

# Smallholder Agriculture and Inclusive Rural Transformation<sup>1</sup>

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In spite of the predictions of gradual withering away of small farms in developing countries, they still exist in large numbers. This paper examines the rationale for their persistence, and the opportunities they and rural small and medium enterprises (SMEs) offer for rural and hence overall economic development in the rapidly diversifying rural sectors of developing countries. The paper notes that the urban manufacturing and the services sectors have not been able to create employment in large enough scale to absorb the rural un- and under-employed, and argues that small farmers and rural SMEs with larger and well-managed investments can achieve inclusive rural transformation, i.e. help these countries to achieve zero poverty and hunger (Sustainable Development Goals 1 and 2), promote growth and take the countries beyond the “Lewis turning point.”

**Keywords:** Smallholder Agriculture, Economic Efficiency of Small Farms, Persistence of Small Farms, Small and Medium Enterprises, Inclusive Rural Transformation

## I. INTRODUCTION

Economists have long debated development pathways of poor countries. A particular focus had been, and still is, on the relative role of agriculture and industry in generating employment, in reducing poverty and hunger and in attaining prosperity. The predominant view had been that economic growth of poor countries will come through reducing their dependence on traditional, fragmented, low productive subsistence agriculture and through increasing the reliance on higher productive, modern industrial sector. Surplus labour in agriculture will gradually migrate to the industrialised urban centres (for jobs with higher pay), and small farms, which traditionally provide the bulk of agricultural production and employment, will wither away. Large-scale farming will emerge. The developed countries of today have largely traversed that path; the future of poor developing countries also lies in following that path.

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<sup>1</sup>This paper draws on some of the arguments from Hazell and Rahman (eds.) 2014. Acknowledgements have been made at appropriate points.

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However, most developing countries have not followed the path predicted. The transformation of rural economies through the emergence of more efficient large-scale farming has not materialised, and rural areas today still remain burdened with poverty, hunger and un- and under-employment, often with wide and increasing income disparity. Small farms persist in abundance.

This paper examines the reasons for the persistence of small farms in developing countries and the development dilemmas presented by such an outcome. The paper also examines the way out of the dilemma and outline a strategy for inclusive rural transformation i.e. a strategy which will capture the productive potential of all the diverse groups in rural areas and realise the goals of zero poverty and hunger in developing countries by 2030 (as envisaged in the 2030 UN Agenda for Sustainable Development Goals, often referred to as Agenda 2030).

After a brief review of the debate on the transition of small farms into large production units and expected transformation of developing countries (section II), this paper examines the state of small farms today, the rationale for their persistence and their possible future direction (section III). The emerging opportunities and the constraints faced by the smallholder agriculture are then examined and a strategy outlined for inclusive rural transformation to take countries beyond what is known as the “Lewis turning point”<sup>2</sup>(section IV). The last section (Section V) presents the concluding remarks.

## **II. TRANSITION OF SMALL INTO LARGE FARMS: THE DEBATE AND UNREALISED EXPECTATIONS**

In the early development stages of now developed countries, agriculture was largely seen as a provider of surplus for investment and accumulation of capital for urban/industrial development. The concept of primitive “socialist” accumulation, propounded by Preobrazhensky towards the turn of the last century (Preobrazhensky 1965), along the line of “primitive capitalist accumulation”, provided the foundation for such arguments.

In the context of the socialist revolution, the relative advantages of surplus generation by large versus small farm production were intensely debated. Around the time Preobrazhensky articulated the need for “primitive socialist accumulation” in the context of the socialist mode of production, Kautsky, referring to the contribution of small farms versus large farms in pre-Soviet era

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<sup>2</sup>The Lewis turning point, named after economist W. Arthur Lewis, is described as a transition point where rural areas cease to have surplus labour.

debate on agriculture, enquired in his Agrarian Question (1899) whether there was any justification for agricultural policies that specifically supported smallholder agriculture. Convinced of the technical superiority of large-scale farming, he believed that the future belonged to them. Marx viewed small farms as self-exploiting. For him, large-scale farms meant greater efficiency and productivity. In the post-Soviet revolution years, Chayanov (1966) was skeptical about the inefficiency of large farmers. He argued that peasant households would tend to produce only the amount of food that they need to survive. The government would find it difficult to force these households to cooperate and produce a surplus. Peasants would have little incentive to produce beyond their subsistence needs and therefore would slow down and stop working once their subsistence needs were met.<sup>3</sup>

The dual economy models (which appeared in the post-Second World War period) provided the rationale for the rise of large farms in rural areas. Higher productivity and wages in urban areas of a growing economy would attract workers from low productive agriculture to migrate to urban areas. The growth of the urban sector, and the manufacturing sector, would need a continuous flow of workers from rural areas. As surplus labour from agriculture diminishes, and the productivity of agricultural workers increases, real wage rates of agricultural workers will increase. Capital will become cheaper compared to labour, leading to larger investment in capital equipment. The higher profitability of farm operations will increase competitiveness in agriculture, and small farms with inadequate access to capital will gradually go out of farming. More recently, Collier and Dercon (2014) also argued along the same line. They argued that the increased competitiveness in the agricultural sector and the advantages that large farms will have with access to technology in land abundant African countries will lead to the eventual rise of large-scale farming. The countries will reach what is known as “Lewis turning point,” a point where surplus labour in agriculture will disappear and lead to the rise in agricultural and unskilled urban wage rates. This is also the turning point for increasing wage bill and distribution of income in favour of labour.<sup>4</sup>

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<sup>3</sup>In the context of South Asian agriculture in the 1970s, Chayanov’s analysis spawned a debate on the economic efficiency (measured in terms of per unit of land) of small farms, in which Mahabub Hossain contributed with his incisive empirical work in the context of Bangladesh.

<sup>4</sup>Economies, however, can slip back again to labour surplus situation with increases in productivity and growth, as in the case of Japan between 1870 and 1920. In this case, agricultural labour productivity increased significantly to produce a labour surplus situation, while real wages rose gently.

