Major Drivers of Inclusive Rural Development

What drives rural development in general and makes it more inclusive are important questions. The diversity of country contexts makes it difficult to offer firm answers to these questions.[48] Also, the global context in which countries operate today is different and it continues to change. For example, most developing economies, including middle-income countries, today operate in a substantially different global trade and investment environment from that prevailed when those economies such as Japan; ROK; and Taipei,China achieved relatively impressive rural development outcomes during the 1950s to 1980s. In addition, resource endowments and economic characteristics across countries differ. However, despite these, and many other cross-country differences, the development experience over the last 5 decades seems to offer some insights on what is likely to drive rural development and what could make it more inclusive.

What drives rural development in general and makes it more inclusive are important questions.

A. High Overall Economic Growth

The most outstanding factor that emerges from the international rural development experience is the critical importance of high overall economic growth. As Fan et al noted,[49] "growth is the only sure way of providing a

[48] According to Sen (2006, 174), "inter-country comparisons have become fashionable as a way of isolating solid connections between causes and effects, but they are seriously compromised by the difficulty of comparing diverse experiences: countries can differ significantly in variables other than those that are brought under cross-sectional scrutiny."

[49] Fan et al. 2000, 1038.

No country seems to have achieved inclusive rural development without high economic growth rates.

permanent solution to the poverty problem and increasing the overall welfare of rural people." Developing Asia, according to ADB,[50] has shown a tighter relationship than other regions between growth and poverty reduction. Each 1% of growth in the 1990s was associated with an almost 2% decline in poverty incidence on average. In addition, growth explained 65% of the variation in changes in poverty on average among the DMCs. No country seems to have achieved inclusive rural development without high economic growth rates. The first generation of Asian developed economies—such as Japan; Taipei,China; and ROK—and the middle-income economies—such as Malaysia and Thailand—and the more recent experience of Viet Nam, PRC, and India provide ample empirical evidence on the positive impact of growth on rural development.

Taipei,China maintained its average economic growth rate around 7% during 1960–1985. With this sustained high average growth rate, it was able to transform itself from a typical less-developed agrarian economy to an industrial economy and reduce rural poverty.[51] The ROK experienced its most rapid economic growth in the 1970s when, between 1970 and 1979, per capita income increased by 570%.[52] The manufacturing sector absorbed over 1 million persons who came mainly from rural areas from 1963 to1975. The migrants tended to come particularly from households owning or cultivating the smallest areas of land.[53] The high economic growth significantly contributed to rural development and the reduction of rural poverty.

Malaysia achieved an annual average economic growth rate of 6.7% during the period 1971–1990, and 7.0% from 1991 to 2000. This unleashed many opportunities, particularly in employment, for inclusive rural development to occur. The incidence of $1-a-day poverty was only 0.6% in 1990; this declined further to 0.2% by 2003. Rural poverty in Malaysia declined from 58.7% in 1970 to 12.4% in 1999 primarily because of high economic growth.[54] High economic growth rates in Indonesia in the 1970s and 1980s also contributed to rural poverty reduction: the incidence of rural poverty declined from 44.6%

50 ADB. 2004a, 33.
51 Francks et al. 1999, 159.
52 Yun. 1988, 99.
53 Francks, et al. 1999, 115.
54 OED. 2006, 103.

in 1980 to 26.8% in 1987.[55] This trend continued until about 1993, with significant progress in poverty reduction during 1990–1993. The greatest poverty reductions were witnessed in rural areas.[56]

The experience of Viet Nam further illustrates the significance of economic growth for inclusive rural development. Over the last decade, Viet Nam's economy grew at an annual average rate of 7.6%, placing it among the fastest-growing countries in the world. About 20 million people escaped poverty during this period.[57]

Similarly, PRC's high economic growth during the last 2 decades led to significant declines in poverty. A recent study suggested that on average, 1% increase in GDP growth was associated with 1.45% fall in poverty for 1994–2004.[58] The high growth rates also enabled a significant reduction in rural poverty and contributed to rural development in numerous ways.[59] Based on the official poverty line, the incidence of rural poverty has fallen from 32.9% in 1978 to less than 3% in 2002.[60] According to Ravallion and Chen,[61] 72% of the reduction in the overall poverty incidence that occurred between 1981 and 2001 is attributable to rural poverty reduction.

However, the experience also suggests that economic growth alone is not sufficient for inclusive rural development.

However, the experience also suggests that economic growth alone is not sufficient for inclusive rural development. For example, poverty elasticity of GDP growth in India has been much lower at -0.32 for 1994–2005. A number of factors explain such outcomes. First, the distribution of benefits of growth can be highly uneven. If the employment elasticity of growth is low, it may not create adequate wage employment opportunities. Second, the economic growth does not lead to automatic improvements in social indicators of the poor and low-income households, particularly of women in economies where social inequities are high. The experience of India illustrates this. Although economic growth has generally contributed to rural development when compared with the counterfactual situation, it is increasingly recognized that a number of other factors are necessary to translate growth into sustainable, inclusive rural

55 Rosegrant and Hazell. 2000, 35.
56 Friedman. 2005, 172.
57 ADB et al. 2005c, 68–69.
58 World Bank. 2007, 42.
59 CCICED ARDTF. 2005b, 233.
60 Huang, Jikun et al. 2005, 133.
61 Referred to in, Chaudhuri and Ravallion. 2007, 186.

development.[62] For example, studies on the growth elasticity of poverty has shown that poverty impact of economic growth is higher with higher levels of human capital and lower initial levels of income inequality. De Haan and Lipton[63] argued that poverty pockets found in many Asian countries are likely to have low growth elasticity because the poor in such areas are subject to multiple, interlocking disadvantages; hence, poverty reduction in those areas require structural remedies.

Rural development has been relatively more impressive and inclusive in economies where effective land reform programs have been implemented.

B. Effective Land Reform

Rural development has been relatively more impressive and inclusive in economies where effective land reform programs have been implemented.[64] Japan; ROK; and Taipei,China introduced land reforms early in their development process and created an egalitarian land distribution pattern with a smallholder family farm system, and relatively secure land tenure. The land reform program in Japan from 1946 to 1950 transferred the ownership of the majority of previously tenanted land to its cultivators and placed a ceiling of 3 hectares on the scale of land ownership. The Agricultural Land Law of 1952 further restricted land sales and strengthened the rights of tenants.[65] In 1952, the Government of the ROK completed the land reform process initiated by the US military government after the war through the acquisition of land owned in excess of 3 hectares and of that owned by absentee landlords, also creating a smallholder family farm system. Similarly, the land reform program of Taipei,China, which consisted of three different phases (reducing rents, redistributing publicly owned land, and providing land-to-the tillers) created an agrarian structure consisting of small-scale owner farmers. Almost half of all farm households received land under the reform.[66] These land

[62] The literature on the links between economic growth and poverty reduction and rural development is extensive (Campos and Root 1996; Francks et al. 1999; Friedman 2005; Mundlak 2005; Rosegrant and Hazel. 2000; Snowdon 2006). We make only a few points in this section primarily because there is almost a universal consensus in the development community that economic growth is necessary but not sufficient for inclusive rural development.

[63] de Haan and Lipton. 1998.

[64] Campos and Root. 1996, 51–56.

[65] Francks et al. 1999, 77.

[66] Francks et al. 1999, 164; 167.

reforms created a vast class of small farmers with strong incentives to respond to emerging economic opportunities. Malaysia's state-sponsored land settlement programs also enabled poor households to participate actively in the growth process and benefit from it. The Federal Land Development Authority (FELDA), established to carry out these programs, provided land to landless and marginal farmers. In addition, the land reform made the elite-capture of rural institutions less likely.

Malaysia's state-sponsored land settlement programs also enabled poor households to participate actively in the growth process and benefit from it.

In a different context, Viet Nam's land tenure reforms contributed to rural economic growth. First, the establishment of private family farms with the right to use land for a long period stimulated a drive toward significant improvements in agricultural productivity and output. Second, the Land Law of 1993 further strengthened tenurial reforms. The law extended the user rights for households to 20 years for annual crop and 50 years for perennial crop cultivation. It also permitted farmers to rent, inherit, or sell the user rights for lands.[67] These triggered a powerful wave of productivity and output improvements than the first limited tenure reform, with rural household incomes increasing. However, landlessness among rural households has increased in recent years. In 2002, 18.9% of rural households were landless—about twice as many as 5 years earlier. The increase was particularly evident among the poorest quintile where the percentage grew from 26% to 39% between 1998 and 2002. About 89% of the landless agricultural households were in the southeast and Mekong delta.[68] However, Ravallion and van de Walle,[69] who analyzed the landlessness data for 1993–2004, concluded that "by and large, it is not the currently poor who took up the new opportunities for selling (or buying) land and acquiring land titles, but the relatively well off." They found "no sign that rising landlessness has undermined the gains of the poor from the relatively equitable assignment of land-use rights achieved at the time of de-collectivization."

[67] ADB. 1996.

[68] Scott and Chuyen. 2004, 107.

[69] Ravallion and van de Walle. 2006, 34–35. They wrote that "on the whole, rising rural landlessness appears to be a positive factor in the process of poverty reduction, as farm households take up new opportunities, notably in the labor market."

PRC's experience with land tenure reform also confirms its potential growth and equity-enhancing impact.

PRC's experience with land tenure reform also confirms its potential growth and equity-enhancing impact. The household responsibility system introduced in the late 1970s led to a remarkable increase in agricultural production, farm incomes and household welfare, and contributed significantly to rural development and poverty reduction.[70] According to some estimates, between 1978 and 1984, as a result of the land tenure reform, the total national grain output increased by 33.6%, cotton output by 89%, and oilseeds output by 28%. Livestock production also recorded a dramatic increase during this period and after. The rural per capita income increased from RMB191 in 1980 to RMB398 in 1985. In contrast, during the 21 years from 1957 to 1978, the annual per capita net income of farmers increased only from RMB74 to RMB 134.[71] The farmers were also able to seize new economic opportunities unleashed by the land tenure reforms and to diversify their sources of income thus reducing their household vulnerability to income shocks.

Sri Lanka's land reform program in the plantation sector, introduced in 1975, produced mixed results on production, productivity growth, and labor incomes in the reformed plantations. However, the program's impact on social development of plantation labor has been significantly positive. Upgrading of crèches and schools for children of plantation labor and housing and health facilities were significant part of the social development. The program also reduced inequalities in social development between plantation sector and the rest of the rural economy. Prior to the reform program, the tea plantation sector represented a major pocket of poverty. While poverty continues to be a major problem on the plantations, the overall quality of life for many labor households changed for the better than what it was before the reform program.[72]

Recognizing its importance for rural economic growth, a number of newly independent Central Asian republics also introduced land reform programs. In 1995, the Parliament of Azerbaijan passed a land reform law allowing free distribution of over 1.3 million hectares of agricultural land

[70] Sonntag et al. 2005 ; Wu. 2005, 115.

[71] Wu. 2005, p115-118.

