

Structural Change & Inequality: Evidence from Asia



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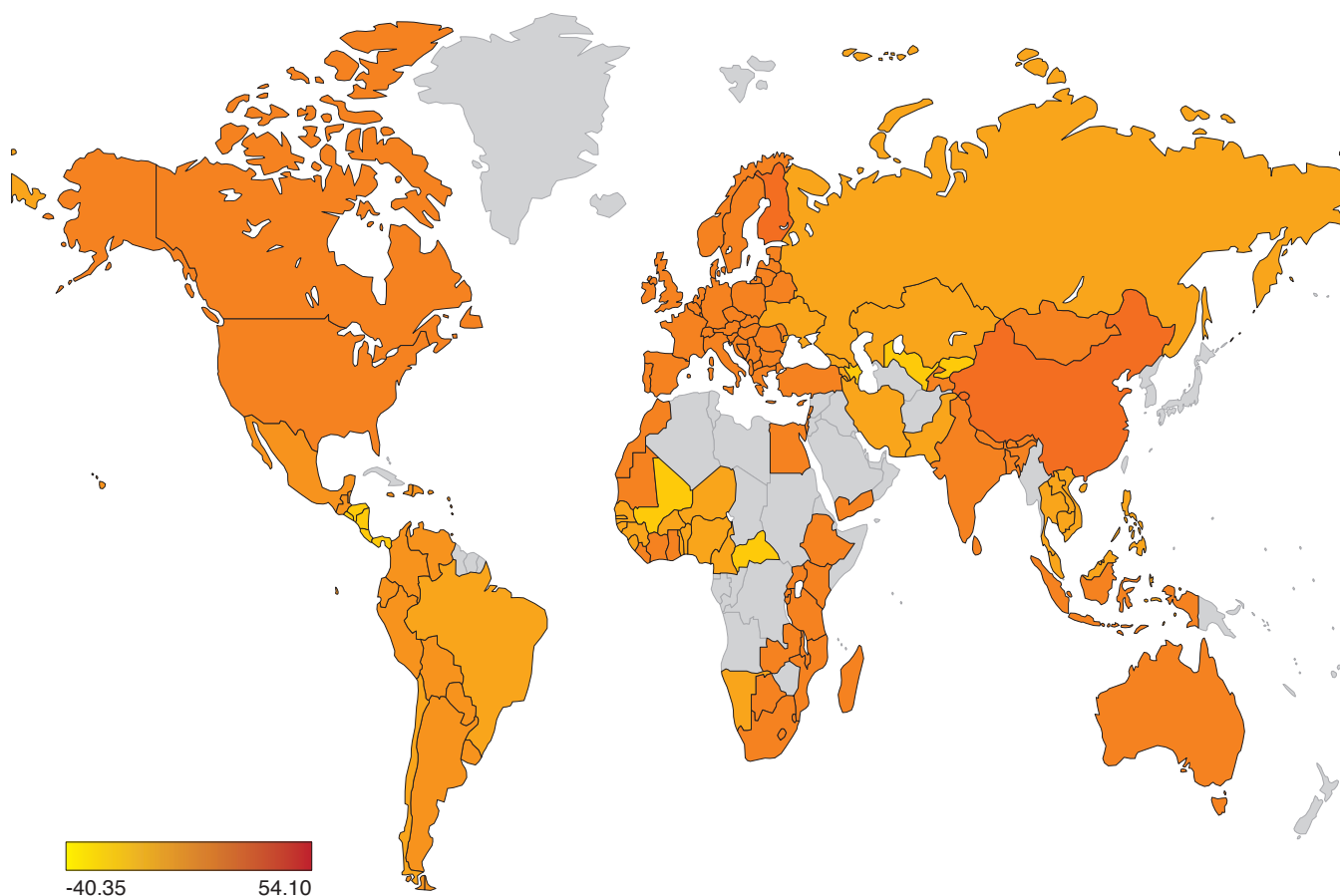
Heterogeneity in Within-country Inequality Across Countries: a Discussion