Kalecki's writings in the post Second World War period deviated from what was then the predominant view on large-scale farming. He saw agricultural growth necessary for the continued and sustainable growth of an economy, and noted that an unequal agriculture, dominated by landlords who capture most of the rents and profits of agricultural activities, would not generate the necessary demand for industrial products. The growth of the manufacturing sector, needed for overall economic growth, would only be possible through demand for them by a large number of small producers under a more equitable production system (Chakravarty 1993).

The debate on the transition of developing countries from poverty to prosperity in both free market and centrally controlled economies centred on urban/industrial growth and large-scale farming. Small farmers were considered relatively inefficient in generating surplus and demand for urban/industrial goods. The experience of developed countries lent credibility to this view.

### **III. THE STATE OF SMALL FARMS, THEIR PERSISTENCE AND REVERSE TRANSITION**

The experience of developing countries of today, however, tells a different story. For most developing countries, small-scale farming is continuing late into their development process. Consolidation of farming into larger units has not taken root. Some of the developing countries in Latin America do have large-scale farming co-existing with the significant number of small farms, a situation arising from big corporate interests in farming (Nagayets 2005, Lowder, Skoet and Raney 2016). But in most countries of Asia and Sub-Saharan Africa, small farms persist in large numbers, and their numbers are even increasing. And for most developing countries, and even for China which has been experiencing high rates of growth over a number of years in the recent past, the "Lewis turning point" seems far off.<sup>5</sup>

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<sup>5</sup>There are claims that "despite its large population in the early 2010s, China has faced labour shortages and real wages have nearly doubled since 2003," and that such rapidly rising wages in regard to unskilled work is a key indicator that a country has reached the "Lewis turning point" (by 2010). (See Wikipedia on "Lewis turning point"). An IMF working paper (Mitali, N'Diyae and Papa 2013), however, notes that the "Lewis turning point" has not been reached yet; it is expected to emerge between 2020 and 2025.

TABLE I  
THE CURRENT STATUS OF SMALLHOLDER FARMING IN THE WORLD

Regions/countries/sample size	Source	Per centage of farms	Per centage of farm land
Global	HLPE 2013	73% <1 ha.	
Sample of 81 countries, data from 2000 round		75% 2 ha	
Global Sample of 111 countries, 460 million farms	Lowder, Skoet and Raney 2016, FAO data	72% <1 ha; 84% <2 ha. 3% >10 ha. Global estimate: 475million farms <2 ha	
Global sample of 92 countries and territories, 240 m. farms, 56% of global population and 38% of agricultural land (excluding China and others)	Lowder, Skoet and Raney 2016	<i>Countries of all income levels:</i> 40-80% <2ha	<i>Countries of all income levels:</i> Few per cent to <40% of farm land
Global sample:106 countries: adding 14(which include China) countries to the above 92. 450 million farms; 80% of global total, 85% of population and 60% of agricultural land	Lowder, Skoet and Raney 2016	84% farms smaller than 2 ha., operate about 12% of land	
Sample of 58 countries	Lowder, Skoet and Rane 2016	<i>South Asia and Sub-Saharan Africa:</i> <2 ha.: 80% of farms and <40% of farm land <i>East Asia (excluding China):</i> <2 ha.: 75% of farms and <30% farm land	

**Source :** Lowder, Skoet and Raney (2016).

**Note:** These estimates are based on data from 92 countries and territories representing 240 million farms, 94 per cent of world farms, 56 per cent of world population and 38 per cent of agricultural land (they do not include China, Russian Federation and Australia).

It is estimated that there are about 500 million smallholder farms (defined as farms cultivating less than 2 hectares of land)<sup>6</sup> worldwide. In terms of numbers, they are about 84 per cent of all farms in the world, but they cultivate a mere 12 per cent of agricultural land. There are variations across regions; they are most numerous in South and South East Asia (including China) and in Sub-Saharan Africa, but much less so in Latin America and in the developed countries (see Table I). In low-income countries, the share of agricultural land operated by small farmers is much larger than the share of small farms in higher income countries. In South Asia and Sub-Saharan Africa, the per centage is about 30-40. In some countries like Bangladesh, the per centage of land operated by small farmers, however, remains very large (about 85 per cent of operational holdings).<sup>7</sup>

In most developing countries in Asia and Africa, smallholders continue to be a significant part of rural economies. They are estimated to produce four-fifths of the developing world's food and 70 per cent of world's food (FAO 2011),<sup>8</sup> and they are home to approximately two-thirds of world 3 billion rural residents (Fan *et al.* 2013). They have very little physical and financial resources at their disposal, their incomes are very low and among the various rural groups (non-farm workers, traders, etc.), they probably have the highest incidence of poverty.

If average household size is taken to be about 4 persons, about 2 billion of the world's population (slightly more than one in every 4) depend directly on small farms for their livelihood. If indirect dependence is considered in terms of people engaged in providing support services to small producers (extension services, the supply of inputs, storage and processing of crops, marketing services), the per centage of people dependent on small farms becomes much higher.

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<sup>6</sup>Exact estimates are not available. Nagayets (2005) used agricultural census data from FAO estimate that there are about 525 million farms of all sizes. Other sources suggest that the number of smallholder farmers could be anywhere between 450 million to 500 million (Hazell *et al.* 2010, IFAD 2011, HLPE 2013, Hazell and Rahman 2014).

<sup>7</sup>Very small farms (operating less than 1 ha.) have about 45 per cent of operational holdings.

<sup>8</sup>It has not been possible to trace the primary source of this information; it, however, appeared in the Rio+20 document from FAO: [www.fao.org/fileadmin/templates/nr/sustainability\\_pathways/docs/Coping\\_with\\_food\\_and\\_agriculture\\_challenge\\_Smallholder\\_s\\_agenda\\_Final.pdf](http://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Coping_with_food_and_agriculture_challenge_Smallholder_s_agenda_Final.pdf). There have been multiple claims from various sources that 65-70 per cent of food of the developing world food comes from smallholder farmers (Naerstad 2012).