[72] Fernando (1984) provides a detailed analysis of the impact of the land reform program on production, productivity, employment and economic well-being of wage labor during the early post-reform period.

among rural residents. The law permitted rural residents the right to buy and sell their agricultural land. The Kyrgyz Republic passed a law in 1998 allowing private ownership of land. In Mongolia, where livestock production remains the mainstay of the economy, the government privatized its state and collective farms in the early 1990s. This paved a way for a rapid growth of herder households.[73]

The rural development experience of economies where land reform has been less successful also indicates its significance for more equitable growth and development. India, Pakistan, and Philippines are cases in point. While India has significantly reduced rural poverty in the last 2 decades, many rural people have been unable to participate fully in the economic and social development process because of insecurity of land tenure and widespread landlessness. However, in states such as West Bengal where land reform has been relatively successful, agricultural growth has improved with significant positive impact on poverty reduction and social inclusion of sharecroppers.[74] In Pakistan, high concentration of land ownership and lack of security of tenure are major obstacles to rural economic growth and poverty reduction.[75]

Those economies that implemented land reform programs with a serious commitment for results also introduced other support measures for farmers to enable productive use of land.

Those economies that implemented land reform programs with a serious commitment for results also introduced other support measures for farmers to enable productive use of land. Essentially, they introduced programs to link the new owners with the market by providing better quality information on agricultural products and input markets.Public policies, including the supervision of uniform weights and measures, engineering standards, and social surveys, were introduced to reduce the costs to small farmers of participating in markets.[76] In addition, rural infrastructure facilities and improved access to finance made land reform more effective.

[73] Lamberte and Vogel. 2006, p48-51.
[74] Hanstad and Nielsen. 2004.
[75] Anwar, et al. 2004.
[76] Campos and Root. 1996, 51–52.

There are clear cross-country differences in the level and quality of rural development between those that developed rural infrastructure and those that neglected to do so.

C. Rural Infrastructure

The fundamental importance of infrastructure in rural development cannot be underestimated.[77] There are clear cross-country differences in the level and quality of rural development between those that developed rural infrastructure and those that neglected to do so. Similar differences in rural development also exist within countries. People in areas with better rural infrastructure have been able to participate in and share the benefits of growth widely. Jalan and Ravallion[78] noted that the differences in rural infrastructure across counties have strong explanatory power for subsequent consumption growth at the farm household level in rural PRC. The impact of high quality rural infrastructure on the quality of life of the rural population can be substantial. Infrastructure contributes to inclusive rural development in many different ways (Figure 2). First, rural infrastructure provides rural people with access to the markets and basic services that they need. Second, it influences rural economic growth and employment opportunities and thereby incomes and social development.[79] For example, "good feeder roads can allow the supply of perishable foods to high-value urban markets, and the income generated can be invested in health and education to improve the productivity of eventual migrants to the cities."[80]

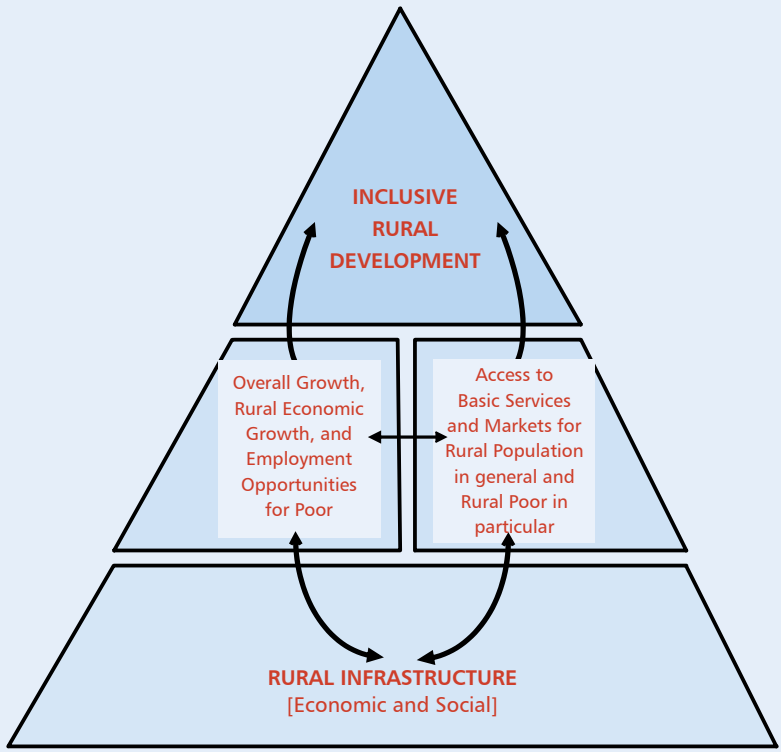
The ROK, Taipei,China, Malaysia, and Viet Nam, which recognized the broader and critical significance of rural infrastructure for long-term overall economic development, poverty reduction, and inclusive rural development, correctly and wisely considered it mainly as a public good. This recognition has been crucial in sustaining their commitment to develop rural infrastructure primarily through public investments. These economies, including Thailand and Indonesia, continue to derive significant economic and social benefits, often far in excess of their original expectations in terms of inclusive rural

[77] ADB, et al. 2005c; Cook et al. 2005.
[78] Jalan and Ravallion. 2002.
[79] Infrastructure positively affects rural population many other ways as well. For example, it facilitates the delivery of emergency relief to rural people in case of national disasters and participation of the poor in local organizations. It will also increase rural people's exposure to information and knowledge. Often, most of the positive effects are difficult to quantify, though they could be substantial (ADB et al. 2005c.).
[80] ADB et al. 2005c, 19.

development and, more importantly, in terms of greater social stability than otherwise would have been the case.[81]

The role of rural infrastructure in more equitable growth in the developed East Asian economies has been widely recognized. These economies have allocated more public investment and government effort to developing economic and social infrastructure in rural areas and created opportunities for the wider participation of rural people in economic development. They

Figure 2: Rural Infrastructure – Inclusive Rural Development Nexus



Source: Adapted from a figure shown in ADB et. al. 2005 c. 55.

[81] Campos and Root (1996, 19), for example, points out that although the contribution of rural infrastructure to growth is well known, its positive impact on income distribution has not been adequately recognized.

made significant investments during the preindustrialization period in rural economic and social infrastructure—particularly in irrigation facilities for rice farming; rural transportation; communication; electrification; education; and water, sanitation, and primary health-care development. Japan made significant investments in the preindustrial period in developing and maintaining an extensive irrigation system to support rice cultivation. These investments enabled Japanese rice farmers to adopt improved high-yielding varieties quickly and widely. During the colonial period, Japan also made significant investments in rural infrastructure in Taipei,China.[82] The Government of Taipei,China continued and expanded this investment policy in the 1950s and 1960s, further developing rural irrigation and other infrastructure and farmer extension services. These investments underpinned the rapid growth in agriculture and also made a major contribution to rural industrialization and inclusive rural development. Government efforts in these countries resulted in a dramatic improvement in rural infrastructure and made infrastructure development between the rural and urban sectors more even. In Taipei,China, electrification covered 70% of farm households by 1960. In the ROK, electrification covered only 14% of farm households in 1964,[83] but since the early 1980s, electricity has been universally available in rural areas, while there was parity between rural and urban access to sanitation by 1987 to1990.[84] Malaysia and Thailand also made great strides in rural electrification.[85] In many OECD countries, such as the United Kingdom, Greece, and Norway, physical rural infrastructure development unlocked new economic opportunities for rural people.[86]

Unlike many other developing countries, the ROK considerably emphasized the public provision of universal primary and secondary education, the expansion of which began almost immediately after the Korean War.[87] This focus provided skills for a larger proportion of its labor force from rural areas and reduced income inequality. Between 1970 and 1990, the share of wage employment in total employment increased from 39% to 60% and urban unemployment rates declined from 7.4% to 2.4%.[88]

82 Francks et al. 1999, 161; 178.
83 Saith. 1987, 277.
84 Campos and Root. 1996, 22–23.
85 World Bank. 1993, 34.
86 OECD. 1995; 2003.
87 Campos and Root. 1996, 58.
88 Campos and Root. 1996, 59.

Malaysia adopted a clear policy to develop public education: all Malaysian citizens were given access to either free or highly subsidized education. For the very poor, an education allowance was also provided to parents to cover school-related expenses such as transportation. The Government also provided free or highly subsidized health services and promoted access to safe sources of water. By 2002, about 95% of the population had access to improved sources of water. Such measures not only benefited the rural population in general but also reduced household vulnerability.[89]

Malaysia adopted a clear policy to develop public education: all Malaysian citizens were given access to either free or highly subsidized education.

Indonesia also paid special attention to rural infrastructure development, and reaped growth and equity dividends. Although Indonesia neglected its rural infrastructure during Sukarno's regime, starting in the 1970s up to the 1980s, the Government emphasized rebuilding rural infrastructure for rural development. The first 5-year plan (1969-1973) focused primarily on providing irrigation facilities for rice self-sufficiency. The second (1974-1978) and third (1979-1983) 5-year plans, while continuing the emphasis on rice production, increased resources available for economic and social infrastructure—roads, bridges, school buildings, and health facilities.[90] Between 1973 and 1979, more than 61,800 primary school buildings were built, making available *222* new schools and 666 new teachers per district. The number of schools constructed in each district from 1973 to 1975 was proportionate to the number of primary schoolchildren not enrolled in schools in 1972. This project almost doubled the number of primary schools in the country. Indonesia also successfully implemented a large project to build public health care centers, which led to "significant improvements in the availability of and access to primary health centers in the regions all over the country."[91] These investments contributed to dramatically reducing poverty from about 60% in 1970 to 33.3% in 1978, and *28%* in 1980. A study of the impact of rural roads on poverty reduction in Indonesia, Philippines, and Sri Lanka[92] also concluded that the poor and the very poor benefited substantially from social impacts through improved access to state services.

89 OED. 2006, 103, 107.
90 Campos and Root. 1996. 65.
91 Darja et al. 2005, 125.
92 ADB. 2002.

Viet Nam also achieved remarkable results from public infrastructure investments. During the decade from 1993, Viet Nam grew at an annual average rate of 7.6%, fueled in part by infrastructure investment. About 44% of government investment has been in infrastructure, both national and local. The investments in rural roads, water, and sanitation markedly reduced rural poverty. One study into rural road investments suggests that they not only raised per capita income of households significantly but also expanded school enrollment of children at all levels, and improved the use of public health services.[93] Another study, according to Fan,[94] revealed that government spending in education, roads, and agricultural research also significantly impacted poverty reduction.

