

**Documentation of statistics for
Patents 2017**

1 Introduction

The purpose of collecting data on trade in IP-rights is to estimate the size of and the development in the trade and use in Intellectual Property Rights (patents, trademarks, design, utility models) of Danish enterprises. These statistics was established on 2008 in cooperation with the Danish Patent and Trademark Office.

2 Statistical presentation

In the statistics are shown trade with IP-rights as well as the enterprises administration and use of these rights. Voluntary questions are to some extend included in surveys.

2.1 Data description

The purpose of the statistics is to show the size and the development in Danish enterprises' trade in IPR (patents, trademarks, design, utility models). The most important variables are:

- Type of IPR-trade (purchase, sale, licensing)
- Type of IPR traded (patent, trademark, design, utility model)
- Trade partner
- Trade within/without own activity/technological area
- IPR-strategy

Copyright is not covered by the statistics.

Besides the compulsory questions also a number of voluntary questions are asked. These are:

- Expectations concerning future trade in IPR
- Pirate copying
- Measures against pirate copying
- Advantages and barriers related to purchase and licensing in of IPR
- IPR and business development
- Barrier's to export of IPR or establishment in emerging markets

Not all the voluntary questions will be continued in future surveys.

2.2 Classification system

Fields of resource fields (9) based on NACE.rev2 codes,

2.3 Sector coverage

NACerev2 classes C to N.

2.4 Statistical concepts and definitions

Design: Many inventions have also a design (the external form), which can be design protected if the design meets the conditions for registration. Design is the design and appearance of a product, such as clothing, furniture or kitchen appliances. Design is therefore the physical appearance, not a technical function.

Enterprise: The economic unit.

European Patent: A patent issued in Denmark only provide protection in Denmark, like a foreign patent provides no protection in Denmark. In the context of the European patent cooperation you can file a European patent application (EP application) which can take effect in up to 38 European countries where the patent should apply. A European application may also include Denmark. The European Patent Office is the patent authority in Europe. Denmark along with several other European countries are members. In practice, you might apply for a European patent by the Danish Patent and Trademark Office.

IPR: IPR is the English abbreviation of intellectual property rights. IPR including patents, trademarks, designs and utility models. Copyright is not included in Statistics Denmark's trade in IPR).

IPR Active: IPR active means companies that have been granted rights within a given period. The rights include patents, utility models, trademarks and design rights.

Patent: A patent is a set of exclusive rights granted by a sovereign state to an inventor or assignee for a limited period of time in exchange for detailed public disclosure of an invention. An invention is a solution to a specific technological problem and is a product or a process. Patents are a form of intellectual property.

Patent trade: Trade with patents: Trade includes in addition to buying and selling; licensing (purchase and sale of licenses to exploit the patent).

Resource Field: A resource field includes, in principle, the industries that contribute to the production of related end products, and each resource field typically consists of industries with different location in the production chain. A resource area covers the whole value chain from primary producer to distribution by sale of end products - e.g. "from farm to fork".

Trade in Design: Trade in designs: Trade includes in addition to buying and selling; licensing (purchase and sale of licenses to exploit the design).

Trade in IPR: Trade in IPR: Trade includes in addition to buying and selling; licensing (purchase and sale of licenses to exploit the IPR).

Trade in Utility Models: Trade in utility models: Trade includes in addition to buying and selling; licensing (purchase and sale of licenses to exploit the utility model).

Trademark: A trademark is intended to serve as a hallmark of a company's products or the company itself. A mark must be represented graphically. Trademarks can consist of words, characters, slogans, letter and number combinations, or it can be a special shape of the product, for example a perfume bottle. Registration or use of a trademark concern is always the specific expression. The holder has the right to prohibit others from using the same word or figurative mark for their business or products.

Utility Model: If an invention is not patentable because it is not sufficiently different from the prior art, it may be possible to search the registered utility model. Utility models aimed at smaller technical creations and give like patents right to prohibit others from exploiting a specific invention. The purpose of utility models are especially to accommodate small business innovation and technical creations that do not qualify for a patent. Utility model protection is particularly common in furniture constructions and household tools.

