Agricultural Extension

Global Status and Performance in Selected Countries

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September 2020

Agricultural transformation and development are critical to the livelihoods of more than a billion small-scale farmers and other rural people in developing countries. Challenges such as low productivity, persistent food insecurity and malnutrition, food price crises, natural resource depletion, changing and uncertain markets, environmental degradation, and climate change directly impact and are impacted by agriculture and rural development. Agricultural extension and advisory services can help in addressing these challenges by assisting farmers with advice and information, brokering and facilitating innovations and relationships, and dealing with risks and disasters.

Agricultural extension and advisory services have had significant positive effects on knowledge, skills, adoption of technologies and practices, crop and livestock yields, and incomes. Rates of return on extension investments are generally high, despite wide variation in services. Yet documentation of the policy and program constraints that extension services face is inadequate, and there is only limited evidence on which policy and program reforms could best increase performance and improve development outcomes.

Agricultural Extension: Global Status and Performance in Selected Countries provides a global overview of agricultural extension and advisory services, compares extension systems at national and regional levels, examines the performance of extension approaches in a selected set of

country cases, and shares lessons and policy insights. Drawing on both primary and secondary data, the book contributes to the literature on extension by applying a common and comprehensive framework – the “best-fit” approach – and by updating previous global assessments.¹ Use of the best-fit conceptual framework allows for standardizing assessments across cases and thus ensures some comparability across geographies. The conclusions address reforms across the best-fit characteristics – governance, capacity, management, advisory methods – to improve outcomes, enhance financial sustainability, and achieve greater scale.

Agricultural Extension assesses developing country extension and advisory services in two ways. First, the book provides a description and comparison of existing extension

¹ The best-fit framework was developed by R. Birner et al., 2009, “From Best Practice to Best Fit: A Framework for Analyzing Agricultural Advisory Services Worldwide,” *Journal of Agricultural Extension and Education* 15 (4): 341-355.

FIGURE 1 Different levels of assessment of extension services

services, focused on a set of extension characteristics that can be affected by policies and programs. Second, for selected case study countries, it provides both an assessment of the performance of extension services provision and an impact evaluation of extension approaches.

Analysis

To provide a landscape view of extension globally, Part 1 of the book compares the recent status of extension and advisory services to the situation 20 to 30 years ago, using primary data from several global assessments not previously analyzed. This global picture is complemented with descriptive primary and secondary data on country and regional extension systems, including cases from Latin America, Africa, and Asia. The best-fit characteristics used as the basis for this analysis are governance structures, capacities, management, and advisory methods, as well as cross-cutting issues such as gender, nutrition, and climate change.

Part 2 presents a set of in-depth country case studies that examine the performance of extension services provision and the impact of these services using new primary and secondary data from Brazil, Uganda, Ethiopia, Malawi, and the Democratic Republic of the Congo. These country cases follow a similar structure, despite some variation in the indicators used, with the best-fit framework characteristics guiding the analyses.

Best-Fit Characteristics

The global analysis of extension systems shows an evolution in extension and advisory services over the last 30 years. Services have become much more pluralistic, and systems in most countries now include both public and private agents, including civil society. The number of extension agents has increased greatly, with more than one million today; and they belong to a variety of organizations from the private, nongovernmental, and public sectors, and even include lead farmers (essentially as volunteer extension agents). While reaching women and youth has remained an extension goal over the decades, newer trends include the use of information and communications technologies (ICTs), a focus on nonrural clients along the value chain, and market-oriented extension.

GOVERNANCE STRUCTURES. In most countries, the public sector – usually the ministry of agriculture, food, or rural development – is responsible for overall coordination and regulation of extension services. With increasingly pluralistic systems, governments must address coordination and regulation of the many providers. Among the case study countries, Brazil and Malawi have established coordination mechanisms, but in many developing countries linkages among extension services, research, and farmer feedback mechanisms remain weak. However, newer forms of innovation platforms that focus on market access and on specific value chains are showing some promise for improving integration in several countries.

Although more organizations are now involved in extension services, the country cases show that there are constraints on the pluralism of service delivery, due to the ad hoc nature and funding constraints of some providers. Service providers are dominated by international nongovernmental organizations, which can address government resource limitations by providing mobility and operating funds for government extension agents, while governments continue to provide the human resources. These constraints to pluralism can limit competition among service providers or expansion of options for farmers.

To support more effective pluralistic extension, policies must provide an overall framework in which multiple actors can operate. But many countries lack a specific policy for extension and advisory services. Brazil and Ethiopia stand out as having good extension policies in place accompanied by appropriate implementation mechanisms and a commitment to public investment in extension services. Malawi has a national extension policy but has struggled to fund and implement the policy, focusing instead on an input subsidy program to the neglect of rural services.

