



# LAKLEMS Latest developments in KLEMS Latin America

André Hofman WorldKLEMS Conference 4-5 June 2018, Boston









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This project aims to create a database for measuring economic growth, productivity, employment creation, capital formation and technological change at the sectoral level, initially for four Latin American countries (Argentina, Brazil, Chile and Mexico) from 1990 onwards.

This work will provide a critical input for the analysis and evaluation of policy, in particular those related to competitiveness, innovation and the role of ICTs (Information and Communication Technologies) on economic growth. The database should facilitate the production of high quality statistics based on the methodologies of national accounts and input-output matrices. The measurements include the categories of inputs: capital, labor, energy, materials and services, identifying each ICT component.

The productivity measurement is carried out with growth accounting techniques (Jorgenson, Gollop and Fraumeni, 1987).





Based on official data of National Accounts will create a new base that corresponds with the methodological requirements of LA-KLEMS. This database will be among participating countries both in structure and methodologies and will enable the comparative study of productivity in the productive areas within Latin America and other countries participating in the project WORLD-KLEMS.

The project is coordinated by IDB and University of Santiago de Chile with support from the University of Groningen (Netherlands), Instituto Valenciano de Investigaciones Económicas (IVIE) and Harvard University.

In addition, to carry out the process of collection and statistical analysis with the participation of the National Institutes of Statistics and the Central Banks of the participating countries.



## **BACKGROUND LAKLEMS**



LA-KLEMS: Economic Growth and Productivity in Latin America The project "LA-KLEMS: Economic Growth and Productivity in Latin America" was approved on October 2016 by the Regional Public Goods Program (RPG). Its objective is strengthening capacities in national statistics institutes and central banks to produce better production statistics with the KLEMS methodology for decisionmaking on economic policies in the countries



# PARTICIPATING COUNTRIES



### •1th Stage

- Brazil (LAKLEMS Consultant)
- Chile (National Statistic Office of Chile, Central Bank of Chile)
- Colombia (DANE)
- Mexico (INEGI)

## •2th Stage

- Costa Rica (National Statistic Office of Costa Rica, Central Bank of Costa Rica)
- Peru (INEI)
- Dominican Republic (Central Bank of Dominican Republic)

## •3th Stage

- El Salvador (Digestyc, Central Bank of El Salvador)
- Honduras (Central Bank of Honduras)





The new web site













UNIVERSIDAD DE SANTIAGO DE CHILE



#### LAKLEMS : CRECIMIENTO ECONÓMICO Y PRODUCTIVIDAD EN AMÉRICA LATINA

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#### LA-KLEMS

El proyecto LA-KLEMS es la apertura hacia América Latina y el Caribe del proyecto WORLD-KLEMS, que ha creado una nueva plataforma para la información asociada al crecimiento económico, la productividad, la creación de empleo, la formación de capital y el cambio tecnológico. El proyecto genera estadísticas e insumos de informaciones esenciales para evaluar metas relacionadas con productividad y potencial de crecimiento económico y para elaborar políticas de desarrollo productivo.



#### WWW.LAKLEMS.NET





### Update of LAKLEMS database by topic

COUNTRY	COVERAGE TIME
Brazil	1995-2013
Chile	1990-2015
Colombia	1990-2014
México	1990-2016







#### Update of LAKLEMS database by topic

Values					
Variable		Brasil	Chile	Colombia	México
Gross output at current basic prices	GO	1995-2013	1990-2015	1990-2014	1990-2016
Intermediate inputs at current purchasers' prices	<u>II</u>	1995-2013	1990-2015	1990-2014	1990-2016
Gross value added at current basic prices	VA	1995-2013	1990-2015	1990-2014	1990-2016
Compensation of employees		1995-2013	1990-2015	1990-2014	1990-2016
Number of persons engaged	EMP	1995-2013	1990-2015	1990-2014	1990-2016
Number of employees	EMPE	NA	NA	NA	1990-2016
Total hours worked by persons engaged	H_EMP	1995-2013	1990-2015	1990-2014	1990-2016
Total hours worked by employees	H_EMPE	NA	NA	NA	1990-2016

