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**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
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Methodologies for Conducting Market Studies - Note by Denmark

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More documents related to this discussion can be found at www.oecd.org/daf/competition/market-study-methodologies-for-competition-authorities.htm

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Denmark

1. Introduction & background

1. In Denmark the Danish Competition and Consumer Authority (DCCA) conducts different types of studies e.g. shorter analytical articles, inter-ministerial task force analysis, political follow-up analysis and major in-depth market studies. The following focuses on the major in-depth market studies.

2. The Danish Competition Act states that the DCCA can carry out market studies on its own initiative or on behalf of the Minister of Industry, Business and Financial Affairs. The Danish Competition Council (DCC) is independent from the Ministry of Industry, Business and Financial Affairs and has the overall responsibility for the studies and approves all market studies conducted on the DCCA's own initiative. In the DCCA the Office of Market Studies and Economy is responsible for most market studies. The studies are conducted in cooperation with employees from other units with expertise on the specific market.

3. In the past two years the DCCA has completed four major market studies along with a number of different types of studies while a fifth is on-going and expected to be published in June 2017:

- Competition on public procurement through central framework agreements (published in April 2015)
- Competition in the market for short-term credit (published in May 2015)
- Public sector activities in commercial markets (published in May 2016)
- Competition in the distribution of medicines (published in October 2016)
- Competition in the market for mortgage loans (on-going – expected published in June 2017)

4. Market studies are usually conducted as a precursor to competition or consumer advocacy where it appears that the market is not functioning well for consumers. The studies will usually contain recommendations on how to improve competition. The Ministry of Industry, Business and Financial Affairs or other relevant ministries are not obligated to act on these recommendations. However, each of the four recently completed market studies has, since their publication, been subject to political action following up on the recommendations put forward. It is a priority for the DCCA that the recommendations put forward become subject to political action.¹ The political follow-up on previously published market studies and/or enforcement of the Competition Act has led to changes in e.g. the Business Rent Act, the Consumer Credit Act, the Planning Act as well as to the liberalization of the Danish book market, etc.

2. Data sources available for the DCCA when conducting market studies

5. The following will outline the general and commonly used data sources available for the DCCA and give examples from the recent market studies. When analyzing a

¹ The OECD peer review of Competition Law and Policy in Denmark from 2015 contains a table on recent market studies and analyses by the DCCA, recommendations, effects and status.

specific market the DCCA uses several different data sources. The Danish Competition Act states that the DCCA can acquire all information deemed necessary, e.g. accounting, transcript of books, electronic data etc., for the execution of the tasks assigned through the Competition Act. The Competition Act thus obligates the market participants to provide all data necessary for the DCCA to conduct the specific market study. This allows the DCCA to collect hard data from businesses and organizations connected to the specific market.

6. Furthermore, the DCCA uses existing open sources focusing on both national and international research. In addition to that, the DCCA has purchased access to different panel data. Additionally, the DCCA performs experiments when analyzing competitive and consumer problems or when developing recommendations.

7. Finally, the DCCA has extensive dialogue with market participants, governmental and non-governmental organizations, experts etc. to elaborate on the received data.

8. Greater significance will be attached to data providing *actual behavior or results*, e.g. data on consumer mobility from the Danish National Research Database DNRD, than to *soft data*, e.g. survey data on mobility. Where possible *soft data* will be used to support, explain and specify *actual behavior*. The different sources and their use are specified below:

9. *First of all* a comprehensive collection of hard data, questionnaires and qualitative information (from meetings, etc.) is obtained directly from the market participants. This will typically include financial data and behavioral data. These data will consist of data from market participants, consumers, potential competitors and suppliers.

10. In the recent study on mortgage loans this included data on turnover, profits, loans, risk exposure, supply of capital, etc. The data was used to describe in detail the supply side of the market and to analyze how changes to legislation and new capital requirements would impact the market.

11. *Secondly* the DCCA has access to the DNRD which provides high quality administrative data for businesses and individuals reported by third parties. For businesses this includes data on e.g. industry, employees and turnover. For personal data this includes data on e.g. consumption, income, education, demography, family etc. for the entire Danish population.

12. These data are used to uncover competition on specific markets through e.g. analysis on productivity, mobility and entry and exit rates. A detailed example is given later in this paper.

13. Access to the database is given for a specific market study. Thus, the DCCA only has access to data relevant for the specific market. The data are anonymized but can be used to analyze market concentration or market size.

14. For the on-going market study on mortgage loans a complete dataset on all mortgage loans – containing information on e.g. nominal debt, Loan-To-Value, indicator for fixed rate mortgages, indicator for interest-only mortgages, interest rate on the loan, and an identifier for the mortgage institution that provided/brokered the loan - held by Danish consumers between 2009-2015 was accessed through the DNRD and used to give a complete description of the demand side and to analyze the mobility of consumers between suppliers. This data was linked to a panel dataset from the Danish Tax authority which contained detailed information on every interest bearing bank loan and mortgage provided for Danish consumers between 2003-2011.

15. The combination of the two datasets provided a full panel data set for every Danish mortgage loan held by Danish consumers between 2003-2015.

16. *Thirdly*, DCCA has access to the Orbis database providing data on more than 200 million private companies worldwide making it possible to compare international companies and markets. The Orbis database consists of e.g. detailed overview, financial strength indicators and standardized credit risk information and can be used to analyze individual or groups of companies.

17. Access to the Orbis database was acquired in 2016 and the database was first used in the study on distribution of medicines. The DCCA has experienced challenges with varying cross border data quality.

