CANADA AND THE WORLD KLEMS INITIATIVE

by

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OVERVIEW OF THE WORLD KLEMS INITIATIVE

The Purpose of the World KLEMS Initiative Is to Provide Industry-Level Data for Growth of Output, Inputs of Capital (K), Labor (L), Energy (E), Materials (M), and Services (S), and Productivity for More Than Forty Countries Around the World.

The Growth of Outputs, Inputs, and Productivity at the Industry Level Is Crucial for Understanding the Sources of Economic Growth and the Nature of Structural Change.

Level Comparisons among Countries Are Essential for Analyzing Competitive Advantage.

The Ultimate Objective of the World KLEMS Initiative Is to Incorporate KLEMS-Type Data Sets into Official Systems of National Accounts for the Forty Countries.

MILESTONES IN THE WORLD KLEMS INITIATIVE

EU KLEMS: Completed June 2008. KLEMS Data Sets for 25 or 27 European Union (EU) Members Plus Australia, Canada, Japan, Korea, and the United States. **See:http://www.euklems.net/**

LA KLEMS: Established December 2009 at ECLAC/CEPAL, the Economic Commission for Latin America and the Caribbean, Santiago, Chile. **See:http://www.cepal.org/cgi-bin/getprod.asp?xml=/la-klems/noticias/paginas/4/40294/P40294.xml&xsl=/la-klems/tpl-i/p18f-st.xsl&base=/la-klems/tpl-i/top-bottom.xsl**

World KLEMS Initiative: Established at the First World KLEMS Conference, Harvard University, August 2010. **See: http://www.csls.ca/ipm/24/IPM-24-Jorgenson.pdf**

Asia KLEMS: Established July 2011, First Asia KLEMS Conference, Asian Development Bank Institute, Tokyo, Japan. **See: http://www.asiaklems.net/**

Third World KLEMS Conference, Tokyo, Japan, May 19-20, 2014. Research Institute of Economy, Trade and Industry.
See: http://scholar.harvard.edu/jorgenson/world-klems.

EUROPEAN UNION (EU) KLEMS

Two Volumes Reporting Results of EU KLEMS:

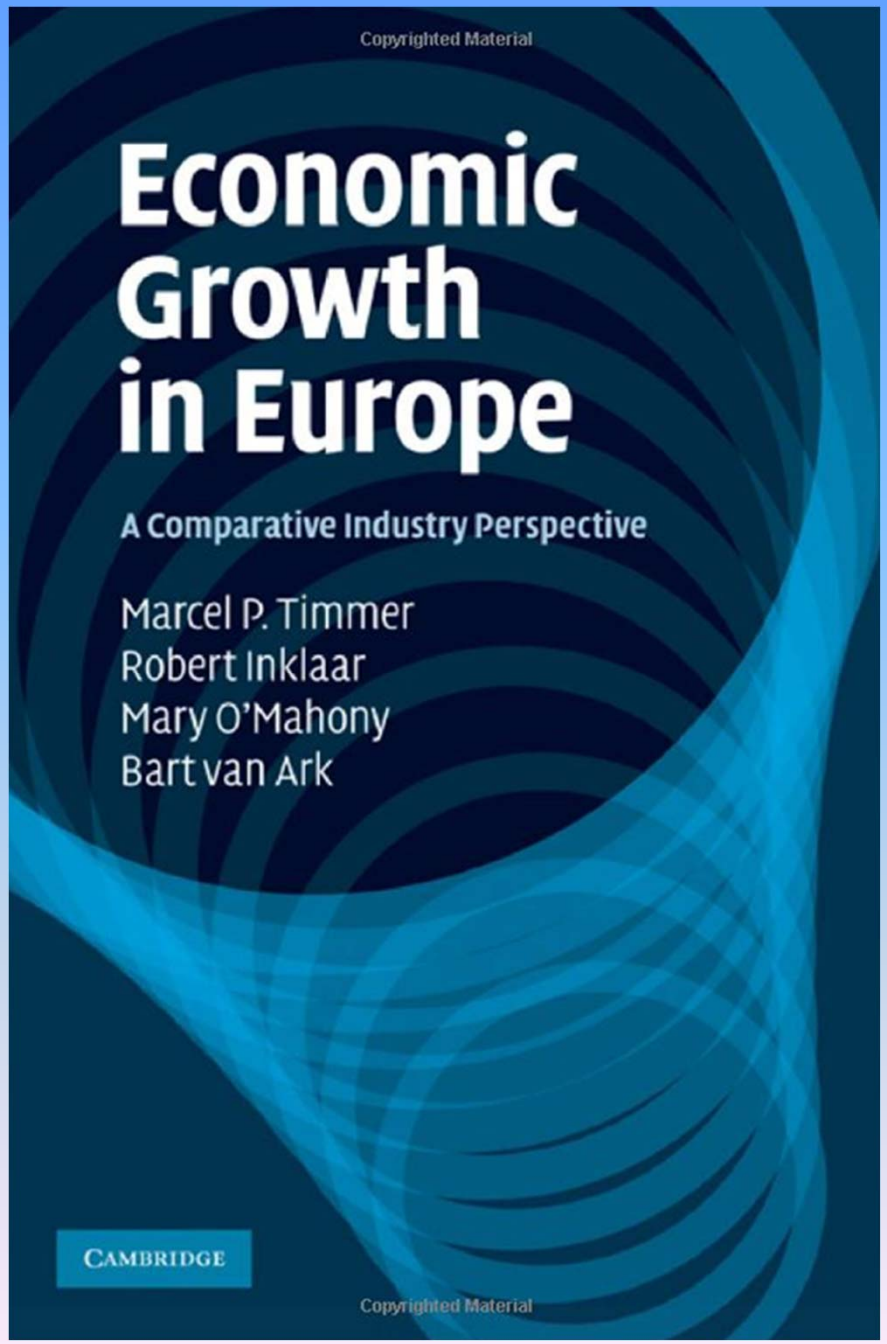
Marcel P. Timmer, Robert Inklaar, Mary O'Mahony, and Bart van Ark, *Economic Growth in Europe: A Comparative Industry Perspective,* Cambridge, Cambridge University Press, 2010.