### 3.1 The Reverse Transition and the Diversification of Small Farms

It is not only that small farms exist in large number; their average size is noted to be decreasing and their number increasing. Farm size is decreasing across much of Asia and sub-Saharan Africa, and is stagnating in Latin America (Lowder, Scoot and Raney 2016). Small farms in Asia today are less than half the size of the small farms that drove the Green Revolution in the 1960s and the 1970s.

Small farms are also becoming more diversified, often because they are now too small to provide an adequate living from farming alone. In China, non-farm income shares for farm households increased from 33.7 per cent in 1985 to 63 per cent in 2000 and 70.9 per cent in 2010 (Huang, Wang and Qui 2012). This is an extreme example, but non-farm income shares of small farm households have reached 40 per cent in many Asian, African and Latin American countries (Wiggins 2014, Haggblade, Hazell and Dorosh 2007). Both farm and non-farm employment is increasing in much of Asia and Africa, but the fall in farm employment in Latin America is more than offset by non-farm jobs (Wiggins 2014). In countries with high land scarcity, such as Bangladesh, diversification of income of small farmers from non-farm sources has emerged as an important livelihood strategy.

Large-scale farming flourished in some of the land abundant countries of Latin America, in Eastern Europe and Central Asia and in East Asia (in palm oil farming). But there is no conclusive evidence of their sustained contribution towards growth and poverty reduction. In countries of sub-Saharan Africa (SSA), efforts to move towards large-scale farming, however, have largely failed and small-scale farming persisted, even with increases in large investments (Deininger and Byerlee 2012). Under colonial rules, consolidation of farming created many large plantations in SSA, producing mainly for exports to the colonising countries. The incomes accrued to the owners of the plantation, however, hardly had much of an impact on poverty reduction, or in improving rural infrastructure. They failed to provide the solutions for livelihood improvements of small farmers and plantation workers.<sup>9</sup> In Brazil, the claimed advantages of large-scale production (in terms of efficiency, or larger investment per unit land), has been demonstrated to be rather shallow (Byerlee 2011), and in

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<sup>9</sup> Much of the reaction against what is labelled as “land grab,” and its eventual retreat in recent times in some countries of Africa (Madagascar, Ethiopia, Ghana, Mali, Tanzania) is due to the perceived as well as expected failure of large plantation to improve economic conditions of agricultural workers or the smallholders in the host countries (Kachika 2010, Gerstter *et al.* 2011).

South Asia, small farms continue to be the dominant form of farming (except in some parts of western India and Pakistan).

The evidence around the world does not show much of success of large-scale farming in reducing poverty and hunger in poor developing countries, even in the land abundant countries of Africa and Latin America. On the whole, the evidence of positive contribution of large-scale farming in terms of equitable growth and poverty reduction is rather thin. In this scenario of limited achievements of large scale-farming, small farms not only have survived for centuries, they continue to be a significant part of the social and economic landscape of developing countries.

### 3.2 The Rationale for the Persistence of Small Farms

Naturally, a question arises how and why smallholder farming persisted through the decades (and even increased in number while getting reduced in sizes). Why are we not observing, in Kautsky's famous formulation, capital "seizing hold of agriculture, revolutionising it, making old forms of production and property untenable and creating the necessity for new ones?" (Kautsky 1988). Is it simply an outcome of land scarcity and growing population pressure or are there other reasons for their persistence?

One line of reasoning is that small farms are not as *inefficient* as usually portrayed. They have higher productivity per unit of land than large farms in densely populated land-scarce countries. The efficiency of small farms has been demonstrated by an impressive body of economic literature (Eastwood, Lipton and Newell 2010, Binswanger-Mkhize and McCalla 2010). More than 40 years ago, Mahabub Hossain's empirical work in the case of Phulpur in Bangladesh, as well as other literature during that period (in India), demonstrated the inverse relationship between farm size and land productivity (Hossain 1977). Small farmers, with the relative abundance of labour and shortage of land, continue using labour use till the marginal productivity of labour reaches a very low level (subsistence level), or even fall to zero (given zero opportunity cost of labour due to the existence of surplus labour).<sup>10</sup> Small farmers have been able to continue

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<sup>10</sup>The higher productivity of small farmer also arises from their greater motivation (than hired hands) and the quality of labour and self-supervision (Tomich, Kilby and Johnson 1995). Large size does not offer any economy of scale; the intensive use of labour by small farmers give them the advantage over large farms, who use hired labour, and engage labour up to the point where their wage rate equals marginal productivity of labour.



with this “advantage” over time, despite losing some labour and larger farms having better access to finance and technology.

Another reason is that small farm failed to develop into large farms because of their inability to shed surplus labour. Limited employment opportunities outside agriculture and the high cost of migration in settling down in urban areas forced unskilled agricultural workers to stay back and continue working in agriculture even if such work yielded very small returns.<sup>11</sup> The farmers, therefore, hardly faced the changes in factor prices which could induce them to substitute capital for labour and reap economies of scale. The cost of management and supervision of large farms also worked in favour of keeping farms small.

In addition, there was a general absence of policies for creating economic opportunities in rural areas through investments. Urban bias in development has long argued to have siphoned off resources from the rural to the urban sector through a combination of price mechanisms and taxation (adverse rural-urban terms of exchange, heavy land taxes, as in the People’s Republic of Korea in the early phases of development). Rural sectors have been deprived of capital and investments necessary to improve production potential, keep up the productivity of agriculture, and create opportunities for absorbing surplus labour in agriculture.

