

CHAPTER 2

Structural and rural transformation in Asia and the Pacific



Summary

The Asia and Pacific (APR) region has witnessed remarkable growth in gross domestic product (GDP) in recent decades, averaging an annual 4.5 per cent in 1980-2000 and 4.4 per cent in 2000-2013, compared with 2.6 per cent and 2.0 per cent for the rest of world over these periods. This rapid growth lifted its share of global GDP from 18.1 per cent in 1980 to 27.8 per cent in 2013. Although growth shows great variation across countries, its overall pace underpins a gradual convergence of lower middle-income countries towards higher middle-income countries in per capita terms, with a steep decline in poverty and malnourishment, but rising inequality and growing pressure on land, natural resources and the environment.

The rural sector in APR has been gradually transforming, moving from largely cereal- or grain-based production to higher-value production, such as livestock and fisheries. Driven mainly by rising income and urbanization, food-consumption patterns have been changing, shifting from starchy staples and rice towards fruit and vegetables, livestock and dairy products, fish, sugar and oils. The reduction in import barriers in developed countries has encouraged trade in these commodities. Moreover, the growing demand for livestock products and the rising costs of fossil fuels, combined with concerns about the environment and energy self-sufficiency, have spurred production of crops for animal feed and biofuels. Off-farm employment in the region has also expanded significantly.

Processes of rural transformation in the region have coincided with the deepest and fastest structural transformation in developing countries. APR displays the usual pattern of structural transformation in which labour productivity in agriculture is lower than it is in other sectors of the economy, rendering the declining share of agriculture in GDP lower than the labour share. There is a strong positive relationship between agriculture and structural transformation. Countries with higher agricultural productivity or production growth also have higher overall economic growth and structural transformation than those with lower

agricultural growth, reflecting the linkages and multiplier effects from agricultural productivity and agricultural growth with structural transformation. These include releasing surplus labour for industry and services, producing low-cost food, supplying exportable commodities that can help finance imports of key technology packages and capital equipment, and raising rural incomes that can increase demand for industrial products. Agrifood supply chains in Asia are shifting from involving multiple vertical linkages to fewer intermediaries over longer distances and closer horizontal connections. An important driver is the growing number of women entering the urban workforce, particularly in services.

Analysis of data from nine countries in the region confirms the report's major hypotheses. Specifically, no country has reduced rural poverty fast without both fast structural transformation and fast rural transformation. No country has reduced rural poverty slowly in the presence of both fast structural transformation and fast rural transformation. Countries that have gone through both fast structural transformation and fast rural transformation have also reduced rural poverty quickly. Countries that have not gone through both fast structural transformation and rural transformation have not reduced rural poverty quickly. Countries that have gone through either significant structural transformation or rural transformation have mixed outcomes, reducing rural poverty either quickly or slowly. Case studies of China, India, the Philippines and Viet Nam confirm that policies, institutions and investments are fundamental to the speed and inclusiveness of rural transformation. The design and implementation of institutions, policies and investments in each of these countries have influenced the path and speed of rural transformation and their outcomes for inclusion and poverty reduction. In all four countries, land reform, rural investments and sectoral policies have been decisive.

Countries with fast inclusive and sustainable rural transformation face the challenge of sustaining speed and outcomes. While labour-intensive manufacturing will

remain an important source of inclusive growth for this type of country, strengthening inclusive institutions, policies and investments is a priority, as is adapting them to new circumstances. Enhancing sustainable agricultural development is essential, with a particular emphasis on overcoming growing stresses from water and land degradation. Countries with relatively slow and non-inclusive rural transformation should primarily focus on overcoming the binding economic, institutional and political constraints to achieving faster structural transformation and rural transformation and to reducing poverty. They should consider comprehensive measures to align institutions, policies and investments, so as to maximize their impact on stimulating sustainable and inclusive growth.

For countries showing mixed results on structural transformation, rural transformation and poverty reduction, the role of agricultural and rural development remains central to boosting both structural and rural transformation. Countries with slow structural transformation should prioritize job creation in the rural non-farm economy, and in services and industry in urban and semi-urban settlements – a major area of action. Countries with slow rural transformation should consider enhancing their institutions and policies to enable the rural poor to access agricultural land and credit, and focus investments on agricultural technology and rural infrastructure. In addition to exploring decentralization, countries should ensure that appropriate market and pricing policies are in place to foster agricultural growth and, thus, rural transformation and structural transformation.

Structural and rural transformations in Asia and the Pacific

Recent economic and social trends

APR³⁷ is an extremely diverse region in its demography, economic and social development, natural resources, physical landscapes, and cultural and historical legacies. Around 3.8 billion people inhabit the 29 countries covered by this chapter, with populations ranging from 0.1 million to 1,360 million, and national population densities from as low as two

people per sq. km of land to as high as 1,200. China and India together account for more than 60 per cent of the region's population. More than half the region's population live in rural areas, most of whom are still engaged in agriculture. Urbanization rates vary widely by subregion. More than 70 per cent of the Pacific's population live in urban areas,³⁸ while in South and South-West Asia only 34 per cent of the population do so (ESCAP 2013).³⁹

The region has witnessed remarkable growth in GDP in recent decades, averaging an annual 4.5 per cent in 1980-2000 and 4.4 per cent in 2000-2013, compared with 2.6 per cent and 2.0 per cent in the rest of world over these periods.

This rapid growth has lifted its share in global GDP from 18.1 per cent in 1980 to 27.8 per cent in 2013.⁴⁰ Such performance was driven by China and India, the region's two largest developing economies, which achieved together annual growth of 7.4 per cent in 2011-2015. Yet while countries like Afghanistan, the Lao People's Democratic Republic, Mongolia, Myanmar, Papua New Guinea and Timor-Leste grew at above 7 per cent a year, others, including Malaysia, Nepal, Pakistan and Thailand, all grew at below 5 per cent. The Pacific Islands as a subgroup also registered, in comparison, slower GDP growth in 2009-2013 (IFAD 2015).

Although growth showed great variation across countries, its overall pace underpinned a gradual convergence of lower middle-income countries towards higher middle-income countries in per capita terms. Bangladesh and Myanmar became lower middle-income countries, and Mongolia an upper middle-income country. Afghanistan, Cambodia and Nepal are still low-income economies.

Growth in APR has generally been associated with a steep decline in poverty and malnourishment. The poverty rate in the region's developing countries fell from about 71 per cent in 1981 to 15 per cent in 2011, based on the purchasing power parity (PPP) US\$1.25-a-day poverty yardstick, and from 91 per cent in 1981 to 40 per cent in 2011, based on the PPP US\$2-a-day yardstick (World Bank 2015c). As with growth rates, poverty reduction

has progressed unevenly across the region, with China and India accounting for most of the region's overall reduction, in view of their large populations.

The reduction in poverty went hand in hand with the rapid decline in the proportion of the hungry, which was estimated to have fallen by more than 0.5 per cent annually, from 25 per cent in 1990 to 12 per cent in 2014 (FAO et al. 2015). South-East and East Asia led the downward trend, with 69 per cent and 59 per cent reductions in the proportion of the hungry, respectively. Progress in South Asia was slower, its proportion of poor people declined by 34 per cent over the period. India only marginally reduced its share of underweight children under 5 years old, in spite of strong economic growth.

Despite these gains, APR is still home to the largest number of the world's poor, with about 560 million (55 per cent of the global total) living below the US\$1.25-a-day poverty line in 2011 and 76 per cent of them living in rural areas. Poverty in the region is therefore largely a rural phenomenon.