The PRC also made major investments in rural infrastructure, particularly in irrigation, rural roads, and agricultural research and development. The Government also invested heavily in rural electrification. These investments produced significant growth and poverty reduction outcomes.[95] As shown in Table 7, particularly high returns have been indicated for investments in agricultural research and development (about 10 yuan (CNY) of agricultural GDP for every yuan invested); education (CNY3.7 of agricultural GDP); and roads (CNY2.1 of agricultural GDP). Investments in rural roads have also yielded more than CNY5 nonfarm rural GDP for every yuan invested. Poverty reduction impacts (number of poor reduced per 10,000 yuan spending) have been estimated at 8.8 for education, 6.79 for agricultural research and development, 3.22 for roads, and 2.27 for electricity. In all cases, higher impacts have been indicated for both Central and Western regions, two regions where poverty incidence is highest.[96]

While government investments in rural infrastructure in the PRC have been substantial, they have been inadequate. For example, in 1997, rural investment accounted for only 19% of total government expenditures, but the rural population accounted for 69% of the total population. Government rural spending as a percentage of rural GDP was only about 5%.[97] Investment in agricultural research accounted for only 2.2% of total government investment in rural areas in 2000.[98] The poor rural economic and social infrastructure continues to make living difficult for many rural residents. Significant deficiencies exist in infrastructure for primary and secondary education,

93 ADB et al. 2005c, 68–71.
94 This study is referred to in Fan. 2007, 6.
95 Rosegrant and Hazell. 2000; Fan. 2005.
96 Fan. 2005, 39-43.
97 CCICED ARDTF. 2005a, 9.
98 Thorat and Fan. 2007, 706.

Table 7: Returns to Rural Investment in the PRC

	Coastal	Central	Western	Average
Returns in Agricultural GDP (yuan per yuan expenditure)				
Research and Development (R&D)	8.6	10.02	12.69	9.59
Irrigation	2.39	1.75	1.56	1.88
Roads	1.67	3.84	1.92	2.12
Education	3.53	3.66	3.28	3.71
Electricity	0.55	0.63	0.40	0.54
Returns in Poverty Reduction (number of poor reduced per 10,000 yuan expenditure)				
R&D	1.99	4.4	33.12	6.79
Irrigation	0.55	0.77	4.06	1.33
Roads	0.83	3.61	10.73	3.22
Education	2.73	5.38	28.66	8.80
Electricity	0.76	1.65	6.17	2.27

GDP = gross domestic product, PRC = People's Republic of China, R&D = research and development.

Note: Marginal returns for 1997.

Source: Fan. 2005, 39.

primary health care, rural roads, energy, agricultural research and development, and communication facilities.

In India, massive public investment in agriculture and rural infrastructure has played a key role in agricultural development and poverty reduction. A study on different kinds of government investments in rural areas concluded that "agricultural research, education and rural infrastructure are the three most effective public-spending items for promoting agricultural growth and poverty reduction throughout all the periods under study."[99] In the 1960s, roads and education investments had benefit–cost ratios of 6 to 9."[100] Another econometric study[101] on India concluded that government expenditures on roads significantly impact productivity growth and rural

In India, massive public investment in agriculture and rural infrastructure has played a key role in agricultural development and poverty reduction.

[99] Fan. 2005. 37.
[100] Fan. 2005, 35
[101] Fan et al. 2000.

poverty reduction than most other investments, and that investments on roads reduced rural poverty not only through productivity growth but also through increased nonagricultural employment opportunities and higher wages. In Kerala state, research following implementation of seven rural water projects found that the incidence of waterborne diseases fell by half in the 5 years after the construction of deep wells, with no change in nonproject areas.[102]

However, despite remarkable improvements in the past 2 decades, India has also failed to make adequate investments in rural infrastructure, particularly in the rural power sector and irrigation. Inadequate investments in the power sector have led to significant problems in rural electrification and telecommunication and had a severe negative impact, among other things, on the growth of agro-processing and cold storage in the rural nonfarm economy.[103] The inadequate and unreliable power supply has also had a significant adverse impact on the development of small-scale enterprises in rural areas. Public investment in agriculture also began to decline in the 1980s. Although this was initially offset by the increase in private investment, since the mid-1990s, private investment in agriculture has also stagnated while public investment continued to decline. Out of about 59 million hectares that could be irrigated through large- and medium-scale irrigation projects, only 40 million hectares have been irrigated primarily because of lack of resources in state governments and the tendency to spread available resources thinly over too many projects.[104] Substantial increase in public investments in irrigation, water management, rural roads and electrification is needed to stimulate private investment, accelerate agricultural growth, and contribute to inclusive rural development. A recent study indicated that every million rupee invested in agricultural research and development and rural roads would lift 323 people and 334 people above the poverty line, respectively.[105]

Regional inequalities in rural infrastructure investments—particularly rural roads, electrification, health services, and schools—remain glaring. Infrastructure investment shortfalls are significant particularly in the states of Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtra, West Bengal, and Orissa which together account for 72% of India's poor.[106] This has been a major constraint on agricultural and rural nonfarm economic growth, and the rural population's ability to share economic growth more equitably. Infrastructure investment inadequacies also continue to hinder rapid growth of high

[102] UNDP. 2006, 88.
[103] Braun, et al. 2005a, 10–11.
[104] Ahluwalia. 2005, 18.
[105] Fan. 2005, 36.
[106] Mehta and Shah. 2003.

value agriculture and its potential positive impact on the poor. The lack of knowledge and skills of the poorly educated rural labor force has constrained the growth of rural nonfarm employment opportunities.[107] The poor quality of rural infrastructure has also retarded growth and poverty reduction.

The infrastructure development in most of these countries was financed mainly by the central governments, although they were simultaneously implementing policies to transfer financial resources out of the agricultural sector and the rural economy. The outflow of tax revenue from farm households in the ROK, for example, was largely offset by the inflow of government spending and investment in rural areas.[108] While the role of financial resource transfers in industrial development in these countries varied, the important role of government investments in rural infrastructure and, hence, agricultural and rural development cannot be overemphasized. However, most of the public sector rural infrastructure development concentrated on areas with irrigation potential and on irrigated areas. This has contributed to intra-sectoral income and development disparities.

In Indonesia, the Government spent 12% of the total regional development budget for the primary education improvement project in 1973; this increased to 28% in 1979. For health expenditure, the Government spent 3.4% of the regional development budget in 1973 and 5.5% in 1979. More importantly, the Government introduced a new expenditure program institutionalizing a formula for allocating revenues among various levels of government: central, provincial, district, and village levels. This established "a system of direct subsidies (to provinces, districts, and villages) with the aim of reducing interregional disparity and building infrastructure in the provinces."[109] This system was instrumental in protecting the share of expenditure going to regional development when the drop in oil prices in the early 1980s resulted in reduced government expenditure on various projects. The Government of Malaysia also financed both economic and social infrastructure development in rural areas.

The cross-country experience also clearly indicates the importance of maintaining a proper balance between physical and social infrastructure in rural

The cross-country experience also clearly indicates the importance of maintaining a proper balance between physical and social infrastructure in rural areas.

[107] Ahluwalia. 2005, 13.
[108] Francks, et al. 1999, 113.
[109] Campos and Root. 1996, 66.

areas. Countries that paid attention to this have not only realized greater growth benefits from their physical infrastructure investments but also have been more successful in transforming growth into shared development. This is not surprising because social infrastructure investments tend to significantly reduce bad inequalities and thereby increase the pro-poor impact of growth.[110]

However, some countries overlooked the need to maintain this balance. Pakistan paid inadequate attention to social infrastructure, including health and education for girls, and was unable to achieve significant progress in most social indicators including female literacy and gender equality.[111] Gender-based education inequalities are particularly acute. The rural–urban gap in school attendance is 27% percentage points but the gap between rural girls and urban boys is 47 percentage points.[112] The average literacy rate in rural Pakistan continues to be much lower than that of urban Pakistan. For example, in Punjab Province, literacy rate of population of 10 years and above in rural areas was 51% for males and 26% for females in 2002.[113]

India is another country with significant infrastructure investment imbalances. The Prime Minister of India acknowledged in 2005 that India had "paid inadequate attention to public health issues and social and preventive medicine." According to Nobel Laureate Amartya Sen,[114] "a sluggish response to the urgency of remedying the astonishingly under-emphasized social infrastructure—for example, the need to build many more schools, hospitals and rural medical centers—and developing a functioning system of accountability, supervision and collaboration for public services" has been one of the major development problems of India. The outcomes of under-investment in rural health infrastructure are reflected in a variety of health indicators in rural areas and wide rural-urban disparities in all health indicators from infant and child mortality rates to maternal mortality and malnutrition. According to United Nations Development Programme (UNDP),[115] 15 years after universal childhood immunization was introduced, less than 20% in Bihar, Uttar Pradesh, and Rajasthan are fully immunized. Four states—Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh— account for more than half of child deaths; some of the deepest gender inequalities in the country also

[110] For a discussion on the role of 'good' and 'bad' inequalities, see Chaudhuri and Ravallion. 2007.
[111] UNDP. 2005.
[112] UNDP. 2005, 60.
[113] The Government of the Punjab, et al. 2005, 51.
[114] Sen. 2007. 11.
[115] UNDP. 2005, 30–31.

mark these states. To address the problems in the basic health care delivery system, in 2005, the Government of India launched a $1.5 billion National Rural Health Mission, a program targeting some 300,000 villages, with an initial focus on the poorest states in the north and northeast.[116] The program aims to improve the availability of, and access to, quality health care by people, especially in rural areas, including the poor, women, and children. This will be achieved by, among others, increased public expenditure on health to increase the quantity and quality of public health, decentralization and district management of health programs, and community participation and ownership of assets. The program will also introduce in each village a voluntary, trained female accredited social health activist to promote access to improved health care. In addition, ambitious public investment programs have also been put in place to expand rural infrastructure, including the provision of safe drinking water and roads.[117]

D. Effective Institutions

Inclusive rural development, or a lack of it, is closely linked to institutions.

Inclusive rural development, or a lack of it, is closely linked to institutions.[118] Even well-conceived strategies and policies will not achieve their desired goals if the implementing institutions are inefficient. Countries with effective institutions have not only achieved faster growth in rural areas but have also allowed greater opportunities for the majority of the rural population to benefit from that growth. Countries without an effective institutional structure have suffered from lackluster growth and been unable to provide the majority of the rural population with opportunities to participate in, and benefit from, the growth process. However, this does not mean that institutions alone are responsible for successes in inclusive rural development.[119]

The now-developed East Asian economies established effective line institutions at the center. At the bottom, they established and nurtured grass-roots organizations to link rural populations effectively with the central administrative system through middle-layer institutions. The middle-layer institutions enjoyed very little autonomy to make decisions and their primary function was to carry out directives from the top. For example, the Office of Rural Development and the National Agricultural Cooperative Federa-

[116] UNDP. 2005, 31.
[117] UNDP. 2005, 31.
[118] ADB, et al. 2005c; Acemoglu. 2003; North. 1991.
[119] Sachs. 2003.

tion in the ROK functioned effectively in this manner. The former had more than 10,000 extension workers stationed at the county and sub-county level throughout the country while virtually all farm households belonged to a cooperative at provincial, county, or village level.[120] In other East Asian economies, most rural households belonged to a cooperative or another type of farmer organization. Japan achieved wider participation of rural people in farm organizations before most of the others mainly to meet war-related food supply requirements. By 1939, 96% of farm households in Japan belonged to a cooperative. Farmers' Associations and cooperatives were pervasive in Taipei,China. The existence of effective institutions at the center and at the village level enabled quick delivery of inputs, high-yielding seeds and fertilizer in particular, and services (extension and credit) for the rural population to carry out their economic activities and improve their social and economic welfare. Farmer associations in Taipei,China in particular ensured that "all farmers, not just as in some countries, a better-off and more commercialized elite, had access both to inputs such as fertilizer and new seed varieties and to technical advice."[121] In addition, they played a key role in supporting the center's agricultural procurement programs. Most other government interventions for agricultural and rural development were also implemented effectively through this structure of cooperatives and other village-level organizations.