Technological advances also helped small farms in poor developing countries to “hang on” and even flourish. The technological change during the Asia’s Green Revolution is a case in point, where the technology increased farm productivity by shifting the production frontier upwards and increasing marginal productivity of labour. Although such big shifts in production frontier do not happen frequently and on a regular basis, small changes in production technology such as the use of innovative simple machinery suitable for land cultivation, weeding, threshing, small-scale irrigation, improvements in seed technology, innovative use of fertilizer and pesticide (the use of newer methods of pest controls), and adaptation of proven technologies for small producers have been streaming in steadily in support of small farms in the recent past. These innovations have been shifting the production curve upwards slowly but steadily. The improvement in the productivity of farms in many countries around the

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<sup>11</sup>Indeed, two papers in this volume (Khan’s and Islam’s) show that in Bangladesh the share of labour in urban/industrial sector has fallen behind their share in GDP. This is primarily due to high cost of labour absorption in the industrial sector (high capital intensity of labour).

world<sup>12</sup> is an example of such steady improvements in technology. Under such circumstances, small farms do not become a liability but continue to contribute towards food security of the country, and keep providing employment to surplus agricultural workers. They thus would dampen the incentive of rural surplus labour to migrate and become a burden to urban authorities for housing and social protection.

Evidence also shows that small farmers could provide food security, not only for themselves but also for others in rural and urban areas, through marketing of their surplus production (Rosegrant and Hazell 2000). And the consumption pattern of small farmers, who usually spend a higher share of their income on local non-farm products compared to large farmers (Mellor 1976, Hazell and Roell 1983), gives the necessary boost for local non-farm production.

Governments with limited resources could also be discouraging rural labour force to move to urban areas to avoid the costs needed to create urban amenities for the migrant workers and their families from rural areas. In many countries, there were conscious policies to discourage rural to urban migration through various social policies, such as providing support to the rural unemployed (Njuguna 2016).<sup>13</sup> Over and above that, for some countries in Sub-Saharan Africa, it is also argued to be due to bad land policies which did not provide ownership right to poor smallholders, thus impeded small farmers to sell their land, raise capital, and move to urban areas (Fan *et al.* 2013, Deininger 2014). The urban bias in development, however, led to more expenditure in urban areas, and this attracted some labour from rural areas to construction, trade and services sectors. But the scale of such migration had been usually significantly smaller than what was required for making any significant dent in the surplus labour available in rural areas.<sup>14</sup>

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<sup>12</sup> A random selection of countries shows that between 1995 and 2014, rice yield increased by 74 per cent in Bangladesh, 44 per cent in India, 20 per cent in Bolivia and 133 per cent in Cote D'Ivoire; wheat yield increased by 56 per cent in Bangladesh, 23 per cent in India, 70 per cent in Bolivia and 86 per cent in Malawi (FAO 2017). These are average yields for all farms; it is likely that small farms also experienced similar increases in yield over time.

<sup>13</sup> The Food for Work Programme in Bangladesh and 100-day Rural Employment Programme (REP) in India are examples of such policies.

<sup>14</sup> The situation in the more recent days, however, seems to be changing fast, with significant loss of labour from the farming sector and rise of agricultural wage rates. However, much of this is not due to emigration to urban areas (although some obviously are), but due to absorption of labour in various rural non-farm activities.

It is suggested here that the persistence of small farms is not something that has just happened. Government policies may not have explicitly targeted them for improving their economic conditions, except in the more recent years in some countries. Nevertheless, some of these policies had an indirect impact and created circumstances for their low-level existence in rural areas.

### **3.3 Smallholder Farming; What Future do they have?**

The persistence of small farmers and their reverse transition raise one important issue: can they continue to exist in the future? Could they not be losing their initial efficiency advantages provided by labour abundance against the efficiency gains of large farms through technological advances and precision farming? What role can they play in eliminating hunger and poverty by 2030 and in transforming rural areas into hubs of economic growth?

We have noted that small farms are becoming even smaller. But there is a limit on how small they can become. The efficiency advantages of small farms can disappear with development. As per capita income rises, economies diversify and workers leave agriculture, rural wages go up. It then becomes more efficient to have progressively larger farms. With technological advances and mechanised farming, economies of scale can be expected to kick in, eventually accelerating this trend. The result is a natural economic transition toward larger farms over the development process, but this process depends critically on the rural to urban migration and, hence, on the growth of the non-agricultural sector (Eastwood, Lipton and Newell 2010, Huang 1973). But this transition does not normally begin until countries have grown out of low-income status (Hazell and Rahman 2014).

There are arguments that small farms are becoming less relevant in today's globalised market economies (Collier 2009, Collier and Dercon 2014, Maxwell, Urey and Ashley. 2001). Small farmers may also have increasingly difficult challenges in linking to value chains, especially high value chains, due to their inability to reap economies of scale in marketing (in bulking, processing, storing and utilising market infrastructure). Large farmers, with better access to markets and supplies of subsidised inputs provided by the state, can, and often do, reap these economies and more than overcome their disadvantages in terms of land productivity.

The growth impacting demand generated from small farms can also be limited if farm size is too small. During Asia's Green Revolution, small farms generated significant marketed surplus and cash incomes, which were spent

locally on agricultural inputs, consumer goods and services, and on investment goods. These generated multiplier impacts of consumption for employment-intensive growth (Haggblade, Hazell and Dorosh 2007). Small farms of today are half the size of what they were during the Green Revolution period. Although productivity per unit of land has increased and sources of income have been diversified, declining farm size may reduce per capita income of small farmers, leaving hardly any surplus after their subsistence consumption. The local non-farm economy will not have the boost in demand coming from a large number of small farmers, as envisaged by Prepobrazhensky.

There can be other negative impacts of declining farm sizes such as (a) widening inequality in income due to increasing gap between rural and urban incomes and increasing poverty and migration to urban areas<sup>15</sup> and (b) deteriorating environmental sustainability. Very small farmers may increasingly resort to unsustainable environmental practices, such as cutting down forests to expand their cultivable land, excessive use of chemical fertilizer for the short-term gain in productivity and excessive cropping intensity (Cleaver and Schreiber 1994). But there are cases where small farmers also used a balanced farming system based on their local knowledge and environmental preservation practices, whereas large farmers' drive for maximising income from farming led to environmentally unsustainable farming practices (Conway 2014).