Through adopting Sustainable Development Goals (SDGs) countries have targeted to reduce income inequality within and across countries. Even though relative global inequality is found to have remained stable, or at best declined (Miguel Nino-Zarazua, Laurence Roope and Finn Tarp, “Global Inequality: Relatively Lower, Absolutely Higher”, *Review of Income and Wealth*, Aug. 15, 2016), there is wide heterogeneity in within-country inequality across

countries and regions (Stephan Klasen, Nathalie Scholl, Rahul Lahoti, Sophie Ochmann and Sebastian Vollmer, “Inequality — Worldwide Trends and Current Debates”, Georg-August-Universität Göttingen Discussion Paper No. 209, 2016). Reduction of income inequality is key to long-term growth and sustenance not only by encouraging investment in human capital, but also ensuring reduction in the concentration of economic and political power in the hands of a few, who then prevent redistribution of income and wealth. (A detailed discussion of the effects of income inequality on economic growth can be found in Rudra Prosad Roy and Saikat

CHART 1

Change in average income inequality between 1990s & 2000s



Source: Authors' own calculation on the basis of data from World Development Indicators

Sinha Roy, “Does Inequality Dampen Economic Growth? A Cross-Country Analysis”, in Chandan Roy (ed.), *International Trade and Inclusive Development: Emerging Issues and Enlarging Debates*, New Delhi: New Academic Publishers, 2017.)

Within-country income inequality is often believed to be associated with the structural transformation of that economy. Classically, structural change in an economy takes place over time with a rise in the relative share of the manufacturing sector followed by a rise in the relative share of the services sector. The idea of a nexus between structural transformation and income inequality follows from seminal papers by Simon Kuznets (“Economic Growth and Income Inequality”, *American Economic Review* 45, 1955, and “Quantitative Aspects of the Economic Growth of Nations: VIII. Distribution of Income by Size”, *Economic Development and Cultural Change* 12, 1963). It is often argued that structural transformation in the long run creates more job opportunities and leads to a more equal society. Kuznets, on the other hand, hypothesized an inverted U-shaped relationship between economic growth and income inequality.

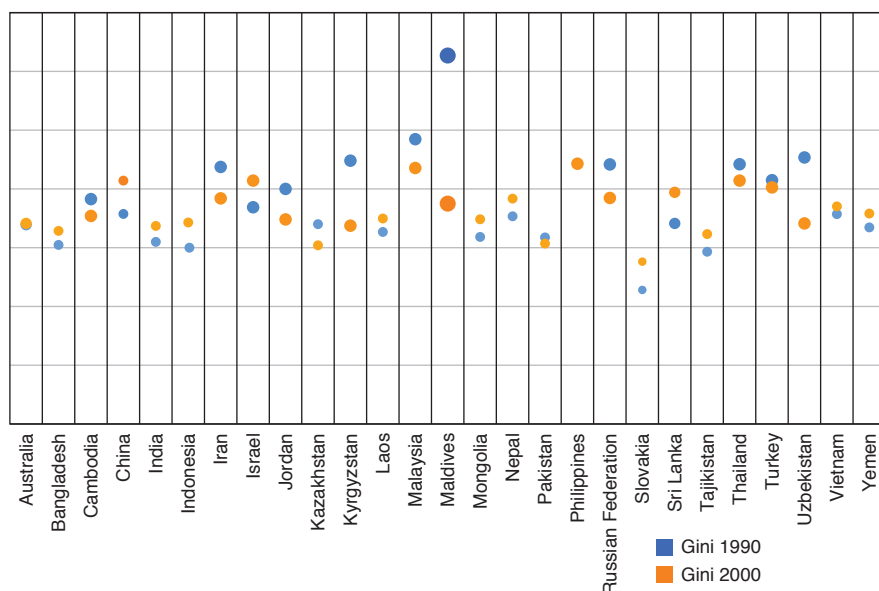
In this context, it is important to observe whether structural transformation reduces income inequality. Prior to discussing the linkage between structural transformation and income inequality, it is important to understand the pattern of change of income inequality over time across countries.

