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Moving towards an implementable agenda for the rural economy of Gujarat

Munish Alagh

Sardar Patel Institute of Economic and Social Research, Ahmedabad 380 054, Gujarat

Email: munish.alagh@gmail.com

Abstract The farm laws enacted in 2020 plan a transformation towards modernization, but the organizational forms of the new agriculture, which are important for this transformation, will involve thinking in collectives and addressing information concerns and stakeholder requirements. These alternate paths for rural development—apart from government projects, involving huge outlays and, often, high welfare losses—will enable a movement towards the modernization of agriculture that is not biased or based on heavy expenditure on inputs. However, the scope for agricultural growth in Gujarat is constrained by the stable, unchanging village hierarchy and the hardiness and practicality of farmers.

Keywords Rural economy, policies, institutions, markets

JEL codes P32

The basic premise of this paper is that the performance of Gujarat's rural sector requires last-mile delivery in terms of inputs to farmers and effective farm field productivity enhancement. Such enhancement must be backed by storage, sale, trade, and transport and by growth in the non-farm sector. Such enhancement and growth will be led by implementable innovative practices suited to rural Gujarat. Cooperatives must facilitate loans and insurance and identify farmers eligible for government support services like irrigation and technology provision. Optimal support in these respects will obviate or minimize the requirement of top-level interventions like subsidy or price ceiling.

The government machinery is often influenced by interests and inaction. According to government pamphlets, organic farming, horticulture, micro irrigation, etc. are good options for technological progress and overall development of agriculture, but many farmers are left high and dry by such arrangements and prefer to supply directly to processors, as the author found in official interactions

with academics and extension officers as held at Vallabh Vidyanagar¹ sponsored by the Government of Gujarat. There are gaps in coordination or in the flow of information among stakeholders—farmers, government, nongovernmental organizations (NGO) and state agricultural universities (SAU)—but the government machinery does not provide any solutions in that direction; instead, it alludes to the government subsidy on cold storage and electricity, and holds that good infrastructure and would be a win-win proposition for farmers.

We state the need for increasing the target group of such support services, state challenges in that regard, and suggest solutions. Specifically, unequal distribution of land, water, as well as added value is deeply entrenched (Aubron 2015) in the state in terms of social relations of dependency. Milk cooperatives provide everyone in the plains access to dairy farming and poor rural families the means for gaining upward social mobility, as do subsidies or loans for irrigation.

¹ 'Doubling Farmer Income', a workshop held on 1–2 June 2018 at B A College Auditorium Hall, Anand Agriculture University Campus, Anand, Gujarat.

Base-level scenario and challenges

A major conclusion of this author's study (Alagh 2014) of Gujarat's agricultural marketed surplus is that agricultural trade is mostly privately handled, and this is a severe limitation in transforming rural Gujarat. The report gave results on the relevant variables leading to market surplus—including cropping and irrigation intensity, fertilizer and electricity consumption, uses of modern agricultural implements, etc.—and these make for an agricultural miracle.

The piece-based implemented agenda in rural Gujarat has been effective, and it has accelerated agricultural development in the state after the 2000. The agenda has specific plans: the Krishi Mahostav campaign (for research and extension support); Soil Health Card facilities (for soil conservation); the Jyotigram Yojana (to supply electricity round the clock); the Sardar Sarovar Project (for constructing major and medium canals for irrigation); and Sardar Patel Sahakari Jal Sanchaya Yojana (for managing groundwater irrigation). Other policies include programmes to develop horticulture (through the Gujarat Horticulture Mission) and improve market access (through Agricultural Produce Marketing Committees (APMC) and farmer producer companies (FPC)) (Behera 2015).

The sources of surface water irrigation are the major and medium irrigation canals under the Sujalam Suphalam Yojana; minor irrigation schemes and indirect benefits through percolation tanks; and check dams, etc. under the Sardar Sarovar Project Yojana, which need to reach marginal farmers. The dynamic water resources development department of the Government of Gujarat estimates the utilization and irrigation potential of surface water and groundwater sources. However, the delivery system, constrained by the panchayats at the village level and by the state bureaucracy, is not balanced or equitable (Acemoglu et al. 2005), and the results depend on how motivated the bureaucracy is in handling these issues.

The bureaucracy is inactive, and the political will for action is missing, because the problems—like the moneylender/trader trap and the inadequate solutions to the problem of conditions for crop sale—need long-term solutions, which do not interest politicians or the bureaucracy. If mutual trust between particular individuals were elevated to institutional arrangements, where the necessary externalities are taken care of, the

parties to a contract could trust each other, and there would be little possibility of default (Hayami 1997: 246). As a member of a cooperative, the consumer would have access to the modern financial system of credit, and they would derive better utility and be better off. If the constraints of the bureaucracy are overcome, society focuses on institutions, and more effective channels of communication between farmers and the government are instituted, clarity will emerge in terms of responsibility allocation and results (North 1992).