The impact of economic growth on the pace of poverty reduction has been held back by widening inequality in income distribution in most Asian countries over the past few decades. The ratio of the share of total income accruing to the richest 10 per cent of the population to that of the 40 per cent poorest (the Palma Index) has, for example, climbed from 1 to 1.3 in Bangladesh (1992-2009), from 1.5 to 2.1 in China (1994-2009), and from 1.1 to 1.5 in Indonesia (1993-2010). Although rural wages in most Asian countries have grown (ODI 2014), wages in other sectors, particularly in manufacturing, have grown even faster (ILO 2012). Inequality was reinforced, too, by economic structures and social practices that disproportionately affect women, indigenous populations and ethnic minorities, as reflected by persistent disparities in access to land, asset ownership, credit, education, health services and other productive assets.

Rural transformation

Agricultural growth has been remarkable in the region, particularly since the 1970s when the Green Revolution hugely boosted grain

productivity and moved the region to a new stage of agricultural development (Ruttan 1977; Barker et al. 1985). More than 2.2 billion people in the region rely on agriculture for their livelihoods. Agricultural GDP in developing Asia surged from US\$2.4 trillion in 2000 to US\$10.0 trillion in 2011 (from US\$1.2 trillion to US\$2.6 trillion, excluding China). In 2007, about 87 per cent of the world's 500 million small farms (those smaller than 2 ha) were in Asia and the Pacific, and in many countries, average farm size continues to diminish.

From the early 1980s, investment in irrigation and increased use of chemical inputs further stimulated agricultural growth (World Bank 2008). The average annual growth rate of agricultural GDP accelerated from 3.4 per cent in the 1980s and 1990s to 3.8 per cent in the 2000s. (In 2013 it was particularly strong in the Lao People's Democratic Republic, Mongolia and the Philippines.) But these increases were accompanied by a decline in the share of agricultural value added in GDP, a sign typical of economies undergoing transformation. Since 1990, labour productivity growth in Asia has been robust, recording an annual average of 2.2 per cent, with China, the Republic of Korea and Malaysia leading the region and Bhutan, Nepal and the Philippines lagging behind (IFAD 2015).

The rural sector in APR has been gradually transforming, moving from largely cereal- or grain-based production to higher-value production, such as livestock and fisheries. Driven mainly by rising income and urbanization, food-consumption patterns have been changing, shifting from starchy staples and rice towards fruit and vegetables, livestock and dairy products, fish, sugar and oils. The reduction in import barriers in developed countries has encouraged trade in these commodities. Moreover, the growing demand for livestock products and the rising costs of fossil fuels, combined with concerns about the environment and energy self-sufficiency, have spurred production of crops for animal feed and biofuels (IFAD 2014).

In response to changes in food demand, the share of non-cereal crops in total crop area rose from 36 per cent in 1980 to 50 per cent in

2013 in APR (FAO 2014). A similar significant increase also occurred in livestock. The share of non-cereal production (non-cereal crops plus livestock) in total value added in agriculture (crops plus livestock) rose from 63 per cent in 1980 to 77 per cent in 2013.

Looking at nine countries with reliable data, and measuring rural transformation as the annual growth of agricultural labour productivity, widely varying speeds of rural transformation are seen in the region, ranging from 0.98 per cent per year for Pakistan to 3.83 per cent per year for China (table 2.1).

Off-farm employment in the region has also expanded significantly. Misra (2013) estimates that the non-farm sector's share in total rural employment in India had risen from 19 per cent in 1983 to 22 per cent in 1993-1994 and to 32 per cent in 2009-2010. In Pakistan, more than half the rural workers are employed away from farms. The rural non-farm sector is an important pathway for poverty reduction and employment (Farooq 2014).

The speed of rural transformation through rising off-farm employment depends heavily on supply and demand for labour (push and pull factors). In APR, with improving agricultural productivity since the 1970s (owed primarily to the Green Revolution, consistent progress in agricultural technology and marketing reforms), labour has been released from farming in nearly all developing countries. At the same time, urbanization and industrialization have raised the demand for rural labour. However, economies' ability to absorb surplus agricultural labour in rural and urban areas differs, influencing the path and speed of rural transformation in each country (Jatav and Sen 2013).

Attractive opportunities have opened up in agriculture, leading to large investments and competition for land (rubber plantations in Cambodia, palm oil production in Indonesia, etc.). These developments have combined with high population density to generate significant land scarcity, which creates major obstacles to adoption of heavy mechanization and labour-saving technologies. Still, new sources of economies of scale have emerged,

reflecting technical change (zero tillage and biotechnology), new markets (contracts with supermarket chains for large continuous and uniform deliveries) and institutional changes (such as access to international finance) (IFAD 2011).

Structural transformation

During the last few decades, the processes of rural transformation in the region have coincided with the deepest and fastest structural transformation in developing countries (IFAD 2014). APR displays the usual pattern of structural transformation in which labour productivity in agriculture is lower than it is in other sectors of the economy, rendering the declining share of agriculture in GDP lower than the labour share. The difference between the two shares (the blue dots in figure 2.1) declines with the rising per capita income until it is almost eliminated (figure 2.1).

Agriculture's share in GDP has fallen far faster (about 2.5 per cent a year since the 1970s, faster than the world average), than its share in total employment (1.7 per cent a year, slower than the world average). The divergence between labour productivity in agriculture and in the rest of the economy has thus increased in the region, widening more than in the rest of the world. This divergence is an important component of the increasing inequality in the region's income distribution, which is particularly acute for middle-income countries facing a difficult trade-off between increasing farmers' incomes and keeping food prices low and stable (IFAD 2015).

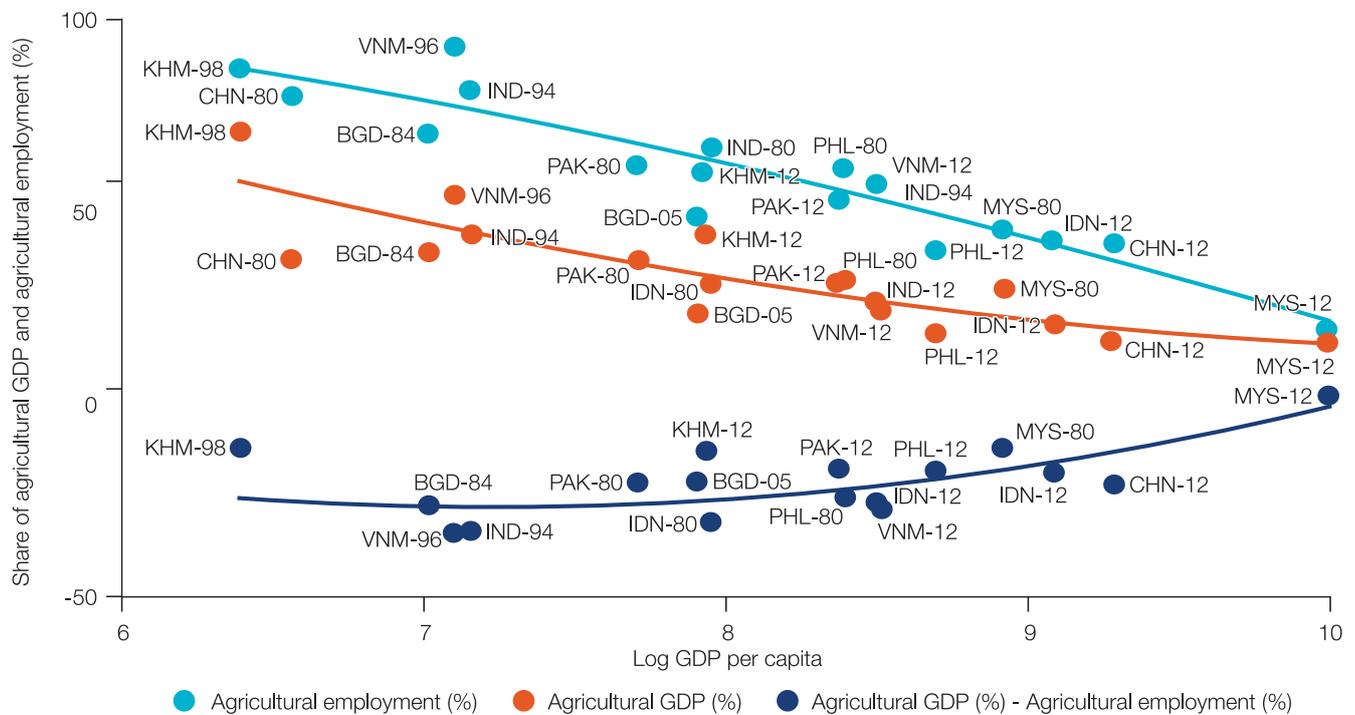
There is a strong positive relationship between agriculture and structural transformation. Countries with higher agricultural productivity or production growth (China, Viet Nam and Cambodia) also have higher overall economic growth and structural transformation than those with lower agricultural growth (the Philippines, Bangladesh and India), reflecting the linkages and multiplier effects between agricultural productivity, agricultural growth and structural transformation. These include releasing surplus labour for industry, construction, services, producing low-cost food that allows wages for

