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Driving forces behind small-farm transformation

Abdul Bayes | Saturday, 7 March 2020

A group of researchers of the Center for Development Research (ZEF) of Bonn, Germany, observed immense changes in the farming systems worldwide. The fundamental forces which are driving farm change, according to them, can be broadly clustered into exogenous and endogenous. Exogenous forces drive patterns and changes by location and geography, ecology and nature and infrastructure. The latter is largely determined by the production potential opening up through infrastructure improvements and rural urban linkages. Endogenous forces are driving (and constraining) change due to current and inherited agrarian and political institutions. The researchers also reckon that technological and institutional innovations are partly endogenous and exogenous. For example, despite similarly small farm sizes in China, Japan, India, Thailand and South Korea, agricultural growth rates have varied significantly between and among these countries and over time, pointing at the role of the policy and institutional environment in shaping the level of viability of small farms. There are six mega trends shaping (small) farm economics. Each of these trends plays a role in shaping the scenarios for the futures of farms and Bangladesh may not be an exception to the observations.

Currently, the world population stands at slightly more than 7.0 billion. It is estimated to increase by a third over the next 40 years. *Pari passu*, the farm population will increase, but at reduced numbers and with increased aging. Second, the world would become more and more urbanised, thus reducing the share of the total population living on farms. A mega driver of change is the change in global employment. The total number of employed people will increase from 3.0 billion to 3.5 billion people by 2020. The number of those employed in farming will decrease by 0.3 billion. This means an increase of employment outside agriculture by 0.8 billion. However, all of those will not be employed in urban areas. At least half of them will find their employment in the industry and service sectors in rural areas, namely in the small rural centres and towns.

The world population is estimated to reach about 9.0 billion by 2050 and these people will want to eat like 12 billion compared to today, because they will be richer and more urbanised. The volume and patterns of consumption will change. The Western middle-income society is the trendsetter. People will eat more packaged food, more diverse and more fast food. The consumption of income elastic products such as animal products including milk, eggs and meat will increase. Some of these products in high demand have declining returns to scale, such as vegetables, and are promising candidates for small farm growth; others have increasing returns to scale, such as poultry, and are of diminishing opportunity for small holders.

Agricultural prices determine viability of small farms to a significant extent. These prices have increased and have become more volatile. Volatile prices are adverse for small farm growth as they increase risks (and small farms have low risk coping capacity) and impair investments. Financial markets and food markets have started to become linked, and especially more so in the last five years.

Recall the food price spikes of 2008 as well as the wheat and maize price increase in 2010. The consequences of these trends towards higher prices and their volatility influence the costs of natural resources. As food prices increase, the pricing of natural resources is affected with prices for land and water rising as a consequence of expected higher output prices. There is now an active international demand for land. Currently, most such land acquisitions take place in Africa, although it occurs also in parts of Asia, such as in Cambodia and Pakistan. We now observe an internationalisation of land markets and that impacts on the viability of small farms especially when property rights are insecure. Local government also plays a role in this in Asian nations (i.e. China and India) when land becomes a source of indirect fiscal enrichment.

The mega trend of increasing access to information and communications technology cannot be emphasised enough. It gives a boost to rural areas, and it will change the whole landscape of infrastructure. Not long ago, this trend only entailed cell phones, which will be soon in everyone's possession all over the world. Currently, there is a fast expansion in smart phones with internet access. This development changes the environment also for small farms. It will facilitate access to rural services and revise the idea of a region being landlocked. This will certainly change the future of farms and the landscape of agricultural productivity.

Investments in science will have a fundamental impact on what level of food prices the next generation will have to pay, and what extent of hunger it will experience. There is an urgent need for increased agricultural research investments and enhanced natural resource management and market efficiency together with effective policies. The major technological changes in the next decades will probably not be in the grain sector, but in the meat and dairy and horticulture sectors and in non-food bio-economy-related diversification.

As control of farm will become more valuable, farmers are going to be more powerful than they are today, as long as land property rights are protected. Farmers' organisations may become stronger and consequently more capable to represent the farming communities.

Is Bangladesh poised to meet such challenges? Possibly not, because seemingly the perceptions of our policymakers centre around traditional views about a farming system without a look at the upcoming changes. We need to be smarter in grasping the gravity of the situation.

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