Growth theorists (Romer 1986; Barro et al. 1995) hold that for growth to be stable and sustainable, certain conditions must be met: the workforce must be skilled, economic activities must be efficient, and there should be innovations of knowledge systems and learning and experience effects of skilled stakeholders. In Gujarat the nature of rural employment is based on the nature of the farmer as an innovator and as an enterprising risk taker within constraints, which are the Gujarati traits.

The soil and weather conditions are difficult in certain areas, and expanding government extension mechanisms (Schultz 1964) there and concerted and focused action would improve the input supply and extension arrangement, make it intensive, and spread it out well regionally. Water harvesting and farm field irrigation are innovative concepts capable of generating a lot of social and economic benefits in water-rich regions (Ilyas 1999), but these do not work in naturally water-scarce regions like Saurashtra, where the soils absorb less moisture. The surplus water of the Narmada can be transferred to North Gujarat, and it can be used to recharge the alluvial aquifers by the means of gravity recharge and spreading water in the fields, as some scholars have argued recently; and the initial analysis has shown that this would be economically viable (Ranade 2004), but correct pricing would be crucial.

In Gujarat, the yield of staple crops, like wheat, and of commercial crops, including horticultural crops, improved between 2002 and 2007, influenced by massive growth in the net irrigated area and gross irrigated area and by the increase in the ratio of gross irrigated area to gross cropped area, the ratio of net irrigated area to net sown area, and the percentage of the area under food crops and non-food crops. Extension is less visible in areas where soil, water, or rainfall conditions are poor. One area where extension

seems to be missing is the Panchmahal district. Here, the monsoon is adequate at best—rainfall averages 700–800 mm—and long dry spells are common even in the rainy season.

In an interview, a farmer² said that they do not have a power connection for their tube well, and that is a problem at the time of irrigation. The Sardar Sarovar Project water though flowing through this area is not reaching the village as it is uphill from the canal distributary. Extension officers do little work, but there is much publicity, and government agencies provide seeds and fertilizers, but other problems remain, like wild pigs and nilgais eating the crop.

The cost of ‘getting things done’ increases depending on the size of the requirement. The price of agricultural labour has increased four times due to the factory nearby. The sale of the crop was dominated by the trader, unlike in Bavla and Unjha, where well-oiled APMCs function. Even the storage godown of the APMC was registered in the name of the local trader, who doubles as the government intermediary, something that should not happen—but anything goes when there are no checks or balances. The farmer felt that Digital India had made things worse—illiterate farmers cannot fill electronic applications, and the bureaucracy has set in deeper because they serve as an intermediary.

In years of low rainfall, agents delay procurement, and farmers have no choice but to sell their harvest at a price much lower than agreed; to avoid this outcome, potato producers in Gujarat have shifted from contract farming to non-contract farming. Farmers assume that the cost of production in contract farming is high. The system of contract farming in Gujarat is tripartite; the APMC acts as facilitator.

The policy analysis of Klein and Tinbergen (Alagh 2004) with regard to instruments of large projects in rural infrastructure and implementable checks on results needs to include marginal farmers and a range of alternative stakeholders / institutions in its fold. Other features of working towards a balanced model of agricultural development ensure equity and promote efficiency.

The system in rural Gujarat depends largely on the inherent strength of the stable yet unchanging village hierarchy and the hardiness and practicality of farmer, and these same factors constrain (Pattnaik and Shah 2013) the ability of society at large to take firm, resolute steps towards an actionable agenda—without the farmer needing to look over their shoulder.

Studies suggest that commercialization will lead to quick transformation (Nadkarni 1988), but the danger is that the paradigm shift (Pal et al. 2008) involves corporatization. The organizational forms of the new agriculture, which are important for this transformation, will involve thinking in collectives (Agarwal 2010) and as groups. The literature on new forms of organization (Singh 2012) addresses value addition across the value chain.

The institutional framework of SAUs, etc. already exists in Gujarat. To this effect some field case studies by the author from 2011 to 2017 are described as an illustration of the *problématique* and possible solutions. The hope is that the combining of sustainability and efficiency as one goal is swift and alternate paths for commercialization, apart from corporate linkages, are generated. These alternate paths for rural development—apart from government projects, involving huge outlays and, often, high welfare losses—will enable a movement towards modernization of agriculture which is not biased or based on heavy expenditure on inputs.

