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Income and Wealth Inequality in Asia and the
Pacific: Trends, Causes, and Policy Remedies

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Income and Wealth Inequality in Asia and the Pacific: Trends, Causes, and Policy Remedies

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Abstract

The Asia-Pacific region's rapid growth and poverty reduction in recent decades have been accompanied by rising income and wealth inequality. Technological progress, globalization, deregulation and market-oriented reform, and financialization have generated many new opportunities, but rewarded capital more than labor, benefited skilled workers more than the unskilled, widened spatial inequality, and produced a growing number of the superrich. For some countries, population aging has also contributed to rising inequality. This paper provides an update on recent trends of income and wealth inequality in the Asia-Pacific region, examines causes behind rising inequality, and discusses policy actions needed to tackle inequality. It also assesses how the COVID-19 has likely worsened inequality in the region.

Key words: Asia; China; income inequality; wealth inequality; causes of rising inequality

JEL code: D3; F6; J3; N3; O15; O33

1. Introduction

Driven by rapid economic growth, the Asia-Pacific region (henceforth Asia) has dramatically reduced its extreme poverty in the past several decades. From 1981 to 2019, the region's proportion of population living below the \$1.9 (in 2011 purchasing power parity terms) international poverty line declined from more than 70% to about 7% (World Bank n.d.). However, the picture of Asia's income distribution is mixed. In the 1960s, 1970s, and 1980s, several economies in East Asia managed to achieve rapid growth and poverty reduction while keeping income inequality low, known as "growth with equity" (World Bank 1993). Southeast and South Asia saw generally stable levels of inequality with varying pace of growth (ADB 2020). But since the 1980s, in a large part of Asia, growth and poverty reduction have been accompanied by rising income and wealth inequality. Recent studies suggest that the COVID-19 pandemic has made inequality worse (Oxfam 2022).

Asia is not alone to see inequality rising. Rising income and wealth inequality has been a global phenomenon in recent decades and has become a global policy issue. Numerous studies have examined causes behind the rise in inequality globally and identified several structural drivers, including technological progress, globalization, deregulation and market-oriented reform, financialization, and population aging. Piketty (2014) in his best-seller, *Capital in the Twenty-First Century*, attributed rising inequality in advanced countries to the higher rate of return to capital than the rate of economic growth leading to a decline in the labor income share. For many Asian economies characterized by a dual economy, some of the development processes associated with structural transformation noted by Kuznets (1955) and Lewis (1954) more than half century ago—industrialization and urbanization—have also been considered among key contributors (ADB 2012; Kanbur & Zhuang 2013; Zhuang, *et al.* 2014).

The purpose of this paper is to provide an update on recent trends of income and wealth inequality in Asia and a review of the causes behind the rise in inequality. Section 2 asks why rising inequality matters. Section 3 provides an update on income and wealth inequality in selected Asian economies where data are available, focusing on the Gini coefficients and quintile ratios. Section 4 examines why inequality has risen in Asia based on the existing literature and presents some stylized empirical evidence. Section 5 discusses the recent trend of inequality in China and its key drivers. The final section concludes the paper with brief discussions on policy actions that are needed to address inequality.

2. Why rising inequality matters?

Income distribution is one of the key dimensions of development. Making income distribution equitable has both intrinsic and instrumental values. The intrinsic value is based on justice, fairness, and human rights as desirable goals that a human society pursues. High inequality deprives many in society of access to basic rights and is unfair and immoral. People also prefer to live in societies with less deprivation, poverty, and inequality. This idea of altruism features prominently in many cultures and religions (ADB 2020). The instrumental value is related to the importance of equitable income distribution to sustaining development and growth.

The instrumental value of equitable income distribution has attracted a great deal of attention in recent years. Earlier literature suggests a positive relationship from inequality to development, based on the arguments that inequality can provide incentives for hard working and innovation (Lazear & Rosen 1981) and foster saving and investment (Kaldor 1957). But recent literature and policy discussions have emphasized the negative effects of high and rising inequality on growth and development much more.

Firstly, high and rising inequality can lower a country's human capital investment and constrain it from attaining its full potential (Barro 2000). Poor and low-income households tend to underinvest in human capital because of the lack of financial resources. In principle they may borrow to finance investment, but imperfect financial markets, coupled with other market failure, often heavily constrain their ability to borrow and invest. Thus, reducing inequality by redistributing incomes from the rich to the poor can increase an economy's human capital investment, improve its productivity, and help to enhance economic growth.

Secondly, high and rising inequality can create social tensions and instability. In ancient as well as modern times, the world has seen again and again instances that high inequality leads to uprisings, revolutions and civil wars. High inequality can also induce crimes and anti-social behavior (Fajnzylber, *et al.* 2002), undermining the rule of law, worsening investment climate, and leading to the waste of resources—including the time and energy of those engaging in such activities that could have been devoted to productive uses and public resources to maintain the rule and order.

Thirdly, income polarization can worsen the quality of institutions and public policy (Stiglitz 2012; Levin-Waldman 2016). This would happen when high wealth concentration leads to elite capture—when a few wealthy people in power set regulations and decide allocation of public resources in their own favor, or when mass movements press politicians to enact populist policies that distort resource allocation and hamper macroeconomic stability. It has also been suggested that growth driven by and benefiting the middle class is more likely to be sustained—by reducing rent-seeking and corruption associated with highly concentrated wealth and by better managing conflict and horizontal inequalities between racial and ethnic groups (Birdsall 2010). Thus, income polarization, by harrowing out of the middle class, makes growth less likely to be sustained.

Fourthly, high and rising inequality can constrain growth by weakening aggregate demand. It has been argued that increases in inequality in advanced countries in recent decades have contributed to their excess savings, weak aggregate demand, and falling natural interest rates, increasing the risk of falling into the so-called secular stagnation (Krugman 2013; Summers 2020; Camarero, *et al.* 2021). Some have also considered rising inequality a root cause of the 2008 global financial crisis, as savings surplus pushed up asset prices leading to asset bubbles (Rajan 2010; Kumhof & Rancièrè 2010). It has also been suggested that high inequality leads to weak aggregate demand not only because wealthy households have higher saving rates, but also because high inequality can lead to greater income uncertainty that raises the aggregate saving rate (Auclert & Roglie 2018).

While there are convincing arguments that high and rising inequality is detrimental to economic development, empirically establishing the linkage from inequality to growth is not easy, because numerous factors are at work. For instance, Perotti (1993) reports an overall tendency for inequality to generate lower economic growth in cross-country regressions, while Li and Zou (1998) reported the relationship with an opposite sign. Barro (2000 and 2008) found evidence that the negative effect of inequality on growth shows up for poor countries, but the relationship for rich countries is positive. Banerjee and Duflo (2004) found an inverted U-shaped relationship between growth rate and net changes in inequality, and noted a number of data and methodological issues in the empirical studies, including omitted variables, the identification problem, measurement errors, and non-linearity in the relationship.

Some of the more recent studies have dug deeper into the linkage from inequality to development. Berg, *et al.* (2008) made a distinction between igniting growth and sustaining growth, and showed that high inequality makes growth less sustainable. Grigoli, *et al.* (2016) found that the impact of inequality on growth is heterogeneous. While the median response of growth to shocks in inequality is negative and significant, the dispersion is large, with at least one fourth of the sample economies presenting a positive effect. This result suggests that the negative effect is mainly driven by developing countries, confirming earlier findings of Barro (2000 and 2008). Grigoli and Robles (2017) found that the effect of income inequality on growth is nonlinear, with a turning point at the Gini coefficient of 27—when inequality passes the turning point, it begins to hurt economic development.

