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DECOMPOSITION OF INCOME GAPS BETWEEN CHINA, JAPAN AND THE UNITED STATES FOR *CIRCA* 1935: A PRODUCTION-SIDE PPP APPROACH AND RECONCILIATION OF PRODUCTION AND EXPENDITURE PPPS

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ABSTRACT

Understanding income gaps between countries and their determinants is important to the understanding of earlier economic development. In theory, inter-country income gaps can be decomposed into three effects, namely, a labour participation effect that is determined by age and gender structures of population and working hours per person employed, an industry-specific productivity effect, and an industrial structure effect.

Due to its "industry-of-origin" nature, the production-side purchasing power parity (PPP) approach is ideal to address the research problem because it not only enables the conversion of national income and labour productivity into a common *numéraire*, but also makes the decomposition of income gaps between nations into the three major effects. In this study, we use cases of China, Japan and the US in the mid 1930s to show how countries at different stages of development are affected by these effects and their implications for economic development.

This study consists of three exercises. Firstly, we construct the production-side PPPs for the major sectors of each country (agriculture, manufacturing-mining, transportation-utilities, trade-finance services and government) with the US as the reference country for *circa* 1935. Secondly, we reconcile the results with the expenditure-side PPP estimates for the same period made earlier by Fukao, Ma and Yuan (2007). Finally, we decompose the income gaps between these countries into the labour participation, labour productivity and industrial structure effects.

Key Words: International price comparison; production and expenditure-side purchasing power parities (PPPs); comparative income level and labour productivity; decomposition of income gaps among countries; economic development

***JEL* References**: L60, O47, P52