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Policy Brief

# AN INCLUSIVE MODEL FOR RURAL TRANSFORMATION

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*Task Force 4*

Food Security and Sustainable Agriculture



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# Abstract

Improving the livelihood of the many rural-based people living in developing economies calls for a rural transformation. Policymakers primarily focus on increasing agricultural productivity, i.e., fostering a green revolution. Although this is key to initiating rural transformation, evidence shows that high productivity alone does not necessarily attract investments in other parts of the value chain. These investments are vital to improving smallholder livelihoods through creating non-farm employment opportunities. Therefore, this policy brief calls for a more holistic approach to successfully initiate and support rural transformation. This approach seeks to build a farm ecosystem where smallholders, medium-scale, and large-scale farmers work symbiotically and thus send strong signals that can attract investors in other parts of the value chain. Such a system can guarantee consistency in quality, quantity, and stable prices. Specifically, this brief also argues that government efforts at improving the investment climate through the investment in rural infrastructure and especially through the building of agro-industrial parks and emphasizing building skills are a key part of solving the rural transformation puzzle.

# Challenges

Improving rural livelihoods calls for a rural transformation. However, driving such transformation remains elusive in developing regions. Rural transformation is a long-term change process in fundamental features of how people in rural areas live and act economically, considering how they are embedded in societal and global dynamics (Kruseman et al., 2020). It is a complete societal change whereby rural societies diversify their economies and reduce their reliance on agriculture. Initiating such transformation requires rising agricultural productivity, i.e., a green revolution. A green revolution can then spur the upgrading of value chains through investment in logistics, processing, marketing, and distribution. Furthermore, increased incomes from these investments can spur further investment through increased aggregate demand and agglomeration effects, thereby further driving rural transformation.

However, high productivity alone is no panacea for successfully achieving rural transformation. For instance, in Indian Punjab, smallholders are in dire straits despite achieving a green revolution (see Box 1). This revolution has not spurred economic activities to create non-farm activities, which could absorb labor released from agriculture.

## Box 1: The fate of small peasantry and agrarian transition in Punjab, India.

The surge in food grain production resulting from the green revolution did not bring transition toward prosperity across all farming sectors in Indian Punjab. High costs of cultivation, stagnating farm income, rising off-farm expenditures, indebtedness, lack of public investment in agriculture, and ecological imbalances in the form of declining groundwater levels have left the smallholders in crisis. Income from

cultivation has also declined significantly (Government of India, 2019), which puts additional pressure on smallholders (Singh and Bhogal, 2014). Furthermore, the commercialization of agriculture in Indian Punjab has dismantled the social ties among the rural peasant class (Gill, 2016). Therefore, despite high land productivity, the rural transformation has not taken place.

Increasing agricultural productivity will not necessarily attract investments in other parts of the value chain if certain standards, both quantity- and quality-wise, cannot be guaranteed. A farm system that is smallholder-centric is prone to these issues. Smallholders are subsistence-oriented, and therefore their main objective lies in providing food security rather than supplying industrial feedstock, which is key to stimulating the emergence of a strong agro-processing sector. In such a farm system, consumption is prioritized over the demand from the industrial sector. Although a green revolution can generate a surplus in output, smallholders will typically grow crops suited to their palates rather than responding to industry demand. Therefore, a green revolution, where new technologies are adopted and applied in agriculture to increase productivity, is a prerequisite but insufficient for achieving rural transformation.

Perhaps the key condition for initiating rural transformation will be the ability of smallholders to supply a certain quality and quantity at a stable price. The most efficient way of complying with these standards is through smallholder cooperatives, as they can organize farmers in production, aggregating, logistics, and even processing, marketing, and distribution. However, as evidence from Indonesia shows (see Box 2), constructing well-functioning smallholder cooperatives proves challenging, especially due to weak governance and a lack of skills.

Box 2: Organizing farmers through cooperatives in Indonesia.

Evidence on smallholder cooperatives in Indonesia shows several limitations to the cooperative model. Smallholder cooperatives' activities are limited to the lowest level of profit (added value),

namely the farming sub-system (Djohan & Krisnamurthi, 2000). Meanwhile, economic activities with a relatively high-profit group in the downstream agribusiness sub-system (processing and trading) are left to entrepreneurs or the state. For this reason, agricultural development in Indonesia has not been able to change the livelihood of farmers for the better (Care, 2019). Furthermore, inadequate capital and infrastructure, weak management, and uncertainty about agricultural products' sustainability prevent cooperatives from thriving (Syahyuti, 2017; Rusdianti, 2019).

Given that smallholder-centric approaches have proven to be a challenge to implement in upgrading value chains and thereby initiating the process of rural transformation, a rethink of the approach is needed.

Supplying consistent quality and quantity can be better guaranteed by medium-scale farmers, as they are more commercially oriented and specialized compared to smallholders. Evidence shows that the presence of a well-functioning medium-scale farming sector can improve the productivity of the smallholder farmer (see Box 3). More crucial for rural transformation, the presence of medium-scale farmers also attracts investments in other parts of the value chain, which is key to driving transformation. Sitko et al. (2018) point to the logistics investment being attributed to medium-scale farmers' presence. Furthermore, the supermarket revolution in Kenya has also been associated with the existence of a symbiotic farm system in which medium-scale farmers have been crucial. These farmers have the scale and capacity to meet supermarkets' high standards, as they can also subcontract smallholders to assist in fulfilling their orders (Evers et al., 2014).