Matilde Mas and Robert Stehrer, eds., *Industrial Productivity in Europe: Growth and Crisis,* Cheltenham, UK, Edward Elgar Publishing, 2012.

Key Findings: Weaknesses in the Knowledge Economy – Investment in Human Capital, Investment in Information Technology, and Innovation – Are the Main Sources of the Economic Growth Slowdown that Preceded the Current Economic and Fiscal Crisis in Europe.

Policy Implications: Establishment of a Single Market for Services in Europe Is Critical for Removal of Barriers to the Knowledge Economy and Revival of Economic Growth.

Updated Data: See: http://www.euklems.net/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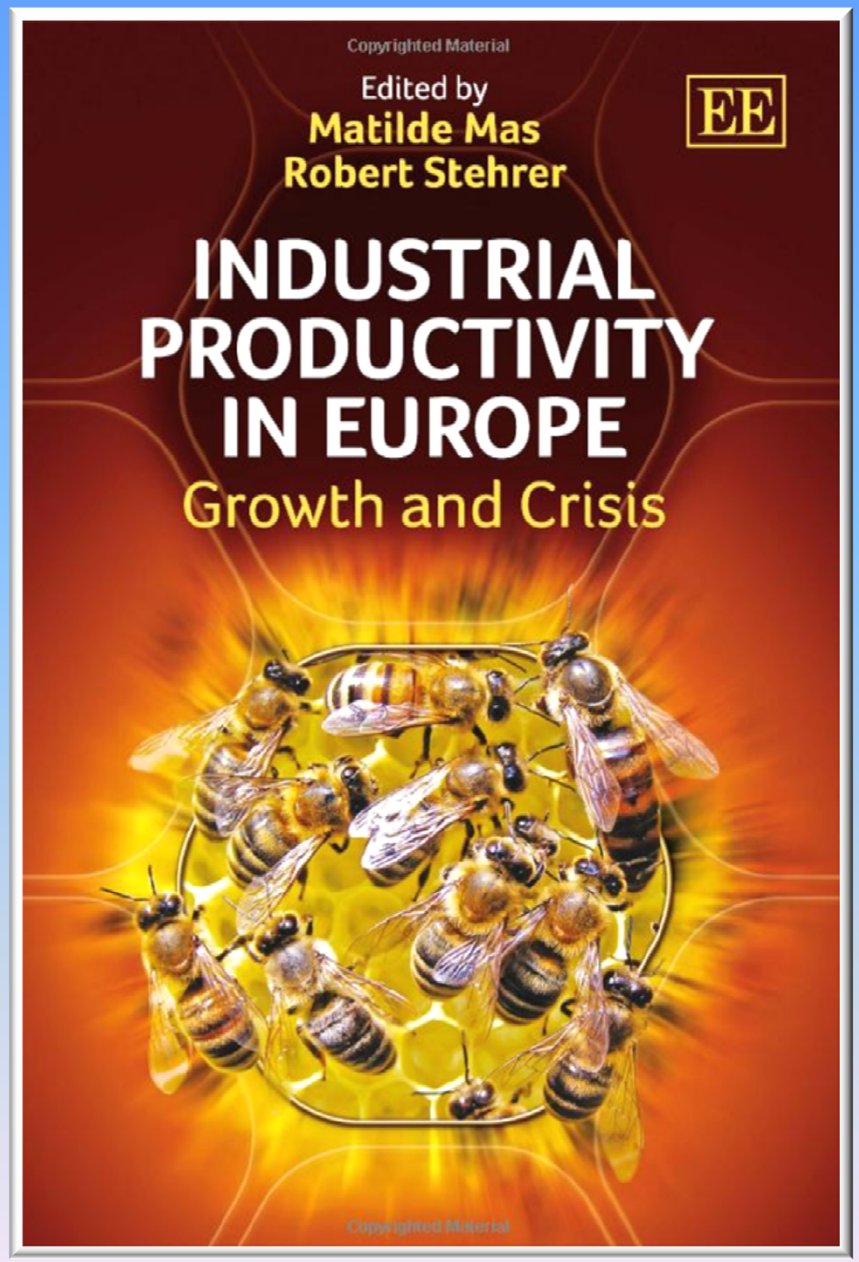
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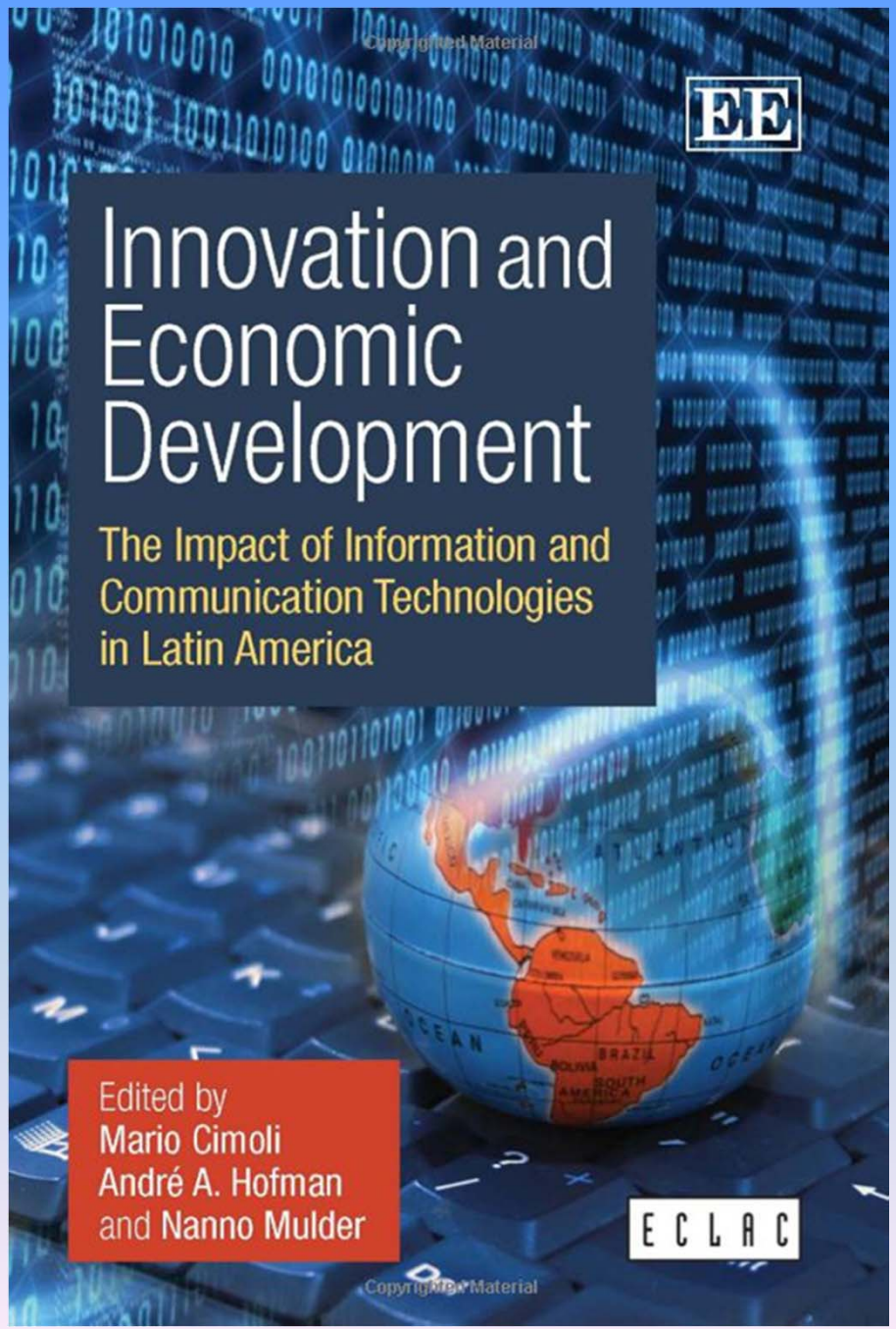
LATIN AMERICAN (LA) KLEMS

