

IS SMALL FARM LED DEVELOPMENT  
STILL A RELEVANT STRATEGY FOR  
AFRICA AND ASIA?

Peter Hazell

# **Small farms are proving surprisingly resilient**

- Despite all the challenges they face, small farms continue to increase in number across much of Asia and Sub-Saharan Africa.
- Their average size is shrinking. In Asia, small farms today are less than half the size of the small farms of the green revolution era
- Small farms are also becoming more diversified into off-farm sources of income, often because they are now too small to provide an adequate living from farming.

# Farm size distribution, India

Census year	Average farm size (Ha)	Number small farms less 2 Ha (millions)
1971	2.3	49.11
1991	1.6	84.48
1995/96	1.4	92.82
2001	1.3	98.10
2005/06	1.2	107.64

(WDR2008)

# Trends in farm size and income diversification in China

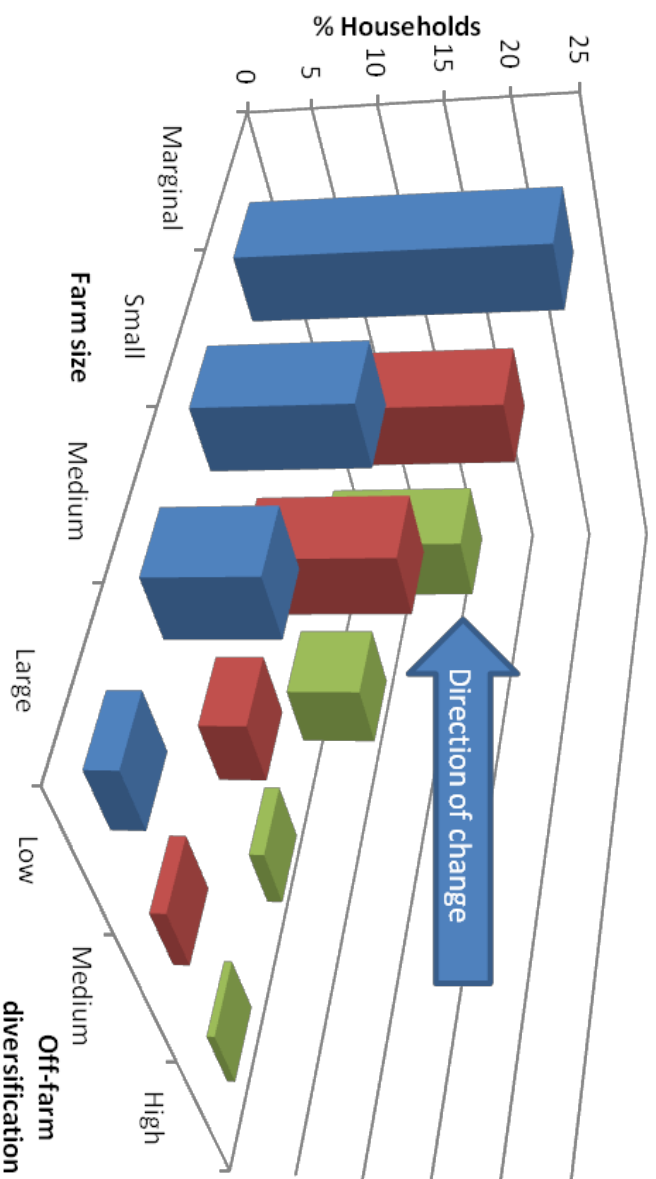
	Cultivated land Ha/household	% net income from farming	% net income from wage earnings	% net income from other
1985	0.70	66.3	18.2	15.5
1990	0.67	50.2	20.2	29.6
1995	0.65	50.7	22.4	26.9
2000	0.55	37.0	31.2	31.8
2005	0.57	33.7	36.1	30.2
2010	0.60	29.1	41.1	29.8

(Huang, Wang and Qiu, 2012)

# A “reverse” transformation

- Although there is a lot of country and regional variation, the overwhelming story is one of more small farms, shrinking farm sizes and increased income diversification.
- Despite growth, sometimes quite rapid growth, in national per capita incomes, there is little sign yet of a shift to the patterns of farm consolidation that occurred during the economic transformation of most of today’s industrialized countries.
- Rather, relatively few workers are leaving their farms for the cities and instead are diversifying into nonfarm activity from a small farm base.
- This “reverse” transformation is leading to farm size distributions that look more and more like Figure 1.