India's dairy cooperative network provides one of the best examples of the important role institutions can play in rural development.

India's dairy cooperative network provides one of the best examples of the important role institutions can play in rural development. The network, owned by nearly 12 million small-scale farmers, consists of 170 milk unions operating in 338 districts and covers over 108,000 village-level societies.[122] The network enabled farmers to improve productivity, obtain better prices for milk, and improve their household incomes and socioeconomic welfare.[123] These cooperatives account for the major share of processed liquid milk marketed in the country and have been the driving force behind what is known as the "white revolution"

[120] Francks, et al. 1999, 126; Ban, et al. 1980, 263

[121] Francks, et al. 1999, 183.

[122] www.nddb.org

[123] In contrast, the primary agricultural credit societies in India are saddled with severe operational and financial problems and failed to become dynamic, sustainable financial intermediaries in rural areas. India has over 93,000 PACSs (Meyer and Nagarajan. 2000). In 2006, ADB approved a loan of $1.0 billion to help the Government carry out its cooperative credit structure reform agenda.

in rural India. The dairy cooperative system grew from a small beginning in Gujarat State in the late 1940s.[124] In 2004–2005, the sales turnover of the Gujarat Cooperative Milk Marketing Federation exceeded $670 million.

Karnataka state government in India, with the assistance of Microsoft, pioneered a computerized land record system (to maintain records of rights, tenancy, and cultivation) in 1991 through decentralized computer kiosks that provide services to villagers who require land records, among others, to obtain loans. These government-owned kiosks provide efficient and effective services to more than 20 million farmers. On average the program annually saves clients 1.32 million working days in waiting time and more than Rs800 million in bribes. The program has also improved the access of poor households to formal credit.[125]

Another example of successful institutions in rural development is illustrated by the e-Choupal program, launched by ITC, one of India's leading private companies involved in agricultural marketing, among other things. This program, started in 2000 in Madhya Pradesh, applies new information technology innovatively to reduce rural poverty. The program now covers 36,000 villages in 9 states and benefits over 3.5 million farmers. The program has linked farmers through computer kiosks to remunerative markets, enabled farmers to better manage risks, obtain their inputs at lower costs, and improve their productivity and incomes. In addition, it has set in motion a rural transformation process which is likely to gather further momentum over time, with increasing benefits to rural people including those in low-income households.

In Bangladesh, nongovernment organizations (NGOs) have played an important role in rural development in the past 2 decades. Civil society has grown rapidly because of liberal policies, and this has significantly impacted the quality of life of the rural poor. These institutions have helped improve a variety of services from microcredit, health services, and education, to disaster management. For example, in 1998, when hit by devastating floods—the worst in the country's history—the effective response by local institutions helped reduce the impact on the rural poor.[126] Building Resources Across Communities (BRAC), the largest multiservice NGO in Bangladesh, runs community nutrition centers, health centers, and various other health clinics, including primary schools; and provides microfinance services. Its

[124] Bhatt. 1998, 278.
[125] Kripalani. 2004; World Bank. 2003, 87.
[126] Bloom et al. 2001, 109-110.

operations cover more than 65,000 villages.[127] In India, Plan International has successfully registered 3.2 million children in the state of Orissa alone and thereby reduced the likelihood of their social and economic exclusion.[128]

In recent years, farmers' and other village participatory organizations, such as water users' associations, have expanded and begun to play an important role in many countries. In an ADB-funded rural water supply and sanitation project in the Punjab province of Pakistan,[129] community-based organizations (CBOs) in 335 of the poorest and most remote villages played a critical role in planning and implementation. They also maintain the facilities created under the project. The CBOs helped reduce costs and improve outreach to the poor. Most governments not only provide an adequate legal framework for the emergence and growth of various types of CBOs but also provide other support to promote their operations. In Nepal, the Government amended the irrigation policy to mandate a minimum women's representation of 20% in water users' associations. However, as was the case with rural infrastructure development, institutional development support policies seem to have neglected the specific requirements of less-favored areas, although effective local-level institutions have an even greater role in rural development of such areas than elsewhere.

Many OECD countries continue to support rural institutions for sustainable rural development, particularly in the context of increasing globalization. They have recognized that effective local institutions in particular increase the flexibility with which rural economic agents can respond to constantly changing conditions in both internal and global markets.[130] Farmers' cooperatives play a significant role in OECD countries, particularly by linking farmers with big markets. More than 80% of farmers in these countries have joined different types of cooperatives. About 90% of the dairy products in Denmark are marketed by cooperatives. In the Netherlands, 95% of flowers, 78% of fruits, and 70% of vegetables are marketed by cooperatives while one third of all US farmers market their cereal products through cooperatives.[131]

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127 www.brac.net. For an excellent brief account of the innovative ways through which BRAC reaches the poor households including the poorest, see, Abed and Matin (2007).

128 UNICEF. 2005, 72

129 Punjab Rural Water Supply and Sanitation Sector Project (Loan No.1349-PAK[SF]). See, ADB (2004b).

130 OECD. 2005.

131 Wu. 2005, 131.

E. Rural Financial Services

Improved access to credit, deposit, and insurance services helps broad-based rural development and reduce income inequalities within the rural sector and between the urban and rural sectors in a variety of ways. First, better access to credit facilitates adoption of fertilizer-responsive high-yielding rice and other crop varieties and enables poorer households to take advantage of opportunities in high-value agriculture. This contributes to farm household income growth. Second, access to credit makes it easier for rural households to respond to emerging rural, nonfarm enterprise opportunities. Third, deposit and insurance services, where available and close to farm households, encourage the accumulation of financial assets and enable the rural population's capacity to better manage their risks and reduce vulnerability. Fourth, improved access to credit also creates and strengthens rural people's perception that leaders are making genuine efforts to share the benefits of growth widely. This creates broad-based rural support for leaders and contributes to social stability.

Improved access to credit, deposit, and insurance services helps broad-based rural development and reduce income inequalities within the rural sector and between the urban and rural sectors in a variety of ways.

Most countries developed their rural economies initially through agriculture, which in turn was driven primarily by the adoption of high-yielding, fertilizer-responsive rice and wheat varieties. Although some economists do not agree, it is recognized that the availability of, and increased access to, institutional credit made it possible for millions of small farmers to adopt the package of technology, and increase their incomes and household welfare not only in East Asia but also in many other countries.[132] Because credit was considered a critical element in adopting new technology, and most countries did not have effective mechanisms to provide credit to rural people, governments established state-owned financial institutions and cooperatives to fill this gap. These virtually dominated the supply of credit at the early stages, and provided credit largely at subsidized interest rates. Nonetheless, the supply of farm credit increased substantially in many of these countries.

[132] A recent ADB report (OED 2006, 24) concluded that in Viet Nam, rural credit played a significant role in facilitating poor households' exit from poverty.

The Government of ROK established a new Agricultural Bank in 1958, and "this founding led to a great expansion in the availability of agricultural credit" because, in addition to the Government, the Bank of Korea provided funds for its lending operations.[133] In 1962, the Agricultural Bank merged with the existing central cooperative organization to form the National Agricultural Cooperative Federation. Thereafter, the Government increased lending to cooperatives to finance their credit operations. However, the Korean cooperatives over time increased their reliance on deposits and borrowing from private banks to finance lending operations. By 1970, about 40% of the lending was financed from private sector resources. The Korean farmers also used their own savings to finance agricultural operations in the 1960s because "mechanisms whereby such savings could have been transferred to the nonagricultural sector were not well developed, especially in the earlier part of the period."[134] In contrast, credit cooperatives in virtually all South Asian countries had a dismal record of performance and, hence, their contribution to rural development is highly doubtful.

While most East Asian economies were successful in making credit available to the wider rural population through state-sponsored institutions and programs, achievements in some countries fell far short of expectations. In Indonesia, the state-owned Bank Rakyat Indonesia (BRI) established unit desas (village banking units) in the early 1970s to provide credit to farmers as part of the Government's rice intensification program, known as BIMAS. The credit was supplied at highly subsidized interest rates. The program could not be continued because of persistent high default rates. The unit desa banking system had to be reformed drastically in 1983 to ensure its sustainability.[135] The Philippines also introduced a similar subsidized lending program (Masagana 99) in the 1970s to provide loans to rice farmers. The program severely undermined the financial viability of the lending institutions involved in its implementation. In Bangladesh, Nepal, and Pakistan, state-owned agricultural development banks continue to operate with very high default rates, and significant and regular injections of government funds, increasing inequity in income distribution in rural areas.[136] The extensive negative effects of subsidized rural credit in most countries led a group of experts in the early 1980s to conclude that "cheap credit undermines," rather than promotes, rural development.[137]

[133] Ban et al 1980, 206.
[134] Francks et al. 1999, 113.
[135] Patten and Rosengard. 1991.
[136] Fernando. 1999; Von Pischke. 1983.
[137] Adams et al. 1984.

The Indian government used state-owned banks and cooperatives extensively to provide credit to finance agriculture and other rural economic activities, and to provide saving facilities in rural areas.[138] The Government nationalized the private commercial banks in the late 1960s and launched an ambitious social banking program to improve the access of the rural population, of the poor in particular, to institutional credit and saving facilities. When the program ended in 1990, bank branches had opened in some 30,000 rural locations with no prior formal financial institutions. In addition, 33% of all bank loans have to be made to priority sectors, which included loans to small-scale industries and entrepreneurs, and to agriculture. This ratio was increased to 40% from 1985 onwards. Moreover, Reserve Bank of India required every bank branch to maintain a credit-deposit ratio of 60% within its geographical area of operation.[139]

According to some researchers, the Government's social banking policy substantially increased financial services, rural economic growth, and employment.

According to some researchers, the Government's social banking policy substantially increased financial services, rural economic growth, and employment, thus significantly contributing to a reduction of rural poverty.[140] Greater availability of credit clearly played a role in agricultural and rural development, and a majority of India's low-income households reached through state-sponsored programs would not have been reached by banking institutions without these state interventions. Nonetheless, the cost of these measures to the Government has been substantial. In addition, whether the social benefits of these measures outweighed the social costs is an open question, particularly because they undermined the financial viability of the lending institutions and discouraged private sector investments in rural financial market development.[141]

The current status of access to finance in India, however, clearly indicates that rural bank branches and cooperatives serve primarily the richer rural households. The rural poor continue to face severe difficulties in accessing credit and saving facilities from the formal sector. The World Bank–National Council of Applied Economic Research Rural Finance Access Survey 2003 indicated that some 87% of the poorest households surveyed (marginal

[138] Meyer and Nagarajan. 2000.
[139] Burgess and Pande. 2005.
[140] Burgess and Pande. 2005.
[141] Meyer and Nagarajan. 2000.

