

Role of Extension Education in Various Economic Policies of Agriculture Development

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ABSTRACT

The policy will aim at infusing new dynamism through public investment, infrastructure development and much higher impetus for private investment. Working hunger and poverty and improve the sustainability of rural livelihoods in the face of increasing social, economic and physical shocks and stresses. Extension performs various functions such as provide out-of-school education, supply of inputs, arranging credit and marketing facilities, collecting data and enforcing regulations. The process of economic development involves in the long run a fundamental structural changes, in which agriculture declines in relative, then absolute importance. This decline has in all developed countries been associated with a dramatic increase in productivity in the sector, whether measured per worker or per unit of land. This combination suggests that in the long run there is a complementary relationship between the growth of industry and the growth of agriculture. The objective of long-term agricultural policy is to maximise this complementarities. There has been a tendency to forget this basic, historical relationship in the last two decades. Various economic policies are: Input Policies, Seed Policies, Irrigation policies, Fertilizer Policies, Farm mechanization and agricultural machinery policies, Credit policies, Output Policies, Import Policy, Export Policy and others help in development of agriculture. Extension can use its understanding of broad socioeconomic trends and its experience with other communities to help community decision makers asks the right questions.

Keywords: Policy, infrastructure development, Input Policies, Seed Policies, Irrigation policies, Fertilizer Policies

To meet the emerging challenges, new policy measures are envisaged to accelerate all round development and economic viability of agriculture. The policy will aim at infusing new dynamism through public investment, infrastructure development and much higher impetus for private investment. These would lead to accelerated agricultural growth and generation of higher income in rural areas which would result in improving the quality of life in villages, bridge the gap that exists in access to education, health and other services between the rural and urban areas and create gainful employment on a self-sustaining basis. Economic policy for agriculture must focus not only on production, poverty and food security, but on the effect of pursuing these policies on the environment. Increasingly, the term 'sustainable development'

is used in place of 'economic development'. Superficially, it would appear that economics has the tools to analyse sustainability, environmental issues, since environmental sustainability has its costs and benefits. Pricing policy involves three instruments: prices themselves, which may be regulated; subsidies, usually on inputs; and taxes on internal trade. The removal or adjustment of these can have environmental effects through their impact on incentives, without environmental outcomes depending on the initial policy position and the response of different crops. Extension can be a source of innovative institutional ideas as well as a conduit for the analysis that shapes the design of new institutional arrangements. Just as perspective, asking the right questions and social/economic

knowledge are important in local policy decisions, they're also critical in designing institutions that define social priorities and determine the outcomes of development efforts.

Role of Extension

Extension performs various functions such as provide out-of-school education, in supply of inputs, arranging credit and marketing facilities, collecting data and enforcing regulations.

1. To increase production;
2. To increase income;
3. To include actual improvement of family living (made possible by the increased income) and
4. Education for self-reliance in seeking and effecting improvements in the future.

Agricultural extension is a service or system which assists farm people, through educational procedures, in improving farming methods and techniques, increasing production efficiency and income, bettering their levels of living and lifting the social and educational standards of rural life. Extension has at least four roles in the economic development arena. In any given state, it may address only one or several of these in its educational programming.

□ **Provide Perspective:** The first role Extension can play is to put the local social and economic changes and decisions into perspective. A given community's mill shutdown or high technology employment growth needs to be placed in the context of what James Fallows recently called "America's Changing Economic Landscape." To make effective economic decisions, communities must understand how changes in the global, national, and regional economies affect the opportunities they have.

An Extension program can provide this content, helping a community compare trends in income, employment, poverty, unemployment, labour force participation, and other economic and social statistics with those of the region and the nation. It can also do this by describing the forces affecting these changes and the projected trends in these

larger forces. The point is that someone outside the process can often help frame the question and thus improve the value of the answer. The earlier in the analytical process that the right question is asked, the more effective the analysis will be in affecting the outcome. Extension can use its understanding of broad socioeconomic trends and its experience with other communities to help community decision makers asks the right questions.