Figure 1: Emerging distribution of farm households by farm size group and degree of off-farm income diversification



- Even in land abundant countries where the average farm size is increasing, still many small farms persist in lagging regions.
- In some countries (e.g. Bangladesh, India and the Philippines), even the total agricultural land area is becoming more concentrated among small farms, and it is the large farms that are being squeezed out.

# There are many factors driving this reverse farm size transition

- Rapid rural population growth, especially in already populous countries.
- Insufficient growth in urban jobs to enable faster rural-urban migration. Even relatively fast growing countries like India have not generated sufficient growth in nonfarm jobs. Bangladesh and China may be two exceptions.
- Other constraints on rural-urban migration, such as language, racial and cultural barriers; legal restrictions on resettlement (e.g. China).
- Inheritance systems that lead to sub-division of farms amongst multiple heirs.
- Dense rural settlement patterns that provide enough income earning opportunities in the local nonfarm economy so that farm based workers do not need to migrate to urban areas.
- Growing high value opportunities in farming that create significant new employment opportunities in agriculture
- Restrictions on land market transactions, such as caps on farm size (India), or indigenous land rights systems that limit opportunities for land consolidation (Africa).
- An aging and immobile population of farmers. Farmer exits tend to be an inter-generational phenomena; land is consolidated when farmers retire or die.
- Constraints on women's employment opportunities that keep them on the farm
- Inadequate social security systems so that farms are kept as a retirement hedge
- Agricultural support policies that make small scale farming more attractive than its real economic worth.



# Outlook

- Many of these drivers are very powerful and seem unlikely to diminish in the near future.
- In poor, heavily populated countries experiencing rapid rural population growth the pressure on land seems likely to keep growing. Exits out of agriculture will depend critically on national and regional rates of economic growth and urban-rural linkages. In slow growing countries and in lagging regions more generally, large numbers of small and marginal farmers seem likely to remain trapped in subsistence farming and poverty.
- The earlier experiences of Japan, Taiwan and South Korea suggest that the reverse farm size transition could continue until well into middle income status (Otsuka 2012).

# **Challenges to the conventional small farm development paradigm**

- Are small farms still the more efficient producers?
- Can small farms compete in today's more globalised value chains?
- Is a new breed of large commercial farm emerging that is about to displace lots of small farms?
- Can small farms generate the marketed surpluses needed to feed growing urban populations?
- Are small farms still win-win for poverty alleviation and growth

## **Are small farms still the more efficient producers?**

Most farm level studies still show an inverse relationship between farm size and land productivity. Nor, except for a few specialist crops, are there any obvious sources of economies of scale, particularly if machinery rental markets are allowed to work. But there are reasons to be concerned:

- Many of the poorest small farms are to be found in marginal areas where natural resources are being degraded
- Labour productivity often remains low
- Farmers are becoming older
- We do not know much about the relative cost structures of a new breed of large commercial farms (see later)

# **Can small farms compete in today's more globalised value chains?**

- Small farms are facing growing challenges in accessing modern inputs, credit and markets, whereas large farms seem able to capture economies of scale and scope in linking to value chains.
- Some small farms are successfully linking to value chains through cooperative action or various types of contract farming relationships, whereas many others are being marginalized by these problems.
- The challenge is greatest for high value markets, but in Africa it is also prevalent for food staples.

## **Is a new breed of large commercial farm emerging that is about to displace lots of small farms?**

- Competition is growing from corporate sized farms that can exploit entirely new types of farming technologies, such as GPS-controlled precision farming, minimum tillage, GM seed and agrochemical packages, and back this with investments and political connections that give them privileged access to markets, modern inputs, insurance and credit, resulting in yields and cost structures that small farms simply may not be able to beat
- A good example is the development model of Brazil's Cerrado region, which is being successfully transplanted by private investors to parts of Angola and Mozambique.
- In some land surplus countries this development may be welcome and unstoppable, but unless carefully managed it is a growing threat to small farmers in more populous countries. The threat is greatest in Africa and LAC than Asia where there is greater scope for outside investors to acquire land.

## **Can smallholders generate the marketed surpluses needed to feed growing urban populations?**

- Small farms provide for the food security of huge numbers of rural poor. But many small farms are net buyers of food and contribute little to marketed surpluses. Urban population shares are projected to grow strongly across the developing world, and the marketed surpluses to feed these populations will need to come from commercially oriented small farms and large farms
- It follows that a national food security agenda may need to walk on two legs. One leg is to provide support to the many smallholders who farm largely to meet their own subsistence needs. The other leg is to invest in large and medium sized farms and commercially oriented smallholdings that can produce marketed surpluses for the cities.