Structural Change & Income Inequality: Some Cross-Country Evidence

While most developed countries experienced structural transformation in the 19th and early 20th centuries, some other countries, including Japan and several developing nations, experienced structural transformation in the mid and late 20th century. For instance, Japan experienced “an economic transformation ... in the high-growth years from 1953 to 1973. In the space of two decades a largely agricultural nation became the world’s largest exporter of steel and automobiles...” (Paul Krugman, *The Return of Depression Economics and the Crisis of 2008*, London: Penguin, 2008; p.57). Economies that were primarily dependent on agriculture and other primary activities have shifted

CHART 2

Change in average income inequality between 1990s & 2000s in Asia-Pacific countries



Note: The vertical axis measures log GINI for the two decades. However, the axis is not mapped to scale; the size of the bubble indicates the extent of income inequality for each country during each period.

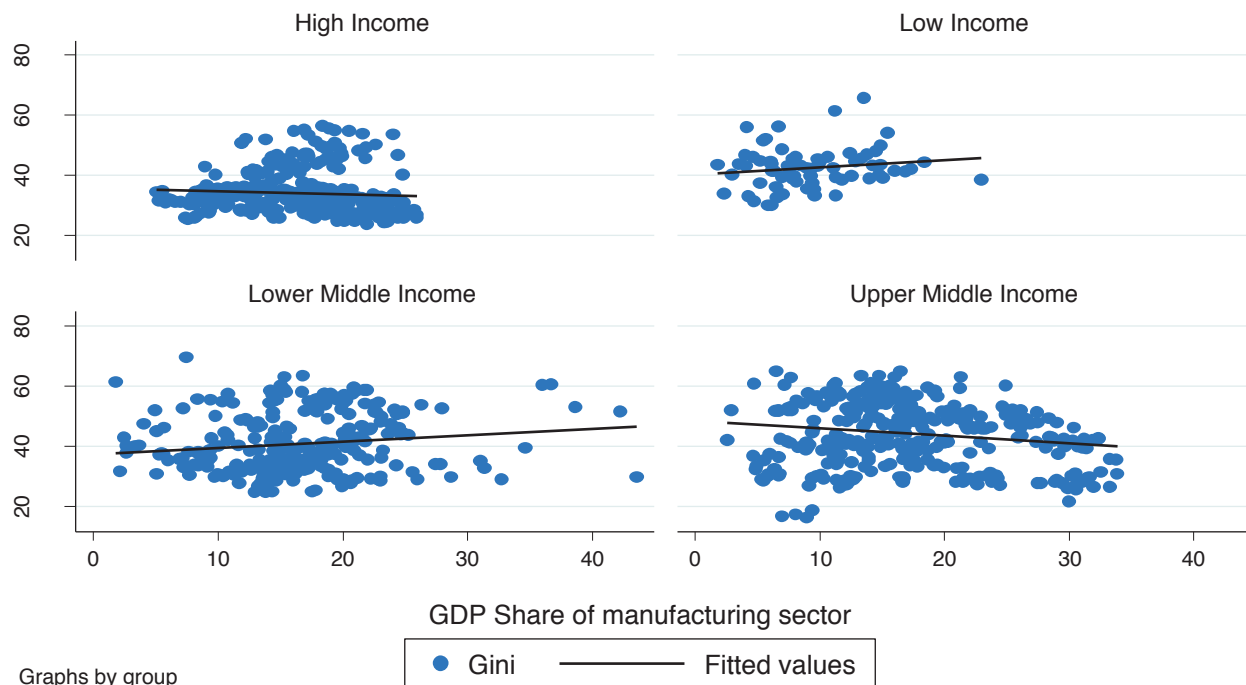
Source: Authors’ own calculation on the basis of data from World Development Indicators

their resources towards more skill- and technology-based activities including manufacturing and services. In the more recent period, most countries including emerging market economies have transformed towards more services production. During the same time economies have also experienced changes in income inequality.