□ **Increase Knowledge Base:** A second role in economic development education is increasing the knowledge base for community decisions. Some analysis of the current economic situation in a community and of alternative ways to meet community objectives must be made. Traditionally, Extension has been effective in this phase of economic development education. It has a long history of educating communities about their local economic structure and conditions and the social and economic impacts of alternative development paths. Extension has also been involved in:

1. analysis of the feasibility of, and financing options for, local community Infrastructure investments;
2. Identification of sectors in which communities may have comparative advantage;
3. Analysis of the effects of alternative local development policy tools and investments on the probability that a firm will locate in an area. We have been involved both in increasing the knowledge of citizens about options and impacts (the application of social science research to community problems) and in developing analytical skills of local officials.

□ **Teach Management Skills:** A community can understand the context of its decision, ask the right questions, and correctly analyze its alternatives, but still be unable to reach its development objectives, because local leadership lacks needed skills (or because the national, state, or local institutional structure works against these objectives). A third

role for Extension in economic development education is leadership training, helping those who have an interest in economic development to obtain the skills necessary to achieve community goals. Extension has proven its ability to teach business management skills. Although this ability isn't usually found in a community development staff, these skills are in high demand by small business people, who represent the bulk of the new businesses and whose efforts create a large share of the new jobs on which many economic development efforts depend. Teaching business management skills may be a component of some programs on economic development.

- **Shape Institutional Structure:** An opportunity exists for Extension to play a fourth role in economic development: involvement in shaping the institutional structure (the laws and organizations) affecting economic development. This can be by involvement in the legislative process to change either (1) substantive government institutions (for example: spending, taxing, or regulatory law; laws relating to development; or creation of public investment institutions) or (2) procedural aspects of government (such as the scope and timing of citizen involvement in various decisions). This involvement can take place at the local, state, or national levels. It can also be directed toward shaping voluntary organizations as well as governments.

Economic policies

Input Policies: Ensuring adequate supply of quality seeds, irrigation, fertilizer, and farm equipment has been a key element in the relative success of the Green Revolution.

Seed Policies: There has been a manifold increase in the area under high-yielding varieties (HYV). In contrast, the private sector so far has largely been concentrating on high-value and low-volume crops such as cotton, vegetables, and so on, hybrid maize, and in recent years, hybrid rice. The public sector is composed of the *National Seeds Corporation and State Farms Corporation of India* (both at the national level) and 15 *State Seed Corporation*, which carry out and

coordinate research, production, and distribution of seeds in the country. Government set up the *National Seeds Corporation (NSC)* in 1963 to streamline production, storage, and distribution of seeds.

- In 1966 the *Seeds Act* was passed, which laid down the first guidelines for seed certification in independent India.
- The *Seeds Order (1983)* further regulated and streamlined the marketing of the certified seeds. It established seed as an essential commodity under the purview of the *Essential Commodities Act (1955)* and made licensing of the dealers mandatory.
- In 2002, *National Seed Policy* was drawn up, with an objective centered on "the provision of an appropriate climate for the seed industry to utilize available and prospective opportunities, safeguarding of the interests of Indian farmers and the conservation of agro-biodiversity.

Irrigation policies: Overall, agriculture in India is mainly rainfed; only about 43 percent of the gross cropped area (GCA) is under irrigation. As monsoons contribute about 75 percent of the total precipitation, the vagaries of the monsoons continue to affect agricultural performance. After Independence water from canal networks was the main source of irrigation, accounting for about 41 percent of the net irrigated area. Water management falls in the domain of state governments, though the center is entitled to regulate and develop interstate rivers through law, if required for public interest. However, The first well-documented national water policy came out in as late as 1987.

Evolution of irrigation policy in India

- 1970—Model Bill to regulate groundwater development
- 1972—Second Irrigation Commission Report
- 1974—Command Area Development Program (CADP)
- 1980s—Formation of the National Water Resource Council (NWRC)
- 1992 and 1996—Revised Model Bill to regulate groundwater development

- ❑ 1997—Participatory Irrigation Management (PIM) at the state level with the Andhra Farmers Management of Irrigation Systems Act
- ❑ 2002—Revised national policy was brought out by the NWRC
- ❑ 2006- PMSKY (Per Drop More Crop)- Micro Irrigation
- ❑ 2015- Pradhan Mantri Krishi Sinchai Yojana (PMKSY)

Fertilizer Policies: India is the largest producer and consumer of fertilizer in the world. Total production of fertilizers in India in 2017 was 413.24 LMT. Since Independence, one of the dominant goals of fertilizer policy has been to attain self-sufficiency in nitrogenous and phosphorous fertilizers production, as India depended heavily on international markets to meet domestic demand. The private sector produced 44.73% of nitrogenous fertilizers and 62.08% of phosphate fertilizers in 2006-07. Efforts from the public, private, and cooperative sector, by 2009 India has a total production capacity of 12.06 million tons and 5.66 million tons of nitrogen and phosphorous fertilizers, respectively.

