

# 36<sup>th</sup> IARIW General Conference

Paper Prepared for the 36th IARIW General Conference, Oslo, Norway, August 23-27, 2021

**Sectoral Purchasing Power Parities for Latin American Economies**  
By Wulong Gu (Statistics Canada) and André Hofman (Usach-LAKLEMS)

This article outlines the methodology, data sources and results of the construction of PPP for industry sectors for eight LA economies. The LA-KLEMS project aims to create a database on measures of economic growth, productivity, employment, capital formation in information and communication technologies (ICT) and other assets, as well as sector-level technological change for eight economies of Latin America (Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Peru and the Dominican Republic) for 1990-2018. It will provide important information for the evaluation of economic and social policies, in particular with respect to the contribution of ICT capital, labor and total factor productivity to economic growth and other variables related to competitiveness and sources of economic growth. The database should facilitate the sustainable production of high-quality statistics using the methodologies of national accounts and input-output analysis.

The LA-KLEMS project is now being extended to provide also level comparisons of output, capital, labor and intermediate inputs and productivity at the sector level for the eight Latin American economies. It complements the growth and productivity accounts component of the LA-KLEMS project by providing comparative levels. It provides important information on the difference in the level of labour productivity and output between LA economies and allocates those differences between factor inputs and Total Factor Productivity (TFP).

The comparison of levels of output, inputs and productivity is based on the volume index of output and inputs. For that purpose, nominal values of output and inputs are deflated by purchasing power parities (PPP) to remove the difference in relative prices between economies. The estimated PPP reflect price relatives that show the ratio of the prices in national currencies of the same good or service in different economies.

The methodology follows the one developed by Jorgenson and Nishirnizu (1978) and Jorgenson, Kuroda, and Nishimizu (1987) which provided a level comparison of output, inputs and productivity between the United States and Japan at both total economy level and industry level. That methodology was adopted and extended for constructing the Groningen Growth and Development Centre (GGDC) Productivity Level database, which provides a level comparison of output, inputs and productivity at a detailed industry level for a set of thirty OECD countries. It was also used for a level comparison of output, inputs and productivity between Canada and the United States (Baldwin, Gu and Yan, 2008) and several other studies.