Results of Initial Conference Reported in:
Mario Cimoli, Andre A. Hofman, and Nanno Mulder (2010), eds., *Innovation and Economic Development: The Impact of Information and Communication Technologies in Latin America,* Northampton, MA, Edward Elgar.

Detailed Report on Mexico KLEMS:
INEGI (2013), *Sistema de Cuentas Nacionales de Mexico: Productividad Total de los Factores, 1990-2011,* Aguascalientes, Mexico, INEGI.

Key Findings: Presents a Complete Mexico KLEMS Data Set, Integrated with Mexican National Accounts, Using the North American Industrial Classification Systems (NAICS). Total Factor Productivity in Mexico Has Not Grown since 1990. Positive Growth Offset by Negative Growth in Mexican Sovereign Debt Crisis of 1995, U.S. Dot-Com Crash of 2001, and U.S. Financial and Economic Crisis of 2007-2009,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Instituto Nacional de Estadística y Geografía
SCNM
Sistema de Cuentas Nacionales de México
Productividad total de los factores 1990-2011
INEGI
INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA

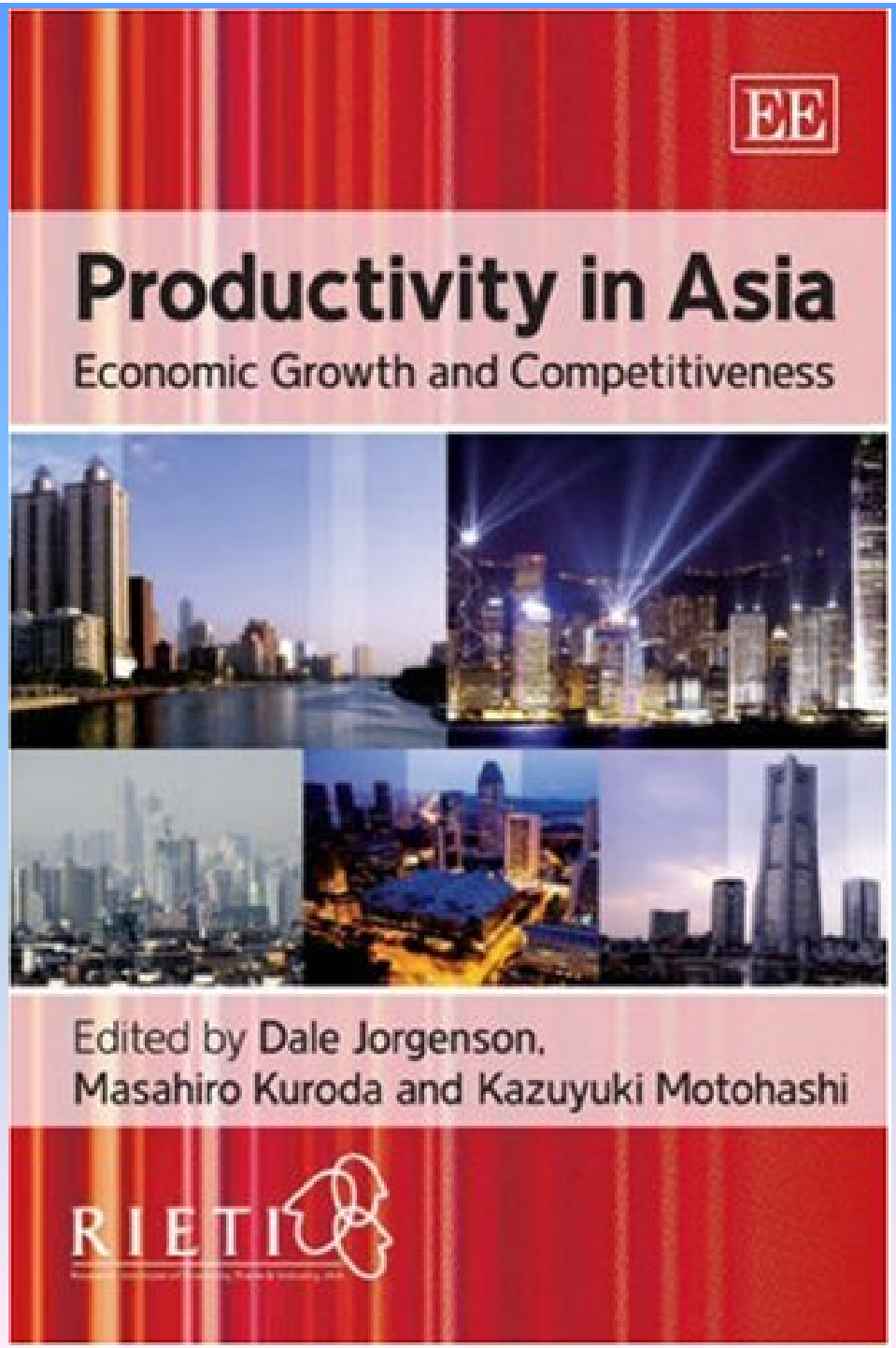
ASIA KLEMS

Asia KLEMS Was Preceded by International Comparison of Productivity among Asian Countries (IPAC) Project, Research Institute of Economy Trade and Industry (RIETI), Tokyo, Japan. Results Reported in:

Dale W. Jorgenson, Masahiro Kuroda, and Kazuyuki Motohashi (2007), eds., *Productivity In Asia: Economic Growth and Competitiveness,* Edward Elgar, Northampton, MA.

KLEMS-Type Data Sets for Japan and Korea: Japan Industrial Database (JIP); Korea Industrial Data Base (KIP) Updated Data Available on EU KLEMS Website. These Data Sets and Others Discussed at First Asia KLEMS Conference in Tokyo, 2011, and Second Asia KLEMS Conference in Seoul, 2013. KLEMS-Type Data Sets Have Completed for India, China, and Taiwan. A KLEMS-Type Data Set Is Under Construction for Malaysia.

Third World KLEMS Conference, Tokyo, Japan, May 19-20, 2014. Research Institute for Economy, Trade, and Industry.
See: http://scholar.harvard.edu/jorgenson/world-klems.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Productivity in Asia
Economic Growth and Competitiveness
Edited by Dale Jorgenson,
Masahiro Kuroda and Kazuyuki Motohashi
RIETI

AGENDA FOR WORLD KLEMS: GROWTH AND STRUCTURAL CHANGE

National Accounts. Ten Countries Provide KLEMS Data within National Accounts: Australia, Canada, Denmark, Finland, Italy, Mexico, The Netherlands, Sweden, the United Kingdom, and the United States.