The relative disadvantage of small farmers vis-à-vis large farms can accentuate as financial services expand. Small farmers have limited opportunity to access those services due to their remoteness, bureaucratic paperwork needed to access those services and, most importantly, due to collateral needs, in accessing credit from financial institutions (Rahman and Smolak 2014). Informal sources can be very exploitative due to their high interest rate. Microfinance institutions have the potential of lending to small farmers, but the percentage of agricultural loans extended to small farmers is often found to be very small.<sup>16</sup>

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<sup>15</sup>Income diversification can take care of falling farm income to an extent, but evidence from countries like Japan, Taiwan and South Korea suggests that only diversification cannot be adequate to stem the rise in income inequality and reduce poverty. Government had to step into introduce income support measures to narrow the income gap, as it is being done in the cases of China and some other Asian countries (Otsuka 2012).

<sup>16</sup> The crop production cycle, which is usually much longer than the duration for which loans are granted to microfinance institutions (MFIs) clients, often excludes agricultural producers. Moreover, the volume of loan needed can also be higher than the ceiling of individual MFI loan.

The relative efficiency advantage of small farms (as noted earlier) can also disappear with advances in farm technology. Large farms, especially large commercial farms, can have an advantage over small farms in accessing high-end technologies, precision farming, knowledge and logistic support. Finance from formal financial institutions and specialised agricultural banks and technology can combine together to give the large farmers advantage which small farmers cannot have. Subsidies directed at small farmers can end up being captured by large farmers. In the business-as-usual scenario in the pre- and post-structural reform period of the 1980s and the 1990s, the playing field was very much tilted in favour of large farms, in accessing finance, technology development and policy support.

And, most importantly, the marketing environment can also become increasingly more favourable to urban and bigger commercial interests, with supermarkets linked to global value chain becoming more interested in doing business with larger farms. Access to these chains is important for getting into the high-value market, both local and, increasingly, for exports. The main threats faced by small farmers in accessing these chains are their relative disadvantage in standardizing products for both national and global markets, high transactions costs and large volume requirements for modern day markets (Harper 2009, Markelova *et al.* 2009). The larger farmers with their links to supermarkets and value chains can play a dominant role in marketing of agricultural products. Larger farmers, arguably, can deliver to these value chains food which meets consumers' increasing demand for quality and food safety. For big commercial interests, large farms have been the preferred option than procuring products from a large number of generally dispersed and remotely located small farmers.

#### **IV. EMERGING OPPORTUNITIES FOR SMALLHOLDER AGRICULTURE AND INCLUSIVE RURAL TRANSFORMATION**

As opposed to the above scenario, small farmers, at least some among them, can continue to have their superior productivity per unit of land with the adoption of appropriate technologies,<sup>17</sup> larger investments and institutional changes. The lower cost of production, marketing in bulk through producers' groups and

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<sup>17</sup>In rice cultivation in the flood plains of Asia, new water resistant seed varieties can cope with salinity, and boost small farm productivity.

incremental but continued technological advances can give small producers the much needed advantages in production, marketing and quality control. They can survive longer into the transformation process if they can adapt to the changing economic and institutional environment. Being small, and having low capital needs, small farms, generally equipped with better local knowledge, have the required flexibility to adjust and survive in the changing economic environment (Singh 2014, Harper 2009).

In recent years, there are increasing number of instances of such changes and adjustments made by small farmers. Despite the limited reach and disadvantages faced by small farmers due to lack of knowledge about markets, difficulties in supplying standardised products to both national and global markets, high transaction costs and lack of access to finance, small farmers have been found to be no less efficient in managing markets. They can use their network such as farmers' groups, which are not usually available to larger farmers (Singh 2014, Suzuki, Jarvis and Sexton 2011), to overcome these constraints. There are examples of emerging opportunities in producing high-value products for organic and fair-trade markets.<sup>18</sup> In Kerala's Wayanad district in India, for example, the fair trade system provides fair doorstep prices to small poorer farmers who are members of the Fair-trade Labelling Organisation certified registered society (Singh 2014).<sup>19</sup> Small producers face multiple marketing risks in terms of demand and price volatility, unexpected demand for repayment of loans over and above the production risks due to weather fluctuations, pest and disease attacks and low quality seeds. But there are many examples of successful ventures taken up by small farmers and groups of them, with investments from their own resources supplemented by resources from external collaborators to break into modern farming and accessing local (urban) and external markets (Singh 2014, Benziger 1996). Supported by appropriate institutions and policy environment, such instances, encouraging as they are, are still too few and far in between but they are occurring with increasing frequency in many developing countries in all the continents (Hazell and Rahman 2014).

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<sup>18</sup>These products usually need high level of labour-intensive care, which small farmers are in a better position to provide more efficiently.

<sup>19</sup>This society, which deals with overseas farmers, has about 3,000 registered farmers and has wide reach in the six districts of Kerala.

There are also instances of right technologies which are increasing productivity of small farms, although the research and development (R&D) environment is generally not very friendly to the needs of small farms (Conway 2014, Lynam and Twomlow 2014). The Assaduzzaman and Anik paper in this volume examines the possibilities of minimising yield gaps between research stations and adopters of new technology in Bangladesh. Small farmers can be induced to take advantage of such opportunities. Although the slowdown in public sector R&D expenditure globally has tended to have a negative impact on the development of pro-small farm technology, small farmers could get significant leverage from using the existing technologies adapted to their production environment (Lynam and Twomlow 2014).

Institutional changes and increasing application of changed modalities are also creating significant positive changes in the working environment of small farms. Contract farming can lower transaction cost to farmers as the procuring firms internalise many of those costs (IFPRI 2005). Contract farming can make small farmers access markets and services (such as right inputs and seeds), help them in ensuring quality and in bulking, and in securing finance at competitive rates. In India, as in many other rapidly developing countries (in Latin America, for example), contract farming is being propelled by both domestic market players (supermarket chains) and by recently permitted foreign direct investment (FDI) in retail and international trade, in sanitary and phytosanitary measures, organics and ethical trade. Farmers' Organisations (FOs) are also allowing small farms to access services which they can develop and provide to the members at lower costs, or present well-developed business cases to large corporate service providers (national and external) for accessing technology and finance, and to overcome risks facing small farms due to hazards of climate change (Hazell and Rahman 2014).