3. Recent trends of inequality in Asia

During the 1960s-1980s, most Asian economies managed to keep income inequality stable regardless of its initial level. For instance, while the per capita GDP of the three East Asian economies—Japan, Korea, and Taiwan—grew 5% annually on average during 1960-1990, their income inequality measured by the Gini coefficient was low and declined, which has been referred to as “growth with equity” (World Bank 1993). In Southeast and South Asia, where the pace of growth varied significantly across economies, the Gini coefficient was higher, but it was generally stable (ADB 2020). Since the 1980s and 1990s, however, Asia has continued to enjoy strong growth, with it a dramatic reduction in extreme poverty, but a large part of the region has witnessed inequality rising rapidly.

Income inequality

Table 1 reports decade averages of Gini coefficients and quintile ratios of per capita household consumption expenditure for 32 developing Asian economies with available data. The data are mostly sourced from World Bank’s PovcalNet to ensure cross-economy comparability (World Bank n.d.). The reason for looking at decade averages of inequality is to facilitate cross-economy comparison—as data availability differs from economy to economy. Decade averages also better capture inequality’s long-term trend by eliminating year-to-year fluctuations.

Table 1: Gini coefficients and quintile ratios of per capita household consumption expenditure, 1980s-2010s, developing Asia

	Decade average Gini coefficient					Decade average quintile ratio				
	1980s	1990s	2000s	2010s	+ or - *	1980s	1990s	2000s	2010s	+ or - *
East Asia										
China	28.2	35.4	42.0	40.6	+	4.3	5.9	8.6	8.1	+
Mongolia	..	31.7	34.4	33.0	+	..	5.2	5.7	5.2	-
Southeast Asia										
Indonesia	31.5	32.0	32.7	38.8	+	4.7	4.7	4.9	6.6	+
Lao PDR	..	34.6	34.0	37.4	+	..	5.3	5.2	6.2	+
Malaysia **	47.3	48.4	45.6	42.1	-	10.9	11.9	10.6	8.6	-
Philippines	40.9	44.2	42.2	40.1	-	7.4	8.8	8.0	7.2	-
Thailand	44.5	44.0	41.3	37.2	-	8.9	8.5	7.7	6.3	-
Myanmar	..	..	..	34.4	..	..	..	..	5.4	
Vietnam	..	35.6	36.3	36.1	+	..	5.6	6.0	6.4	+
South Asia										
Bangladesh	27.2	30.3	33.3	32.3	+	3.8	4.4	4.9	4.7	+
Bhutan	..	..	39.5	38.1	-	..	..	7.1	6.7	-
India	32.3	31.7	34.9	35.7	+	4.8	4.6	5.2	5.5	+
Maldives	..	..	39.8	31.3	-	..	..	7.1	4.8	-
Nepal	30.1	35.2	43.8	32.8	+	4.3	5.6	7.9	5.0	+
Pakistan	33.3	31.7	31.8	31.1	-	5.1	4.7	4.6	4.4	-
Sri Lanka	32.5	33.9	38.6	39.0	+	5.0	5.1	6.4	6.5	+
Central Asia										
Armenia	..	40.3	32.8	31.4	-	..	7.5	5.0	4.7	-
Azerbaijan	..	34.7	28.4	..	-	..	5.9	4.0	..	-
Georgia	..	39.8	37.9	37.8	-	..	8.4	7.3	7.1	-
Kazakhstan	..	34.0	32.6	27.5	-	..	5.8	5.2	3.8	-
Kyrgyz Republic	..	46.4	32.0	28.2	-	..	11.8	4.9	4.0	-
Tajikistan	..	29.5	32.3	34.0	+	..	4.6	5.2	5.6	+
Uzbekistan	..	44.7	34.8	28.0	-	..	12.4	5.7	..	-
Pacific Islands										
Fiji	..	..	39.2	36.7	-	..	..	7.0	5.9	-
Kiribati	..	..	37.0	..	..	..	..	6.7	..	..
Micronesia	..	..	42.4	40.1	-	..	..	8.8	8.3	-
Nauru	..	..	..	34.8	..	..	..	..	5.7	..
PNG	..	45.8	41.9	..	-	..	..	10.6	9.3	-
Timor-Leste	..	..	31.9	28.7	-	..	..	5.0	4.1	-
Tonga	..	..	37.6	37.6	-	..	..	6.8	6.6	-
Tuvalu	..	..	..	39.1	..	..	..	..	7.0	..
Vanuatu	..	..	..	37.6	..	..	..	..	6.7	..

Notes: * + refers to inequality increasing between starting and ending decade and - refers to inequality declining between starting and ending decade; ** Malaysia data refer to per capita household disposable income.

Sources: World Bank (n.d.). The 2010s data for Uzbekistan are sourced from ADB (2019).

Ten out of the 21 developing Asian economies with comparable data (the other 11 only have data starting from the 2000s or 2010s) experienced rising inequality since the 1980s or 1990s, including the three most populous countries in the region, China, India and Indonesia. China's decade average Gini coefficient increased by 44%, the India's by 11%; and the Indonesia's by 23%. Other economies that have experienced rising inequality during the period include Bangladesh, Lao PDR, Mongolia, Nepal, Sri Lanka, Tajikistan, and Viet Nam. The quintile ratios show a similar picture.

Table 1 also shows that an equal number of developing Asian economies have experienced a decline in the Gini coefficient and quintile ratio since the 1980s or 1990s. These include Malaysia, the Philippines and Thailand in Southeast Asia; Pakistan in South Asia; Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, and Uzbekistan in Central Asia; and PNG in Pacific Island. When decade average Gini coefficients of the 2010s are compared with those of the 2000s, about 20 developing Asian economies saw the Gini coefficient and quintile ratio moderating, including China. For central Asian countries that have experienced a fall in inequality, the Soviet collapse in the early 1990s led to a surge in inequality in the newly independent nations as fiscal spending and welfare transfers were cut; but once economic stability was restored from the late 1990s, income inequality started falling (ADB 2020).

Table 2: Gini coefficients and quintile ratios of per capita household disposable income, 1980s-1990s, high income Asia

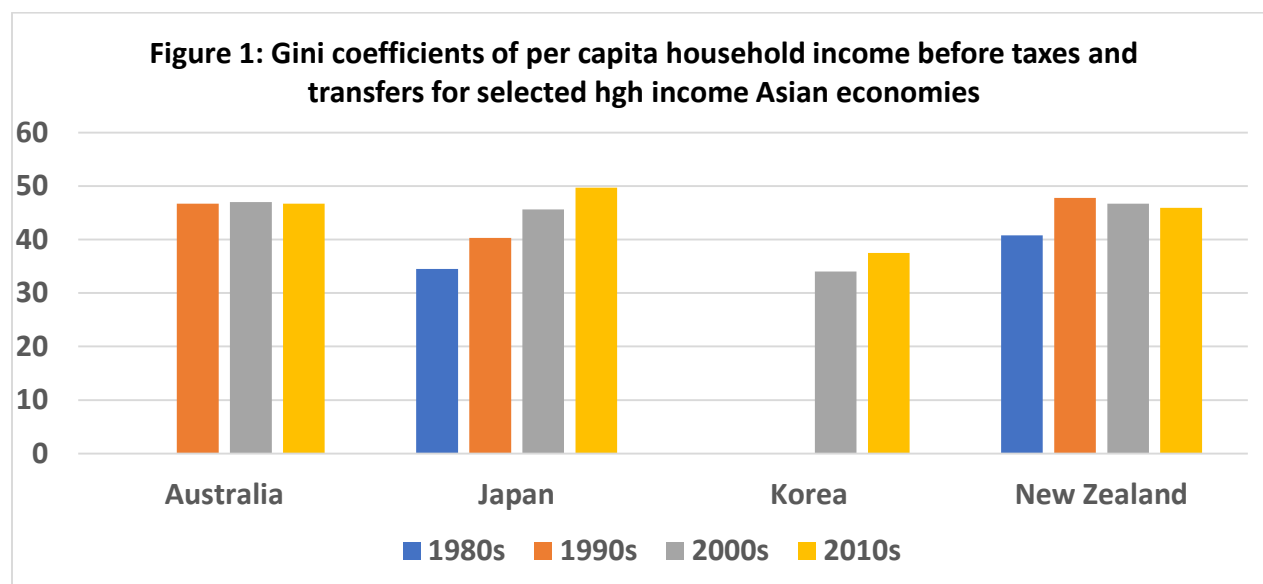
	Decade average Gini coefficient					Decade average quintile ratio				
	1980s	1990s	2000s	2010s	+ or - *	1980s	1990s	2000s	2010s	+ or - *
Australia	32.3	32.6	33.9	34.5	+	5.4	5.3	5.6	5.7	+
Hong Kong	..	42.7	42.4	42.6	-	..	..	..	..	..
Japan	30.4	32.3	33.1	33.4	+	5.0	5.7	6.1	6.2	+
Korea	30.7	29.3	31.2	33.3	+	..	..	5.6	6.5	+
New Zealand	27.1	32.7	33.2	32.3	+	4.1	5.2	5.4	5.2	+
Singapore ****	..	..	42.1	40.8	-	..	..	..	..	..
Taiwan, China	29.8	30.7	31.8	32.4	+	4.4	4.7	4.9	5.1	+