Over the last two and a half decades, income inequality has increased in many countries. Income inequality increased in Africa, followed by Latin American and Asian countries. Changes in average income inequality between the 1990s and 2000s across countries can be seen in [Chart 1](#). Large changes in inequality are observed in Asian Emerging Market Economies (EMEs). [Chart 2](#) shows changes in average income inequality in Asia and Pacific countries between the 1990s and 2000s. On account of lack of comparable data, the data on Japan cannot be presented here. It can be seen that in some Asian countries average inequality, measured in terms of average Gini coefficient, has increased between the 1990s and 2000s; and in some other countries it has fallen.

For instance, between the 1990s and 2000s, when China witnessed a quantum increase in inequality, India and Indonesia experienced only a moderate increase. While China showed almost a 15% increase in inequality during the last two decades, the Gini coefficient for India increased from 30.8 to 33.6. The increase/decline in income inequality is irrespective of the size of the economy. Small countries like Jordan, Kazakhstan, Malaysia,

CHART 3

Relationship between structural change & inequality

Source: Authors' own calculation on the basis of data from World Development Indicators

Pakistan, and the Philippines, and large countries like the Russian Federation and Thailand, showed a decline in inequality, whereas Bangladesh and Sri Lanka experienced an increase in inequality. The inequality measured in terms of the Gini coefficient for Bangladesh increased from 30.5 to 32.9.

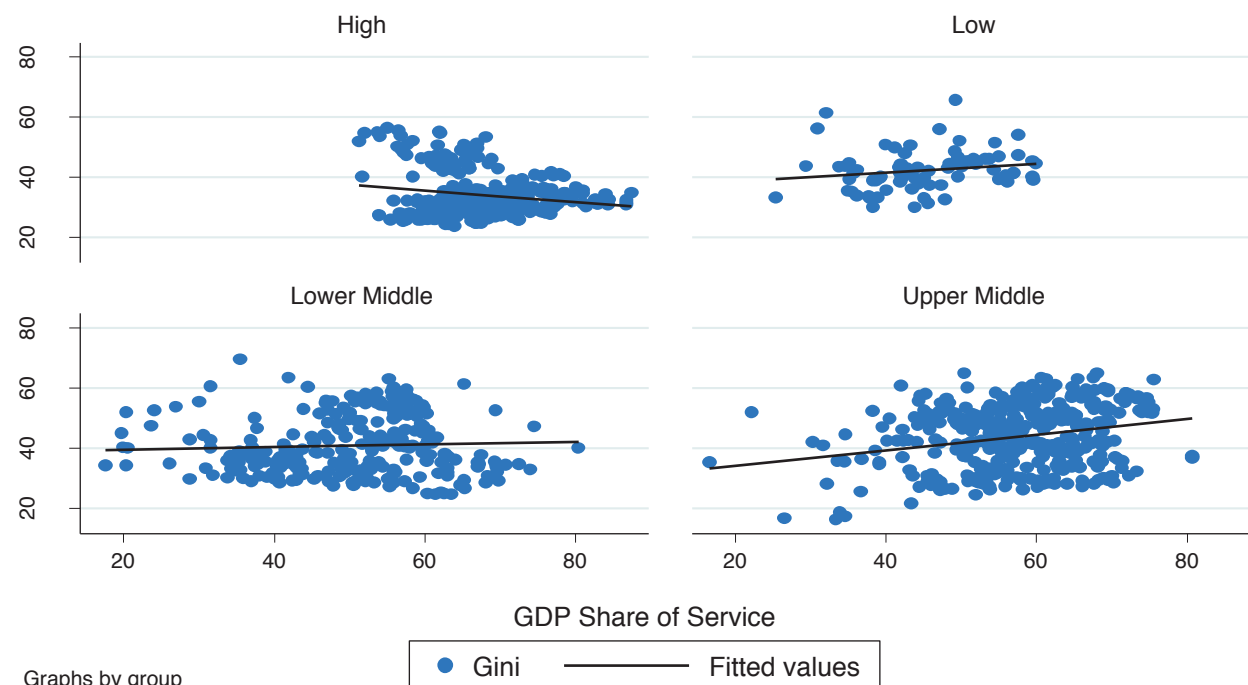
Among ASEAN countries, in Indonesia, Laos and Vietnam, the Gini coefficient increased from 29.37 to 34.3, from 32.7 to 34.7, and from 35.6 to 36.8, respectively. Some other ASEAN countries like the Philippines and Thailand showed a downward trend in inequality during this period of time. In Australia as well, inequality increased marginally. In the 1990s, the average inequality measured in terms of the Gini coefficient was 33.7, and in the 2000s it increased to 34.1. Most of the countries have undergone rapid structural change towards services during this period. On the whole, inequality is found to have increased mostly in countries that underwent structural transformation in these two decades. Simultaneous occurrence of structural change and income inequality tempted researchers to study the causal relationship, if any, between the two.