2.5 Statistical unit

Enterprises.

2.6 Statistical population

NACE classes C to N and with more than 10 FTE (Full Time Equivalent).

2.7 Reference area

Denmark excluding Greenland and Faroe Islands.

2.8 Time coverage

2007-2014 and 2017

2.9 Base period

Year.

2.10 Unit of measure

Percentage of enterprises in certain groups/strata.

2.11 Reference period

In 2007 the enterprises were asked for information on trade in IPR during the latest 5-year-period. In 2008 they were asked of the trade during 2003-2007 and in 2008. For 2009 and following years enterprises are only asked for trade during the last calendar year.

2.12 Frequency of dissemination

Latest surveys are on 2017 and 2014. Previously surveys were conducted each year.

2.13 Legal acts and other agreements

The act on Statistics Denmark (Act no. 610 of 30 May 2018).

2.14 Cost and burden

The respondent costs are estimated to DKK 245.000 - every third year

2.15 Comment

Statistics Denmark can be contacted if more information is needed

3 Statistical processing

Annual data collection from a sample of 3,000 enterprises out of 17,000 with more than 10 FTE (Full Time Employed). The enterprises are grouped in 45 strata, each subdivided in two (prioritized/not prioritized)

The final weights are compiled according to total number of enterprises in each strata and the number of responding enterprises. In case unreliable data are observed, clarification is made via contact to the enterprises.

3.1 Source data

Trade in IPR is based on a survey of app. 3.000 Danish enterprises and information on NACE activity and size from statistical business register.

The sample represents about 17,000 enterprises. Enterprises which according to the Danish Patent and Trademark Office holds IP-rights are prioritized in the sample as well as enterprises with values of intangibles.

3.2 Frequency of data collection

The frequency have recently changed to every third year.

3.3 Data collection

Data are collected using a Web survey on <http://www.virk.dk>. Digital registration which are compulsory for all enterprises unless they have a dispensation.

[Oplysningssiden](#)

3.4 Data validation

Outliers in activities on size groups or in resource fields are controlled. Unlikely records are verified by contact to the respondent. Data from enterprises holding IP-rights according to Danish Patent and Trademark Office are subject to a high level of validation.

3.5 Data compilation

Simple estimate of weight by total number of enterprises N divided by number of enterprises answering in respective strata ($45 * 2$)

3.6 Adjustment

No further corrections.

4 Relevance

Statistics on trade in IPR meets some of the clients needs. Some clients could like to know the value of trade, which is not collected from enterprises. The Danish Patent and Trademark Office and business associations are main users of the results.

4.1 User Needs

Main users: Ministries, public institutions, business organizations, media, researchers and private enterprises.

Use: The statics is part of statistics covering the information society.

4.2 User Satisfaction

The published results satisfy some needs, further needs for number of transactions and value of trade in IPR.

4.3 Data completeness rate

Not relevant for these statistics.

5 Accuracy and reliability

The IP-rights traded is in some cases based on an estimate from the respondent, and therefore there are some uncertainty connected with the raised figures. Further, the sample strategy itself leads to uncertainty.

5.1 Overall accuracy

The quality of the results are considered as good within the framework of the sample strategy. The accuracy of the collected qualitative information on trade, IPR-strategy etc. is, based on general experience, considered good.

5.2 Sampling error

The showed uncertainty are based on the compiled Percentage of enterprises with trades in IPR 2014

Calculated on the Fields of resource the shares and respective confidence intervals (95 pct.) +/- are:

- All 3,3 +/- 0,6
- Food 2,8 +/- 1,1
- Furniture/clothes 6,0 +/- 3,7
- Tourism 0,1 (uncertainty can not be compiled)
- Building/housing 2,5 +/- 1,3
- ICT 4,6 +/- 1,6
- Transport 1,4 +/- 1,0
- Energy/environment 2,7 +/- 0,7
- Medico/health 5,0 +/- 0,7
- Other 4,7 +/- 1,8

The uncertainty is mainly due to low selection rate among smaller enterprises.