The challenges faced by small farmers are not only those offered by markets, technologies and finance, and the need to move up the production activities (such as diversifying into higher value production e.g. fruits and vegetables, and niche markets such as organics), but also getting access to land to expand production and adopting other livelihood strategies. There could be possibilities of renting or buying additional land in some cases, securing ownership and usufructuary rights. And there could be other challenging livelihood options such as expanding into non-farm sources of income and employment.

It would be unrealistic to expect that all small farms will be able to capture these opportunities and link up to value chains, export markets and high-end technologies. Due to current capacity constraints, only a small proportion of the small farmers can have access to resources, technology, skills and markets to advance as progressive commercial farmers. Some of the small farmers, better organised, having access to finance and already using improved technologies can do with very little help. These farmers can be labelled as Category I farmers.<sup>20</sup>

Then there can be Category II farmers, much more numerous than Category I farmers, who have favourable off-farm opportunities, and who, with assistance, can exit farming completely or successfully combine farming with non-farm activities. They produce for national markets but have the potential for expanding into global markets. They are the farmers in transitions; they are open to migration, and are ready to expand their activities to non-farm sectors as well as graduate successfully to category I farmers.

And lastly, there are category III farmers, who constitute the bulk of the half a million small farmers and who still remain subsistence oriented. They mostly exist outside the reach of modern farming, produce mostly for subsistence, but can also generate a decent surplus for marketing after meeting their own consumption needs (Hazell and Rahman 2014). This group of farmers also has most of the rural surplus labour. The question is how and where the excess labour (of category III and a part of category II farmers) be employed for a successful rural transformation.

#### **4.1 Inclusive Rural Transformation**

For most developing countries, expansion of urban manufacturing sector has not been the right answer for absorbing surplus labour from rural areas. Enough evidence does not exist that this has happened in large enough scale in developing countries. There are examples of blips of such possibilities (as in Bangladesh in recent years through the rapid expansion of less capital intensive garment manufacturing industries). Given the cost of generating employment in the manufacturing sector, such a route for employment creation and rural transformation cannot be expected to continue on a large enough scale and

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<sup>20</sup>This categorisation discussed here is similar to that used by FAO and IFAD (2008) and is close to the five categories identified in the World Bank *World Development Report 2008* (World Bank 2007).



sustained over a long period of time. The absence of multiple opportunities can keep wage rates in urban areas suppressed (see Sobhan (forthcoming)).

One possibility could be the creation of employment in the services sector (such as in urban and semi-urban transport, petty trade and low-end food industry) and the construction sectors in the urban area. In South Asian economies, for example, these sectors have expanded employment opportunities, but the scale of migration had been much larger than what these sectors could offer. In most developing countries, the population momentum (the number of working population between ages 15 and say 60) will keep the working age populations swelling for a number of years, even if strict population control measures are adopted now. The existing unemployment and sub-human living conditions in urban and peri-urban areas for migrant workers and their families, and the prospects of not so lucrative wages for unskilled workers can be expected to dampen the urge of rural unemployed to migrate to urban areas in search of employment.

The alternative for surplus rural labour, swelled by population momentum, is to stay back in and seek livelihood options in the rural sector, rather than taking up the socially and emotionally “costly” journey to urban areas for employment. Traditionally, the rural areas have not been dynamic enough to create employment at the fringes of the already over-saturated family farming and the rural services sectors. These sectors generally have been rather stagnant, and provided little additional employment opportunities.

In recent years, however, the rural sector of the developing world is showing some unprecedented dynamism. Greater awareness towards eradication of hunger and poverty has been created by the successful implementation of MDGs in most developing countries. Much larger investment than before by the countries themselves for infrastructure development and in agriculture is helping to push up the agricultural growth rate, and globalisation and liberalisation have been successful in pushing up the growth rates of developing countries in general. Inflows of remittance income in some developing countries have increased significantly. Access to better technologies in communication and the spread of microfinance institutions in many countries of the world are making finance available for micro-entrepreneurs, and initiatives being taken to consolidate microfinance institutions and other formal and informal finances under inclusive rural finance (under the countries’ commitment to implement the Maya

Declaration<sup>21</sup>) are easing access to finance and expanding opportunities for alternative livelihoods in rural areas.<sup>22</sup>

As a result of such awareness and initiatives, the rural areas are becoming increasingly diversified and stratified (Wiggins 2014, IFAD 2016). Smallholder farmers and their dependents (nearly 2 billion of them) who constitute more than half of the 3.5 billion rural population of the world are also becoming more diversified, with increasing number (and proportion) of them seeking opportunities in rural non-farm activities (Hazell and Rahman 2014). Many of the small farmers are also quitting farming and trying to establish themselves as small entrepreneurs in trade and transportation, in cottage and small-scale manufacturing activities. Rural small and medium rural enterprises (SMEs) are providing employment to increasing number and proportion of rural unemployed labour force. The microfinance “revolution” is creating opportunities for very deprived groups of rural poor, mostly very poor rural women (in case of Bangladesh, for example), to engage in small farm and non-farm production, and in transport and communication businesses. This process of diversification and transformation of rural areas could be hastened if more investments are made available to rural areas.

Unfortunately, investments in agriculture and the rural sector in most developing countries have been, and still remain, rather small, compared to what could be expected to be reasonable given their contributions to GDP. Estimates show that the lowest share (in 2005) was for Latin American countries (2.5 per cent of public spending), followed by Africa (5 per cent) and Asia (6.5 per cent) (Fan *et al.* 2009). Prior to 2005, there was a decline in spending on agriculture by the public sector, as well in the shares of Official Development Assistance (ODA) and FDI going to agriculture. More recent studies show an upward trend,

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<sup>21</sup>The Maya Declaration of 2011 at the Global Policy Forum (GPF) in Mexico is a relatively recent initiative to unlock the economic and social potential of the 2 billion unbanked population through greater financial inclusion.