**Box 3: Medium-scale farmers – a key piece in the rural transformation puzzle.**

Medium-scale farmers play a key role in rural transformation. The literature provides several pathways through which their role in this transformation is portrayed. The medium-scale sector tends to invest in equipment and machinery and rents out excess capacity to smallholder

farmers, as by their nature, they tend not to be able to make full utilization. Houssou et al. (2013) find that, on average, the owner of a tractor ploughed 20 hectares of their own farmland while ploughing about 163 hectares for other farmers as a paid service. Thus, their presence positively affects smallholders, increasing their access to mechanization, thereby increasing overall productivity (Chapoto, 2014). While medium-scale farmers are commercially oriented, they often cannot cater to market demand. As a result, they subcontract smallholders, increasing the smallholder's access to markets (Rao et al., 2018). Furthermore, medium-scale farmers can better interface with large farms, which can bring frontier technologies and knowledge (ACET, 2015). The medium-scale farmer is in the position to facilitate the diffusion of this know-how to the smallholder farmers. For example, the Kenyan dairy sector shows how a strong ecosystem can drive specialization among small, medium, and large farms (ACET, 2015).

As pointed out in Box 3, large-scale farmers also have an important role in the farm ecosystem, especially in diffusing frontier technologies. Indeed, there is an increasing call for a greater policy focus on large-scale farmers. Collier and Dercon (2014) make a case for large-scale farming on the argument that: (i) they are key to feeding the growing urban population as they produce surplus (many farmers in rural areas do not produce a net surplus, making them net buyers of food); (ii) commercial farming can create rural employment for many sub-subsistence farmers in rural areas, especially for net food buyers; (iii) they can adopt new technologies and adapt those to local conditions and thus boost yields<sup>1</sup>.

<sup>1</sup> Collier and Dercon (2014) argue that larger commercial farms are likely to be close to the frontiers of technology, finance, and logistics. Further innovations of recent decades have made the rapid adoption of technology, access to finance, and high-speed logistics more important, and in the process given commercial agriculture a substantial advantage over the smallholder mode of production.

A combination of a highly productive smallholder sector with the presence of a well-functioning medium-scale farming sector and large-scale farms has the potential to improve overall productivity and attract the needed investments in the value chain. However, this might not suffice as an incentive to attract investors. Public investments aimed at improving the investment climate will be critical. For example, public investments in agro-industrial parks can lower costs for investors.



# Proposals for G20

Above, it is discussed how several challenges exist that constrain developing regions worldwide in achieving rural transformation. It showed how increasing agricultural productivity focused on smallholder farmers could prove problematic. This policy brief attempts to provide a holistic approach to achieving rural transformation, in which upgrading the entire agricultural value chain will be significant. Acknowledging that no panacea exists for achieving rural transformation, this policy brief discusses several policy approaches that - according to the authors - will be critical in successfully initiating and achieving rural transformation.

## I. Refocus farm-level support

Policymaking today is predominantly smallholder-centric. While this can be justified given the significant place smallholders hold in developing regions, a singular focus on this sector may not suffice to initiate and stimulate rural transformation. This brief therefore argues for a focus shift of farm-level support from being mainly smallholder-centric to creating support for developing a strong ecosystem of small, medium, and large-scale farmers working symbiotically.

## II. Targeted public investment to incentivize private investment in value chain upgrading

Private sector investment can be incentivized by actions that aim at improving the investment climate. Some actions that can support this climate include building agro-industrial parks that can provide infrastructure and other services.

## III. Investment in technical and vocational education to supply skills needed to support agglomeration effects

Apart from investments in value chain upgrading and infrastructure, investments in the educational system, especially in technical and vocational education, will prove pivotal. Developing a sound educational system will increase the supply of skilled labor needed to accelerate agglomeration effects.

#### IV. Building the medium-scale sector

In line with the need to build a strong farm ecosystem that has all three types of farmers, there is a need to develop a strong medium-scale sector. The fact is that this sector contributes little to agricultural output, despite it holding a significant part of total agricultural land, which is problematic (Jayne et al., 2016; van Dijk et al., 2022). Reasons for their inability to become productive can be found in their lack of appropriate business models and support (Leenstra, 2014; van Dijk et al., 2022). Bringing this land into production and thereby activating the medium-scale farmer will be of great importance for creating a strong farm ecosystem. Some policy actions include: (i) routing smallholder farm support, e.g., subsidizing fertilizers through the medium-scale farmers as long as they are subcontracting to smallholders; (ii) establishing funds for medium-scale farmers to borrow at preferential rates to benefit from mechanization; (iii) encouraging medium-scale farmers to provide extension services to surrounding farmers, potentially by making their farms available as demonstration or model farms.

#### V. Building an agricultural services sector

As the medium-scale sector grows due to the middle-class and successful smallholder farmers buying land, there is inevitably going to be an increase in landless farmers. Furthermore, many young people entering the labor market may not be able to access land as they cannot compete in land markets. However, the emergent urban-based medium-scale farmers will be able to buy farm services. Evidence shows that building an ecosystem with training institutions, which generate the needed skills and support trainees

in becoming service providers, can work as models to support the emergent medium-scale farmers (van Dijk et al., 2022). Policy recommendations here include: (i) working with technical and vocational education and training institutions (TVETs) to develop a specialized program that trains and incubates the would-be agricultural services entrepreneurs; (ii) developing standards and regulations to ensure the quality of services delivered; (iii) incentivizing investors to develop a franchising model that can further backstop these entrepreneurs and build confidence around the service model.

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