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STATISTICS ON THE INFORMATION SOCIETY THE FINNISH EXPERIENCE

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Abstract: The pilot project of Statistics Finland proposes that the information sector aspect should be included in the regular production of statistics; a lot of relevant data exist which may be re-processed. Current definitions and classifications, however, need evaluation and an internationally harmonised framework for statistics on the information society should be developed. The lack of data on the demand of ICT-services in enterprises is obvious. Social impacts of information technology at work and in everyday life need deeper analysis.

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Statistics on the Information Society – the Finnish Experience

1. Background

While the transition to the information society is regarded as an important national objective in Finland, there is simultaneously concern over the problems related to implementation of the new technology involved. On the basis of the Finnish information society strategy report and proposals from different ministries, the Government took up a position in 1995 on its goals and the actions to be undertaken to develop the Finnish information society. As was noticed in an OECD report some years ago; technological development and change is a social process. We are living in a continuously changing society and it is essential for a statistician as well as for a decision-maker to distinguish which are the paths to follow and what, essentially, is changing.

As a part of the national information society strategy, Statistics Finland launched its pilot project Statistics on the Information Society, the target of which is to provide one possible approach for defining the scope of the information society. New information products have caused economic and social changes and introduced gaps into the on-going measurement programmes.

- The main target for the project is to build up an indicator system for measuring the progress being made towards the information society.

- A secondary target is to identify the main gaps in the production of statistics and to make proposals for the future development of statistics for the information society.

2. Evaluation of statistics

The phenomenon of the information society is of course basically a matter of definition. These problems of definition should be resolved at an international level. It will be important to improve the definitions and classifications of information activities, including the definitions of information industries, information products, information services etc. within an internationally harmonised framework. If national statistics on the information society do not allow for international comparisons, their practical value will be limited.

Statistics Finland is currently providing information on many relevant issues. Our statistics on telecommunications and the mass media, the labour force, employment and education are well developed and offer a lot of relevant information related to information society. Existing statistics on manufacturing and foreign trade concerning telecommunications and IT equipment also cover the area well. Re-processing of the statistics on the above topics may cause new problems, however.

One major source of difficulty in statistical classifications is that the boundaries between industries have become increasingly blurred. Technological, regulatory and commercial developments are leading to *a growing convergence* of telecommunications, computer and related services and the broadcasting industries, which means that it will be increasingly difficult to assess these industries on the basis of registers and industrial statistics. Furthermore, industrial 'establishment' as a statistical unit is poorly suited for use in connection with a networked information economy where virtual enterprises fulfil the tasks of separate projects. Moreover, the product classifications are becoming outdated, as it is not always easy to make a clear-cut distinction between commodities and services. Our statistics cover the

area of traditional goods well, but where the services sector production by products is concerned we have to rely on special surveys made by different organisations.

The statistics on *education* cover the formal schooling system, but the new openings for studying, e.g. through a virtual university or by attending adult education, need new measurement tools to evaluate life-long learning and continuous training at work. Computer literacy is considered important, but how can one measure it? The classification of *occupations* entails perhaps the most obvious defects, and the job descriptions in today's employment advertisements have less and less in common with the ISCO.

Household budget surveys give a good picture of the expenditure of households, and the amount of money spent on information goods and services, along with the stock of new technology products furnishes a good description of our modern society. Still more accurate information is needed on more detailed level, however, to achieve data on expenditure on information goods and services.

Statistics on the information society are today largely being produced by the private sector; e.g. a lot of data on the users of information and communications technology. Research institutes, private organisations, consultants and business companies have been quicker to respond to the growing need for such statistics than have the national statistical agencies. The role of the latter is to provide for continuity and comparability where the statistics already produced do not always meet the highest quality standards.

3. Experiences and further development in Finland

A lot of relevant data exist which can be re-processed and re-classified in order to describe the changing society. The members of the project group are representatives of our statistics departments and their task is to monitor all relevant information no matter what its sources may be, official statistics as well as private sources.

What will be the output of a statistical office? We have been asked for indicators and measuring tools which can be used to evaluate the information society process. One answer is set out in the report 'On the Road to the Finnish Information Society'. It is obviously necessary to obtain systematic feed-back from users. The project proposes that the following actions should be taken:

- The publication should be revised at two years intervals. Meanwhile, Statistics Finland should continue to develop its information society statistics and organise monitoring on a regular basis.

- The project proposes that information sector statistics on industrial production, foreign trade and employment should be produced regularly according to existing classifications and included in the biannual report on the information society. Later on, however, the information should be included in normal statistical publications. The traditional classification into agriculture, manufacturing and services should be supplemented with the information sector.

- Concerning the technical infrastructure, the project proposes that the Ministry of Transport and Communications should launch a project for statistics on the new technical environment of telecommunications and accelerate the project "statistics on information networks".

Though our knowledge of the supply side is at a tolerable level (telecommunications statistics, industrial production), *the demand side* is more or less unknown. Point-in-time information to establish a base year for comparisons is urgently needed in order to monitor the speed of development in the coming years.

- The picture provided of information technology infrastructure, investments and expenditure in enterprises is vague and based on estimates. The project suggests that a survey should be carried out among enterprises, based on experiences in the Netherlands and the Nordic Countries.

- Relevant data exist on information technology appliances in households, but nomenclatures for household consumption expenditure and the stock of appliances should be more detailed in the case of expenditure on new technology.

The social impact of information technology

- Information technology at work is exceptionally well monitored in Finland. Based on existing survey data, the project suggests a study of the effects of information technology on employment. Moreover a proposal has been made for a study of how working conditions and the nature of work have changed, and whether there are any differences related to age and sex.

- In order to acquire more data on the penetration of information technology into homes and everyday life, Statistics Finland have started a project "The Finns and the future information society: An interview survey on the experiences and abilities of Finns to use new information technology at home and at work." This provides a comprehensive account of the types of IT tools that the Finns use and to what extent they are used at home, at work, at school, for studying and in leisure time activities. Another target in addition to the Finns' IT skills and abilities is people's experiences of new information technology and their related expectations. The survey makes a good start towards monitoring skills and attitudes associated with new information technology among its users. The project suggests that monitoring should take place regularly as a separate survey or in combination with other surveys.

Statistics Finland has taken part in the Eurostat Task Forces and the Statistical Panel of the OECD. The project suggests further activities in an international context. The Eurostat Action Programme for Statistics for the Information Society - a proposal agreed upon at the 83rd DGINS meeting in Helsinki, in May 1997, gives good guidelines for international co-operation. International comparability is one of the main problems regarding statistics on the information society. The importance of global statistical harmonisation is also underlined by various market-driven factors, e.g. the information needs of multinational corporations.