Further estimates for detailed levels of publication are available from our website under R&D and innovation/Patents

[Subject](#)

5.3 Non-sampling error

Very high response rate (over 95 pct.) therefore the non response have negligible influence on the results. The uncertainty linked to measuring are assessed as low.

5.4 Quality management

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

5.6 Quality assessment

The accuracy of the qualitative information on trade, IPR-strategy etc. is considered good, based on general experience in Statistics Denmark. The IP-rights traded is in some cases based on an estimate from the respondent, and therefore there are some uncertainty connected with the raised figures.

5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

5.8 Data revision practice

Only final statistics are published therefore no needs for revisions.

6 Timeliness and punctuality

Yearly as scheduled no later than a year after reference year.

6.1 Timeliness and time lag - final results

10 months after the end of the year of reference.

6.2 Punctuality

The statistics is published as scheduled.

7 Comparability

The Danish Patent and Trademark Office compile statistics on applications for IP-rights.

7.1 Comparability - geographical

No known statistics on trade in IPR exists.

7.2 Comparability over time

The statistics are calculated for the so-called Resource areas, which are coherent business areas. The resource area definition is based on the *Danish Activity classification*, Dansk Branchekode 2007 (DB07. For 2008 the statistics can also be calculated on basis of DB03.

Renewal of reference period: With the objectives of reducing the response burden and at the same time obtain higher precision in the calculations, it has been decided that from the reference year 2009 and onwards only information on trade during the last calendar year will be collected. The 2008-statistics are therefore a transition year for which information on trade in IPR is asked both for 2003-2007 and for 2008.

In conclusion, the comparability are high from 2008 an onwards.

7.3 Coherence - cross domain

There are no official statistics of which the variables are totally comparable to the statistic on trade in IPR. There are a number of statistics in which information are collected that are comparable to a certain extent. These are:

External trade in service, in which enterprises are asked for information on total purchase of patents, licensing, franchising, royalties etc.

Statistics on manufacturing industries' purchase of services, in which enterprises are asked for information on their purchase of licenses, royalties, type-approvals etc.

Statistics on enterprises research, development and innovation, where enterprises are asked whether they have purchased patents, licenses etc, or have applied for a patent during the reference year..

7.4 Coherence - internal

Reporting's are consistent therefore statistics will consistent as well.

8 Accessibility and clarity

These statistics are published in the StatBank under [Innovation and patents](#).

8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

8.3 User access

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

8.2 Release calendar access

The Release Calender can be accessed on our English website: [Release Calender](#).

8.4 News release

Not relevant for these statistics.

8.5 Publications

Publication only in Danish.

8.6 On-line database

These statistics are published in the StatBank in the following tables:

- [IPR1](#): Enterprises, who have traded in IPR by resource area (type of activity), IPR-category and Type of IPR-trade
- [IPR2](#): Enterprises, who have traded in IPR by size class, IPR-category and Type of IPR-trade

8.7 Micro-data access

The collected data is stored electronically. It is possible via the anonymous number of the enterprise, to link the collected data to other statistical registers of Statistics Denmark, for tables as well as for research purposes.

8.8 Other

Not relevant for these statistics.

8.9 Confidentiality - policy

The statistics are compiled by reference to Statistics Denmark's policy on confidentiality [confidentiality policy](#)

8.10 Confidentiality - data treatment

Data on single business units is not accessible. The statistics counts number of enterprises and never values. Therefore no specific rules for confidentiality are needed.

8.11 Documentation on methodology

Not relevant for these statistics.

8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

9 Contact

The administrative placement of these statistics is in the division of Science, Technology and Culture. The contact person is Ole Olsen, tel.: + 45 2977 1498, and e-mail: OLO@dst.dk.