## **Are smallholders still win-win for poverty alleviation and growth?**

- As small farms get smaller, they may not have the kinds of cash income and expenditure patterns that help drive economic growth. During Asia's green revolution, small farms generated significant marketed surpluses and cash incomes, much of which was spent locally on a range of agricultural inputs, consumer goods and services, and investment goods for their farm and household. These expenditure and investment patterns generated significant growth multipliers, especially in the rural nonfarm economy.
- Small farms today are less than half the size of the small farms of the green revolution era, and many are subsistence rather than market oriented. Much may depend on how off-farm sources of income are spent, but the possibility arises that it is now the medium and larger sized farms that are able to generate significant growth multipliers.

## **Implications for small farm assistance policies**

- There is greater diversity of small farms today in terms of their size and livelihood strategies.
- There is less complementarity between poverty, growth and food security goals.
- This implies greater need to target assistance by type of smallholder and by goal.



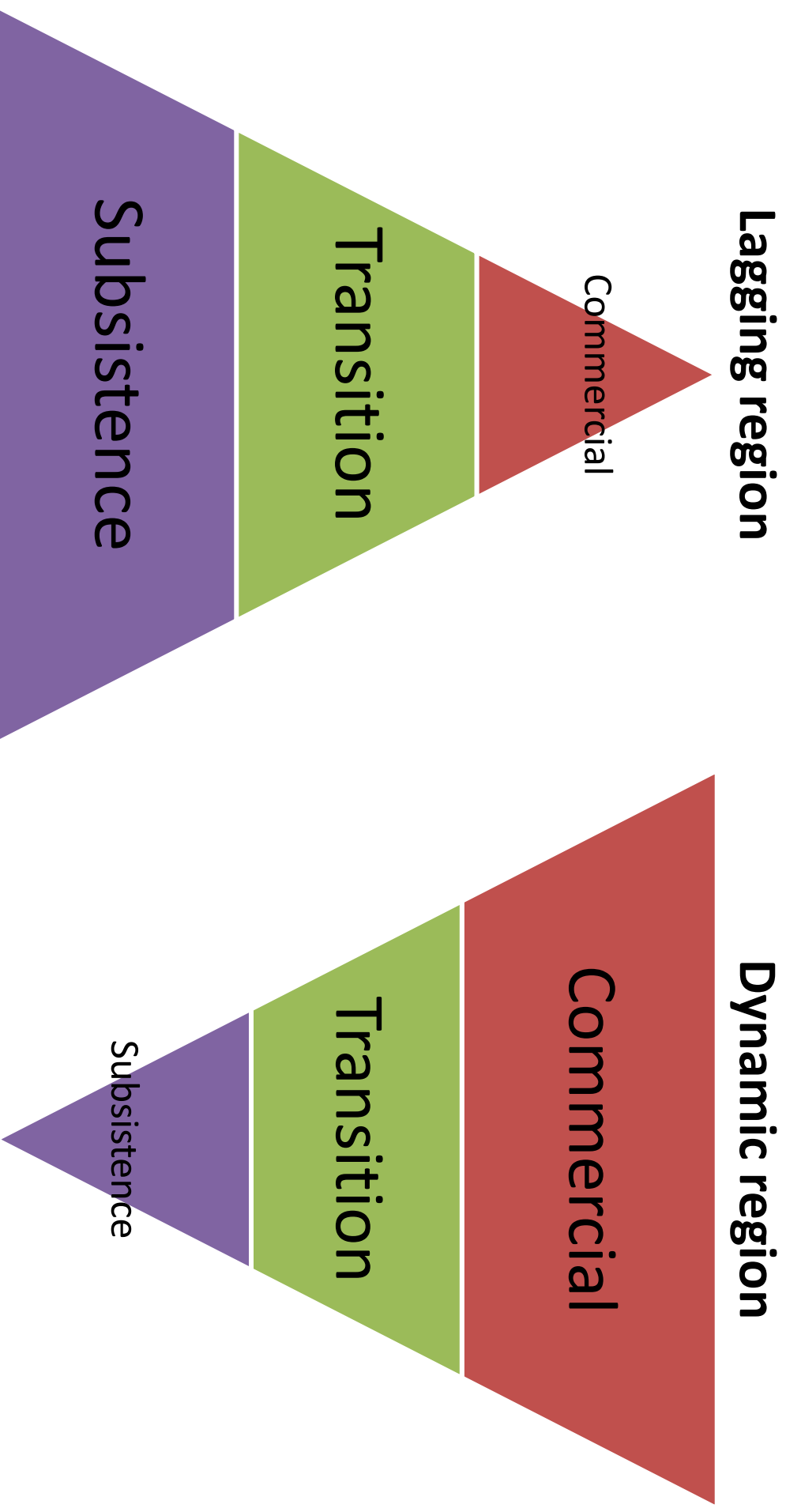
# Typologies of small farms

- A variety of farm typologies have been offered in the literature to help manage small farm diversity. These include Vorley's (2002) three rural worlds, the 5 types of smallholders identified by the World Bank (WDR2008), and three groups of family farms identified by Berdegue and Escobar (2002).