Holistic solutions

Nowadays, the term ‘rural development’ is used in a holistic sense, and it takes into account the industrialization and tertiarization of rural spaces, infrastructure, markets, and the social and economic well-being of the rural poor. These alternate mechanisms include the complex policy option (Birthal et al. 2007) of making rural areas the focus of diversified enterprise, and transformation involves extending the benefits of development to the poorest among those who seek a livelihood in rural areas, such as small-scale farmers, tenants, and the landless. For rural institutions to function well across the board, the necessary condition is for a minimum check on

² Hasmukh Parmar owns 40 bigha of land in Derol, a village in Kalol taluka, Panchmahal district, Gujarat. A bigha is a sixth of a hectare; therefore, 40 bighas is nearly 7 hectares.

leakages in terms of delays and disagreements. More enthusiasm for protecting institutions is needed, irrespective of politics; this is a matter of culture, not agriculture.

The Parliament of India enacted new farm laws in 2020; a necessary condition for these laws to be effective is market viability—that is, arrangements for streamlining input use, like global potato contract farming alliances with McCain (Sharma et al. 2013) in Mahesana and the proposed reform of APMC. But the sufficient condition is to settle the fear that the produce of small cultivators is not secure; for instance, in the McCain case, a small potato contract farmer will be challenged by the urge to sell in the open market rather than meet exacting conditions in terms of the shape and size of potatoes.

A long-standing argument in agricultural economics stresses on technology (Rao 1989) rather than shifting away from staples. When agricultural trade is privately handled, a quick advance towards commercialization is *de rigueur* in the plan for rural transformation (Kannan 2011): the impact of the green revolution technologies has ebbed, as is well documented, and a new epoch in agricultural growth has not been seen after liberalization (Chand 2008).

The clinching argument for modernization, with effective checks, is that small commercial farmers—rather than large-scale farms or poorer, semi-subsistence producers—are the key engines of economic growth and poverty reduction. A significant portion of that impact comes through local general equilibrium effects through labour markets (Mellor 1963) and those farmers' demand for non-tradable goods and services, both of which generate high multiplier effects that concentrate gains among the poor. Hence, imperfections in rural factor and product markets, which are pervasive, can be dealt with (Barret, cited in Mellor 2017)—while staying within modern market mechanisms—and the argument in favour of modernizing the agricultural mandi and introducing commercial contract arrangements thus becomes far more effective. The modernization of staple farm fields can have a significant, positive effect on the marketed surplus ratio, which means that more modernized the agriculture, the greater the inducement for farmers to sell proportionately higher amounts of their crop in the market; these would be farmers taking advantage

of modern technology in agriculture and generating larger surpluses to sell.

We suggest a local, ground-up approach (Easterly 2007) that focuses on alternative forms of organizational rural communities—like *pani panchayats*, self-help groups, village cooperative credit societies, and producer companies. If we envisage that rural organizations in Gujarat should work towards the same objective, we should assess the investment and technology required to remove the uncertainty in rural Gujarat and plan for these. Therefore, to enhance agricultural growth, the Gujarat government needs to combine large, well-directed projects and improve the effectiveness of ground-level monitoring and facilitation.

In the non-farm economy, especially in rural retail, change and advances are taking place fast. There is demand for bottom-of-the pyramid goods, like Newport jeans, which have to be specially procured from the Ahmedabad wholesale market. Kirana stores have transformed themselves into modern, organized over-the-counter stores and systematized their accounts and inventories. Modern retail in rural Gujarat (Dutta & Alagh 2018) compete with nearby kirana stores and have to make efforts to create a space in terms of range and quality of goods because kirana stores offer cheaper alternatives. In field visits to such supermarket-format stores in rural Gujarat, the author found that some retailers spoke of how the villagers had to be trained to shop with a cart, trolley, or basket and pay at the counter, and also of how customers had gradually, albeit hesitatingly, started demanding specific commodities. Store owners spoke of how the distribution and training provided by the central store had helped them become viable.

Conclusions

In Gujarat, as in India, schemes supporting farm acreage growth and public investment have run their course, and the new agricultural policy of 2000 needs to show its effects in faster and more equitable growth. Diversified farm and non-farm enterprises will work in Gujarat if effective credit cooperatives, rural commercial banks, rural retail, rural colleges, roads, storage godowns, and mandis are streamlined and supported. Small business stores—not restricted only to kirana stores, but rural supermarkets in some areas,

local milk dairies, tailor shops, commercial banks, small papad factories, or other cottage industries—are seen in Gujarati villages as an extension of urban culture.