Canada in World KLEMS. Statistics Canada Provides KLEMS-Type Data on Growth and Productivity for Canada, Covering1961 to 2012.
See: http://www5.statcan.gc.ca/cansim/a45?lang=eng&CORId=3764

Productivity and the Canadian National Accounts: Growth and Productivity Data Are Produced Annually, Using NAICS, and Are Integrated into the Canadian System of National Accounts,
See:http://www.statcan.gc.ca/nea-cen/list-liste/prod-eng.htm.

Key Findings: Growth of the Canadian Economy is Dominated by Growth of Human and Non-Human Capital. Canadian Productivity Has Not Grown since 1990 and Declined Sharply from 2005-2012.

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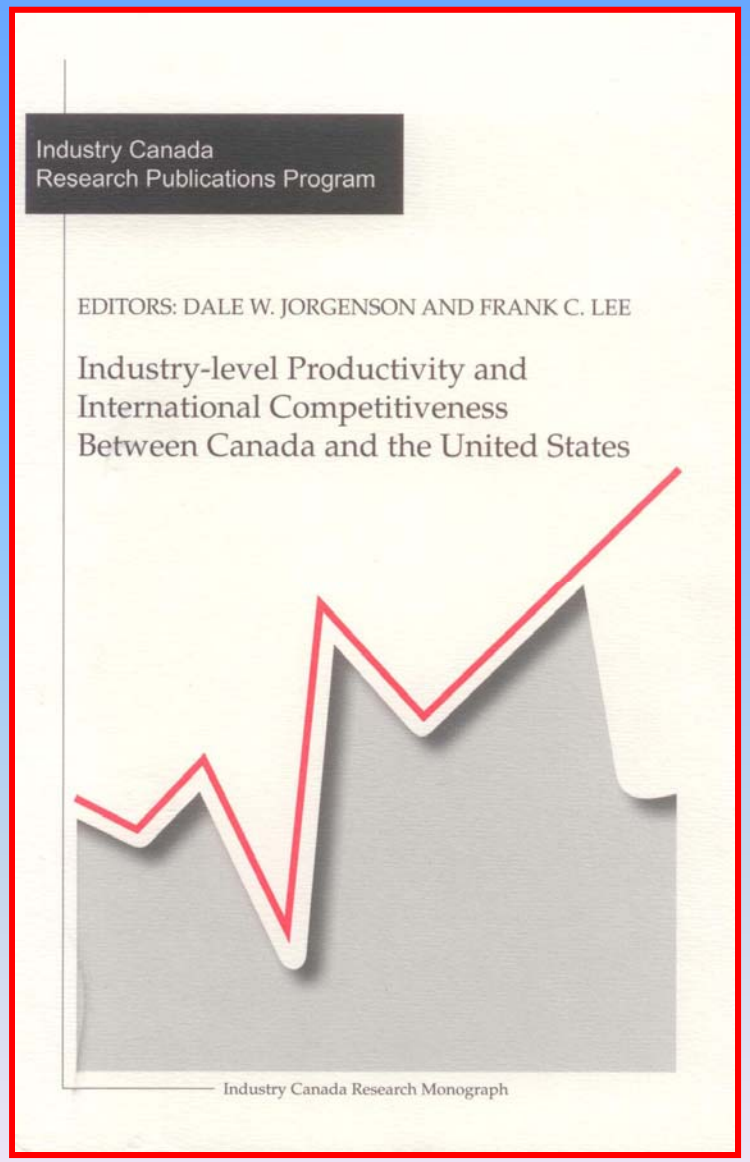
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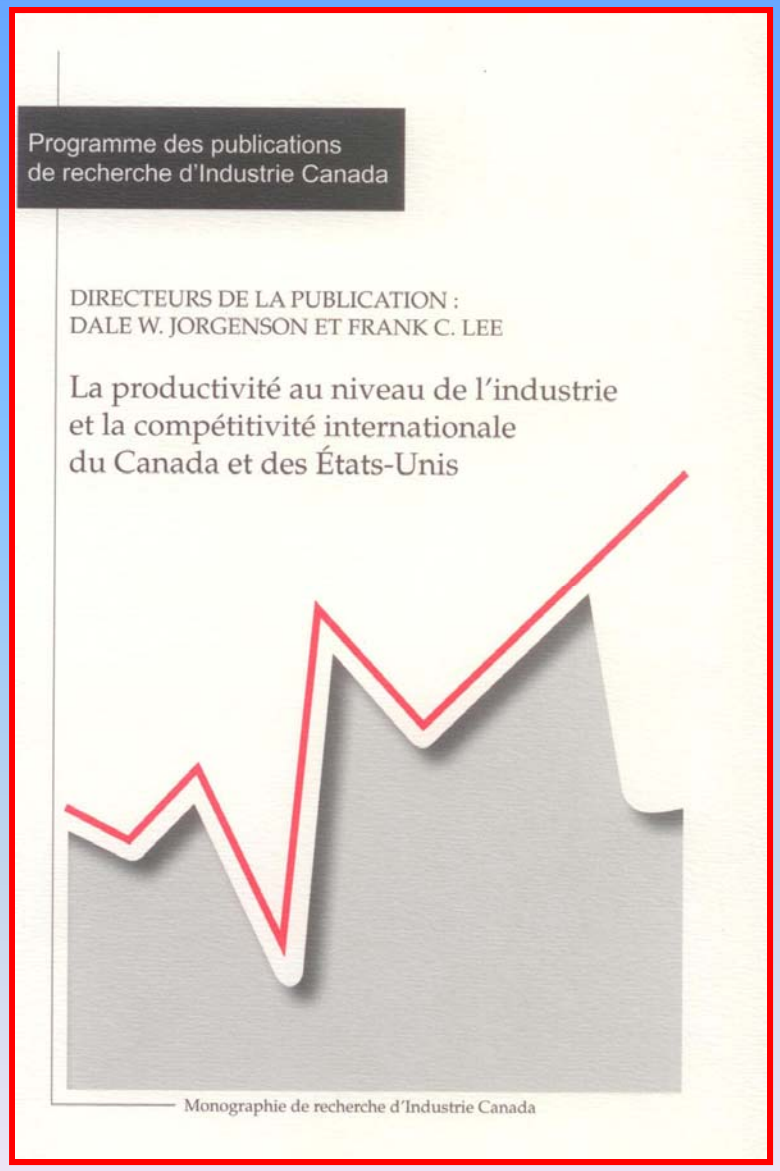
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THE AGENDA FOR WORLD KLEMS: INTERNATIONAL COMPETITIVENESS