The recent history of rural finance shows that market-oriented rural financial institutions can significantly contribute to rural development, particularly rural nonfarm enterprise development.

farmers) did not have access to credit, and 71% did not have access to savings from a formal source.[142] The elite capture of most of the subsidized credit may have contributed to increased intra-sectoral inequity. The Government, through the self-help groups' (SHGs) bank linkage model, has sought to improve the access of the rural poor to finance. More than 16 million women and their households are linked to rural banks through group savings accounts, though far fewer have credit from banks. Outstanding bank loans to SHGs were estimated to be $460 million at the end of March 2005.[143] The financial viability and long-term sustainability of many SHGs remains questionable.[144]

Previously, some had argued that cheap credit significantly undermined rural development.[145] It has been pointed out that the credit-biased, subsidized-interest-rate-based rural finance policies extensively adopted by most Asian countries had made rural development less equitable, discouraged the emergence of market-based rural financial institutions in rural areas, and that the strategy "was usually fundamentally flawed because it failed to provide savings, insurance, money transfer, and other financial services demanded by farmers."[146]

The recent history of rural finance shows that market-oriented rural financial institutions can significantly contribute to rural development, particularly rural nonfarm enterprise development. The track record of BRI's unit desas during the post-reform period (1984 onwards); the performance of the reformed, previously state-owned Agricultural Bank of Mongolia; and new breed of microfinance institutions, including Grameen Bank in Bangladesh, Cambodia's ACLEDA Bank, and India's Share Microfin Ltd, providing financial services to low-income households strongly suggest that sustainable rural finance for rural development is feasible.[147] The privatized Agricultural Bank of Mongolia is the main provider of financial services in rural areas in that

[142] World Bank. 2004.
[143] Sinha et al. 2006.
[144] World Bank. 2004.
[145] Adams et al. 1984.
[146] Meyer and Nagarajan. 2000.
[147] Patten and Rosengard. 1991; Robinson. 2002; Clark. 2006.

country.[148] In 2006, it reported a return on equity of 57.3%. The ACLEDA Bank—which had its origin in a nongovernment microfinance organization—has profitably increased its outreach to micro and small enterprises and low-income households, despite being a commercial bank.[149,150] Share Microfin Ltd, a nonbank finance company, had over 800,000 active borrowers, mostly women, at the end of March 2007.

The increasing role of the ICICI Bank in India's rural financial markets illustrates the entry of established, conventional profit-oriented, private sector institutions—including foreign-owned banks—into rural finance in recent years.[151] The largest private sector commercial bank, and the second-largest commercial bank in India, ICICI has aggressively increased its rural-finance loan portfolio during the last 3 years, and claims to have an outreach of 3.2 million low-income clients. It has established partnerships with 102 microfinance institutions to expand its rural and microfinance services. Other commercial banks involved in microfinance include the State Bank of India, HDFC Bank, UTI Bank, IDBI Bank, Andhra Bank, and Oriental Bank of Commerce. The most recent foreign bank entrants into microfinance include HSBC, Citibank, Standard Chartered, and ABN-AMRO.

While formal, financial institutions play an increasing role in rural finance in many countries, NGOs in some countries continue their dominant role in providing credit facilities for poor and low-income households.[152] The best examples for this come from Bangladesh where two large NGOs operate efficiently and effectively, with a few medium-scale microfinance NGOs. BRAC, the largest multiservice NGO, reaches over 4.5 million microcredit clients in rural areas. In 2005, BRAC disbursed $501 million equivalent in loans to the poor and recorded a recovery rate of over 98%.[153] The total outstanding loan portfolio of BRAC amounted to $350.2 million equivalent at the end of 2006. BRAC also makes a concerted effort to reach the hardcore poor with innovative financial service programs. The Association for Social Advancement (ASA), the other large NGO in the microfinance industry in Bangladesh, had over 5.0 million active borrowers and a gross loan portfolio of about $255.0 million equivalent at the end of 2005.[154] ASA's loan recovery rate

148 Dyer et al. 2004.

149 A number of other microfinance NGOs that transformed into formal financial institutions are providing an increasing access to a range of financial services for the poor and low-income households. For a detailed discussion of these institutions, see (Fernando. 2004).

150 Clark. 2006.

151 ADB. 2005d.

152 Fernando. 2007.

153 www.brac.net

154 www.mixmarket.org.

is also about 98%. These institutions serve the poor profitably and efficiently. BRAC's return on equity was 23.27% at the end of 2006 while ASA's return on equity at the end of 2005 was 28.16%. With the cost of serving a borrower at only $5.40 equivalent, ASA is one of the most efficient microfinance NGOs in the world.[155] Over 90% of the clients of both organizations are poor women, a vital indicator of their contribution to inclusive rural development. Many other microfinance institutions also primarily serve women (Table 8),

Table 8: Outreach of Selected Microfinance Institutions in Asia

Institution (and Country)	Year	Number of Active Borrowers	% of Women Borrowers	Gross Loans Out-standing ($mn)	Number of savers	Deposits Out-standing ($mn)	Return on Equity (%)
ACLEDA Bank (Cambodia)	End of 2006	159,930	61	158.1	141,368	123.1	16.65
AMRET (Cambodia)	End of 2006	141,957	83	17.6	–	–	25.21
TSPI (Philippines)	End of 2006	142,370	100	11.9	–	–	16.32[a]
BRI (Indonesia)	End of 2006	3,455,894	50	3,035.7	30,907,566	4,869.7	129.96
CARD NGO (Philippines)	End of 2006	159,673	100	16.1	–	–	26.13
ASA (Bangladesh)	End of 2006	5,163,279	87	255.4	6,455,979	46.3	28.16
BRAC (Bangladesh)	End of 2006	4,550,855	96	350.2	45,234	0.52	23.27
Grameen Bank (Bangladesh)	31/07/2007	7,240,726[b]	97[c]	490.0	–	686.0	–
Basix (India)	31/03/2007	198,282	100	32.0	–	–	–
Share Microfin Ltd. (India)	31/03/2007	826,517	100	91.7	–	–	15.31
Spandana (India)	31/03/2007	972,212	100	89.8	–	–	22.0
Kashf Foundation (Pakistan)	End of 2006	136,015	98	25.5	133,363	0.131	n.a.

– = not applicable or data not available, mn = million.
[a] As of end June 2006.
[b] Refers to number of members.
[c] Refers to proportion of women members.
Source: www.mixmarket.org; www.grameen-info.org

[155] Fernando and Meyer. 2002; Microfinance Information eXchange. 2006.

a majority of whom belong to poor and low-income households. In general, microfinance continues to make a valuable contribution to reduce the severity of poverty in rural areas and improve poor people's choices. The situation of rural poor in countries such as Bangladesh, Cambodia, and Indonesia would have been worse without access to microfinance.

Vibrant rural financial markets can also make rural development more inclusive by facilitating poor and low-income households' access to a range of other financial services beyond credit. Such services include deposit, money transfers, and insurance. Deposit services enable poor people to accumulate financial savings, earn a return, and improve their credit worthiness and ability to cope with certain types of risks. Experience in most developing countries has shown that demand for deposit services is generally greater than for credit among poorer households. Microinsurance, simply defined as insurance services provided to the poor and low-income households, enhances the capacity of poor households to manage a number of risks to which they are exposed and vulnerable. By helping low-income households manage risks, microinsurance not only contributes to improving their economic well-being but can also assist them maintain a sense of financial confidence even in the face of significant vulnerability.[156] In India, microinsurance services, both life and nonlife, have begun to expand in recent years partly because of government policies which made provision of these services mandatory for the mainstream insurance companies.[157] Weather-based insurance services offered to small farmers are also increasing. Microinsurance services are also expanding in the Philippines. Institutional money transfer services, which enable poor and low-income households to transfer funds at low transaction costs, also reduce the risks they may otherwise face. In Cambodia, India, Indonesia, and PRC, most rural-to-urban migrant workers are increasingly relying on such services to send money to their families in rural areas without exposing themselves to risk of theft and losses.

Vibrant rural financial markets can also make rural development more inclusive by facilitating poor and low-income households' access to a range of other financial services beyond credit.

Generally, countries that provide an enabling environment develop essential financial infrastructure, support the development of retail institutional capacity, and allow for institutional diversity have seen thriving

[156] Churchill (ed). 2007.
[157] UNDP. 2007.

inclusive, rural financial markets over time. Countries providing appropriate assistance to develop financial services for the poor in particular increase the capacity of the poor to take advantage of economic opportunities, manage risks, and reduce their vulnerability to external shocks. Improved access to financial services continues to reduce not only economic but also social exclusion of an increasing number of poor and low-income households in countries as diverse as Bangladesh, India, Indonesia, Mongolia, Viet Nam, and Cambodia.[158] By providing access to an increasing range of financial services, the microfinance industry in many countries across the developing world has in particular made rural development much more inclusive than otherwise would have been the case. More importantly, according to ADB President Kuroda,[159] modern microfinance has launched an irreversible process of financial democratization. Thus, positive impact of microfinance on inclusive rural development will further increase over time.

F. A Dynamic Agricultural Sector

Agriculture has played, and continues to play, an important role in rural development.

Although economic transformation involves a substantial decline in the relative share of the agricultural sector in total output and employment, agriculture has played, and continues to play, an important role in rural development. Some countries are far advanced in the transformation than others, but in many agriculture accounts for a sizeable share of GDP (Table 9), and agricultural employment accounts for significant share of total employment. As ADB points out in Rural Asia study, "all the successfully transforming economies in Asia (except single-city economies like Singapore and Hong Kong, China) enjoyed successful agricultural revolutions prior to their industrialization." First, agriculture growth has been a source of food, foreign exchange, and financial and labor resources for the growing industrial sector. Second, agricultural growth contributed to the emergence of the agro-industry sector, rural manufacturing, and the rural nonfarm economy. Third, agricultural growth has contributed to productive employment creation for millions of small and marginal farmers and unskilled labor and improvement of socioeconomic welfare of their families. Fourth, agricultural growth has made it possible to keep wages in the manufacturing sector at relatively low levels, contributing to manufacturing growth. Agriculture, it has been said, had to undergo a productivity revolution to increase output and efficiency to perform these

[158] Fernando. 2007.
[159] Kuroda. H. 2007.

functions successfully.[160] Countries that improved agriculture have achieved better rural development, and reduced rural poverty substantially—directly and indirectly (indirectly through contributions to industrial and rural nonfarm growth, lower food prices, and higher agricultural wages). For example, the rapid increase in the productivity of farms and livestock had profound effects on rural development in the United States from 1940 to1980. Dramatic growth in agricultural output and farm productivity in the PRC during the post-1978 period also had a similar impact on rural development.

