

Globalization and Technology Absorption in Europe and Central Asia

*The Role of Trade, FDI, and Cross-border
Knowledge Flows*

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Contents

Foreword	vii
Acknowledgments	ix
Executive Summary	xi
1. Introduction	1
Definition of Innovation and Knowledge Absorption	1
Diffusion of Knowledge in Support of Productivity Growth: Literature Review ...	2
Conceptual Framework: Economic Conditions and Capacities for Knowledge Absorption	4
2. Patents as Indicators of Technological Activity in the ECA Region	7
Patent Data Provide a View of the Knowledge Absorption Process	7
Implications for Policy	18
3. The Links among Knowledge Absorption, Trade, and FDI	23
Trade and its Benefits	24
Foreign Direct Investment	31
Discussion of Results with Implications for Policy	49
4. How Does FDI via Company Acquisition Impact Technology Absorption? A Case Study of Serbian Enterprises	55
Investment Climate and Sequence of Mergers and Acquisitions, and Greenfield FDI	57
The Background of the Serbian Privatization Program	61
Policy Implications from Case Studies	76
Appendixes	81
A. Statistical Tables for Chapter 2	83
B. Regression Variables Used in Chapter 3	85
C. Questionnaire for Company Interviews	87
D. Correlates of ICT and Quality Certification	93
Bibliography	115
LIST OF TABLES	
1. Correlations of “Composite” Measure of Absorption with Firm Characteristics [+] positive correlation, [-] negative correlation	xix

2. Comparing the Effects of Privatization on FDI versus Domestically-owned Firms	xxi
2.1. Top 10 Russian Generators of U.S. Patents	15
3.1. Trade Restrictiveness Indices	27
3.2. Logistics Performance Indices, 2007	30
3.3. Regression Results for New Product Introductions as Dependent Variable	39
3.4. Regression Results for Product Upgrades as Dependent Variable	42
3.5. Regression Results for Introduction of New Technology as Dependent Variable	44
3.6. Linear Regression Results Based on a “Composite” Measure of Absorption.	46
3.7. Regression Results Based on Composite Measure of Absorption, Panel Data	48
4.1. Results of the Serbian Privatization Program.	62
4.2. Revenue and Employment Trends Pre- and Post-acquisition	65
4.3. Productivity Trends Pre- and Post-acquisition	67
4.4. Financial Ratios Pre- and Post-acquisition.	69
A.1. Patent Citations in ECA and Comparator Regions	83
A.2. Hypothesis Tests for Equality of Sample Means.	84
B.1. Definition of Variables Used in Regressions	85
D.1. ISO Certification and Web Use across Sectors	97
D.2. ISO Certification and Web Use, Firm Size, and Age	98
D.3. ISO Certification and Web Use, Firm Ownership, and Trade Integration.	98
D.4. Variable Definitions	102
D.5. Determinants of ISO Certification and Web Use—Cross-Sectional Regressions	104
D.6. Determinants of Technology Adoption across Country Groups	106
D.7. Determinants of ISO Certification and Web-Use—Panel Regressions	108

LIST OF FIGURES

1. U.S. Patents Granted per Million Population	xiii
2. U.S. Patent Grants for the ECA 7 vs. India and China	xiv
3. Indigenous Patents and Coinventions in ECA: 1993–2007	xv
4. Trade Restrictiveness Index (TRI), 2005–06.	xvii
5. FDI Inflows as a Percentage of GDP, 2005.	xviii
1.1. Innovation and Absorption as Inputs into Growth and Productivity	5
2.1. ECA Region Patenting in the EPO	9
2.2. ECA Patenting in Europe, by First Inventor Country of Residence	10
2.3. ECA Coinvention by Partner Country	11

2.4. U.S. Patent Grants for the ECA 7, India, and China	12
2.5. The Expanding Role of International Coinvention in the ECA 7.	13
2.6. International Coinvention in Russia.	14
2.7. National Innovation Systems.	21
3.1. Overall Trade Restrictiveness Index-tariff (all goods), 2006.	28
3.2. Overall Trade Restrictiveness Index-tariff + non-tariff (all goods), 2006	28
3.3.	35
3.4.	35
D.1. ISO Certification and Web Use across ECA Countries	96

LIST OF BOXES

3.1. Measuring the Impact of Trade and FDI on Technology Absorption	34
3.2. New Foreign Competition: Lowering Profits and Raising Efficiency.	35
4.1. Methodology: Company Selection, Data Sources, Fieldwork.	63
4.2. A Closer Look at Productivity Trends	68
D.1. Identification Strategy	101

Foreword

This report on globalization and technology absorption in Europe and Central Asia is part of the Europe and Central Asia Knowledge Economy Flagship Studies produced by the Finance and Private Sector Development Department. Innovation and cross-border absorption of knowledge are central forces behind economic convergence and a more sustained knowledge-intensive growth. Absorption of technology is considered a necessary step to promote the development of human capital and the productive base, paving the way for innovations at the global knowledge frontier. Research and development, patents, trade, and foreign direct investment are major channels of technological absorption, allowing diffusion of new ideas and manufacturing best practices among countries and firms. These channels constitute the central focus of this study, which is the second publication in this Knowledge Economy series. The first title in the series examined the public financial support of commercial innovation. The third title of the series aims to address the importance of the restructuring and/or exit of existing public R&D institutions, and to provide policy lessons on Research and Development Institutes restructuring.

This study uses patent databases, surveys of enterprises, and case studies to investigate how the presence of specific channels of absorption molds decision making about technology at the firm level. Trade and FDI flows show considerable promise as catalysts for the region to upgrade its technology and move near the global technology frontier. Econometric analysis using enterprise surveys from all ECA countries helps us understand the conditions and policies that induce firms to incorporate external knowledge and technology into their overall growth strategies.

We find evidence of learning by exporting, underscoring the importance of trade as a driver of technology absorption. A case study of several manufacturing firms in Serbia complements this perspective, providing a detailed picture of the positive dynamics that are produced by FDI, particularly in terms of investment and risk-taking incentives that are critical for technology absorption. Examination of patent citations shows that cross-border knowledge flows remain weak. Consequently, science and innovation policies should foster greater integration of the region's substantial science and engineering resources with those of the rest of the world. These policies should encourage international collaboration and closer connection between the region's public sector R&D and global private sector efforts.

Fernando Montes-Negret

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