- Key elements in these typologies are access to markets, household assets, agricultural potential and off-farm income diversification. Drawing on this work, it is proposed to classify smallholders into three groups for the purposes of targeting small farm assistance

# Three types of small farms

1. Business oriented small farmers who either are already successfully linked to commercial value chains, or who could if given a little help. Business oriented small farms may be full or part time farmers.
2. Smallholders in transition who have favourable off-farm opportunities and would do better if they were to either exit farming completely or obtain most of their income from off-farm sources. Most transition farmers are likely to leave farming, and it is just a question of when and how. Those that remain will farm part time and not very market driven.
3. Subsistence oriented small farmers are marginalized for a variety of reasons that are hard to change, such as ethnic discrimination, affliction with HIV/AIDS, or being located in areas with limited agricultural potential. Many of the same factors also prevent them from becoming transition farmers.

# Figure 2: Relative importance of the three small farm groups



# Transitions from small farm groups

X = desired, O = problem

Type small farm	Subsistence	Transition	Commercial	Large Farm	Nonfarm
Subsistence	O	X	X		
Transition	O	O			X
Commercial	O	O	X	X	

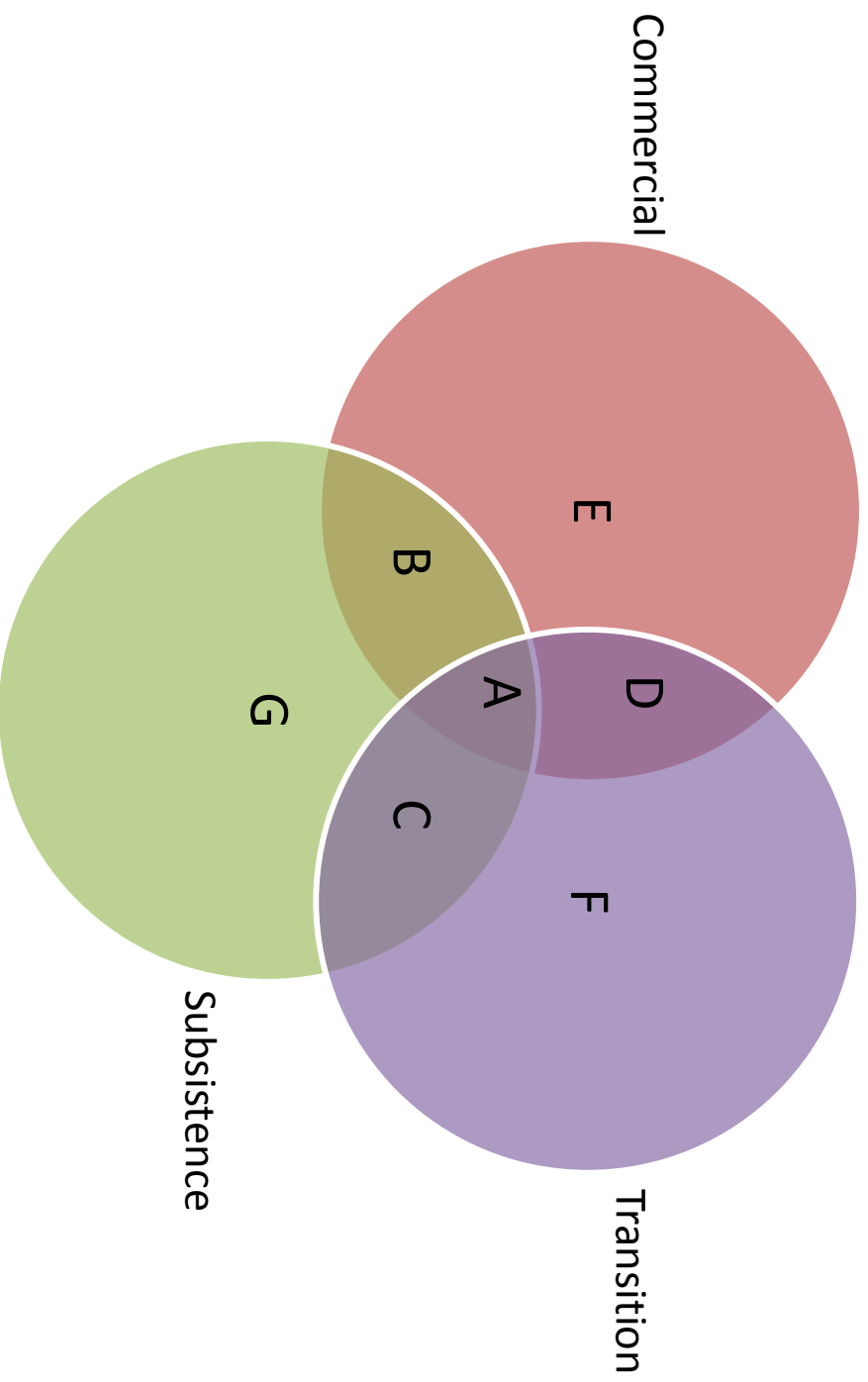
# Types of assistance relevant for different small farm groups