Table 9: Share of Agriculture in GDP (%)

Country	1985	1990	2004
Bangladesh	50	38	21
Cambodia	56	56	36
China, People's Republic of	33	27	15
India	31	31	22
Indonesia	24	22	17
Japan	3	3	1
Korea, Republic of	14	9	3
Lao PDR	63	61	49
Malaysia	21	19	10
Mongolia	16	17	26
Nepal	62	60	40
Pakistan	25	26	23
Papua New Guinea	33	29	26
Philippines	27	22	14
Sri Lanka	27	26	17
Thailand	17	12	10
Viet Nam	47	37	22

Lao PDR = Lao People's Democratic Republic.

Source: ADB 1995; World Bank 1987, 1992, and 2005.

Many countries have used agricultural product procurement policies—particularly procurement of staple agricultural commodities—to achieve multiple rural development objectives, and to maintain urban wages at relatively low levels. For example, the Government of the ROK promulgated the Law for the Maintenance of Farm Product Prices in 1961 "to maintain proper prices of agricultural products and to insure the stability of agricultural

[160] Meyer and Nagarajan. 2000, 9.

production and the rural economy."[161] However, over time these measures involved growing costs, became difficult-to-remove protection measures for farmers of staple crops, and constrained agricultural sector adjustments in relation to changing market conditions.

Within the overall economic transformation, a transformation occurs in general within agriculture as well. The relative shares of different commodities seem to change significantly in economies where no restrictions are placed on such adjustments, reflecting the changes in demand arising from increases in household incomes within and outside rural areas. Consumption pattern shifts from cereals to high-value agricultural products which include fruits, vegetables, milk and milk products, meat, eggs and fish. With sustained increases in per capita incomes, in the ROK, per capita annual consumption of meat increased from 4.6 kgs in 1965 to 19.9 kgs in 1990; milk, from 2.1 kgs to 42.8 kgs; and fruit and vegetables, from 56.5 kgs to 168.8 kgs in the same period. In response to these, the importance of vegetables, fruit, and meat production in agriculture rose significantly. However, unlike many other countries, per capita consumption of rice, a staple, declined only slightly from 121.8 kgs in 1965 to 119.6 kgs in 1990.[162] The continued importance of rice in the diets of households and in agricultural production put pressure on the Government to maintain a high level of protection on rice cultivation.

Transforming economies such as India and the PRC, among others, are observing similar changes in consumption patterns. Recent estimates showed that in India, per capita consumption of cereals declined from 192 kgs in 1977 to 152 kgs in 1999 in rural areas and from 147 kgs to 125 kgs in urban areas. The consumption of fruits, on the other hand, increased by 553%; of vegetables, by 167%; of milk and milk products, by 105%; and of meat, eggs, and fish, by 85% in rural areas over the same period. Similar changes have occurred in urban consumption patterns.[163] This structural shift in consumption pattern has led to an associated structural change in agriculture. High-value food commodities (defined to include fruits, vegetables, animal products, spices, tea, and coffee) contribute nearly 40% to the gross value of agricultural output in India.[164] A similar trend has been observed in the PRC since the mid-1980s.

While the structural changes in the composition of agricultural output is vitally important for overall rural development, its impact on inclusive

[161] Ban, et al. 1980.
[162] Francks, et al. 1999, 135.
[163] Braun et al. 2005b. 15.
[164] Rao et al. 2006, 2748.

rural development seems unclear particularly in countries where land ownership distribution is unequal, land rental markets do not function well and rural infrastructure development is highly inadequate geographically. Most high-value crops and commodities, being perishables, require immediate transportation to the markets, or storage, or transformation into less perishable forms through processing.[165] Hence, their growth tends to be concentrated mostly in areas with better infrastructure and connections to markets. Most farmers outside such areas may not be able to fully seize this economic opportunity. High-value crops also require more cash inputs than other crops and, hence, a larger amount of working capital. Unequal access to finance in the rural sector can make it difficult for many farmers to participate fully in producing high-value crops. Thus, "left to market forces alone, the major beneficiaries of the new high-value agriculture will be mostly the larger and commercially oriented farms, as well as farms that are well connected to roads and markets."[166] However, the increasing trend in high-value crop production may also have some positive effects on equity in rural areas to the extent that small farmers are able to participate in this process and the effect of the expansion of high-value crops on productive employment is significant. It is claimed that high-value agricultural products have higher employment elasticity than other agricultural products. Thus, potential exists for more productive employment opportunities for rural wage labor.

Agricultural growth in many developing countries have generally been low in recent years. The sluggish growth in agriculture, particularly in South Asia, is closely associated with policy and institutional neglect. In particular, a lack of public investment in rural infrastructure (irrigation, roads, electrification, and communications), social infrastructure (basic education and health care), and agricultural research and extension services is widely acknowledged to have led the agriculture sector in performing below its potential.[167] Countries with sizeable agricultural sectors and relatively low growth rates in agriculture (see Table 10) find it difficult to sustain poverty reduction impacts. This appears to be the situation in India. Agricultural growth in India rose to more

The sluggish growth in agriculture, particularly in South Asia, is closely associated with policy and institutional neglect.

[165] Rao et al. 2006, 2751.
[166] Braun et al. 2005b. 15
[167] ADB. 2004a, 36–37.

than 4% a year from 1992 to 1996. However, the growth rates declined to about 2% a year from 1997 to 2000, and remained low thereafter in 2002, 2004, and 2006. Some argue that "slower growth in agriculture was the major reason behind the slower poverty reduction" in India, relative to the PRC.[168] Slow growth in agriculture is also at the root of growing evidence of distress in the farming community.[169] This is not surprising given that the agriculture sector in India accounts for about 22% of GDP, is dominated by smallholdings, and is characterized by considerable underemployment of labor. However, the same factors increase the importance of agricultural growth for rural economic growth in general and inclusive rural development in particular. A similar situation may be observed in countries such as Bangladesh, Cambodia, Lao PDR, Pakistan, Nepal, and Tajikistan where the share of agriculture in GDP and agricultural employment in total employment continue to remain high while agricultural productivity is low.

To sustain a dynamic agriculture sector and harness its full potential for inclusive rural development, available technology must be used effectively and efficiently.[170] In most developing economies including

Table 10: Growth Rates in Agriculture (%)

Country	Growth Rates in Agriculture (%)							
	1999	2000	2001	2002	2003	2004	2005	2006
Bangladesh	4.7	7.4	3.1	0.0	3.1	4.1	2.2	4.5
Cambodia	3.4	(1.5)	2.7	(3.5)	10.5	(0.9)	15.7	5.5
India	0.3	(0.1)	6.5	(7.2)	10.0	0.0	6.0	2.7
Lao PDR	8.2	4.9	3.8	4.0	2.2	3.5	2.5	–
Nepal	2.8	4.9	5.5	2.2	2.5	3.9	3.0	1.7
Pakistan	1.9	6.1	(2.2)	0.1	4.1	2.4	6.5	1.6
Papua New Guinea	13.8	2.1	(4.7)	(4.1)	–	–	–	
Philippines	6.5	3.4	3.7	4.0	3.8	5.2	2.0	3.8
Sri Lanka	4.5	1.8	(3.4)	2.5	1.6	(0.3)	1.9	4.7
Vanuatu	(12.2)	6.7	(3.4)	2.5	1.6	–	–	–

Source: ADB 2004a; ADB. 2007.

168 Braun, et al., 2005a, 8.

169 Ahluwalia. 2005, 17.

170 An emerging view argues that agricultural development should no longer be considered the best way to promote rural development. Rigg (2006, 180–202) concludes that, "the best means of promoting pro-poor growth in the countryside may have less to do with supporting smallholders farming and more to do with endowing poor people with skills so they can escape from farming and, perhaps, escape from the countryside. Investing in farming and agriculture may, indeed, preferentially support the nonpoor and thereby widen inequalities in the countryside". However, the broader experience suggests agriculture can continue to play a potentially significant role, albeit on a reduced scale as the level of diversification of the rural economy increases over time.

rapidly transforming economies such as the PRC and India, a wide gap exists between latest knowledge on best agricultural practices and what is actually applied by most small and marginal farmers. This practice gap, which is more prevalent among poorer farmers, contributes significantly to low agricultural productivity and incomes. This gap is also one of the factors contributing to negative environmental effects of agriculture. For example, according to some reports, in the PRC, "more than 10% of cropland may have been polluted because of improper use of pesticides and fertilizers."[171]

This practice gap, contributes significantly to low agricultural productivity and incomes.

New technology that increases yield and labor productivity must also be developed and promoted. The green revolution technology in the 1970s and 1980s increased the production of three cereal crops: rice, maize, and wheat. Recent experience in many countries shows that agricultural research and extension should pay increasing attention not only to high-value products—such as livestock and horticulture—to boost yields and expand their production and processing, but also to crops grown by poor households in pockets of poverty.[172] ADB research has found that, typically, agriculture's share of total employment declines more slowly than its share of national income, with the inevitable result that labor productivity, and hence per capita incomes, in agriculture lag behind the nonagricultural sector.[173] Hence, to minimize nonagriculture–agriculture as well as intra-rural sector disparities in income levels, particular attention must be paid to measures leading to increases in agricultural labor productivity within short periods.

Although previous agricultural development strategies that focused on irrigated areas produced spectacular results, they bypassed large areas of agricultural land characterized by lower agricultural potential. Some experts estimate that more than 260 million of the rural poor in Asia live in such less-favored areas.[174] The lack of adequate focus on agricultural research suitable for less-favored areas has been an important factor for the persistence of poverty pockets in some countries. Crop breeding has failed to significantly impact on these areas. This neglect of less-favored-area development based on inadequate appreciation of its long-term consequences has led to significant disparities in socioeconomic development between irrigated agricultural areas and less-favored areas.[175]

[171] Cha. 2007.
[172] IFAD. 2002.
[173] ADB. 2000, 16; Warr. 1991, 2.
[174] Rosegrant and Hazell. 2000, 324.
[175] Rosegrant and Hazell. 2000.

Many Asian developing economies have paid inadequate attention to conserving natural resources, particularly land, water resources, and forests.

Many Asian developing economies have paid inadequate attention to conserving natural resources, particularly land, water resources, and forests.[176] In Tajikistan, irrigation-related land degradation, in particular salinity, water logging and soil erosion, has left about 90,000 hectares in poor condition. Soil erosion in rain-fed farm lands is also a problem.[177] Although some OECD countries have also made this mistake, most of them have been addressing issues relating to environmental protection relatively quickly and implementing them effectively. An example is implementation of regulations controlling waste products from intensive livestock farms. New institutions have also emerged to strengthen the environmental protection agenda.[178] Similarly, OECD countries are seeking to minimize the loss of soil quantity and quality, and water pollution from agricultural activities. In the US, farmers have been encouraged to use reduced or zero tillage.[179] In addition to pollution, most countries have to pay attention to using less water in agriculture given the rapidly increasing scarcity of water resources. Those developing countries where agriculture is shifting toward more diversified and high-value crops and activities will have more opportunities to reduce water consumption in agriculture because many of the new crops need less water. Many countries increasingly recognize the importance of environmentally sustainable agriculture and using a range of measures to protect natural resources in rural areas to sustain the agriculture sector and preserve the rural ecosystem. However, this recognition remains to be translated into effective practice in most countries.[180]

[176] It is important to note that, according to some rural development experts, even international research institutes such as the International Rice Research Institute (IRRI) paid inadequate attention to environmental issues associated with agricultural technology that they developed and promoted. Some of the rice varieties that IRRI promoted require heavy doses of water, fertilizer and other chemicals and contributed to environmental problems. see. Barta. 2007, A1.