Globalization, Structural Transformation & Income Inequality

In our study “Structural Change, Trade, and Inequality: Some Cross-Country Evidence”, (Asian Development Bank Institute (ADBI) Working Paper No. 763, 2017) we empirically threw some light on the proposition linking structural transformation and income inequality. With a large number of both developed and developing countries during the period 1991-2014, it has been shown that the process of structural transformation has increased income inequality. It has been found that, across countries of different regions, structural transformation has increased income inequality. This can also be seen graphically from *Charts 3 & 4*. From *Chart 3* it can be seen that for high-income and upper middle-income countries, structural change (measured in terms of share of the manufacturing sector) and inequality are negatively related. On the other hand, for lower middle-income and low-income countries, they are positively related. The relationship marginally varies when structural change is measured in terms of share of the services sector (*Chart 4*). It is found, using a regression exercise, that if the GDP share of the manufacturing sector increases by 1%, it causes a 3% increase in income inequality. On the other hand, if the share of

CHART 4

Relationship between structural change & inequality



Source: Authors' own calculation on the basis of data from World Development Indicators.

the services increases by 1%, income inequality is found to increase by 10%.

However, this pattern is found to vary across regions. For example, if the GDP share of the services sector in Asia increases by 1%, income inequality in Asia increases by 8.53%. While structural transformation measured in terms of the share of manufacturing is not found to have any significant impact on inequality in Asia, the impact is positive and significant when structural transformation is measured in terms of the share of services. This result is not counter-intuitive: as Asian countries have moved towards production of services during the 1990s and 2000s, inequality is found to have been exacerbated in these countries. The wage gap between skilled and unskilled labor could be one of the key factors explaining this observed increase in within-country inequality in Asia following structural transformation towards services.

The argument runs as follows: as the economy relies more on modern sectors, where productivity is higher, demand for high-skilled labor increases and that of low-skilled labor decreases, thereby increasing income inequality. Therefore, as resources including labor move from less productive sectors (agriculture) to more productive sectors (manufacturing and services), income inequality increases. Globalization, in particular trade and FDI, and

structural transformation accelerate this process of a widening wage gap between skilled and unskilled labor in developed and mostly in developing countries (Supplement to the International Labour Organization's Global Wage Report 2014-15: *Wages in Asia and the Pacific: Dynamic but Uneven Progress*).

On the whole, in the short and medium term, structural transformation causes rising wage inequality and thus a rise in income inequality. These findings highlight the need for the bottom deciles of income earners in Asian countries to benefit from the process of structural transformation. Trade, FDI and infrastructural development could be the possible policy targets. **JS**

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