

ESGI: European Studies on Gender Aspects of Inventions Statistical Survey and Analysis of Gender Impact on Inventions

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1. The ESGI project

About one year ago the ESGI project was proposed by scientists of the Project Netzwerk Frauen.Innovation.Technik to the European Commission. The proposal was successfully evaluated and therefore negotiations with the EU could be completed by the signing of the contract in May 2006. In October 2006 the project, which runs for two years, started its activities in the faculty of Maschinenbau und Verfahrenstechnik.

The project will contribute to the extension of the quantitative knowledge base on women in science in Europe. Within this project the gender impact on inventive activities of all 25 EU Member States within the time-span 2002 - 2004 will be investigated. The available knowledge base, which is very narrow up to now, indicates a comparatively low participation of women in inventive activities in relation to their participation in research and development. A complete study covering all 25 EU Member States is missing to this day. The method of the proposed project will be to use patents as an indicator for inventive activities. It includes the comparison of statistical data of the European Patent Office with statistical data of EUROSTAT, with the results of an online survey exploring the attitudes of patent applicants regarding the innovation climate in their institutions.

2. State of the art

One of the main aims of the European Union is to be the most competitive and dynamic knowledge based economy in the world by the year 2010. In order to reach this ambitious goal it is necessary to incorporate the full range of innovative and inventive potential of the society. Therefore the EU has a strong commitment to empower equal opportunities for men and women.

But even though there exists many projects to increase the number of women in science and technology— until now these efforts don't seem to be sufficient enough. Women are still under-represented in all sectors of research. E.g. the mean value of ISCED 6¹ graduated women in 2001 for the EU-15-States in science, mathematics and computing was 35.7% and in engineering, manufacturing and construction 20.6%, respectively². But in comparison with the situation in Germany these numbers are still relatively high. Compared to other European countries Germany shows a very low participation of women in science and technology. In general the number of women in research is much higher in the eastern than in the western states. Recent research shows, that the male image of engineering and technology is still prevalent in most European countries and only very slowly is deconstructed³⁴.

¹ International Standard Classification of Education, ISCED 6 is equivalent PhD-level

² European Commission and EUROSTAT, "She Figures" (2003)

³ Sagebiel (2006)

⁴ Stewart (2003)

A well known example demonstrates, that even today inventors are usually seen as male persons. “Daniel Düsentrrieb” or “Gyro Gearloose”, as this figure is called in English, is the idol of inventors. In contrast, female scientists often remain unknown in public awareness, although many women realised outstanding inventions especially in medicine, development of synthetical material, informatics and machine constructions. And who knows, that many useful objects of daily life, for example windscreen wipers, coffee machines and disposable diapers have been invented by women?

The percentage of female inventors who participate in patenting is not known until today. Even though the EU commission continuously monitors the development in research and technology, the sex of patentees is not recorded at the time of patent application. Only a few pilot-studies focussing on gender and patenting have been realised so far⁵. They indicate a very low participation of women in patent filing, especially in Germany, the state with the highest number of patent applications in all 25 EU-Member states. In a “gender-ranking” of six countries (United Kingdom, Netherlands, Italy, France, Spain and Germany) Spain reached the top place with 15,8 % and Germany a bottom place with 4.6% female inventors⁶.

3. Perspectives of the project

ESGI will substantially contribute to deepening the knowledge base in an area where significant improvements can be made, as it covers relevant aspects of a topic that can be considered under-investigated. With the research methods applied by ESGI the project has the potential to generate information that is highly useful and to provide recommendations for improved decision and policy-making both at EU and national levels.

Details on the project can be found under www.esgi.eu.

Literature:

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⁵ Burkhardt & Greif (2001)

⁶ Naldi & Parenti (2002)