TABLE 2.1 Agricultural labour productivity, nine countries

Country	Agricultural labour productivity				Data years	
	Added value (constant 2005 US\$)		Annual change (%)		Base year	End year
	Base year	End year	National	Regional average		
Bangladesh	267.0	602.0	3.44	2.21	1990	2014
China	317.0	754.0	3.83	2.21	1990	2013
India	459.0	689.0	1.71	2.21	1990	2014
Indonesia	613.0	1 079.0	2.38	2.21	1990	2014
Cambodia	349.0	514.0	1.86	2.21	1993	2014
Philippines	826.0	1 152.0	1.39	2.21	1990	2014
Viet Nam	266.0	489.0	2.57	2.21	1990	2014
Lao PDR	345.0	522.0	1.74	2.21	1990	2014
Pakistan	857.0	1 083.0	0.98	2.21	1990	2014

Note: different base year for Cambodia is due to lack of data.
 Source: World development indicators (World Bank 2015)

FIGURE 2.1 Convergence of shares of agricultural GDP and employment in APR, 1980 and 2012



BGD = Bangladesh, CHN = China, IND = India, KHM = Cambodia, MYS = Malaysia, PAK = Pakistan, VNM = Viet Nam. Note: the figure is based on data for two years (the early and recent years) from each country.
 Note: Log GDP per capita is a logarithmic transformation of the level of gross domestic product of the country (constant 2011 purchasing power parity international dollars) in the year of reference.
 Source: IFAD, based on World development indicators (World Bank 2015)

workers in industry to be kept down, producing fibre and other crops that can be inputs to production in other parts of the economy, supplying exportable commodities that can help finance imports of key technology packages and capital equipment, and raising rural incomes that can increase demand for industrial products.

These multiplier effects of agriculture in industry and services have been well documented (Johnston and Mellor 1961; Schultz 1964; Johnston 1970; Graff et al. 2006; Timmer 2009). One example, alongside increased demand for high-value and processed food, is the rapid emergence of better-integrated agricultural supply chains and supermarkets. Agrifood supply chains in Asia are shifting from involving multiple vertical linkages to fewer intermediaries over longer distances and closer horizontal connections. An important driver is the growing number of women entering the urban workforce, particularly in services (IFAD 2014).

Structural transformation, rural transformation, and rural poverty reduction

The impact of structural transformation on rural poverty reduction differs among countries due to the degree of inclusiveness of growth (Balisacan and Fuwa 2003; Huang et al. 2008b; Timmer 2008; World Bank 2008). The speed of structural transformation also matters greatly for rural poverty reduction. The relationship between the two elements might be taken as the inverse of the average annual change in the share of non-agricultural GDP and average annual change in rural poverty (figure 2.2).

The coordinate (-1.90, 0.57) is the mean for the nine countries. The countries in the bottom-right quadrant showed slow structural transformation and slow rural poverty reduction in the past two decades (against the regional averages). They include the Philippines, Pakistan, India and Bangladesh. Viet Nam, China, the Lao People's Democratic Republic and Cambodia, in the top-left quadrant, had both fast structural transformation and fast rural poverty reduction, again, compared to regional averages. Indonesia is an exception, for despite its slower structural transformation than the mean of all countries,

the rate of its rural poverty reduction was above the regional average. Timmer (2004) argues that Indonesia's long-run pro-poor growth record is among the best in Asia owing to the country's efforts to balance growth and distribution during its structural transformation.

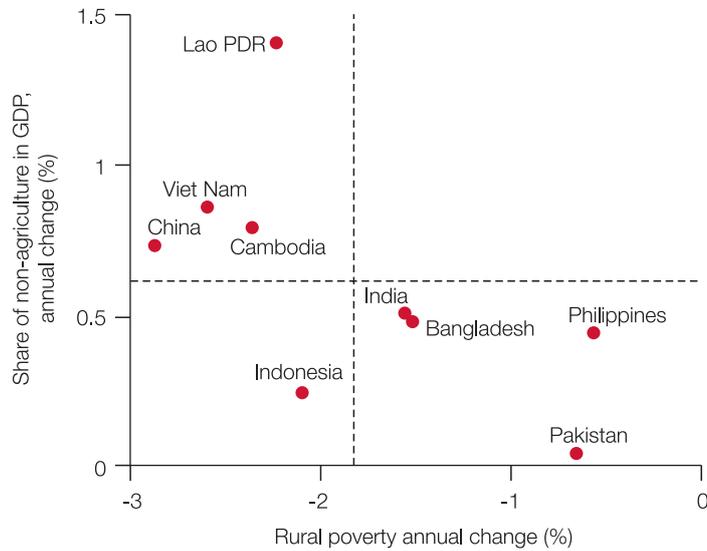
As with structural transformation, the speed of rural transformation is also positively correlated with the extent of poverty reduction (figure 2.3). Viet Nam, China and Indonesia, for example, in the top-left quadrant from the coordinate (-1.90, 2.22) had faster rural transformation and faster rural poverty reduction. On the other side of the line, the Philippines, Pakistan, and India had slower rural transformation with slower annual poverty reduction. Bangladesh had fast rural transformation but, compared to the nine countries, showed slower rural poverty reduction, which might be related to its slow structural transformation. Cambodia and the Lao People's Democratic Republic, with slower rural transformation, have shown faster rural poverty reduction, which also may be largely due to their fast structural transformation.

