

# 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



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business: the case of manufacturing in  
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## Contents

	<i>Page</i>
Acknowledgements .....	iii
Executive summary.....	vii
1. Introduction.....	1
Thailand's ICT strategy and policy.....	1
Background and objectives of the project .....	1
2. Data and statistical methodology.....	3
3. Overview of ICT use in business .....	4
General characteristics of the business sector.....	5
Use of computers.....	8
Use of Internet and web presence.....	11
Barriers to the use of ICT.....	18
4. ICT use in manufacturing firms .....	20
Use of computers.....	21
Use of Internet and web presence.....	21
ICT use and economic performance .....	21
5. Measuring ICT impact on labour productivity.....	23
ICT use and firm labour productivity.....	23
Complementary factors explaining the ICT–productivity relationship.....	24
Impact of specific ICTs on productivity.....	25
ICT investment, soft technologies and total factor productivity gains .....	27
6. Presentation of the model .....	28
7. Results .....	29
Differences between employment size groups.....	31
Differences between age groups.....	32
Regional differences.....	33
Industry differences .....	35
8. Conclusions and policy recommendations .....	39
Annex 1. Summary of literature on ICTs and productivity at the firm level.....	41
Annex 2. Summary of the variables used in the regression analysis.....	43
Annex 3. Correlation coefficients between the regressors used in the analysis.....	44
References .....	47



## ***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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