[177] ADB. 2006c, 2

[178] Baldock. 1994.

[179] Geyer-Allely. 1994.

[180] Malaysia paid attention to certain aspects of environmental sustainability even as early as the 1970s. The Pesticides Act was introduced in 1974, for example, to promote the safe and efficient use of pesticides. The Environmental Quality Act was also enacted in the same year. However, the extent to which these acts were actually implemented remains an open question.

G. Rural Nonfarm Enterprises

RNFEs can make a significant contribution to employment generation.... these enterprises are an important source of income for women, small farmers, and landless workers.

Rural nonfarm enterprises (RNFEs) include manufacturing, agricultural processing, and service enterprises—such as rural tourism—are diverse in their characteristics, and dominated by small, highly labor-intensive enterprises that play a significant role in inclusive rural development. Their role increases significantly as the economic transformation gathers momentum. They are important because, first, agricultural growth alone cannot productively absorb the increasing rural labor force in agricultural employment and allow opportunities for rural income increases even with rapid improvements in agricultural productivity. RNFEs can make a significant contribution to employment generation. Urban industrial sector cannot grow fast enough on a sufficiently labor-intensive path to fully absorb the surplus labor in agriculture. Second, RNFEs can reduce rural–urban income differences and excessive rural-to-urban migration. These enterprises are an important source of income for women, small farmers, and landless workers. Third, RNFEs can make a potentially significant positive impact on non-income dimensions of rural poverty. They can reduce the vulnerability of the rural poor to various economic shocks, make rural economic growth more equitable, and indirectly contribute to improvements in social indicators. Fourth, by providing smallholder farm households with opportunities to transform into pluriactive viable economic units less dependent on agriculture, RNFEs can facilitate agricultural adjustment and reduce the costs that would entail such adjustments. A more developed rural nonfarm economy reduces the need for government subsidies to make rural development more equitable.

The overall effect of RNFEs on rural economic growth and poverty reduction has been substantial. The increased pluri-activity of rural households has improved their incomes and reduced their vulnerability to external shocks.[181] Because many nonfarm economic activities require little capital and generate more employment per unit of capital, they are compatible with the requirements of poor households. ADB's Rural Asia study found that the rural nonfarm economy accounts for 20–40% of total rural employment,

[181] IFAD. 2002; de Haan and Lipton. 1998, 149; Francks et al. 1999; Rosegrant and Hazell. 2000; Fernando. 1990.

and 25–50% of total rural income in Asia. Within the region, rural nonfarm employment accounted for 37% of total rural employment in Indonesia in 1995, 50% in Thailand in 1996, and 40% in Bangladesh in 1991.[182]

The experience of Taipei,China in rural industrialization illustrates much better than that of any other country the significance of RNFEs for inclusive rural development. Between 1958 and 1973, the share of manufacturing in net domestic product increased from 16% to 36% while the agricultures share declined from 31% to 14%. Exports accounted for 42% of GDP in 1973. Much of the growth of industrial production and exports originated from the activities of small businesses located in rural areas. Manufacturing enterprises in Taipei,China were not concentrated heavily in urban areas. The proportion of industrial establishments located in the five largest cities remained almost unchanged at just under 35% through the 1950s and 1960s and manufacturing employment consistently grew faster in rural, rather than in urban, areas. As a result, the share of rural manufacturing employment increased from 57% to 63% in the decade from 1956.[183] The expansion of nonfarm activities in rural areas also increased opportunities for women to participate in such activities. About 41% of full-time off-farm rural workers were women in the 1970s.[184] The growth of rural nonfarm economic opportunities including rural industries led to a 54% increase in part-time farm households from 393,425 in 1960 to 605,117 in 1970. The nonfarm income in total farm household income rose from 34% in 1965 to 54.8% in 1970.[185] The rural nonfarm activities also had a clear egalitarian impact on rural income distribution because their incidence was higher in the smaller land-owning households than in the larger ones.[186] Thus, the decentralized, labor-intensive pattern of rural industrialization and other rural nonfarm economic activities helped transformed rural farm households into economically viable pluriactive units, increased rural household incomes, contributed to income equality in rural areas, reduced urban–rural income disparities and increased employment opportunities particularly for women.

In contrast to the Taipei,China experience, the majority of manufacturing activity in the ROK took place in urban areas: in 1970, 67% of manufacturing firms were in urban areas, employing 82% of the manufacturing labor force, and the proportions had changed little by 1980.[187] By the 1980s over 80% of

[182] IFAD. 2002, 100.
[183] Francks et al. 1999, 162, 176.
[184] Saith. 1987, 277.
[185] Francks et al. 1999, 176.
[186] Saith. 1987, 277.
[187] Francks et al. 1999, 114.

manufacturing employment was located in one urban area along the Seoul–Pusan axis. Although the relative share of income from agriculture in total income of rural households declined from 76% in 1970 to 65% in 1980 and 57% in 1990, it continues to be high. The share of agricultural employment in total employment declined over time but remained high at 34% in 1980. The degree of pluri-activity in rural households remained limited. This, coupled with divergence between growth rates in urban-based manufacturing and agriculture, resulted in significant urban–rural income disparities and substantial political pressure for agricultural protection.

Rural nonfarm activities have become central to rural livelihood in many other countries, making agriculture-centric rural development less appropriate.

Rural households in many East Asian economies were able to respond to the emerging economic opportunities and participate in the rural nonfarm economy. Good communication infrastructure, widespread rural electrification, and the availability of well-educated workers within rural households facilitated this process.[188] Thus, many East Asian economies provided the incentives, ability, and opportunities for rural people to participate in the growth process while remaining in rural areas. This reduced the possibilities for wide rural–urban disparities and the political pressure for agricultural protection. In addition, the pressure to migrate from rural to urban areas was relatively less.

Many OECD countries have developed rural tourism based on cultural, historical, and natural resource features in rural areas. Many European OECD countries have also found that significant potential exists for developing nonfarm niche goods and services in rural areas, and these can significantly contribute to improving the socioeconomic welfare of the rural population.

Rural nonfarm activities have become central to rural livelihood in many other countries, making agriculture-centric rural development less appropriate. Thailand followed a policy to promote RNFEs since the 1970s with a view to creating employment, increasing rural incomes, and reducing regional income disparities. This policy contributed to the growth of RNFEs: the proportion of off-farm income in total income of farm households rose from already high 46% in 1971–1971 to 59% in 1982–1983. A field survey in the Central Plains of Thailand indicated that the contribution of farming to household income declined from close to 90% to 36% while the share of

[188] Francks et al. 1999.

nonfarm income rose from 13% to 64% between 1994 and 2000 in the villages covered in the survey. In India, a survey of rural households in 240 villages across 16 states showed that between 1971 and 1999, the share of nonfarm incomes in total rural incomes rose from 19% to 48%.[189]

In the PRC, rapid growth of rural nonfarm activities in the last 2 decades has become one of the major drivers of poverty reduction. Highly labor-intensive, household-based microenterprises provide employment for more than 80 million rural residents in more than 50 million households. Off-farm employment as a proportion of the total rural labor force grew from about 15% in 1981 to about 43% in 2000. A bulk of this growth was in self-employment, whose importance in the rural labor force grew steadily from 4% in 1981 to about 16% in 2000. It was high productivity self-employment that increased which in 2000 accounted for over 75% of all self-employment. Evidence indicates a significant shift in rural labor from low-productivity activities to higher productivity activities.[190] Undoubtedly, government investments in rural infrastructure significantly contributed to the growth of the rural nonfarm economy. Relatively high quality of labor and access to electricity was particularly important. By 1998, 98% of the villages had access to electricity and more than 97% of the households had electricity connections.[191] RNFEs, in addition to agricultural growth, possibly made a significant contribution to the increase in rural incomes.

Viet Nam's rural economy has also benefited from rural industries and other rural nonfarm enterprises. According to official estimates, each year rural industries provide employment to more than 11 million people, indicating an increase of 10% compared with the number of jobs provided in 2000. In mid-2006, the Government announced a 5-year plan for developing rural industries to create 300,000 new jobs. Although no reliable studies on the contribution of rural industries to reduce income or non-income poverty are available, it is safe to assume that rural industrial growth must have significantly and positively impacted on the rural economy. However, without specific studies, it is difficult to generalize on its impact on inclusiveness.

RNFEs have made a significant contribution to inclusive rural development in the Philippines where the agricultural economy is dominated by rice cultivation. While labor use in rice production was declining because of adoption of labor-saving technologies and stagnant productivity, many rural households have increased their nonfarm economic activities. A study of rural

[189] Rigg. 2006, 148.
[190] Mohapatra, et al. 2007, 166.
[191] Thorat and Fan. 2007, 706.

nonfarm activities indicated that in a high-potential village, the share of nonfarm income increased from 45% to 70% between 1985 and 2004, making a major contribution to higher per capita household incomes. Similar or even more dramatic changes have been observed in marginal areas. "Because agricultural production is not as promising as in the high-potential areas, the households in the marginal areas have expanded their nonfarm activities more actively to increase their income. As a result, the regional income gap has significantly declined".[192] The landless households in the Philippines have also shifted to nonfarm activities to improve their income. This movement not only enabled many landless families to move out of poverty but also reduced the income disparities between the landless and the farming households.[193]

A failure to develop a dynamic rural nonfarm economy has some major indirect consequences on inclusive rural development.

A failure to develop a dynamic rural nonfarm economy has some major indirect consequences on inclusive rural development. When rural prosperity continues to depend heavily on agriculture, it exerts enormous pressure on governments to introduce and maintain highly protective policies on agriculture and provide various subsidies to farmers. Excessive levels of protection delays adjustments in agriculture and increases future costs of adjustments. In addition, subsidies add to the fiscal burdens of the governments and begin to compete directly with public expenditure for health, education, and other public services critical for the welfare of the poor and low-income households. Experience tends to suggest that agricultural subsidies in most countries disproportionately benefit the relatively rich farmers. In addition, in most developing economies, extensive subsidies create rent-seeking opportunities, vested interest groups, and weaken effective governance of institutions.

The country experience also shows that less diversified rural economies have implications for the age composition of the rural population. Countries with less dynamic rural nonfarm economies tend to have rural populations consisting largely of older people, thus creating both economic and social problems. Young people tend to dislike agricultural employment particularly where such agriculture relies heavily on manual labor; and they prefer and search for nonagricultural employment. If such employment is available mostly in urban areas, they tend to migrate to such areas. For example, in the

[192] Otsuka. 2007, 4.
[193] Estudillo, et al. 2006.