Combining the countries into categories based on their speed of structural transformation, rural transformation, and rural poverty reduction, yields the results in table 2.2. In summary:

- No country has reduced rural poverty quickly without both fast structural transformation and fast rural transformation (the bottom-left corner of the table is empty).
- No country has reduced rural poverty slowly in the presence of both fast structural transformation and fast rural transformation (the top-right corner is empty).
- Countries that have gone through both fast structural transformation and fast rural transformation have also reduced rural poverty quickly (China and Viet Nam).
- Countries that have not gone through both fast structural transformation and rural transformation have not reduced rural poverty quickly (Philippines, Pakistan and India).
- Countries that have gone through either significant structural transformation or rural

FIGURE 2.2 Changes in non-agricultural GDP and in rural poverty, nine countries

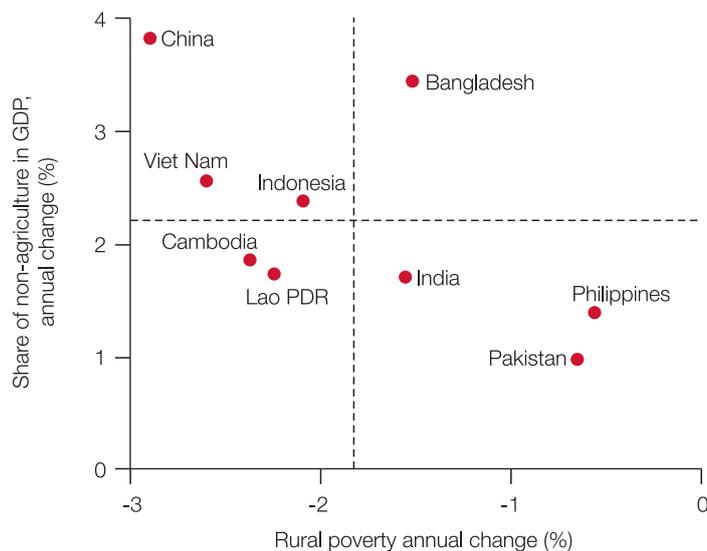
Structural transformation and rural poverty reduction, 1990s-2010s



Note: the simple means for “average annual change in the share of non-agricultural GDP” and “average annual change in rural poverty rate” of the nine countries are 0.57 (as indicated by vertical dotted line) and -1.90 (as indicated by horizontal dotted line), respectively.
Source: IFAD, based on World Bank (2015)

FIGURE 2.3 Rural transformation and rural poverty reduction, nine countries

Rural transformation and rural poverty reduction, 1990s-2010s



Note: the simple means for “average annual growth of agricultural labour productivity” and “average annual change in rural poverty rate” of the nine countries are 2.22 (as indicated by horizontal dotted line) and -1.90 (as indicated by vertical dotted line), respectively.
Source: IFAD, based on World Bank (2015)

transformation have mixed outcomes, reducing rural poverty either quickly (Indonesia, Lao People’s Democratic Republic and Cambodia) or slowly (Bangladesh).

The associations between structural transformation, rural transformation and poverty reduction are much sharper in the APR region than in other regions (discussed in the Introduction), probably because economic growth, structural transformation and rural transformation were, on average, faster than elsewhere. This is quite important, as in other regions fewer of these expected associations have been confirmed.

Based on these results, it is possible to divide the nine countries into three groups:

Group I: countries with fast structural transformation, rural transformation and rural poverty reduction (China and Viet Nam). This group is a classic but much more rapid structural transformation and rural transformation than the “classic” transformation experienced by OECD countries in the twentieth century. Successful rural transformation in these countries increases structural transformation and vice versa as rural transformation and structural transformation are strongly linked. They also significantly reduce rural poverty.

Group II: countries slow in structural transformation, rural transformation and poverty reduction (the Philippines, Pakistan and India). Slow structural transformation and slow rural transformation contribute to slow rural poverty reduction.

Group III: countries with mixed experiences: (i) fast in structural transformation but slow in rural transformation and fast (but less fast than group I, or moderate) in rural poverty reduction (Lao People’s Democratic Republic and Cambodia), (ii) slow in structural transformation but fast in rural transformation and fast (but less fast than group I) in rural poverty reduction (Indonesia) and (iii) slow in structural transformation but fast in rural transformation and slow in rural poverty reduction (Bangladesh).

TABLE 2.2 Distributions of countries' outcomes for transformation and inclusion in Asia and the Pacific

Speed of structural and rural transformation		Rural poverty reduction	
		Fast	Slow
Fast structural transformation	Fast rural transformation	China, Viet Nam	
	Slow rural transformation	Lao PDR, Cambodia	
Slow structural transformation	Fast rural transformation	Indonesia	Bangladesh
	Slow rural transformation	Philippines, Pakistan, India	

Note: fast structural transformation refers to countries with above-average rates of structural transformation. Slow structural transformation countries are those with rates below average for their regions. Rural transformation and poverty reduction are also measured relative to averages for each region.

Source: Authors.

Patterns of transformation: four country case studies

To build an understanding of factors driving these results, developments over the last decades in four countries from these groups are examined: China and Viet Nam from group I and India and the Philippines from group II. At issue is how initial conditions and different institutions, policies and investments have shaped structural transformation and rural transformation processes. Together, these countries account for three-quarters of the region's population and thus constitute a powerful lens through which to build insight into structural and rural transformation in the region.

Initial conditions and key trends

Table 2.3 presents the evolution of key indicators of initial conditions in the four countries, most of them over the last 50 years. On arable land, all four countries were similarly constrained in 1960s. Per capita arable land was less than 0.2 hectares in China and Viet Nam, while the Philippines and India had slightly larger units per capita (0.25 and 0.35 ha, respectively). With rising populations, the amount of arable land per person has been falling in all four countries. Similarly, the average farm size has been falling. Currently, average farm size ranges from less than 1 hectare in China and Viet Nam to

1.2 hectares in India and nearly 2 in the Philippines (FAO 2015).

While the size of agricultural holdings has been decreasing, the share of cultivated land equipped for irrigation has risen sharply, by 44 and 35 per cent, in China and India between 1990 and 2010. In the same period, the Philippines saw a decrease on this indicator from an already low share (15.7 to 14.4 per cent), while Viet Nam maintained its 45.4 per cent. These differences are important because the expansion of irrigated land is a source of growth in crop production and land productivity.

China and India are the world's most populous nations, together accounting for some 37 per cent of the global population in 2013 (WDI 2015). In the Philippines, the urban population share was already 31 per cent in 1961, nearly twice that in the other three countries. By the early 2010s, the urban population exceeded the rural population in China, and accounted for about one third of the total population in India and Viet Nam, and nearly half the population in the Philippines.

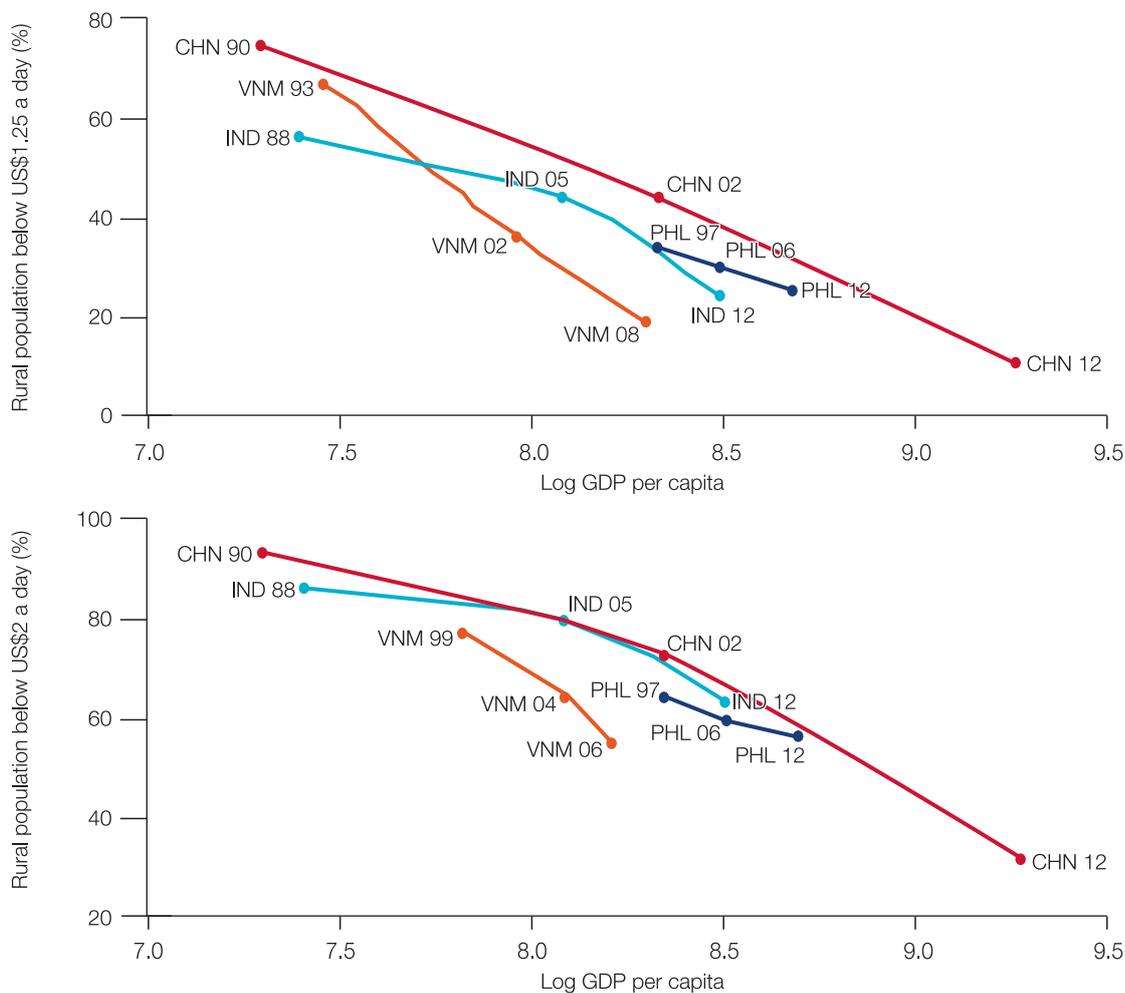
In rural poverty (figure 2.4), the steepest falls in the US\$1.25 or US\$2-a-day metric over the past two decades have been in China and Viet Nam. Economic development has differed in the four countries. Five decades ago, GDP per