<sup>22</sup>The unwelcome outcomes of increasing income inequality and unequal opportunity created by the economic and financial liberalisation has to be noted in opening up rural areas to these new opportunities. Globalisation and liberalisation in the 1980s and the 1990s have generally resulted in increasing the overall growth rate, both in urban and rural areas of developing countries, but there were instances of increasing economic and social disparities (UN-DESA 2013, Maskin 2017). India with higher overall growth rate did not fare well in terms of social development. In most cases, rural and urban incomes failed to converge and indicators of social development showed chequered progress. China, too, showed increases in overall income inequality, both in urban and rural areas.

but, still, the share remains less than 10 per cent of public spending (Lowder and Carisma 2011). In Africa, the challenges of allocating 10 per cent of the national budget have been formally adopted by the Comprehensive African Agricultural Development Programme (CAADP) countries, but most countries have not been able to reach that target yet. The urban bias in development still remains a major stumbling block to hastening the growth of the agricultural and the rural sector.<sup>23</sup>

And, more importantly, investments reaching rural non-farm entrepreneurs remain way below what is considered to be the demand for them. Evidence shows that about 70 per cent of the rural people in Africa depend on agriculture for their livelihood, and contribute two-fifths of the GDP, yet they get only 10 per cent of commercial bank lending. Suppliers' credit and bank loans meet only 3 per cent and 8 per cent of SMEs investment needs. In Bangladesh, as in other countries, there is an increasing demand for finance by rural SMEs; these are not being met either by formal financial institutions or by microfinance institutions.<sup>24</sup> The investment needs of individual SMEs usually fall between US\$5,000-500,000. These are usually too large to be addressed (and met) by local microfinance institutions, and too small to be good business propositions for formal financial institutions.

Findex data show that globally an estimated 2 billion working-age adults i.e. more than half of the total adult population, have no access to formal financial services offered by regulated financial institutions (World Bank 2015). Unmet demand for finance exists across the value chain (Snyder 2015), as well as among the rural SMEs. In particular, rural farm and non-farm entrepreneurs (the so-called "*missing middle*"), who need larger and longer-term commercial loans to expand their business, were deprived, although it is precisely this group along with the huge small farm community that hold the key for inclusive transformation of rural areas.

The adoption of the sustainable development agenda (particularly SDG 1 and 2, which call for eliminating poverty and hunger) has led to much greater emphasis than ever before on inclusive rural transformation, where all rural groups could be integrated into the development process. A range of estimates

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<sup>23</sup>The rural areas of the poor countries have not had the needed support, in scale, for their transformation into poverty free, rising rural wage rate, higher living standard areas (Eastwood and Lipton 2000, IFAD 2016).

<sup>24</sup>Changes in microfinance regulations have resulted in the increase in the credit ceiling MFIs in Bangladesh, and formal financial institutions are now increasingly working with MFIs and agent bank to expand financial services to rural SMEs (Rahman 2015).

have emerged on the investment needs in rural areas; a reasonable estimate is that the developing world would need additional investment to the tune of about US\$ 200 billion a year up to 2030 to meet SDG goals 1 and 2 (Kharas 2017).

There is cautious optimism that this gap could be reached through increased investment by the private sector (IFAD-IMEF 2017). The prospects of expanding businesses in rural areas of developing countries, creating opportunities for reaping higher profits, and opening up the huge, yet unrealised, rural markets could be powerful incentives for local (and foreign) private investors to invest in rural areas. There is a very upbeat assessment of resources available for investment by the private sector, if the constraints and the risks of investment in rural areas could be removed.<sup>25</sup> Such constraints have been identified as the lack of infrastructure in the rural areas of poor countries, weather-related risks which introduce production uncertainties, especially for agricultural production, local conflicts and unstable political and law and order situations, archaic bureaucratic rules and regulations, lack of skilled manpower, weather-induced risks, etc.

Attention of national governments, global development agencies and financial institutions is directed at how private resources could be leveraged through public sector finances. A critical aspect is mitigation of risks faced by both local and external investors due to constraints mentioned above. Various options for risk coverage, such as blended finance, impact financing, organisation of farmers' groups to develop and negotiate projects on behalf of small farmers and develop their capacity, have been under discussion at international forums (IFAD-IMEF 2017). Attention is also directed at how innovative finance could overcome the risks, hedge investors against losses, and how social responsibility could be part of the profit-oriented businesses in rural areas (Rahman 2017).

There are also concerns, however, about the impact of "external" investment on fragile social and economic fabric of rural areas. There are instances where such investments are not yielding the right benefits for the rural poor people and that these are leading to increases in income inequality, or, at least, they are not addressing the issue of widening income inequality or reduction of poverty (Rahman 2017). Much attention is also being directed at what could be the role of government policies, what could be the regulatory mechanisms to protect the

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<sup>25</sup> The estimated gap of 200 billion US dollars per year is estimated to be less than 0.007 per cent of US dollar 218 trillion of private sector savings estimated to be available world-wide (IMF 2012).

interests of rural investors, how could be the social and economic environment be made more investment-friendly. At the same time, there are also concerns about ensuring that the interest of the poor is protected through proper business-friendly regulations.

At the same time, there are also concerns on how local financial institutions (such as MFIs, local banks and insurance companies) could be developed further under an inclusive financial network, which globally cover only a fraction of the unbanked 2 billion rural people. With income growth, opportunities are also emerging for mobilising resources from domestic sources, from the rural people themselves, and also from the emerging SMEs with surpluses to invest in local areas. Remittance income (some 350 billion US dollars currently) could also be an important source of finance. Mobilised and directed well, these resources could greatly reduce the dependence on both public and private sector financing. Technological advances such as cashless transactions, use of mobile phones in transferring funds (such as *M-PESA* in Kenya, and *bKash* in Bangladesh) could be utilised to mobilise and facilitate seamless transfer resources in rural areas.