Note: * + refers to inequality increasing between starting and ending decade and - refers to inequality declining between starting and ending decade; ** Data for Singapore refer to household incomes from work.

Sources: World Bank (n.d.) for Australia and Taiwan; OECD (n.d.) for Japan, New Zealand and Korea (only 2000s and 2010s); Kang, S. (2001) for Korea in the 1980s and 1990s citing the national statistics office; Singapore Department of Statistics (n.d.) for Singapore; Hong Kong Census and Statistics Department (n.d.) for Hong Kong.

Table 2 reports decade averages of Gini coefficients and quintile ratios of per capita disposable income for 7 high income Asian economies, sourced mostly from OECD, World Bank's PovcalNet, and national statistical offices. With the exception of Hong Kong and Singapore, high income Asian economies have also experienced rising income inequality since the 1980s and 1990s. The simple average of the Gini coefficients of the 7 high income economies in the 2010s was 35.6, while the same was 35.3 for the 32 developing Asian economies. However, it is worth noting that the Gini coefficient of per capita disposable income is normally larger than that of per capita consumption expenditure by 5-10 points when it is measured in 0-100 (ADB 2012). Therefore, on

average, high income economies' inequalities of both per capita disposable income and consumption expenditure are lower than those of developing economies in Asia.



Source: OECD (n.d.).

OECD income distribution database also provides data on the Gini coefficient of per capita income before taxes and transfers (or termed “market incomes”) for OECD countries (OECD n.d.). As shown in Figure 1, inequality of market incomes is much higher than that of household disposable incomes, indicating a major role of taxes and fiscal transfers in reducing income inequality in these economies. Australia’s decade average Gini coefficient of market incomes remained more or less unchanged during the past three decades, the New Zealand’s increased from the 1980s to 1990s, but moderated somewhat since. However, Japan’s Gini coefficient of market incomes rose significantly, by 44% between the 1980s and 2010s. In the case of Korea, which only has data for the last 2 decades, it increased by 10%.

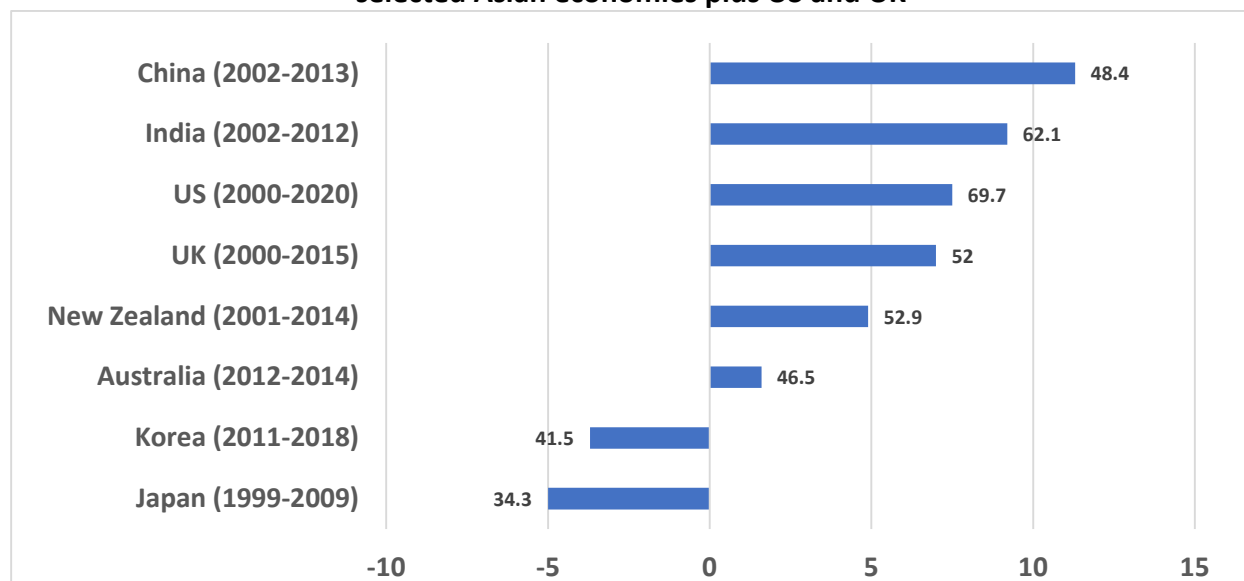
The above results need to be interpreted with caveats. Firstly, the Gini coefficient and quintile ratio, while being widely used, cannot adequately capture inequality associated with top income earners, such as top 5%, 1% or 0.1%. In the case of Thailand, for example, it has been noted that incomes of the top 1% grew almost three times that of average incomes in 1988-2011, even though its Gini coefficient and quintile ratio declined during the same period (ADB 2020). The second caveat is that inequality estimates from household survey data often suffer from underreporting by top income households. In the case of China, correcting for underreporting by top income households was found to increase the Gini coefficient of per capita disposable income from 47.8 to 56.1 in 2009 (Gan 2012) and from 46.4 to 64.6 in 2012 (Li, *et al.* 2020). In the United States (US), Piketty (2014) shows that income inequality would be 20% higher in 2011 if underreporting by top income earners was corrected.

Wealth inequality

Wealth inequality measures inequality of the ownership of wealth stocks such as financial assets, housing, land, and other physical assets across households or individuals. Wealth data are only available for a small number of Asian economies, as many household surveys do not provide detailed information on values of wealth stocks. Among the economies where survey data of wealth stocks are available, many have also seen wealth inequality rising rapidly.

Knight, et al. (2021), using detailed household survey data, showed that between 2002 and 2013, China's Gini coefficient of per capita household wealth increased from 49.5 to 61.7, and the share of wealth of the top 10% wealthiest households rose from 37.2% to 48.4%. According to survey-based wealth inequality estimates compiled by Credit Suisse (2014; 2021), the wealth share of the top 10% rose by 9.2 percentage points (pp) to 62.1% during 2002-2012 in India; by 4.9 pp to 52.9% during 2001-2014 in New Zealand; and by 1.6 pp to 46.5% during 2012-2014 in Australia (Figure 2). For comparison, Figure 2 also shows the same estimates for US and United Kingdom (UK). Behind the rapidly rising wealth share of the top 10% is a sharp increase in the number of billionaires globally as well as in Asia. According to Forbes, Asia only had less than 100 billionaires in 2000 (in terms of net worth), the number increased to more than 1,200 in 2021 (Forbes n.d.).