TABLE 2.3 Major indicators: initial conditions and trends, four countries

	China	Viet Nam	India	Philippines
Per capita arable land (ha)				
1961	0.16	0.18	0.35	0.25
1980	0.10	0.12	0.24	0.20
2000	0.10	0.10	0.16	0.13
2012	0.09	0.11	0.14	0.11
Share of cultivated land equipped for irrigation (%)				
1990	37.9	45.4	29.1	15.7
2000	41.7	44.9	35.5	14.0
2010	54.5	45.4	39.4	14.4
Share of urban population (%)				
1961	17.2	15.0	18.0	30.6
1980	20.3	19.2	23.1	37.5
2000	36.8	24.4	27.7	48.0
2013	53.8	32.3	32.0	49.3
GDP per capita (PPP 2011 constant international US\$)				
1990	1 490	1 500	1 780	4 010
2000	3 610	2 650	2 550	4 240
2010	9 230	4 490	4 550	5 610
2013	11 500	5 120	5 240	6 330
Agricultural GDP share (%)				
1960	40 ^a		43	27
1980	30		35	25
2000	15	23	23	14
2013	10	18	18	11
Industrial GDP share (%)				
1960	31 ^a		19	31
1980	48		24	39
2000	46	34	26	34
2013	44	38	31	31
Service GDP share (%)				
1960	29 ^a		38	42
1980	22		40	36
2000	39	43	51	52
2013	46	43	51	58
Gini coefficient				
1984/85	27.7		31.1	41.0
1993/94	35.5	35.7	30.8	42.9
2002/03	42.6	37.6	-	44.5
2011/12	37.0/47.6 ^b	35.6	33.6	43.0
Share of public agricultural expenditures in agricultural GDP (%)				
1980	10.9		2.4	3.2
1990	6.1	2.3	4.5	6.1
2000	8.2	8.5	3.8	7.4
2010	20.1	6.5	5.9	8.0

^a Average for 1961-1963. ^b 37.0 based on WDI (2015) and 47.6 based on the National Bureau of Statistics of China (2013).
Sources: World development indicators (World Bank 2015); FAO (2015); IFPRI (2013); NBSC (2013).

FIGURE 2.4 GDP per capita and rural poverty rate, four countries, circa 1998-2012



CHN = China, IND = India, PHL = Philippines, THA = Thailand, VNM = Viet Nam.

Note: economic development has differed in the four countries. Five decades ago, GDP per capita in the Philippines was more than seven times that of China and nearly three times that of India. Since 1980, India and Viet Nam have narrowed their income gap with the Philippines. In the early 2000s, China's per capita GDP surpassed that of the Philippines.

Note: Log GDP per capita is a logarithmic transformation of the level of gross domestic product of the country (constant 2011 purchasing power parity international dollars) in the year of reference.

Source: IFAD, based on World Bank data.

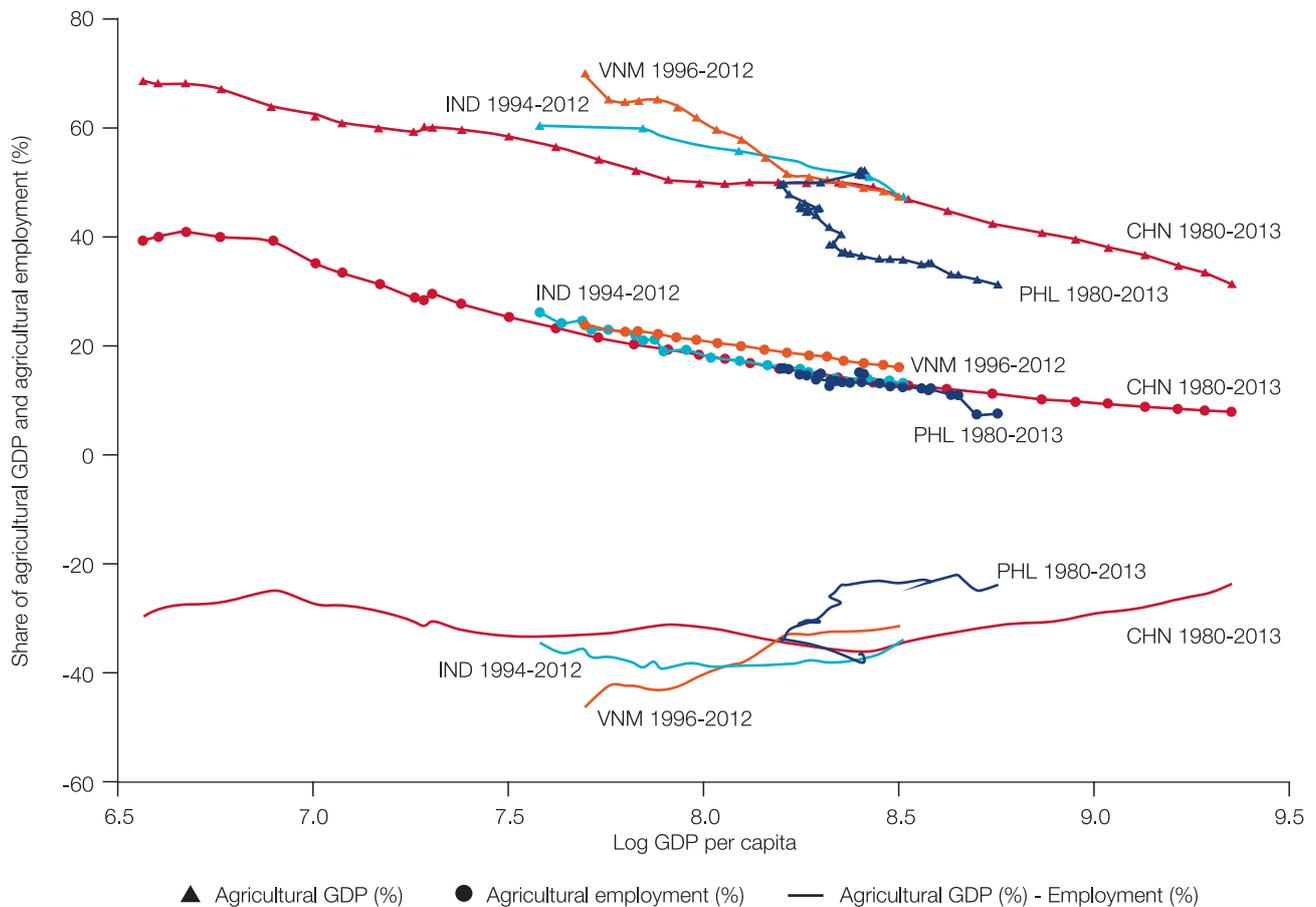
capita in the Philippines was more than seven times that of China and nearly three times that of India. Since 1980, India and Viet Nam have narrowed their income gap with the Philippines. In the early 2000s, China's per capita GDP surpassed that of the Philippines.

