015* research project has a better foundation for making well funded conclusions.

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Comments and discussions with associate professor Jesper Lindgaard Christensen throughout the research process leading up to this article are greatly appreciated. So too are suggestions and comments from associate professor Jan Holm Ingemann.

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¹¹ Known from Danish accounting (as *forsigtighedsprincippet*) where company assets are valued according to their lowest possible value, in order to avoid overestimation of assets. The rule of thumb is that underestimation is preferred to overestimation

¹² Redefinitions of words or terms that define other issues is most often not a good solution. However, in the light of the very similar essences of importance, it is applied in this definition

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