Figure 2. Change in and ending-year level of the wealth share of the top 10% households, selected Asian economies plus US and UK



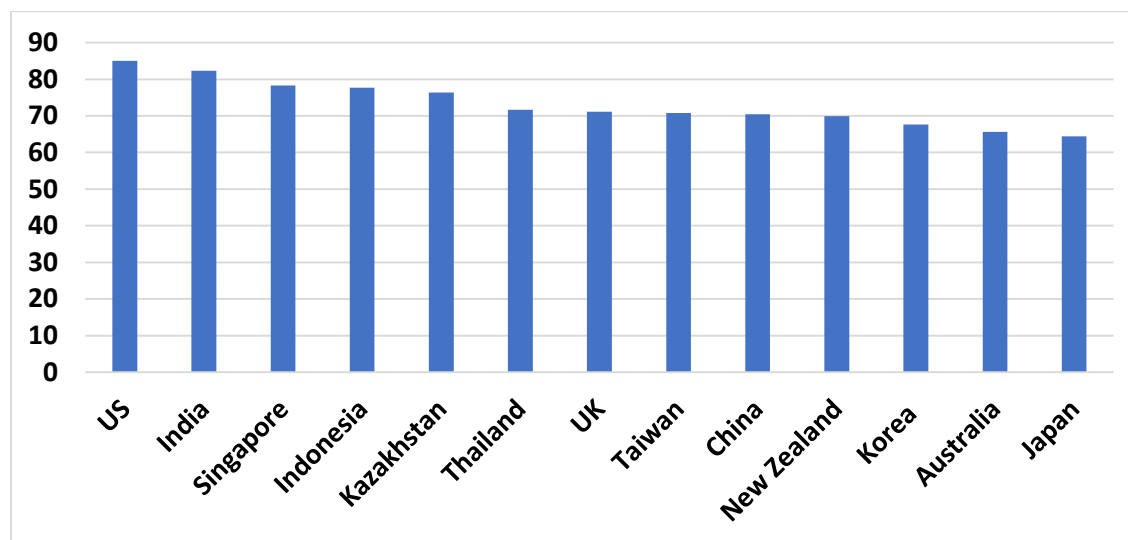
Note: Data labels represent the end year levels of the wealth shares of the top 10%.

Source: Credit Suisse. 2014; 2021.

The Credit Suisse report (2021) also present wealth Gini coefficients for a large number of economies, many of which were estimated from the “synthetic” wealth distributions that were constructed from a variety of data. Figure 3 presents wealth Gini coefficients in 2020 reported by Credit Suisse for economies with satisfactory, good or fair data quality. The data show that wealth

distribution is much more unequal than income distribution. Among Asian economies, in 2020, the wealth Gini ranged from 64.4 in Japan, 65.6 in Australia and 67.6 in Korea to 77.7 in Indonesia, 78.3 in Singapore, and 82.3 in India. The US has the highest wealth Gini coefficient at 85 in 2020.

Figure 3: Wealth Gini coefficients of selected Asian economies plus the US and UK, 2020



Source: Credit Suisse. 2021. Only estimates with good, satisfactory or fair data quality are reported.

The rise in wealth inequality has been partly driven by rising income inequality, as rich households have a higher propensity to save than poor and low-income households, and partly by rises in asset prices that have accompanied strong economic growth in many countries—including prices of housing, land, and corporate shares. In the case of China, for instance, Knight, *et al.* (2021) showed, based on household survey data, that in 2013 the household saving rate was 56.6% for the top income decile and 49.5% for the 9th income decile, but -55.5% for the bottom income decile and 0.4% for the second income decile. The same study also showed that relative house price inflation accounted for 47% of the increase in the wealth Gini between 2002 and 2013 in China at the national level.

4. Why inequality has risen in Asia?

A brief review of literature

Asia is not alone in experiencing rising income inequality. Many advanced countries in Europe and North America have also seen inequality rising rapidly in recent decades. Literature and policy discussions have highlighted several key drivers behind the rise in income inequality globally, among which, technological progress, globalization, deregulation and market-oriented reform, financialization, and population aging have attracted most attention. For developing countries with a dual economy, some of the development processes underlying the Kuznets'

inverted-U hypothesis and Lewis' dual economy model have also been noted as among the contributors to rising inequality.

Technical progress

Many studies have noted that technological progress in the past several decades has been driven by rapid development of information and communications technology and adoption of automation, and is skill-biased and labor-saving—that is, it favors skilled workers over the unskilled and benefits capital owners more than labor (Berman, *et al.* 1998; Acemoglu 2000; Acemoglu & Autor 2014; Chau & Kanbur 2018). Such technological progress can cause income inequality to increase through two channels. One is to widen the wage differentials between skilled and unskilled workers. The other is to reduce the share of national income accrued to labor and increase the share for capital. Many studies have attributed rising income inequality in both developed and developing countries in recent decades partly to labor-saving and skill-biased technological progress (Acemoglu 1998; 2002; David Card & DiNardo 2002; Piketty 2014).

Globalization

There is a broad agreement that globalization in trade has contributed to recent increases in inequality in developed countries, as it has led to the stagnation of wage growth for unskilled workers (Wood 1995; Stiglitz 2002; Kanbur 2018; Posen 2021). For developing countries, however, the relationship is less clearcut. The standard trade theory predicts that trade liberalization could help reduce inequality in developing countries as it can increase wages for unskilled workers. This appears to be supported by the “growth with equity” story of East Asia (Wood 1997). However, recent empirical studies find that trade liberalization does not necessarily reduce inequality in developing countries (Goldberg & Pavcnik 2007; Zhuang, *et al.* 2014). One explanation is that trade today is often accompanied by the use of new technologies that require more skilled workers than the unskilled locally, especially when it is associated with foreign direct investment and global value chains (Choi 2006; Maskin 2015). Furthermore, skills and capital often work together due to their complementarity (Taniguchi & Yamada 2022). Therefore, for developing countries, trade liberalization can also lead to widening wage differentials between skilled and unskilled workers, a falling labor income share, and rising inequality.

Deregulation and market-oriented reform

Since the 1980s, there have been waves of deregulation and market-oriented reform worldwide (ADB 2020). These have involved (i) privatization, business deregulation, de-unionization in labor market, and scaling down of welfare states in developed countries, driven by the rise of the neoliberal economic thinking; (ii) trade and financial liberalization in the developing world, influenced by the Washington Consensus; and (iii) transition to a market economy in former socialist countries, pushed by the desire to improve their economic performance. While these

measures have helped raise productivity and accelerate growth, they have also had significant distributional consequences. Trade liberalization is a key driving force of globalization. Labor market reform weakened the bargaining position of labor. Economic transition from a command to a market economy increased returns to scarce resources, which in these countries were often technology, skills, and capital. Therefore, deregulation and market-oriented reform can also lead to rising inequality by increasing the capital income share and widening wage differentials between skilled and unskilled workers (Zhuang 1996; ADB 2012).

Financialization

Financialization has often been referred to as a process of growing size and importance of a country's financial sector relative to its overall economy. It has been suggested that financial deregulation and liberalization in recent decades have led to financialization of the economy in many countries. Two channels through which financialization increases a country's inequality have been noted. One is that it allows large and "too big to fail" financial firms to engage in rent-seeking activities and capture a large share of national income, benefiting small groups of financial executives and capital owners (Stiglitz 2010; 2015; Tomaskovic-Devey & Lin 2013). The other is the increased engagement of non-financial firms in the financial markets. This gives the firms more options for investing—in financial as well as in real assets and at home as well as abroad, thus weakening the bargaining position of labor while empowering shareholders (Lazonick & O'Sullivan 2000; Stockhammer 2004). Therefore, financialization can lead to a fall in the share of labor income and an increase in wage differentials between white and blue-collar workers. Many studies have found empirical evidence that financialization increases inequality (Stockhammer 2004; Davis & Kim 2015; Horn 2017; Lee & Siddique 2021; Roberts & Bao 2021).

