



## Reading productivity and economic trends

### Part 4. Setting agriculture in order—an important step toward development

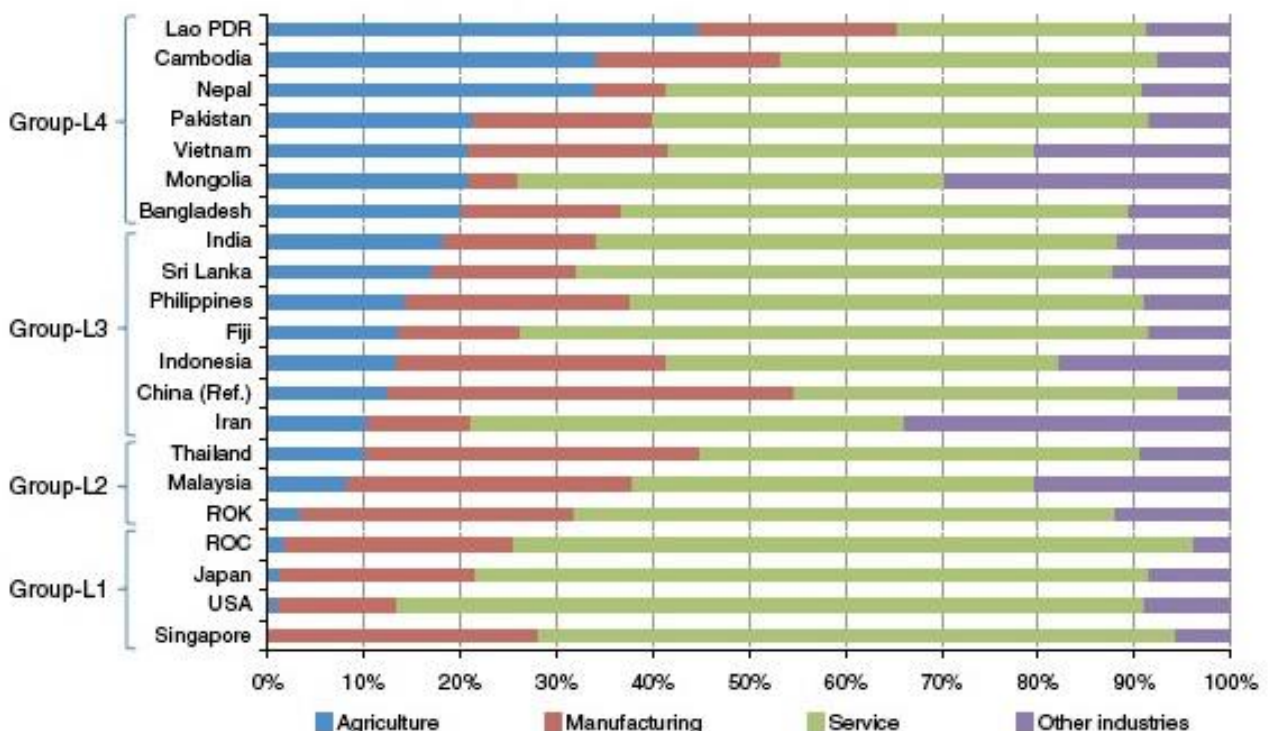


Dr. Koji Nomura is an Associate Professor at Keio Economic Observatory, Keio University. He is also chief expert of the APO Productivity Databook project, as well as project manager of the APO Productivity Database project. He has done extensive research on productivity, particularly on measuring capital. He has served as senior visiting research fellow at the Economic and Social Research Institute, Cabinet Office, Government of Japan; economist at the OECD; and fellow at the Center for Business and Government at Harvard University JFK School of Government.

Ms. Eunice Y.M. Lau is a visiting research fellow at Keio Economic Observatory, Keio University. She has served as economic advisor at the Industry, Economics and Statistics Directorate, Department of Trade and Industry, Government of the UK; Head of the Productivity Economics Branch, Economic Analysis Directorate, Office for National Statistics, Government of the UK; and lecturer in the Department of Economics, University of Portsmouth, UK.

Asia is a diverse region with countries at different stages of economic development. Part of this diversity is reflected in the national industrial composition. Economic data suggest that the more an economy relies on its agricultural sector, the lower its per capita GDP. Although the actual path of economic development may vary, an effective redeployment of resources from the agricultural sector appears to be an element common to a country's development outcome.

Industry Composition of Value Added in 2005



The accompanying chart shows national industrial composition of total value added in 2005 (Figure 13 in the *APO Productivity Databook 2008*). The share of agriculture ranged from 44.8% in Lao PDR to 1.4% in Japan. The data suggest a negative correlation between the size of the agricultural sector and the relative per capita GDP against the USA. That is, the lowest income group tends to have the largest agricultural sector, whereas the top group has the smallest.

Agricultural employment in Asia accounted for 45% of total employment in 2005, compared with 1.1% for the USA. In Asia, agriculture generally has a higher employment share than its corresponding value-added share, implying that the sector's labor productivity level lags behind that of the wider economy. In 2005, per-worker value added in agriculture was only 31% of that in the nonagricultural sector on average. Assuming other things being equal, this difference in the industrial structure alone, i.e., the relatively less productive sector having a much greater weight, explains 10–20% of Asia's 84% labor productivity shortfall against the USA.

In the context of long-term trends, this snapshot of cross-country comparisons in 2005 reflects regional progress rather than weakness. Despite the widespread variations, nearly all countries studied are making concerted efforts to shift resources from agriculture, and most experienced positive labor productivity growth between 2000 and 2005, ranging from 1.1% in Japan to 5.8% in Malaysia (Table 11 in the *APO Productivity Databook 2008*). The trend of a long-term relative decline of agriculture is unmistakable.

It is perhaps no coincidence that the Green Revolution and rural reforms preceded economic reforms and the subsequent takeoff in China and India in the 1980s (see for example, Sachs, J., *The End of Poverty*, 2005). The boost in rural income was significant when agriculture's share in total employment was around 70% in both countries in the 1970s. The subsequent emergence of highperforming new sectors (particularly manufacturing in China and IT services in India) held the key to the productive absorption of resources displaced from agriculture and spurred overall growth. By 2005, agriculture's employment share had fallen to 53.7% and 44.8% in India and China, respectively. However, the corresponding value-added share of 18.3% and 12.6% still suggests significant slack in agriculture in these two economies, despite their rapid economic growth. Underemployment, and informal production and employment, are suspected to be prevalent in agriculture in these fast-transforming Asian economies. Given the size of the sector, their impact on economic measurement could be significant.