As the pace of information flow steps up, NGOs and trusts need to think synergistically. The spread has to be faster. Horticultural projects, online APMCs, micro irrigation, technology in seeds, fertilizers and pesticides, all will work provided the government machinery does not only enforce its will but becomes a more effective facilitator. Success breeds many progenies; so, if policy academics and other rural stakeholders join hands, change can be on the horizon. Top-down arrangements, including contracts and modern enterprises, will work—if the rural stakeholder is empowered by knowledge and their business supported by the government bureaucracy—over time, if not immediately.

References

- Acemoglu, D, S Johnson, and J A Robinson. 2005. *Institutions as a fundamental cause of long-run growth*. In: Handbook of Economic Growth, 1, 385–472, North-Holland.
- Acemoglu, D. 2012. Introduction to economic growth. *Journal of Economic Theory*, 147(2), 545–550.
- Agarwal, B. 2010. Rethinking agricultural production collectivities: the case for a group approach to energize agriculture and empower poor farmers. *East Asian Bureau of Economic Research* No. 22736.
- Alagh, M. 2014. Assessment of marketed and marketable surplus of major foodgrains in Gujarat. *Indian Journal of Agricultural Marketing*, 28(2), 60–80.
- Alagh, Y K. 2004. Policy without theory: India in a globalising economy. *Economic and Political Weekly*, 39(7), 1748–1753.
- Aubron, C, H Lehoux, and C Lucas. 2015. Poverty and inequality in rural India. Reflections based on two agrarian system analyses in the state of Gujarat. *EchoGéo*, 32.
- Barrett, Christopher B. 2017. *Agricultural development and economic transformation*. New York: Springer.
- Barro, Robert, and X Sala-i-Martin. 2004. *Economic growth*. MIT Press.
- Behera, D. 2015. Agricultural development and inclusive growth in India: A case study of Gujarat. *International Journal of Food, Agriculture and Veterinary Sciences* 5(1), 41–52.
- Birthal, P S, P K Joshi, D Roy, and A Thorat. 2007. *Diversification in Indian agriculture towards high-value crops*. IFPRI Discussion Paper 00727, International Food Policy Research Institute (IFPRI).
- Chand, R. 2008. The global food crisis: Causes, severity and outlook. *Economic and Political Weekly*, 43 (26/27), 115–122.
- Dutta, S, and Alagh, M. 2018. *Supermarket for rural customers: a study of a community-oriented social enterprise in Gujarat*, Academic Foundation, New Delhi.
- Easterly, W. 2001. *The Elusive quest for growth: Economists' adventures and misadventures in the tropics*. MIT Press.
- Hayami, Y, and J P Platteau. 1997. *Resource endowments and agricultural development: Africa vs. Asia* (No. 192).
- Ilyas, S M. 1999. Water harvesting towards water demand management and sustainable development. *Journal of Rural Reconstruction*, 322, 31–43.
- Kannan, K P. 2011. Agricultural development in an emerging non-agrarian regional economy: Kerala's challenges. *Economic and Political Weekly*, 46, 64–70.
- Mellor, J W. 1963. The use and productivity of farm family labor in early stages of agricultural development. *Journal of Farm Economics*, 45(3), 517–534.
- Nadkarni, M V. 1988. Crisis of increasing costs in agriculture: Is there a way out?. *Economic and Political Weekly*, 23 (39), A114–A119.
- North, D. 1990. *Institutions and their consequences for economic performance: the limits of rationality*, 383–401. University of Chicago Press.
- Pal, S, P K Joshi, and R Saxena. 2003. *Institutional change in Indian agriculture*, Workshop Proceedings, National Centre for Agricultural Economics and Policy Research, New Delhi.
- Pattnaik, I, and A Shah. 2013. *Gujarat's agricultural growth model: how sustainable it is?* International Journal of Agriculture and Food Science Technology, 4, 281–286.
- Ranade, R and M Dinesh. 2004. Narmada water for groundwater recharge in North Gujarat: conjunctive management in large irrigation projects. *Economic and Political Weekly*, 39, 3510–3513.
- Rao, C H H. 1989. Technological change in Indian agriculture: emerging trends and perspectives. *Indian Journal of Agricultural Economics*, 44(4).

- Romer, P. 1986. Increasing returns and long-run growth. *The Journal of Political Economy*, 94(5), 1002–1037.
- Schultz, T W. 1964. *Transforming traditional agriculture*. New Haven CT: Yale University Press.
- Sharma, V P, B Vorley, A Suleri, L Digal, and J Huang. 2013. *Linking smallholder producers to modern agri-food markets: case studies from South and South-East Asia*. Allied Publishers, New Delhi.
- Singh, S. 2012. New markets for smallholders in India: Exclusion, policy and mechanisms, *Economic and Political Weekly*, 95–105.