Structural transformation (measured as changes in share of agricultural GDP and agricultural employment) was much faster in China and the Philippines (1980-2013) when compared to that of India and Viet Nam (mid-1990s-2012).⁴¹ Economic growth in China was much faster than in the Philippines. Viet Nam had faster structural transformation

and economic growth than India (figure 2.5). A larger change in the *x*-axis reflects faster economic growth (in GDP per capita) and the larger change in the *y*-axis reflects faster structural transformation.

Among the four countries, China had the fastest structural transformation, with agriculture's share in GDP falling by some 30 percentage points during 1960-2013 (or 20 percentage points since 1980; see table 2.4). In 2013, the share of agriculture in China's GDP was similar to that of the Philippines (10 and 11 per cent, respectively), but the speed of structural transformation in the Philippines has

FIGURE 2.5 Structural transformation and GDP per capita, four countries



CHN = China, IND = India, PHL = Philippines, THA = Thailand, VNM = Viet Nam.
 Note: Log GDP per capita is a logarithmic transformation of the level of gross domestic product of the country (constant 2011 purchasing power parity international dollars) in the year of reference.
 Source: IFAD, based on World development indicators (World Bank 2015).

been moderate since 1980. (In 1960, its share of agricultural GDP was already much lower than China, India and Viet Nam.)

The cases of China and the Philippines help to show how the path and speed of structural transformation matter also for inclusive growth. China has undergone significant structural transformation and massive job creation for rural labour in its market reform and trade liberalization since the 1980s. This includes the rapid growth of labour-intensive manufacturing in rural (including rural township and village enterprises) and urban areas in the 1980s and 1990s, and even faster growth in manufacturing and services since China joined the World Trade Organization in 2001. Quick manufacturing growth created not only jobs for rural surplus labour but also high demand for services.

Therefore, despite the rapid expansion of manufacturing, the share of industrial GDP declined from 48 per cent in 1980 to 44 per cent in 2013 because of much faster growth in labour-intensive service sectors, whose share of total GDP increased from 22 per cent to 46 per cent over the period. In 2014, China had 294 million rural labourers (more than half the rural labour force) who worked more than six months in off-farm employment. More than 60 per cent of them were migrants, most of them working in urban areas (NBSC 2015).

The Philippines went through a more moderate process of structural transformation over 1960-1980 as the share of agricultural GDP declined by only two percentage points, from 27 per cent in 1960 to 25 per cent in 1980. Only after 1980 did the economy start to transform

moderately (see table 2.4). With slow growth in manufacturing and fast population growth, the service sector has become a major absorber of surplus rural labour, and the unemployment rate has stayed high. The lack of structural transformation in the Philippines is largely explained by persistent policy distortions (macro policy, import substitution, inequality of land distribution, etc.) that have slowed the growth of agriculture and manufacturing (World Bank 2013). The Philippines “missed a crucial step in the structural transformation process: the rise of manufacturing and the associated successful job creation in urban areas,” a major reason for diminished economic transformation and inclusive growth (World Bank 2013).

The share of non-cereal agricultural GDP shows correlation with the progress of rural poverty reduction among the four countries. The share of non-cereal products (crops plus livestock) in agricultural GDP increased by 21.5 per cent, 11.6 per cent and 1.1 per cent in China, India, and the Philippines, respectively, during 1980-2010. In Viet Nam, where rural transformation started later, this share has seen an 8 per cent increase over the past decade.

Across the region, many of the most marginalized areas and minority communities still face huge challenges. Poor initial development conditions (such as lack of natural resource endowment), costly infrastructure development and lack of local market opportunities hinder their enjoyment of the fruits of overall economic development. In China, those left behind are concentrated in the western region and remote areas with large minority populations (Montalvo and Ravallion 2010). Large numbers of India’s poor live in its semi-arid tropical region. The poverty incidence rate for indigenous groups is twice as high as for non-indigenous groups (World Bank 2007). The incidence of poverty in Viet Nam is also highest in the remote northern and central highlands, particularly in indigenous areas (Minot and Baulch 2005). In the Philippines, poverty incidence is higher in conflict-affected Mindanao than in non-conflict provinces, and higher in remote mountain areas than in the lowlands (World Bank 2013).

As measured by the Human Development Index, all four countries have recorded sweeping gains in human development over the last few decades. Similarly, the Global Hunger Index developed by the International Food Policy Research Institute (IFPRI) showed that while all countries made strong improvements from 1990 to 2014, Viet Nam (ranked 7.5) and China (5.4) have reached a moderate situation, while the Philippines (13.1) and India (17.8) still have to overcome challenges (IFPRI 2015).⁴² Over the past decade, India has, however, made progress in fighting undernutrition: child wasting fell from 20 per cent to 15 per cent between 2005-2006 and 2013-2014, and stunting fell from 48 per cent to 39 per cent. The Indian government has also scaled up nutrition-specific interventions. Yet progress in reducing child undernutrition is uneven among the states. One factor that makes it more likely that babies will be born underweight is the low social status of women, which affects women’s health and nutrition (IFPRI 2015).

A key finding in this report is that the speed of the shift to inclusion beyond poverty is not always positively correlated with income equality, as measured by the Gini coefficient. In fact, the Gini has worsened in China, but has changed only moderately in the other three countries (see table 2.4). In China, interregional inequality has been rising, too, most notably between the more highly developed eastern region and the lagging central and western regions (Li and Wei 2010) and between urban and rural areas, reinforced by long-standing urban-rural inequalities (Long et al. 2011).

Similarly in Viet Nam, although economic development in rural areas has resulted in higher income per capita and consequent improvements in living standards, it has also brought income inequality. Despite the gains in per capita income in rural areas, tackling residual poverty is proving hard owing to few assets, low education and poor health status, particularly among ethnic minorities, who are disproportionately represented among the rural poor. Average income per capita in rural areas is less than 50 per cent of that in urban areas. Rural poverty incidence is nearly three times that in

urban areas. Many rural households maintain an income level just above the poverty line. With few or no savings, little state support and an almost total dependence on natural resource gathering and subsistence agriculture, they are vulnerable to shocks. Poverty is concentrated in upland areas in the northeast and northwest mountains, parts of the central highlands, and areas of the central coastal region.

The per capita income ratio between urban and rural areas has been about 2.0 in India, the Philippines and Viet Nam over the past two decades, with a rising trend in India (Kanbur et al. 2014), and a falling one in Viet Nam (from 2.3 in 1999 to 1.89 in 2012) (GSOV 2014). The same ratio has stayed largely unchanged in the Philippines (Kanbur et al. 2014). China has the widest gap, despite the rapid growth of farmers' income. The ratio increased from about 2.0 in the early reform period to a peak of 3.33 in 2009, and then declined to 2.92 in 2014 (NBSC 2015). This recent narrowing reflects a bigger commitment by the authorities to narrow the divide (see box 2.1).