Population aging

Population aging has been noted as a contributor to rising inequality in countries with an accelerated pace of aging. Several channels through which aging affects income distribution have been noted. Firstly, according to the permanent income hypothesis, for any cohort of people born at the same time, inequality in both consumption and income tends to grow with age due to the cumulative differences in the effects of luck over life time (Deaton & Paxson 1994; 1997). Thus, a country's aggregate inequality could increase as its share of aging population rises. Secondly, a rising aging population can raise aggregate inequality when working-age population earn more and enjoy higher income growth than the elderly that rely largely on pension, social security payments, or family support (Gustafsson & Johansson 1999). Thirdly, according to Piketty's well-cited $r-g$ framework, when r , the rate of return to capital, is greater than g , the rate of economic growth, income inequality will increase because capital incomes grow faster than labor incomes (Piketty 2014). As aging is associated with slowing population growth that reduces economic growth, it can also increase inequality through this channel. Numerous studies have

provided empirical evidence that aging is associated with rising inequality in both developed and developing economies, including those in Asia (Deaton & Paxson 1994, 1997; Ohtake & Saito 1998; Zhong 2011; Van Vliet & Wang 2015; Wang, *et al.* 2017).

Development processes behind the Kuznets hypothesis and Lewis' dual-economy model

For many developing countries with a dual economy, some of the development processes behind Simon Kuznets' inverted-U hypothesis (Kuznets 1955) are also relevant to explaining the recent rise in income inequality. According to this hypothesis, a country's income inequality tends to worsen in the initial stage of development, but stabilize when its income reaches a certain level, and fall when the country becomes wealthy. This is because economic takeoffs often start with a small number of entrepreneurs and rich households investing in new technologies and accumulating capital before leading to higher income for the wider population. These early investment and capital accumulation are more likely to take place in locations with natural advantages, such as urban cities with better infrastructure and areas with better access to domestic and overseas markets. Urbanization could also drive inequality to rise initially, but decline when the urbanization is completed and the urban-rural income gap narrows.¹

The inverted-U hypothesis can also be explained by Arthur Lewis' dual economy model (1954). According to this model, in a subsistence economy, the urban modern sector can generate growth by transferring surplus labor from the traditional agriculture sector in rural areas, leading to widening urban-rural income gaps at the initial stage of structural transformation. At the same time, the rural surplus labor implies unlimited supply in the urban labor market and could keep urban wages low, leading to a rising share of incomes going to capital. When the country becomes more developed and rural surplus labor is exhausted, urban-rural income gaps would narrow (due to improving agricultural productivity), urban wage would rise (leading to a rise in the labor income share), and inequality could start to fall. Thus, both the Kuznets hypothesis and Lewis' dual economy model predict widening spatial inequality at the initial stage of development: widening urban-rural income gaps and rising regional disparity. Although empirical studies that attempt to test the validity of the Kuznets hypothesis have yielded mixed results (Ahluwalia 1976; Deininger & Squire 1996; Barro 2000; 2008; Ravallion & Chen 2019), some of the development processes behind it are relevant to explaining rising income inequality in developing countries.

More recent economic analysis has highlighted the role of agglomeration benefits, where once concentration starts in a particular location because of its natural advantages or because of advantages conferred by infrastructure or some public policies, there is a self-perpetuating process of increasing concentration (Krugman 1991; World Bank 2008), leading to increasing spatial inequality. It has been noted that in recent years growing spatial inequality is not only observed in developing countries, but also in developed countries (Moretti 2022; Overman & Xu. 2022).

¹ Kuznets also noted that political pressures from an expanding middle class for greater income redistribution and rising importance of services sector incomes that rely more on individual excellence could cause inequality to fall when a country becomes more developed.

A growing number of the superrich

As discussed earlier, one particular feature of the recent rise in inequality in many countries is the rapid growth of income and wealth for a small group of people at the top of the income distribution, leading to a growing number of the superrich. These include, for example, entrepreneurs who are the first movers in taking advantage of the new opportunities generated by technological progress, globalization and market liberalization (ADB 2020), executives and capital owners of the booming sectors (such as finance and property), and owners of large land holdings in newly favored locations. While a large part of the income and wealth earned by these groups reflect market rewards to their hard-working and risk-taking, whether all of these can be justified by their contributions to the society is often a highly contentious issue, especially when market fails to work efficiently and institutions are weak. When the tax system is ineffective, this can be a major source of inequality and social tensions.

Some stylized facts in the context of Asia

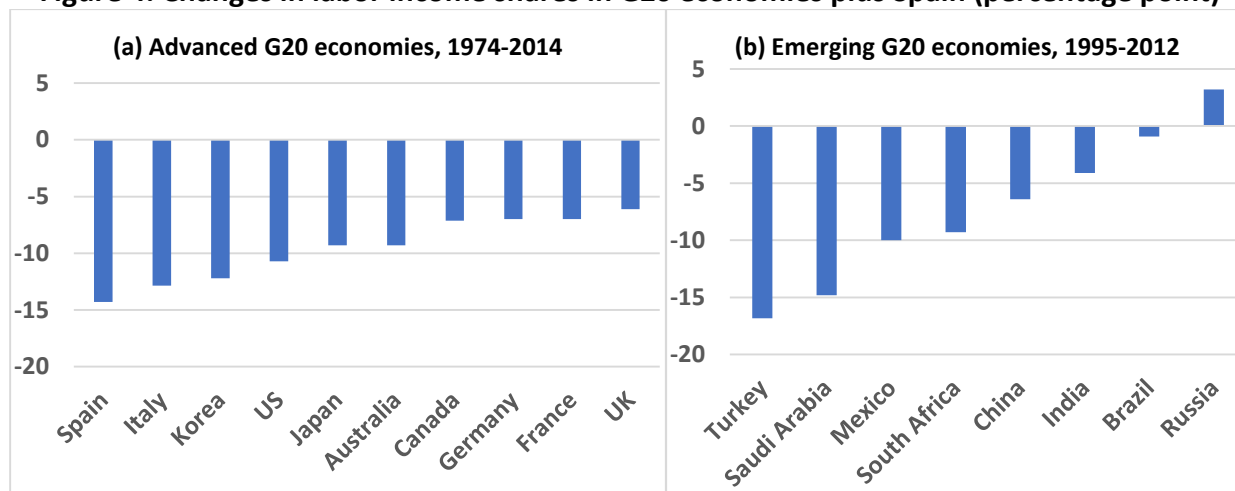
The above discussions suggest several key channels through which technological progress, globalization, deregulation and market-oriented reform, financialization, and population aging can cause inequality to rise: a fall in the share of labor incomes and corresponding rise in the share of capital incomes; widening wage differentials between skilled and unskilled workers, or the so-called “skill premium”; increasing spatial inequality, including widening urban-rural income gaps and regional disparity; and a growing number of the superrich. Furthermore, increases in income inequality can lead to increases in wealth inequality as rich households have a higher propensity to save, and rising wealth inequality can in turn increase income inequality. This section shows that all these factors are relevant to explaining recent increases in inequality in Asia, although the importance of each of the factors may differ from one economy to another.