Second Priority Is the Analysis of International Competitiveness. The Natural Framework for this is the World Input-Output Study (WIOD), Revised and Extended by OECD and World Trade Organization: **See: http://www.wiod.org/index.htm.**

KLEMS-Type Data Sets Can Be Linked by Industry-Level Purchasing Power Parities and Trade Data as Shown by Inklaar and Timmer (2012), "The Relative Price of Services," *Review of Income and Wealth,* on line December 20. These Data Can Be Used to Implement the Value Added Approach to Trade: Marcel P. Timmer, Abdul Azeez Erumban, Bart Los, Robert Stehrer, and Gaaitzen J. de Vries (2014), "Slicing Up Global Value Chains," *Journal of Economic Perspectives,* Vol. 28, No. 2, Spring, pp. 99-118.

Challenge Remaining Is to Link Data Sets for Capital and Labor Inputs, Using Industry-Level Purchasing Power Parities. See: Dale W. Jorgenson, Koji Nomura, and Jon D. Samuels (2014), "Industry Origins of the U.S.-Japan Productivity Gap," Third World KLEMS Conference, Tokyo, Japan, May 19-20.

THE AGENDA FOR THE WORLD KLEMS INITIATIVE: SUMMARY

Original Vision: World KLEMS Initiative Involves KLEMS-Type Data Sets for More Than 40 Countries. These Include the Countries that Are Participating in EU KLEMS, LA KLEMS, and Asia KLEMS, the Regional Organizations that Comprise World KLEMS.

Linking the Data: Data on Growth and Productivity Can Be Linked through Trade Data and Industry-Level Purchasing Power Parities from World Input-Output Data Base and Industry-Level Purchasing Power Parities for Capital and Labor Inputs.

Applications: Growth and Productivity Data Are Used to Analyze the Sources of Economic Growth and Changes in the Structure of an Economy. Linked KLEMS-Type Data Are Used to Analyze International Competitiveness, Including the Evolution of Global Supply Chains.