- ❑ The government passed the *Fertilizer Control Order (FCO)* in 1957, to regulate fertilizer prices and fertilizer distribution.
- ❑ Fertilizer subsidy was decided on the basis of the recommendations of the *Tariff Commission*, the chief account officer of the Ministry of Finance and the Fertilizer Association of India.
- ❑ In 2002, the government came out with the New Pricing Policy Schemes (NPS) aims to “encourage efficiency parameters of international standards based on the usage of the most efficient feedstock, state-of-art technology and also ensure viable rate of return to the units.”

Farm mechanization and agricultural machinery policies: Although there is no separate national policy on agricultural mechanization, the National Agricultural Policy 2000 (NAP) of the Government of India addresses some aspects of farm mechanization. Under the NAP, the government aims to promote

agricultural mechanization with the overall objectives of:

1. Sustainable yield increases
2. Raising agricultural workers incomes
3. Spreading benefits of mechanization to all classes of farmers
4. Creating a worker-friendly environment, especially for women agricultural workers
5. Finally, with the objective of ensuring lowered production costs of agricultural commodities, improving competitiveness in the international markets.

There are a number of programs for promotion of agricultural mechanization under both central and state governments in India. Central-sector schemes include the scheme for Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration, under way since 2004/05. The training and testing component of the scheme is being undertaken through four Farm Machinery Training and Testing Institutes (FMTTIs) located at Budni (Madhya Pradesh), Hissar (Haryana), Garladinne (Andhra Pradesh) and Biswanath Chariali (Assam), whereas farm demonstration and other activities are to be undertaken by state governments, Indian Council of Agricultural Research (ICAR), and other government agencies.

Credit policies: The spatial variability in the social, political-economic, and agricultural situation across India spawned the development of a wide variety of informal lending institutions across the country’s rural expanse. Consequently, indebtedness and poverty have been persistent characteristics of many rural households, affecting private investments in agriculture.

- ❑ To tackle the problem, the colonial government began to extend credit to farm household during drought years in the 1870s and consequently the Co-operative Societies Act was passed in 1904 to disburse agricultural credit.
- ❑ Given the depth and spread of credit shortage, the Reserve Bank of India (RBI) established in 1935

had special provisions to cater to agricultural credit, and it focused on building short- and long-term cooperative credit infrastructure.

- ❑ In 1966, the All India Rural Credit Review Committee, set up to review agricultural credit supply, recommended that commercial banks alongside cooperatives should play a greater role in increasing credit supply.
- ❑ In 1982, the National Bank for Agriculture and Rural Development (NABARD) was set up to play a pivotal role in facilitating credit flow to agriculture. Its scope was expanded to accommodate refinancing requirements of state cooperatives and RRBs (previously done by RBI), administering the Rural Infrastructure Development Fund (RIDF) and coordinating microcredit activities through SHGs.
- ❑ Financial-sector reform undertaken as a part of the broad-based economic reforms of 1991 also affected agricultural credit institutions.
- ❑ Some of the changes included deregulation of interest rates of cooperatives, RRBs, and commercial banks for loans above a certain amount; recapitalization of select RRBs; provisioning requirements for all rural credit agencies; increased refinance support from RBI; capital contribution to NABARD; introduction of Kissan Credit Card; and so on.

Output Policies: A critical element that paved the way for the acceptance of the new technologies by farmers was the support that the government provided on the output side. The government intervened in the markets for food-grains in several ways: through its pricing, procurement, storage, and distribution operations, and through controls over external and internal trade.

The overall objective of the government was to ensure that farmers received a sufficient return, with minimal risk, that encouraged them to adopt new technologies that would help increase productivity and production. At the same time the government had to do a balancing act to ensure that the prices of critical

food items were not so high that it hurt the interest of the consumers in both urban and rural areas, a sizable percentage of who were solely dependent on the market for meeting their consumption needs.