Unemployment is a challenge across the region, but with variation by country. In Viet Nam, while unemployment rates are higher for youth than for the total labour force, they have been quite low (5-6 per cent), moderate in China and India (9-11 per cent), and worrisome in the Philippines (nearly 20 per cent). Unemployment rates are lower for women – including female youth – in China, show no significant difference in Viet Nam and India, but are about 3 per cent higher in the Philippines (table 2.4).

Differences in employment between women and men are often due to their different roles in the economy and society. Men are generally more likely to participate in off-farm business, particularly business involving migration to urban areas, while married women tend to work more in farming and take care of their children and elders at home (Wang et al. 2011; Misra 2014). In India, about 300 million young people (aged 13-35) live in rural areas, and many of them are forced to migrate seasonally or even permanently, but lack the skills required by the modern economy. The Philippines, with

limited domestic job opportunities, has seen more women than men leave the country (for domestic services and other jobs abroad). In China, nearly all rural youth now participate in non-farm employment. In addition, more educated men and women have higher off-farm employment opportunities. Similar observations apply to India and Viet Nam.

Across the region, many of the most marginalized areas and minority communities still face huge challenges. Poor initial development conditions (such as lack of natural resource endowment), costly infrastructure development and lack of local market opportunities hinder participation in the benefits of overall economic development.

In China, those left behind are concentrated in the western region and remote areas with large minority populations (Montalvo and Ravallion 2010). Large numbers of India's poor live in its semi-arid tropical region. The poverty incidence rate for indigenous groups is twice as high as for non-indigenous groups (World Bank 2007). The incidence of poverty in Viet Nam is also highest in the remote northern and central highlands, particularly in indigenous areas (Minot and Baulch 2005). In the Philippines, poverty incidence is higher in conflict-affected Mindanao than in non-conflict provinces, and higher in remote mountain areas than in the lowlands (World Bank 2013).

Policies, institutions and investments

A key theme of this report is that policies, institutions and investments matter fundamentally to the speed and inclusiveness of rural transformation. The design and implementation of institutions, policies and investments in each of the four countries have influenced the path and speed of rural transformation and their outcomes for inclusion and poverty reduction. In all four case study countries, land reform, basic rural investments and sectoral policies have been decisive.

Over the past 60 years, China has pursued three major rounds of land reform. The "total land reform" initiative in the 1950s took land away from the landowning classes and redistributed it to all farmers.

TABLE 2.4 Unemployment rates, total and youth, four countries, 1991-2013 (%)

Rate	China	Viet Nam	India	Philippines
Total (% of total labour force)				
1991	4.9	2.5	4.3	9.0
2000	4.5	2.3	4.3	11.2
2010	4.2	2.6	3.5	7.3
2013	4.6	2.0	3.6	7.1
Male (% of male labour force)				
1991	4.8	2.4	4.0	8.1
2000	5.1	2.4	4.3	11.2
2010	5.5	2.5	3.3	7.4
2013	5.2	1.8	3.5	7.2
Female (% of female labour force)				
1991	4.1	2.6	5.0	10.6
2000	3.8	2.2	4.2	11.2
2010	3.4	2.8	4.4	7.1
2013	3.8	2.2	4.0	6.9
Youth total (% of total labour force aged 15-24)				
1991	9.0	4.7	10.6	17.3
2000	9.3	4.6	10.0	23.0
2010	9.0	6.0	10.2	16.8
2013	10.1	5.4	10.5	16.7
Youth male (% of male labour force aged 15-24)				
1991	10.6	4.6	10.2	14.9
2000	10.9	4.8	9.9	21.4
2010	10.4	6.0	9.8	15.7
2013	11.7	4.8	10.3	15.4
Youth female (% of female labour force aged 15-24)				
1991	7.4	4.8	11.5	21.2
2000	7.6	4.4	10.1	25.6
2010	7.3	6.1	11.4	18.8
2013	8.1	6.2	11.3	18.6

Source: World Development Indicators (World Bank 2015)

BOX 2.1 Strengthening inclusiveness through integrated and participatory approaches in poor areas in China

China's transformation has been fuelled by strong market reforms, fast industrialization and rapid urbanization. But as wages increased in the industrial and services sectors, average incomes among rural and urban households diverged, to a ratio of 1:3 by 2014. Pockets of poverty persist in rural areas, particularly in mid- and western areas of the country, far from the industrialized coastal areas.

IFAD supported the government in pursuing more inclusive growth by tackling pockets of rural poverty using an integrated but flexible (modular) approach that included options for stakeholders to test and scale tailored solutions. This collaboration was well demonstrated in Xinjiang Uygur Modular Rural Development Programme (MRDP), which ran from 2008 to 2013 in north-western China, where IFAD worked with four prefecture Poverty Alleviation Offices. The programme relied on close community engagement. It used participatory approaches for delivering modular interventions in management of natural resources, village livestock service stations, financial services through women's federations and rural credit cooperatives, market linkages through farmers' cooperatives and market associations, and "demand-responsive" agricultural services through innovative "technical envoys" for farmers, who delivered demonstrations on the farms of poor, rather than leading, farmers. The programme also addressed the special needs of rural women for literacy education and market-oriented skills training.

Due to its participatory and demand-driven approaches, and to its decentralized execution of modules by empowered local officials, the programme greatly helped to lift agricultural production and established a lending programme targeted at poor villages and households. Sample surveys indicate that 94 per cent of households increased their household assets, and that a significant majority increased their production of crops and livestock. Government statistics show higher growth rates in farmers' incomes and food production in programme villages than the four prefectures. This cut child malnutrition considerably: chronic malnutrition in children under 5 years fell from 38 per cent in 2007 to 16 per cent in 2014, and the prevalence of underweight children decreased from 17 per cent to 2 per cent for boys, and from 15 per cent to 4 per cent for girls, in the same period.

The government and IFAD further adapted these approaches within Inner Mongolia's Ulanqab Prefecture, where farmers suffer from limited water availability and land degradation. The Inner Mongolia Autonomous Region Rural Advancement Programme used similar participatory approaches to MRDP to benefit about 210,000 rural households, and helped reduce poverty in the programme area from 28 per cent at the start of the programme to 10 per cent at its completion.

Source: IFAD 2015.

The second land reform in the 1970s and 1980s built on the household responsibility system, dismantled the communes and “contracted” cultivated land to all village households, based mainly on the number of people and labour in the household, and giving them rights and responsibilities in land use (Brandt et al. 2002). More recent land reforms have emphasized securing land-contracted rights for the original contracted households and operational rights for land transfers through the rental market, the latter enabling middle and large farms to emerge rapidly (Huang and Ding 2015).

The government invested heavily in rural areas, especially in transportation infrastructure, agricultural research, irrigation, education, and health (IFAD 2015). The government also adopted supportive policies such as agricultural tax exemptions, subsidies for agricultural production and higher prices for government procurement of agricultural commodities, domestic and international trade liberalization, and expanded social protection and social security coverage (IFAD 2015). The result was rapid, sustained and inclusive transformation of rural areas. But stresses on natural resources and the environment have emerged, with stresses from water and land degradation becoming increasingly severe.