ROK in 1970, 54% of the rural population was under age 20: this declined to 16% by 2002. The proportion of farmers aged over 60 was 51% in 2000. This also creates an uncertainty about family continuity in farm operations, negatively affecting incentives to invest in farming.[194] If the rural nonfarm economy fails to grow and expand opportunities with better labor productivity particularly in those countries where agriculture continues to account for a significant share of GDP, it will lead to massive unemployment and underemployment in rural areas, and to persistent poverty for a large segment of the population.[195]

To make rural economy more dynamic, the rural nonfarm economy should be integrated with the expanding urban and global markets.

To make rural economy more dynamic, the rural nonfarm economy should be integrated with the expanding urban and global markets. This requires a market- rather than product-driven approach. One reason that India has been unable to harness the full potential of the rural nonfarm economy for increasing rural prosperity is its weak market integration. As Porter highlighted in a recent study on competitiveness in rural US regions, a number of measures are required to unleash the full potential of the rural nonfarm economy—move away from thinking about purely rural strategies, think of and focus on economic regions rather than "rural regions," and adopt a "regional hubs" and "rural spokes" model of development.[196] These suggestions are relevant for many developing economies aspiring to achieve inclusive rural development.

[194] Mundlak. 2005, 1011.

[195] A recent ADB study on labor markets in Asia (Felipe and Hasan [ed.] 2006) concluded that unemployment and underemployment are the ultimate causes of poverty in the region, and recommended that the surest means of fighting poverty is large-scale job creation. According to Naughton (2006), Lin Yifu of Peking University has also asserted that the only way to improve long-term income distribution in the PRC is to encourage the development of labor-intensive sectors. It is interesting to note that many others came to the same conclusion many years ago. For example, Lal (1988) attributed the painfully slow decline in poverty in India until 1980s, to the failure to increase the demand for labor outside agriculture at a substantial rate.

[196] Referred to in Sampson. 2005, 27–28.

H. Subsidies

Most countries have used various kinds of subsidies to achieve rural development objectives.

ADB research has found that most countries have used various kinds of subsidies to achieve rural development objectives. They have varied over time. Most countries at the early stages used input subsidies for agricultural development, where fertilizer, seeds, irrigated water, and energy were provided at highly subsidized rates. Government procurement programs in some countries offered higher-than-market prices for staple agricultural products while in some others they were used to implicitly tax the farmers. Import restrictions also enabled farmers to obtain artificially high prices for their farm products. The impact of these subsidies remains a highly controversial issue, and it is difficult to be firm about their actual impact on rural development, particularly distributive impact, partly because governments also taxed the agricultural sector in a variety of ways while providing subsidies. However, many believe that input subsidies helped small farmers adopt new agricultural technologies, particularly during the Green Revolution period, and increase their incomes in most countries. In India, subsidies on irrigation and fertilizer during the 1960s to 1990s yielded benefits that were 2–4 times the amount spent. However, in the 1990s, most subsidies became uneconomic.[197] The returns in rural poverty reduction (number of poor reduced per million rupees spending) were also high for irrigation, fertilizer, and credit subsidies in the 1960s, but varied during 1970s to 1990s, as shown in Table 11.

Table 11: Returns in Growth and Poverty Reduction to Subsidies in India

	1960s	1970s	1980s	1990s
Returns in Agricultural GDP (rupees per rupee spending)				
Irrigation subsidies	2.24	1.22	2.28	–
Fertilizer subsidies	2.41	3.03	0.88	0.53
Power subsidies	1.18	0.95	1.66	0.58
Credit subsidies	3.86	1.68	5.20	0.89
Returns in Rural Poverty Reduction (number of poor reduced per million rupees spending)				
Irrigation subsidies	149.11	67.51	113.50	–
Fertilizer subsidies	165.87	180.88	48.14	23.67
Power subsidies	78.68	52.31	82.52	26.90
Credit subsidies	256.60	92.54	258.51	41.73

Source: Fan 2005, 36.

[197] Fan. 2005, 35–37.

Some Asian countries went beyond what was considered at the time conventional measures of subsidies for rural development. When the ROK introduced its "new village movement" (the saemaul movement) in 1970, the Government provided 335 bags of cement to each of 33,267 villages in the country to use for government-designated village projects. In July 1971, this increased to 500 bags of cement for villages that performed well (about 16,000) during the pilot project stage. Each of these "well-performing" villages also received one ton of steel.[198] The Government of Malaysia heavily subsidized its land settlement programs initially for rubber cultivation, and later for oil palm cultivation through the FELDA for many years. By 1987, FELDA had settled more than 400,000 poor households—over 15% of the rural population.[199] These land settlement programs transformed the country's food crop dominated low-productivity agricultural economy into a one dominated by high-productivity industrial crops and enabled a larger number of rural households to improve their incomes and quality of life. The plantations also improved rural wage labor and further contributed to poverty reduction. Sri Lanka also heavily subsidized land settlement programs for rural people during the 1950s to 1980s.

Most countries also provided, and many continue to provide, credit at subsidized interest rates to promote rural development.

Most countries also provided, and many continue to provide, credit at subsidized interest rates to promote rural development. India, Pakistan, PRC, Thailand, and Viet Nam have used this more extensively than many other countries. India introduced a subsidized credit-based Integrated Rural Development Program in 1978 in selected districts and later expand it to other areas. This was reputed to be the largest microfinance program and the most ambitious effort at rural development and poverty reduction in the world during the 1980s. It provided capital subsidy and complementary loans of less than $300 at below market rates to poor households to finance productive investments in income-generating assets.[200] Over 20 years, banks gave 55 million loans under the program and disbursed some $5.6 billion equivalent[201] while the direct budgetary cost to the Government exceeded $3 billion. However, subsidies provided under the program were captured mostly, and not

[198] Boyer and Ahn. 1991, 34–35.
[199] de Haan and Lipton. 1998, 166.
[200] Pulley. 1989; Sinha, et al. 2006, 7.
[201] Sinha, et al. 2006, 7.

surprisingly, by better-off households. Both type one error (exclusion of the target group households) and type two error (inclusion of the nontarget group households) were significant. The recovery rates of the subsidized credit provided through financial institutions were extremely low: the cumulative recovery rates ranged from 25% to 33%.[202] Although India and many other countries continue credit subsidies for rural development, their significance has decreased considerably in recent years.

The PRC has also been following a policy of providing subsidized agricultural credit for many years. The Agricultural Bank of China (ABC), rural credit cooperatives (RCCs), and the Agricultural Development Bank of China, a policy bank established in 1994 to take on board a substantial amount of bad loans of ABC to carry out policy-based rural lending, have been involved in subsidized lending. In addition, the Government has provided budgetary resources and concessional loans to sustain their operations at various points. Despite these, none of these institutions are believed to have been successful in reaching a majority of the rural households. Although RCCs are the only formal financial institutions that continue to directly cover a vast area of the countryside with an extensive network, only 25% of the smallholders nationwide have obtained a RCC loan, for example.[203]

The use of subsidies for rural development is also widespread in OECD countries. However, their role has changed from providing assistance for agricultural development to protection for agriculture. These measures have taken two forms: restriction of imports of agricultural products that compete with those that domestic farmers want to produce; and a variety of other measures, such as price supports and other subsidies that directly raise farmers' incomes. These subsidies benefit the large-scale producers more than the others because they are directly linked to output and the size of landholding. Thus, in Europe six sugar processors shared a payment of E831 million.[204] The US Government also provides agricultural subsidies. Because of these, agriculture has become "one of the most highly protected and subsidized areas of economic activity in almost all developed countries."[205] Most OECD countries also provide subsidies for sustainable environmental services.

In general, extensive persistent subsidies reflect the failure to achieve equitable rural development and address agricultural adjustment issues systematically rather than widespread market failures. Second, their

[202] Sinha, et al. 2006.
[203] CCICED ARDTF. 2005c, 356.
[204] UNDP. 2005, 130.
[205] Francks et al. 1999, 12-13.

effectiveness in generating more equitable and sustainable rural development remains highly questionable, and the quality of implementation of these programs often deteriorates over time. Third, their sustainability depends on the governments' ability to meet generally increasing costs associated with these programs. Fourth, experience shows that over time subsidy programs become entrenched in the sociopolitical system, making their removal extremely difficult. Hence, they reduce adjustments that economic agents would otherwise make in response to changes in the broader environment within which they operate. Thus, "subsidization in agricultural and rural areas may well be the most crucial question with respect to policies in rural area development."[206] Fifth, in most developing countries the opportunity cost of subsidies tends to be high because they directly compete with long-term capital investment in rural infrastructure such as roads, rural education and health, agricultural research, and environmental sustainability. Therefore, subsidies must be used selectively and targeted effectively.

Social safety nets play an important role in inclusive rural development. However, in most cases, governments fail to address effectively difficult targeting issues.

Social safety nets play an important role in inclusive rural development. However, in most cases, governments fail to address effectively difficult targeting issues. ADB research has found that programs are vulnerable to rent seeking and corruption, particularly in countries where local-level institutions are weak and dominated by elites. A study of the Maharashtra Employment Guarantee Scheme in India's Maharashtra State found that the rate of participation of nonpoor in the Scheme was 38.9% in 1979 and 54.8% in 1989.[207] However, programs such as this and the Bangladesh's Food for Work Program and Income Generation for Vulnerable Groups Development (IGVGD) program, implemented by BRAC, illustrate that they have an important role in reducing the vulnerability of poor households in rural areas. The IGVGD program has reached 1.6 million destitute women since its inception in 1985, 66% of whom have risen from absolute poverty to become microfinance clients.[208] Similarly, despite implementation problems, the Maharashtra Employment Guarantee program has also contributed to reducing severe poverty in the

[206] Greenspan. 2005, 24.
[207] Overseas Development Institute (ODI). 2006, 3.
[208] CGAP. 2006, 5.

state where employment opportunities in agriculture are highly seasonal and limited.[209]

The important role of social safety nets for inclusive rural development is reflected in India's new National Rural Employment Guarantee (NREG) program introduced in accordance with the NREG Act that guarantees 100 days of employment at a minimum daily wage for any rural adult household member for 7 hours of unskilled work per day or unemployment benefit. The NREG, introduced in early 2005, has been described as the world's biggest social security initiative. The Government expects it to help transform the rural economy. It is being implemented in 200 of the most backward districts, and is open to all rural residents irrespective of income levels. The Government expects to extend the program to all 593 districts over time. Two major hurdles stand in the way of its effective implementation in the local context: inadequate capacity of local-level institutions and the pervasiveness of rent-seeking behavior among local officials.

In many countries, inclusive rural development requires more emphasis on social development including primary education and primary health care facilities for the rural population.

In many countries, inclusive rural development requires more emphasis on social development including primary education and primary health care facilities for the rural population. As noted in an earlier section, physical infrastructure is also critical. In this context, it appears much sensible to use limited public resources that are being diverted for activities that add little to rural economic growth to build rural schools, hospitals, and medical centers and improve basic physical infrastructure.

[209] ODI. 2006; Ravallion. 1991.