Declining labor income share and rising capital income share

Many studies have noted that the share of labor income has fallen and that of capital income has risen in many developed countries. In Asia, a number of studies commissioned by Asian development Bank (ADB 2007; 2012; Zhuang, *et al.* 2014) showed a similar picture. According to ADB (2012), between the mid-1990s and mid-2000s, the share of labor incomes in manufacturing value added declined in a number of Asian economies: by 14.7 percentage point (pp) in India, 9.8 pp in Singapore, 6.2 pp in China, 4.6 pp in Japan, 4.2 pp in Taiwan, 4.0 pp in Hong Kong, and 1.7 pp in Indonesia. Since capital earnings mostly go to wealthier individuals and households, and are less equally distributed, a falling share of labor incomes and rising share of capital earnings worsen the income distribution. A joint report by ILO and OECD (2015) prepared for G20 Group shows that, during 1970-2014, the labor share in national income declined by more than 10 percentage points (pp) in Spain, Italy, Korea and the US, about 9 pp in Australia and Japan, and 6-7 pp in Canada, Germany, France and the UK (Figure 4 (a)). The same study shows that, during

1995-2012, the labor income share declined by 15 pp or more in Turkey and Saudi Arabia, 9-10 pp in Mexico and South Africa, 6 pp in China, 4 pp in India, and about 1 pp in Brazil (Figure 4 (b)).

Figure 4: Changes in labor income shares in G20 economies plus Spain (percentage point)

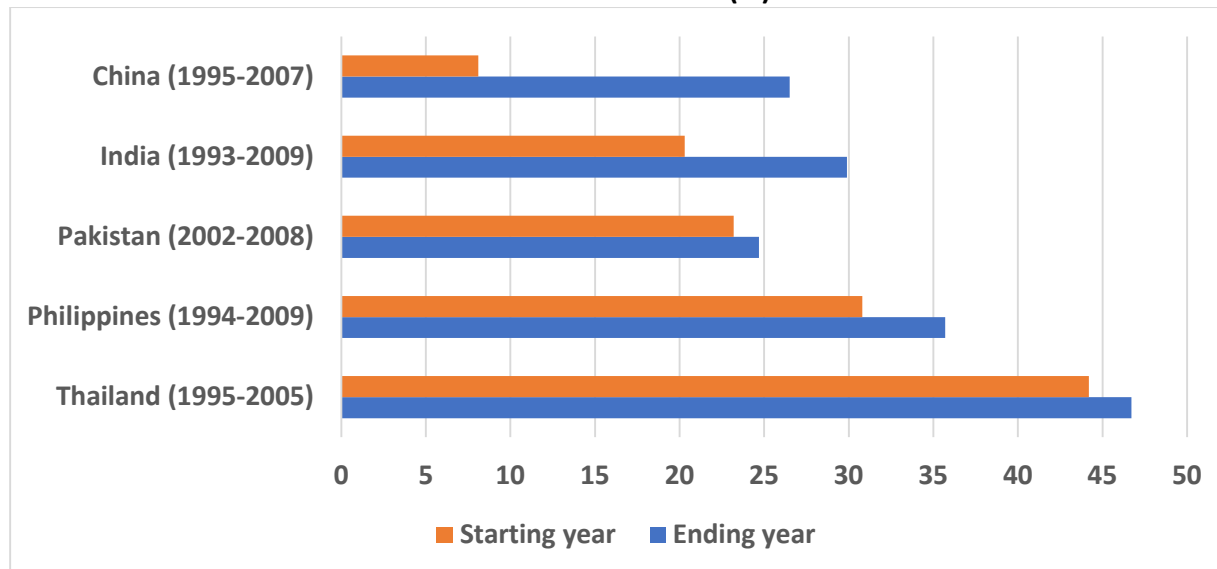


Source: ILO and OECD (2015).

Widening wage differentials between skilled and unskilled workers

There is ample global evidence that the rates of return to progressively higher levels of education have been trending upward in recent years. In Asia, a World Bank study (2012) reported that in various years in the 2000s, the tertiary education premium stood at 90% in Cambodia, 60% in China, 84% in Indonesia, 70% in Mongolia, 70% in the Philippines, 120% in Thailand, and 55% in Viet Nam, and the premium has been growing too. In China, for instance, the hourly earnings premium of workers with college education or above over those with high school or below increased from 41% to 58% between 1999-2005 (Gropello & Sakellariou 2010). It jumped from 23% to 57% between 1992 and 2006 in Viet Nam. A study on India, the Philippines, and Thailand found that the rate of return to college education rose relative to that of secondary education between the mid-1990s and mid-2000s (ADB 2012). Household survey data show rising importance of educational attainments in explaining income inequality in a number of Asian countries (Figure 5). This can be due to widening gaps in educational attainments, or growing educational premiums in earnings. But mostly likely it is due to the latter, or both.

Figure 5: The share of income inequality due to differences in educational attainment of the head of household (%)



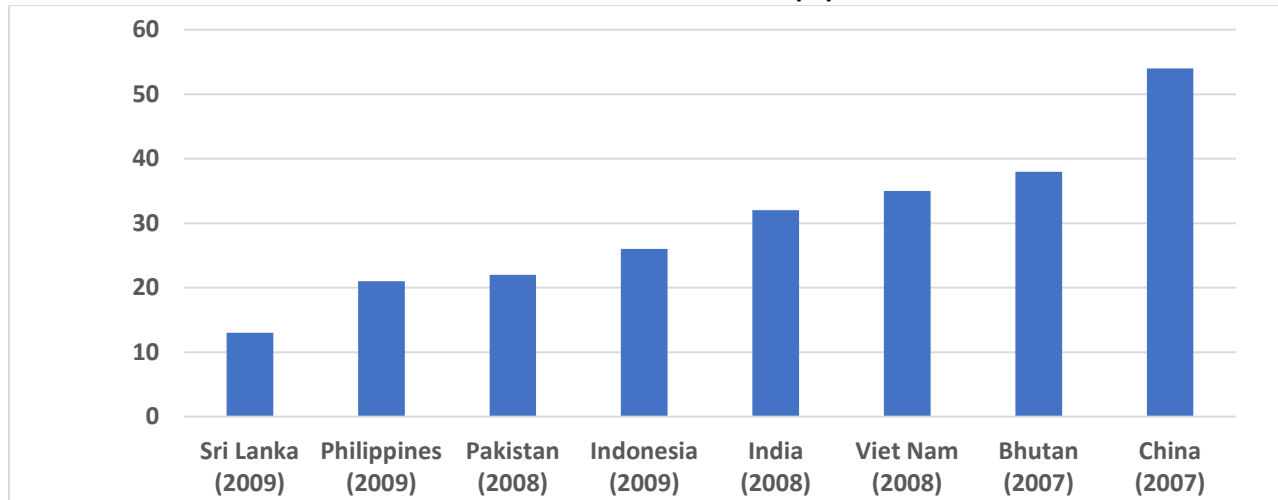
Source: Zhuang, *et al.* 2014.

Growing spatial inequality

In developing countries with a dual economy, technological progress, globalization, deregulation and market-oriented reform can not only affect income distribution between capital and labor and between skilled and unskilled workers, but also between urban and rural areas and among different regions, especially in early stages of development, due to some of the development processes behind Kuznets' inverted-U hypothesis and Lewis' dual economy model.

Increasing regional disparity and widening rural–urban income gaps have been significant contributors to increases in inequality in several Asian countries. According to ADB (2012), for example, in China, the urban-rural income gap can explain less than 35% of the total inequality in 1990, but 45% in 2008; in India, it can explain less than 15% of the total inequality in 1993, but more than 20% by 2009. The same study also found rising regional income disparity in countries such as China, India and Philippines. In China, the Gini coefficient of provincial per capita income increased from 22.6 in 1990 to 27.6 in 2008 before moderating to 22.7 in 2010. In India, the Gini coefficient of state per capita income increased from 21.4 in 1994 to 26.3 in 2009. In the Philippines, the Gini coefficient of provincial per capita income increased from 31.1 in 1990 to 36.1 in 2004 before moderating to 33.3 in 2009. Figure 6 shows that the combined contribution of urban-rural and regional inequalities to total inequality for selected Asian countries in the late 2000s.