#### **4.2 The Role of Small Farms in Inclusive Rural Transformation**

The smallholder farmers (especially the progressive farmers in category I and category II) could play the key role in this process of transformation through expanding their agricultural operations, entering into high-value crop production, and moving up the scale in agricultural value chain activities through agro-processing, and marketing of their products in local and global markets. It may not necessarily involve expanding their individual areas of operations greatly (although it might happen in many cases); it is more of expanding their skills and knowledge, in organising themselves, creating partnerships with local and foreign investors. Some of them could do them on their own, or through their organised groups, but many would need financial support (subsidies) or financial guarantees from public authorities. This is already happening in many instances (Hazell and Rahman 2014). Supported well, they can create full employment opportunities for members of their own family and also create employment opportunities for others in the rural communities.

The category III farmers, the large body of subsistence farmers, with public and institutional support, and with subsidised financing (with suitable exit mechanisms), can also be supported to take up improved production technologies and marketing opportunities to increase their production and add more value to

their products through small-scale food processing and trading. They could be organised into production groups such as farmers' organisations and deal effectively with production and market uncertainties. Many could move solidly to self-sufficiency status and even produce the surplus for the market, and thus contribute towards the reduction of hunger and poverty. They already provide a major share of food and nutrition to the nearly one billion poor people of the world. Improvement in their production conditions through improved technologies and inputs is the base on which rural transformation can take off.<sup>26</sup> Others in the category III farmers, not having these prospects of strengthening their agricultural production, can diversify into non-farm activities, as small non-farm producers or traders, or even as farm workers for the more progressive farmers of category I and category II.

The major and significant change in the rural areas, however, will come through the expansion of rural SMEs, which have great opportunities for expanding their operations if investments can be made available to them. The public sector has important roles to play through creating investment opportunities, ensuring security of investment by private sector (local and foreign), creating institutions for small producers, eliminating risks for big investors, and creating both infrastructural facilities (weather immune road and communication network, irrigation facilities) and enhancing the capacity of rural producers and businesses. The concepts of "social business" and "impact investment" could take care of both growth and more equitable distribution of income. Inclusive finance through the implementation of the Maya Declaration can open up significant opportunities through both mobilisation of local financial resources and investing them to expand local businesses and agro- and non-agro production activities.

The transformation of rural economies into hubs of growth thus does not have to depend on the creation of costly employment creation at the urban industrial sector although in the longer term it will happen; but for now, inclusive transformation of the rural economies and elimination of hunger and poverty can best be achieved through investments on small farms and rural SMEs to unleash their growth potential.

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<sup>26</sup>According to a CGIAR analysis, a large majority of the world's poor people (those living on less than US\$1 a day) are fed primarily by smallholder farmers (most with less than 2 ha. of land, See Naerstad (2012), <http://ag-transition.org/1769/who-produce-our-food/>).

## V. CONCLUDING REMARKS

Small farms, still persisting at subsistence levels in poor developing countries, are not necessarily seen today as inefficient and therefore failed entities, neither the urban manufacturing sector, nor large farms are the way out for the elimination of hunger and poverty. Small farmers are being increasingly viewed positively, with the more progressive among them taking up “farming as businesses” and the others playing the important role of providing food security for the country as well as hosting the surplus labour till they are gainfully employed elsewhere. In addition, rural areas are also being seen as hubs of unrealised potentials and new investment opportunities within a framework of inclusive rural transformation, a framework for coherent and coordinated development of all rural groups to attain higher levels of living and reaching zero hunger and poverty by 2030.

The framework recognises not only the persistence of small farmers in large numbers and the failure of large farming to lead the way towards the emancipation of the rural poor from poverty and hunger, but also the emerging diversity of rural areas, in both farm and non-farm activities, the unsatisfied investment needs of rural SMEs, their growth potential, and the risk of increasing inequalities that could potentially arise from globalisation and liberalisation without suitable institutional reforms. It recognises the positive roles that both public and private investments can play, often together, in changing rural economies with appropriate institutional and regulatory mechanisms to avoid negative impacts of private sector investments and in increasing the flow of investments to rural areas.<sup>27</sup>

Promotion of large-scale farming could be an option if there are possibilities of absorbing the surplus labour in non-farm productive jobs. But the effectiveness of such a strategy has proved to be rather limited and constrained by large investment needed to create employment in urban areas. In addition, the cost of social protection and provision of adequate social amenities to the urban unemployed could be very heavy and economically unsustainable for poor countries in the longer run.

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<sup>27</sup>For an eloquent analysis of the risks of continued poverty and deprivation in an inherently iniquitous social and economic structure, see Sobhan (forthcoming).

It is argued that smallholder farmers in developing countries could be the entry points for achieving inclusive rural transformation. However, a major role will have to be played by the diverse group of small and medium enterprises that thus far have faced shortages of capital to expand their businesses. Given increased investment, infrastructural and institutional support, they could move inclusive rural transformation forward. They will need to be supported by the public sector, innovative financing approaches, subsidies in specific cases and the right environmental and institutional frameworks to help generate good investible projects. Elimination of poverty and hunger cannot be achieved unless the bipolar view of agriculture and industry is moderated by the realities of the “emerging middle” in rural areas, where the interests of farm and non-farm activities merge together to create new and innovative business and production opportunities.

There could be a critique of such a strategy on the ground of accentuation of inequality in rural areas, “elite capture” of benefits, and even impoverishment of the poor. The possibility of such an outcome would be high where state power is captured by undemocratic forces and where politics is used for self-enrichment (Sobhan 2017). Instances of such outcomes cannot be ruled out if the interests of the poor are not protected through public financial support and the development of appropriate institution of the poor people.



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