Type small farm	Types of assistance
Commercial	<p><b><u>Farming as a business</u></b></p> <ul style="list-style-type: none"> <li>Better technologies and NRM practices</li> <li>Organizing small farmers for marketing purposes</li> <li>Incentivizing large agribusiness to link with small farms</li> <li>Accessing seeds, fertilizer, finance and insurance</li> <li>Securing land rights and development of efficient land markets</li> <li>Encouraging entrepreneurship</li> <li>Empowering women and other vulnerable groups</li> <li>Building resilient farming systems</li> <li>Safety nets</li> </ul>
Transition	<p><b><u>Stepping out of farming</u></b></p> <ul style="list-style-type: none"> <li>Training and support for nonfarm activity, including development of small businesses</li> <li>Encouraging entrepreneurship</li> <li>Empowering women and other vulnerable groups</li> <li>Securing land rights and development of efficient land markets</li> <li>Better technologies and NRM practices</li> <li>Safety nets</li> </ul>
Subsistence	<p><b><u>Social protection</u></b></p> <ul style="list-style-type: none"> <li>Safety nets and transfers</li> <li>Better technologies and NRM practices</li> <li>Subsidized inputs for own food crops</li> <li>Securing land rights</li> <li>Building resilient farming systems</li> <li>Empowering women and other vulnerable groups</li> <li>Support for nonfarm diversification</li> </ul>

# Targeting assistance

- Although the choice of assistance policies will need to be different for the three groups of small farms, not all interventions need to be as carefully targeted as others. Figure 3 shows how possible interventions to assist small farmers might impact on the three groups of SFs. Some interventions will benefit more than one group (areas A, B and C). Interventions that benefit only one group (areas E, F and G) may be relatively easy to target, but interventions that benefit two or more groups can be more problematic.
- If an intervention generates ‘non-excludable’ benefits, i.e. other groups can also benefit at little or no additional cost beyond the cost of reaching the primary target group (e.g. some types of agricultural R&D) then the benefits captured by other groups can be viewed favourably as “spillover” benefits and careful targeting would not be required.
- But if the benefits captured by other groups represent are ‘excludable’ and represent a diversion of benefits from the primary target group, then this must be viewed as a “leakage” that needs to be minimized through careful targeting. Cash transfers, food subsidies and fertilizer vouchers intended for the poor typically fall into this category.

**Figure 3: Potential benefits accruing to different types of small farms as a result of assistance interventions, including agricultural research**



# Conclusions

- Unlike the green revolution era when small farm led development was a clearer win-win-win proposition for growth, food security and poverty alleviation, a new situation has arisen in which policy makers need to differentiate more sharply between the needs of different types of smallholders, and between growth, poverty and food security goals.
- This requires the design and targeting of three types of assistance programmes: business support to commercially oriented farmers; social protection for subsistence farmers trapped in poverty; and exit strategies for transition farmers.
- There is a widening fault line between the food security needs of large numbers of poor, subsistence oriented smallholders and the food needs of growing urban populations that will require a two pronged strategy for achieving national food security.