18. *Fourthly*, the DCCA has access to a consumer panel consisting of 25 000 Danish consumers. This allows the DCCA to get a representative result of consumer behavior in most markets. The consumer panel is used in most major market studies as well as for enforcement issues e.g. merger control. An external supplier administrates the panel and a typical consumer survey has about 1 000-2 000 respondents.

19. A questionnaire for about 2 000 Danish consumers with mortgage loans is used to describe the demand side including consumer behavior and considerations in the market in the on-going study on mortgage loans.

20. *Fifthly*, the DCCA uses experiments when analyzing problems, causes and testing possible recommendations. Experiments provide user-tested data on e.g. specific new initiatives. For example, when trying to compose a front page for mortgage loans aiming at nudging consumer to compare different prices and institutes, the DCCA hired a company tracking eye motion to track the attention of consumers when reading loan documents. The data collected was then used in the final construction of the front page for mortgage loans.

21. *Finally*, when the market study is ready for publication the DCC approves the study for external hearing. An external hearing typically lasts three weeks and allows external stakeholders to provide additional or corrective data and critique. After the hearing the DCCA will include relevant new data before publishing the study.

3. Analytical methodology when conducting market studies

22. When conducting market studies the DCCA, on a general level, applies a problem-cause-solution-methodology:

- Which problems that weaken competition can be identified on the market?
- What are the causes of the identified problems?
- Which solutions will take corrective actions towards the identified problems and improve competition to the greatest extent.

23. Preliminary analysis focuses primarily on identifying problems restricting competition and the causes of these problems. Often problems will have been identified prior to - and contributing to - the decision of conducting a specific market study. Indications of problems restricting competition are systematically and continuously identified through different channels e.g. regular enforcement, advocacy and dialogue with governmental and non-governmental organizations.

24. When identifying and analyzing *problems* the findings are usually categorized in:
- Entry barriers
 - Expansion barriers
 - Problems linked to the demand side (e.g. inactive consumers)
25. In the on-going study on mortgage loans rising prices, low consumer mobility, low degrees of product innovation etc. were identified as problems for well-functioning competition.
26. A central part of the preliminary analysis are desk studies examining existing studies on the specific market, legal analysis and market comparison with similar countries.
27. Different studies may vary in methodology depending on the market and the characteristics of the problems and the causes hereof. If anticompetitive legislation is the cause of limited competition, the legal playing field and legal solutions will be given distinct attention. On the other hand if the problems are caused by e.g. inactive consumers, then behavioral analysis will be given distinct attention. The DCCA has a behavioral insight team aiding in creating behavioral solutions.
28. When analyzing problems and causes the DCCA will seek advice and mentoring from economic advisors. The advisors will be officially connected with the market study and provide guidance on any economic analysis. In the on-going study on mortgage loans Professors of Economics Hans Jørgen Whitta-Jacobsen and Claus Thustrup Kreiner – both former members of the Danish Economic Councils² – is a part of the analytical process and provides insights on economic issues.
29. Furthermore, Professor Torben Hansen gives insights on consumer behavior and marketing research methods. Finally, the DCC – consisting of both legal and economic experts – provides input throughout the market study process.
30. A central part of the market study process is the development of solutions that will take corrective actions towards the identified problems and improve competition to the greatest extent. When working with solutions the DCCA will typically invite external experts with in-depth knowledge of the market in question to participate. Through workshops they provide insights on the identified challenges and suggestions on how to remedy these challenges.
31. The DCCA then qualifies and categorizes the different solutions before testing the effects of the proposed solution through experiments where possible.
32. In the on-going study on mortgage loans the DCCA – beside the experiment with eye tracking mentioned above – carried out experiments on an app collecting all data needed for collecting and comparing mortgage loans and on the presentation of the financial loan offers presented on real estate agents' homepages. The experiments are conducted by external companies in cooperation with the DCCA's behavioral insights team.

² The Danish Economic Councils is an independent economic advisory body. The primary objective of the institution is to provide independent analysis and policy advice to Danish policy makers.

3.1. Example of data analysis

33. The following is an example of how the DCCA uses and analyzes data acquired through the DNRD. In this example data is used to analyze consumer mobility.

34. The data acquired through the DNRD can be used to e.g. draw a time series of consumer mobility. In the mortgage market study this was measured by the fraction of consumers who switched mortgage institution in any given year. Consumer mobility was compared to consumer activity measured by the (much higher) fraction of consumers who refinanced their loan in any given year and who missed a no-cost opportunity to switch mortgage institutions.

35. The propensity of consumers to switch mortgage institution was then measured at the municipality level to depict geographical patterns in consumer mobility. The analysis showed that consumers living in or near big cities had higher mobility than consumers located in remote areas far from the big cities.

36. The geographic analysis was supplemented with an individual-level cross sectional probit analysis relating demographic factors and the evolution in municipality-level house prices to the propensity for a consumer to switch mortgage institution.

37. The analysis made it possible to distinguish between regionally low mobility caused by deteriorating circumstances on the housing market in remote territories in Denmark and regionally low mobility caused by adverse demographic characteristics of debtors located in these areas – among other things low income, low education, high age and high Loan-To-Value.

38. Lastly, the data was used – in combination with yield data provided by the mortgage institutions – to calculate the fraction of debtors who should rationally have refinanced their loan in response to falling interest rates, but failed to do so. This fraction describes inactive consumers who missed the opportunity to obtain lower interest rates and consequently displayed low mobility because they simultaneously missed the opportunity to switch mortgage institution.