Figure 6: Contribution of spatial inequality to total inequality in selected Asian countries (%)



Note: Decomposition using the Theil index. Spatial inequality covers both between-region and urban–rural inequality.
Source: Zhuang, *et al.* 2014.

Limited income redistribution through taxes and transfers

For Asia’s developing economies, another important contributing factor to rising or high-income inequality is the limited role of income redistribution through taxes and transfers when compared with developed countries. As shown in Table 3, income redistribution plays an important role in reducing inequality in developed countries. For instance, taxes and transfers reduce the mean Gini coefficient by 34% (16 Gini points) for OECD countries and by 28.6% (13.1 Gini points) for three high income Asian countries (Japan, Australia and New Zealand) in 2015, while the reduction was only 6.5% (2.6 Gini points) for developing Asia. A greater role of income redistribution when a country becomes wealthier is one of the underlying assumptions of the Kuznets’ inverted-U hypothesis and Table 3 appears to vindicate this assumption.

Table 3: Impact of taxes and transfers on income Inequality, 2015

Region	Pre-tax and pre-transfer Gini (mean)	Post-tax and post-transfer Gini (mean)	% Difference
Developing Asia	40.0	37.4	-6.3
Japan, Australia, and New Zealand	45.7	32.6	-28.6
Latin America, and Caribbean	47.1	43.4	-7.7
Sub-Saharan Africa	45.9	45.0	-1.8
OECD	47.4	31.1	-34.1
European Union	46.8	29.9	-36.0
North America	48.6	34.5	-29.1

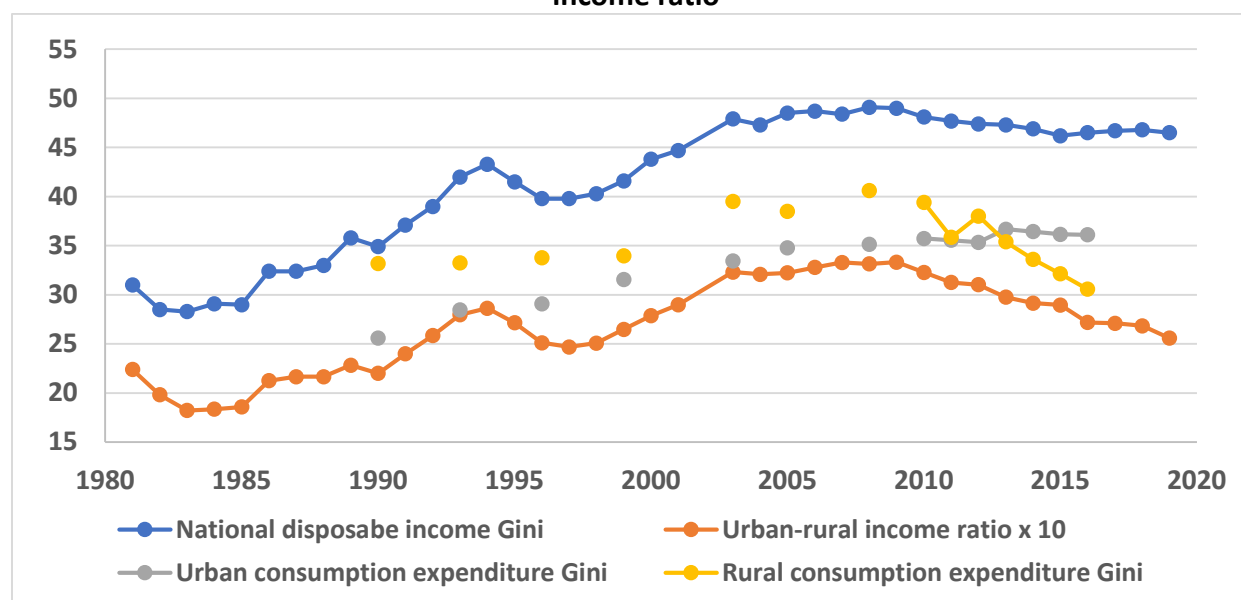
Note: Mean refers to the simple average of Gini coefficients of the countries in the region.

Source: Solt, 2019.

5. The recent trend of inequality in China

Rapidly rising inequality in China since the 1980s has attracted considerable attention in and outside the country. While the Chinese economy has managed to grow at close to 10% annually for 4 decades, thanks to the market-oriented reform, and the growth has helped to lift hundreds of millions of people out of poverty, the Chinese society has in the process become less equal. The Gini coefficient of per capita household disposable income was below 30 in the early 1980s, but it started rapid rise from 1985 when China's reform focus shifted to the urban areas, reaching its peak at 49.1 in 2008 (Figure 7). It moderated somewhat in the following years, to 46.2 in 2015. Since then, the Gini coefficient has hovered around this level. At the same time, China's wealth inequality has also grown.

Figure 7: The trends of China's national, urban and rural Gini coefficients and urban-rural income ratio



Note: for easy consumption, urban-rural income ratios are multiplied by 10.

Sources: National Gini coefficients before 2003 from Ravallion & Chen (2007) and after 2003 from China National Statistical Bureau (n.d.); urban and rural Gini coefficients from World Bank (n.d.); urban-rural income ratios from China National Statistical Bureau (n.d.).

Figure 7 shows that the rapid rise in China's national Gini coefficient followed very closely with an equally rapid rise in the urban-rural income ratio during 1981-2008, suggesting that widening urban-rural income gaps played a major role in causing national inequality to rise during this period, consistently with many empirical studies (Zhuang & Li 2016). But rising inequality within urban cities and rural areas also contributed to rising national inequality.² Technological progress, globalization and market-oriented reform have generated strong growth in China, but the growth

² It needs to be noted that urban and rural Gini coefficients were estimated using household consumption expenditure data, while national Gini coefficients were estimated using household disposable income data, and the former is usually smaller than the latter by 5-10 points.

has benefited capital owners more than labor, skilled workers more than the unskilled, and urban cities and coastal regions more than rural areas and inland regions (Zhuang, *et al.* 2014). These are shown by a falling labor income share, widening skill premium, increasing urban-rural income gaps, and growing regional disparity, as discussed in previous section. The rapid growth has also produced many superrich. According to Forbes, the number of billionaires in China was nil in 2000, but it increased to 630 in 2021 (excluding Hong Kong and Macao) and now accounts for 23% of the world total, making the country the second place in the number of billionaires globally, only after the US (Forbes n.d.).

The moderation in the national Gini coefficient from 2008 has followed the decline in the urban-rural income gaps and in rural inequality and, from 2013, stabilizing in urban inequality. Zhuang and Li (2016) attributed the moderation of China's Gini coefficient after 2008 to the reversal of the direction of several key drivers that were behind the rise in inequality before 2008. Firstly, as China approached and passed the so-called Lewis turning point where rural to urban migration began to tighten labor markets (Zhang, *et al.* 2011), the rural-urban income gaps have started to narrow. Recent policy actions supporting rural population (such as investment in rural infrastructure, improvement in rural social security, and rural antipoverty programs) have also contributed to increases in rural incomes (Li, *et al.* 2013).