Import Policy: Under market access, all members were supposed to convert non-tariff barriers to barrier tariffs (tariffication of quantitative restrictions, that is, QRs) with ceiling tariff bindings. India submitted high tariff bindings of 100 per cent, 150 per cent, and 300 percent for raw agri-commodities, processed products, and edible oils, respectively (some exceptions; soya had binding of only 45 percent and some other commodities like rice, maize, sorghum, and millet had zero ceiling binding). India, in fact, renegotiated tariffs on commodities like maize seeds, rice, rape oil, mustard oil, and so on, to new bound rates ranging from 80 to 40 per cent. The general import licensing system was slowly dismantled, and in 2001 the last 715 tariff lines (which included 147 agricultural tariff lines) were removed and the system itself was abolished.

But though systematic tariff reduction was undertaken for nonagricultural goods in the 2000s, agriculture was omitted from this agenda; in 2006, trade-weighted average actual tariffs were still around 44.4 percent (World Trade Organization 2010).

Export Policy: Other than traditional exports like spices, cashews, tea, and coffee, there were several quantitative and price restrictions. In 1994, India lifted the minimum export price (MEP) of rice and exports of non-durum wheat were allowed (subject to quantitative restrictions). Other reforms included elimination of export quotas (except for some goods including onion, paddy, some seeds, and so on), opening up credit lines for exports and setting up agricultural export zones.

External Constraints on Agricultural Policy

1. The WTO and the Agreement on Agriculture.
2. Structural Adjustment Programmes.
3. Agricultural Policy & Food Security in light of the WTO And Structural Adjustment.

Aspects of Structural Adjustment Programmes

Policy area	Policy goal	Instrument or mechanism
1. Exchange rate	Correct imbalance in external account, generate more efficient allocation of resources through comparative advantage	Until recently, a free-floating exchange rate preferred; mixed outcomes from this policy leave 'best practice' in flux
2. Trade policies	Correct imbalance in external account, generate more efficient allocation of resources through comparative advantage	Tariffication, drastic reduction in variation across tariff lines, tariff reduction, elimination of export subsidies, reduction in export taxes (similar to WTO requirements, but usually more stringent)
3. Fiscal policy	Deficit reduction to reduce inflation or 'crowding out'	In practice, expenditure reduction tends to be preferred to tax increases, strong emphasis on elimination of consumer subsidies
4. Public expenditure	Expenditure reallocation in favour of social sectors and facilitating expansion of tradable commodities	Frequently there is conditionality for privatising public services
5. Public enterprises	Increase efficiency through commercialisation	Privatisation, independence from political influence, or closure
6. Financial sector	Development of financial sector, increased allocative efficiency	Elimination of interest rate subsidies, independent central bank, privatisation or closure of development banks
7. Industrial policy	Increase allocative efficiency	Elimination of trade protection, subsidies, directed credit, privatisation
8. Energy policy	Foster efficiency energy use	Reform pricing to cover full costs,
9. Agricultural policy	Increase allocative efficiency	Abolish any marketing boards, eliminate input subsidies, eliminate credit subsidies, abolish any price controls, privatise agricultural services (marketing, transport, etc.)

CONCLUSION

Extension policy should include the following: (1) name of the extension system, (2) mission and goals, (3) intended clientele, (4) geographic coverage, (5) the dominant extension approach to be followed, (6) general subject-matter coverage, (7) institutional and organizational framework, (8) how extension will be financed, and (9) provisions for review and accountability within the extension system. Finally, the ultimate test of extension policy is the impact that extension is having on the productivity of all major groups of farmers, including their incomes and quality of life. In addition, extension should be evaluated by its contribution to sustainable agricultural development. To extension policy makers, managers, specialists, and professional staff, the following checklist might prove useful: (1) Is extension policy developmental with a long-term vision, (2) Does it foster innovativeness and creativity on the part of the extension staff, and does it have more provisions for facilitating, rather than controlling, their work, (3) Does it foster stakeholder participation and confidence in the extension system, (4) Does it attract sustained financial support from government through the support of stakeholders and beneficiaries, (5) Does it follow appropriate procedures and methods to perform its responsibilities efficiently and effectively, and (6) Does it have reasonable provisions for accountability through periodic reviews.

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