	Prices				
Variable		Brasil	Chile	Colombia	México
Gross output, price indices, 2010 = 100	<u>GO_P</u>	1995-2011	1990-2015	1990-2014	1990-2016
Intermediate inputs, price indices, 2010 = 100	<u>II P</u>	1995-2012	1990-2015	1990-2014	1990-2016
Gross value added, price indices, 2010 = 100	VA_P	1995-2013	1990-2015	1990-2014	1990-2016

Volumes					
Variable		Brasil	Chile	Colombia	México
Gross output, volume indices, 2010 = 100	<u>GO_QI</u>	1995-2013	1990-2015	1990-2014	1990-2016
Intermediate inputs, volume indices, 2010 = 100	<u>II_QI</u>	1995-2013	1990-2015	1990-2014	1990-2016
Gross value added, volume indices, 2010 = 100	VA QI	1995-2013	1990-2015	1990-2014	1990-2016
Gross value added per hour worked, volume indices, 2010 = 100	<u>LP I</u>	1995-2013	1990-2015	1990-2014	1990-2016





#### New Update of LAKLEMS database by topic

Growth accounting					
Variable		Brasil	Chile	Colombia	México
Labour compensation	LAB	1995-2013	1990-2015	1990-2014	1990-2016
Capital compensation	CAP	1995-2013	1990-2015	1990-2014	1990-2016
Labour services, volume indices, 2010 = 100	LAB_QI	1995-2013	1990-2015	1990-2014	1990-2016
Capital services, volume indices, 2010 = 100	CAP_QI	1996-2013	1991-2015	1991-2014	1991-2016
Growth rate of value added volume (% per year)	<u>VA_Q</u>	1996-2013	1991-2015	1991-2014	1990-2016
Contribution of hours worked to value added growth (percentage points)	<u>VAConH</u>	1996-2013	1991-2015	1991-2014	1990-2016
Contribution of labour composition change to value added growth (percentage points)	<u>VAConLC</u>	1996-2013	1991-2015	1991-2014	1990-2016
Contribution of ICT capital services to value added growth (percentage points)	VAConKIT	1996-2013	1991-2015	1991-2014	1990-2016
Contribution of non-ICT capital services to value added growth (percentage points)	VAConKNIT	1996-2013	1991-2015	1991-2014	1990-2016
Contribution of TFP to value added growth (percentage points)	VAConTFP	1996-2013	1991-2015	1991-2014	1990-2016
TFP (value added based) growth, 2010 = 100	<u>TFPva_I</u>	1996-2013	1990-2015	1990-2014	1990-2016

Additional variables					
Variable		Brasil	Chile	Colombia	México
Labour compensation per hour worked	LAB_AVG	1995-2013	1990-2015	1990-2014	1990-2016
Average number of hours worked	<u>H_AVG</u>	1995-2013	1990-2015	1990-2014	1990-2016

Other Additional variables					
Variable		Brasil	Chile	Colombia	México
Gross value added per hour worked	LP	1996-2013	1995-2012	1991-2010	1990-2016
ICT Capital compensation, volume indices, 2010 = 100	CAPIT_QI	1996-2013	1995-2012	1990-2010	1990-2016
Non-ICT capital services, volume indices, 2010 = 100	CAPNIT_QI	1996-2013	1995-2012	1990-2010	1990-2016
ICT capital services per hour worked, 2010 = 100	CAPIT_QPH	1996-2013	1995-2009	1990-2010	1990-2016
Capital compensation adjusted for negative rental prices	CAP_GFCF	1995-2013	1990-2012	1990-2010	1990-2016
Non-ICT capital services per hour worked, 2010 = 100	CAPNIT_QPH	1995-2013	1990-2009	1990-2010	1990-2016
ICT capital compensation (share in total capital compensation)	CAPIT	1995-2014	1990-2010	1990-2010	1990-2016
Non-ICT capital compensation (share in total capital compensation)	CAPNIT	1995-2015	1990-2011	1990-2010	1990-2016

#### WWW.LAKLEMS.NET







#### Initial countries

•Disaggregation of the variables by Energy (E), Materials(M) and Services (S) for Argentina, Brazil, Chile and Colombia

#### •New Countries

Construction of *"historical series"* of output, capital and labor 1990-2015
Disaggregation of the series by more economic sector for the main variables
Disaggregation of the variables by Energy (E), Materials(M) and Services (S)







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