Secondly, China's regional inequality started to decline from the mid-2000s after many years of widening, with the Gini coefficient of per capita provincial income falling from 27.3 in 2003 to 20.4 in 2014. Some studies attribute this partly to the implementation of the Great Western Development Strategy by the government from the early 2000s (Fan, *et al.* 2011). Thirdly, recent data suggest that the labor income share has risen in China in recent years, from 54.8% in 2011 to 58.6% in 2017 (Feenstra, *et al.* 2015). This can also be partly explained by China passing the "Lewis turning point", leading to labor market tightening and increases in wage growth in urban areas. This is consistent with the fact that Chinese coastal provinces have been experiencing labor shortages since the mid-2000s (ADB 2012).

Fourthly, there are evidence of narrowing wage differentials between skilled and unskilled workers in recent years too, with the average wage growing faster for unskilled workers than for skilled workers. One reason is a rapid increase in the investment in tertiary education. China's annual university enrollment increased from 0.93 million in 1995 to 6.62 million in 2010 and 9.67 million in 2020. It has been reported that many university graduates struggled to find suitable jobs, leading to high unemployment among these graduates (Chan 2015; Knight, *et al.* 2016). This may have put downward pressures on wage rates for the better-educated labor. Furthermore, recent years have seen rapid increases in the minimum wage rates in many provinces, as the government responded to rising inequality (Li & Lin 2015). Since the minimum wage rates apply largely for unskilled workers, their increases help to reduce wage differentials between skilled and unskilled workers and income inequality.

Since 2015, however, while the urban-rural income gaps have continued to narrow, the national Gini coefficient of per capita disposable income has been hovering around 46-47, suggesting that there are other factors offsetting the impact of narrowing urban-rural income gaps. Going

forward, there are a number of factors that will influence China's income inequality. Some tend to increase inequality, some tend to reduce it, while for some others, their impact is more difficult to predict.

The factors that can help reduce China's income inequality include further narrowing in urban-rural income gaps as urbanization and the reform of hukou system continue (Kanbur & Zhuang 2013); more reduction in regional disparity as interior provinces continue to catch up and the labor mobility becomes easier; and stronger government policy actions to contain inequality guided by the new vision of promoting common prosperity. According to this vision, China is to achieve common prosperity by better balancing the relationship between efficiency and equity; putting in place an institutional arrangement for income distribution consisting of primary distribution (through market), secondary distribution (through fiscal transfers such as tax and social protection) and the third distribution (through charity and philanthropy), strengthening the role of taxes and fiscal transfers, expanding the size of the middle class, increasing incomes of the poor and low-income households, reasonably adjusting incomes of top earners, cracking down rent-seeking and corruptive activities, and promoting social justice (Xi 2021).

The factor that could cause China's inequality to increase with a reasonable certainty is population aging. China's population aging has accelerated in recent years due to increasing life expectancy and a rapid decline in the fertility rate. China's total fertility rate declined to 1.69 in 2019, far below the replacement level (UN 2019). Its proportion of population aged 65 and above rose from 5.6% in 1990 to 12% in 2019 and is projected to increase further to 26% by 2050 (the median prediction). According to estimation by Jain-Chandra, *et al.* (2018), China's Gini coefficient of per capita disposable income could rise by 4.8 Gini points by 2050 from its 2010 level due to population aging. In Japan, for instance, half of the increase in income inequality between the 1980s and 1990s was estimated to be caused by population aging (Ohtake & Saito 1998)

Other drivers such as wage differentials between skilled and unskilled workers, the labor income share, and wealth inequality are more difficult to predict. For instance, the labor income share will depend on factors such as the rate of economic growth and labor market reform, and the wage differentials between skilled and unskilled workers will depend on the demand and supply of skilled workers. What is certain, however, is that in order to reduce the Gini coefficient of per capita household disposable income to a level comparable to the OECD average, China will have to significantly increase the role of taxes and transfers in income redistribution over time.

6. Conclusions and policy discussions

A large part of Asia including both developing and high-income economies experienced rising income and wealth inequality in recent decades, following the global trend. Technological progress, globalization, deregulation and market-oriented reform, and financialization of the economy have created many new opportunities, but not benefited everyone equally. In particular, the new opportunities have rewarded capital owners more than labor, benefited skilled workers

more than the unskilled, and favored urban cities and locations with better infrastructure and proximity to domestic and overseas markets over rural areas and locations with poorer infrastructure and less favorable natural advantages. The new opportunities have also led to a growing number of the superrich. In some countries, population aging has also contributed to the rise in inequality.

China's inequality has increased the most among Asian countries with available data. But its Gini coefficient of per capita household disposable income has moderated somewhat after peaking in 2008, due to the reversal of the direction of some of the key drivers of the rise in inequality before 2008. Going forward, continued narrowing in urban-rural income gaps, further reduction in regional disparity, and stronger government policy actions to reduce inequality under the vision of common prosperity will help to reduce inequality, population aging will increase it, while the direction of some other drivers such as the labor income share and skill premium is more difficult to predict. What is certain, however, is that China needs to significantly increase the role of taxes and transfers in income redistribution over time in order to reduce the Gini coefficient of per capita household disposable income to the level comparable to the OECD average.

In designing policies to contain and reduce inequality, it is useful to make a distinction between inequality of outcome and inequality of opportunity (ADB 2012). Income, expenditure and wealth are typical examples of outcomes. Inequality of opportunity is the portion of the inequality of outcome that can be attributed to differences in "individual circumstances" (Roemer 1998). Circumstances refer to those features that are outside the control of an individual, such as gender, race, ethnicity, place of birth, and parental education or income, that are often caused by weak institution, poor policy, market failure, and social exclusion. There is no disagreement that inequality of opportunity should be eliminated. On the other hand, given an individual's circumstances, what level of efforts the individual makes will also influence his or her outcomes. This difference in outcome reflects market rewards for hard working and risk-taking, and should not be simply disregarded.

In the real world, a clear distinction between inequality of outcome and of opportunity is not straightforward. There could also be differences in opinion on what constitutes circumstances and what constitutes efforts in a society. Even with these difficulties, in many developing countries, it is relatively easy to observe extreme circumstances that limit opportunities for a large segment of the population (ADB 2012). These circumstances include the lack of, or unequal access to, good jobs, and education, health care, and social protection compatible with a country's level of development. Thus, creation of good jobs and adequate provision of education, health care and social protection for wide population should be among key ingredients of policy to reduce inequality.

Therefore, Asian countries should adopt a four-prong approach to reducing inequality. The first is job creation through robust economic growth. Technological progress and open trade will remain key drivers of growth, but should be managed to minimize their negative impact on labor market. The second is adequate provision of education, health care, and social protection to enable everyone in the society to participate in and benefit from growth. The third is effective

income redistribution through taxes and transfers—developing Asian countries have a large scope in this area. The redistribution should not only aim to raise adequate finance for public spending on education, health care, and social protection, but also to reduce inequality. The fourth is governance and institutional reforms to tackle market failure, control rent-seeking and corruptive activities, and eliminate social exclusion, with a view to reducing inequality of opportunity.

Reducing income and wealth inequality is one of the key development challenges many Asian countries face in the years ahead. The COVID-19 pandemic has made tackling this challenge more urgent. The pandemic has not only pushed many into extreme poverty, but also increased inequality. Zhuang (2020) highlighted several channels through which the pandemic can increase inequality. Firstly, the pandemic is likely to hit unskilled workers harder than skilled workers because skilled workers are more difficult to replace and the unskilled are more likely to lose jobs or experience wage cuts. Secondly, it will hurt labor more than capital owners, because it is easier for capital-intensive production, such as manufacturing, to manage containment measures than labor-intensive production, like the service sector. Firms also have the option of substituting workers with machines and technology. Thirdly, the pandemic will have a disproportionate impact on vulnerable groups such as micro, small and medium-sized enterprises, women and the elderly. Governments around the region and world have many policy tools in disposal to address this challenge. The most urgent is to work together to end the pandemic as early as possible by ensuring everyone have equal access to COVID-19 vaccines.

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