

Measuring the impact of ICT use in business

THE CASE OF MANUFACTURING IN THAILAND

Prepared jointly by the UNCTAD secretariat and the Thailand National Statistical Office



UNITED NATIONS

United Nations Conference on Trade and Development

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United Nations

New York and Geneva, 2008

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The report is available on the UNCTAD website at:

www.unctad.org

UNCTAD/SDTE/ECB/2007/3

UNITED NATIONS PUBLICATION

Sales No. E.08.II.D.13

ISBN 978-92-1-112746-1

Acknowledgements

This report was prepared jointly by the UNCTAD secretariat, under the supervision of Susan Teltscher, Chief of the ICT Policy and Analysis Unit, ICT and E-Business Branch, and the Thailand National Statistical Office, under the supervision of Ruamporn Sirirattrakul, Chief of the Economic Statistics Analyzing and Forecasting Group, Statistical Forecasting Bureau. The main contributors were Diana Korka (UNCTAD) and Areerat Kittisomboonsuk (Thai NSO), who have worked closely together through 2007 to prepare the data sets, design the econometric model, carry out the analysis and draft the results. The UNCTAD secretariat greatly acknowledges the making available of statistical microdata by the Thai NSO. The work was carried out under the overall direction of Anh-Nga Tran-Nguyen, Director, the division for Services Infrastructure for Development and Trade Efficiency in UNCTAD and in Thailand under the direction of Jirawan Boonperm, Deputy Secretary General of NSO and Wilas Suwee, Director of the Statistical Forecasting Bureau.

During their internships with UNCTAD, Lidia Villalba contributed to the statistical analysis of the 2005 ICT enterprise survey and Sirirat Kiatichaipaibul made useful inputs to the interpretation of the Thai questionnaire.

Jose Luis Cervera Ferri delivered an econometric modelling training course to the staff of the Thailand NSO as part of the project and in preparation of the ICT data analysis, and provided helpful comments on the econometric analysis.

Useful comments were also received from Ugo Panizza, Marco Fugazza, Marcin Skrzypczyk, Albi Tola, Adam Gross, Oluwatobi Osobukola, Chengetai Masango and staff members of the ICT and E-Business Branch, in particular Angel Gonzalez-Sanz, Dimo Calovski, Scarlett Fondeur-Gill and Cécile Barayre El Shami.

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Executive summary

The report is the outcome of a joint project of UNCTAD with the National Statistical Office (NSO) of Thailand which builds upon the measurement of information economy statistics to enable the assessment of the economic impact of information and communication technology (ICT). This is one of the first studies to use official developing-country data to measure the productivity impact of ICT use in business. The project is part of UNCTAD's capacity-building programme on measuring ICT to help developing countries to improve the production and quality of their ICT statistics at the level of firms through an international "Partnership on Measuring ICT for Development". These data and the ensuing analysis on measuring the economic impact of ICT use aim to provide policymakers with better tools to design, monitor and evaluate their ICT strategies.

Information and communication technologies have received particular attention in Thailand as enablers of economic and social development. In the context of the national ICT plan, the NSO has collected a large amount of data on ICT use through its annual ICT surveys of the business sector, ICT household surveys and surveys of specific industries such as manufacturing and services.

This report shows a detailed analysis of trends in ICT use by the Thai business sector by looking in particular at the use of computers, the Internet and the web. This is done against the background of a continuous increase in the proportion of businesses using ICTs in Thailand. The study also reviews the specialized literature estimating the productivity impact of ICT use at the firm level in a number of developed countries. It then presents the results of the empirical analysis measuring the impact of ICT use on productivity in manufacturing firms, both at a general level and also by geographical region, industry branch, firm age and size.

The results indicate that the use of basic ICTs such as computers is important to firm productivity, particularly in countries where a significant proportion of businesses are still not using computers. The analysis also finds that, in addition to computer presence, Internet use and web presence are also reflected in higher labour productivity. The study shows that small and newly founded manufacturing businesses, especially the ones located in the north and north-east of the country, should receive more support both in terms of facilitating their access to ICTs and in terms of information campaigns on how ICTs can help to increase productivity, improve the quality of products and better respond to demand. Technical information on how businesses implement ICT solutions can provide additional guidance to set industry-specific ICT strategies.

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