In Viet Nam, beginning with the major reform of Resolution No. 10 in 1988, individuals were given land-use rights, in a shift from de-collectivization of farms. The Land Law of 1993 further widened farmers’ rights, including the right to rent, buy, sell and bequeath land, and to use it as collateral. Special attention was given to women’s rights to land. The outcomes of these policies were the main factors in a sharp gains in agricultural productivity, farmers’ income and rural poverty reduction (Nguyen and Goletti 2001; Kompas et al. 2012). Sectoral policies, institutions and investments have included price and marketing reform in agriculture and the rest of the economy, agricultural R&D, agricultural trade liberalization, aggressive price decontrol, dismantling of parastatal trading firms, and heavy investment in communications, energy, and transport infrastructure. The National

Targeted Programme for Socio-Economic Development in Communes facing Extreme Difficulties in Ethnic Minority and Mountainous Areas – better known as Programme 135, Phase 2 (2006-2010) – dramatically expanded the number of schools, roads and components of market infrastructure, and improved access to new means by which minorities can profit from their assets.

India’s major land reforms have aimed to provide the rural poor with access to arable land through policy and legislation, including the abolition of intermediaries, tenancy reform and regulated ceilings on land holdings. Results have been mixed – the proportion of landless farmers even increased from 33 per cent in the 1970s to 40 per cent after 2000 (Sinha 1984; Rawal 2008). More than half the rural households were landless in the early 2010s (SECC 2011). Implementation of land reforms has varied greatly among states, and has been held back by social stratification and related political bottlenecks. India has increased its public investment in agricultural R&D in recent years. Although it recorded falling irrigation investment in the 1980s and 1990s, it saw a return to investment growth early this century (Varma et al. 2012), and the share of cultivated land equipped for irrigation rose from 29 per cent to 39 per cent over 1990-2010 (FAO data). But groundwater levels and soil fertility are rapidly declining in the food bowl of India, risking lowered food crop yields of 20-40 per cent by 2050 by some projections.

The government has developed what many consider the largest employment programme in the world, based on the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Its objective has been not only to provide wage labour, but also to generate productive assets, which could lead to sustainable livelihood opportunities and thus gradually reduce dependence on such a public works programme. During 2006-2009, MGNREGA generated 6 billion person-days of work, involving an outlay of about US\$16 billion. The government has fostered rural decentralization and local empowerment since the 1950s. While results have been modest

and mixed overall, significant positive impacts have been achieved on empowering women, scheduled tribes and castes, and on improving the quality of water delivery, health care and education (Nagarajan et al. 2014).

After gaining independence in 1946, the Philippines made several land reforms aiming to redistribute land. Progress has been uneven. The country still has wide land inequality. The share of landless farmers climbed from 58 per cent in the 1970s to 70 per cent in 2010 (Boyce 1993; USAID 2011). From the early 1990s, the government started transferring irrigation management from the central level to decentralized users of irrigation services (World Bank 2013). But slow growth of government fiscal income has kept down public expenditure on water control, and the limited expansion of irrigation has been made possible mainly through loans from international agencies (Llanto 2012). The share of cultivated land equipped for irrigation even fell slightly, from 16 per cent to 14 per cent in 1990-2010. Public investment in other rural infrastructure has been limited. Government spending on the road network as a share of GDP dropped to only 0.3 per cent in 2009. Low investment added to the poor conditions of farm-to-market roads, stymying tight and timely links between production and consumption areas. During the typhoon season, frequent landslides shut down roads completely. Substantial investment is required to upgrade road networks (IFAD 2009). Sectoral policy has been aggressive but has also had mixed results.

Market liberalization has been less successful than in other countries in reducing price distortions and allowing farmers to better allocate their land, labour and capital to increase agricultural productivity. But, as in India, the government has sought to address persistent poverty and undernutrition through in-kind food subsidy programmes, making substantial budgetary outlays (United Nations 2015). Jha and Ramaswami (2010) found that the overall return to the two countries' food subsidy programmes is low, with income impacts on the poor of less than 5 per cent of incremental spending. Persistent policy distortions, such as

the rice self-sufficiency policy and large subsidies for inputs, are part of the reason for the lack of agricultural transformation in the Philippines (World Bank 2013). Trade liberalization, though, has contributed to poverty reduction in the Philippines (Cororaton and John 2007). The outflux of migrant workers and the large influx of remittances from them and other overseas Filipinos, are important features of structural transformation and rural transformation. Remittances were estimated at US\$28.4 billion in 2014 (WDI 2015).

Conclusions and implications for policy and investment

Differences in the path and speed of structural transformation and rural transformation in APR lie mainly in the growth of productivity and the extent to which employment can be generated in the farm and non-farm sectors in rural and urban areas. Though initial conditions matter, institutions, policies and investments are primary factors determining the path, speed and inclusiveness of rural transformation. Fostering sustainable and inclusive rural transformation requires policymakers to combine policies to promote rural transformation and enhance structural transformation, as growth and inclusiveness are outcomes of both transformations. Without substantial structural and rural transformation, it is hard to achieve sustainable growth and really *inclusive* rural transformation.

While countries and the transformations in the region are distinct, strategic areas for policy and investment emerge for countries at similar levels and speed of inclusive and sustainable rural transformation. Countries with fast inclusive and sustainable rural transformation (group I) face the challenge of sustaining their success. While labour-intensive manufacturing will remain an important source of inclusive growth for this type of country, strengthening inclusive institutions, policies and investments is a priority, as is adapting them to new circumstances. Rapid growth has been accompanied by major distributional consequences, particularly for faster-growing economies (Zhuang et al. 2014). Fostering

integrated urban-rural development and balanced regional development to narrow urban-rural and regional income gaps is another priority. Policies to strengthen provision of rural public goods and rural financial institutions and investments – targeting left-behind regions – are required.

Another central concern tackling increasing stresses from water and land degradation linked to fast structural and rural transformation. There is a need to enhance sustainable agricultural development, including sustainable management of natural resources, with a particular emphasis on overcoming growing stresses from water and land degradation. Countries should consider exploring policy options for increasing efficiency of water and modern inputs (by, for example, cutting overuse of fertilizer and pesticide).

Policies and institutions should be tailored to each country's circumstances, but a common thread among fast transformers is dealing with the impacts of rising wages – as in China now or in Viet Nam in the near future – by, for instance, updating technology in manufacturing and services. Policies should also aim to keep increasing agricultural productivity by, among other things, enhancing the security of land tenure and consolidating farmland, so as to further expand the rental market.

Countries with relatively slow and non-inclusive rural transformation (group II) should primarily focus on overcoming the binding economic, institutional and political constraints to achieving faster structural and rural transformation and to reducing poverty. They should consider comprehensive measures to align institutions, policies and investments, so as to maximize their impact on stimulating sustainable and inclusive growth. Countries in this group face the common challenge of creating more jobs for rural workers, on and off the farm, and in rural and urban areas. In rural areas, policy priorities should include investing more in agricultural technology and rural infrastructure, eliminating market distortions on agricultural and rural growth and fostering a better business environment to promote private sector investment (including

fiscal and financial incentives). Additionally, strengthening institutional reforms in farmland and rural finance would enable the poor to access agricultural land and credit. There is also a need to decentralize fiscal and administrative responsibilities and funding so that lower-level authorities can allocate resources according to local needs.

For countries showing mixed results on structural transformation, rural transformation and poverty reduction (group III), strategic priorities will depend on the circumstances of each and the type of transformation to be enhanced. Still, the role of agricultural and rural development remains central to boosting structural and rural transformation in all cases. Countries with slow structural transformation should prioritize job creation in the rural non-farm economy, and in services and industry in urban and semi-urban settlements – a major area of action. Countries with slow rural transformation should consider enhancing their institutions and policies to enable the rural poor to access agricultural land and credit, and focus investments on agricultural technology and rural infrastructure. In addition to exploring decentralization, countries should ensure that appropriate market and pricing policies are in place to foster agricultural growth and, thus, rural and structural transformation.

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