Among the countries examined, decentralization was frequently attempted as a means to increase accountability by bringing the services closer to the clientele. However, the legal decentralization of responsibilities for agricultural services is rarely matched by sufficient fiscal decentralization, and the autonomy of local governments is undermined by continuing dependence on transfers from the central government. When such transfers are reduced and revenues

collected by the local government remain meager, the benefits of decentralization are rarely realized. For example, attempted reforms to build up district-level agricultural extension systems in Malawi lacked the resources and capacity to coordinate among different service providers and engage with farmers. Public expenditure studies in other countries have found similar problems.

In most cases, financing of extension services was insufficient and often donor-driven, with little consideration of sustainability. Scarcity of funds hampered the performance of extension services, especially in terms of operational funds and sufficient staffing numbers. While financing of extension services in Latin America appeared quite diverse, in Africa and Central Asia and the Caucasus, financing was largely donor-dependent and public-sector-led. For example, extension programs in Rwanda and Ethiopia relied on donor funds, but these programs were driven by national extension and agriculture strategies rather than by donor priorities. Case study countries lacked cost-effective ways to increase coverage and provide services to many unserved or underserved areas. Nevertheless, there were promising moves toward cofinancing and farmer contributions in some Latin American countries and in Senegal. Certain advisory methods, such as use of ICTs and farmer advisers, enhanced sustainability of extension services in many countries.

CAPACITY. Capacity of extension services includes staff numbers, training level, skills, infrastructure, and financial resources. Despite the presence of more than a million extension agents worldwide, the capacity of individuals and organizations was generally low – especially in Africa. Public sector extension agents were seldom sufficient in number, agent-to-farmer ratios were often low, and vacancy rates and turnover were high in some countries. Many extension agents in Africa struggled with poor mobility and transport infrastructure. Salaries were low, especially in the public sector, and there were few rewards and little recognition. In addition, staff training often fell short. Foundational training for agents usually focused on technical topics, disregarding the functional skills needed for extension. Exceptions were Central and South American countries that appeared to have well-established foundational and continuing education systems for extension providers. Several countries, including India and Malawi, hoped to professionalize their extension services through certification and continuing education but found implementation challenging. Yet, increasing operational budgets for extension services is more important than increasing staff numbers – without funds to support mobility and operations, additional staffing would be expensive and counterproductive.

MANAGEMENT. A number of mechanisms were used to ensure better management and to provide monitoring and evaluation (M&E). Many countries were putting in place demand-driven or client-oriented mechanisms, as well as M&E, to ensure that extension services are more participatory and thus more relevant to farmers, in particular the underserved, women, and indigenous groups. Increasing use of multistakeholder networks, innovation platforms, and other demand-based strategies contributed to these efforts.

However, there are huge gaps in data, capacities, and funding necessary for these management tasks.

ADVISORY METHODS. A growing range of methods, including digital approaches, was used to provide advisory services. Farmer field schools and other group methods and demonstrations were widely used, and private-sector extension and the use of lead farmers appeared to be growing worldwide. Market-oriented extension has frequently and appropriately become an integral part of extension activities, particularly in Latin America and increasingly in Africa south of the Sahara. However, capacities and information to provide market-oriented extension were often lacking; Central Asian and Caucasus countries in particular struggled to provide such services.

Policy Recommendations

Insight gained from this research supports a set of specific policy recommendations across the best-fit characteristics:

1. **EXTENSION POLICY.** An explicit policy or strategy for extension services is a crucial first step for better governance, funding, coordination, and decentralization, as well as for overall effective design and implementation of extension services. Capacity for developing such country-specific extension strategies is currently weak or does not exist and thus needs strengthening in national systems.
2. **EXTENSION FUNDING.** Although private sector, nongovernmental, and farmer-based organizations all play an increasingly important role in extension services, the public sector's role in reaching remote areas and marginal groups cannot be overestimated. A combination of expanding funding sources and mixing innovative modern approaches with traditional mechanisms can increase the sustainability of extension services.
3. **EXTENSION COORDINATION.** As extension and advisory services become more pluralistic, the need for coordination, quality control, and avoiding duplication of efforts becomes a major challenge for the public sector. Also, identifying the gaps left by the multiplicity of actors as they focus on specific target groups or value chains, and defining and coordinating the roles and responsibilities of these actors, is a major challenge for policymakers. Public extension systems need to invest in such coordination capacity.
4. **MAKING EXTENSION DEMAND-DRIVEN.** The organizational and institutional capacity to effectively reach farmers in a country context is important to improve the extension services provided by pluralistic actors. Making extension services more accountable and demand-driven requires identifying producers' information needs in an organizational context, setting priorities for the extension services, and sharing the goals and approaches among the extension services' providers. This implies building the capacity of producers and especially producer organizations to identify and prioritize their needs. These activities will further help in managing

limited extension resources, which are currently split among the multiple providers.

5. **IMPROVED MONITORING AND EVALUATION SYSTEMS.** Assessing extension services' performance in meeting their clientele's needs requires sound M&E systems, which remain weak in many countries.
6. **TRAINING FOR EXTENSION PROFESSIONALS.** Organizational and institutional innovations are needed on a regular basis to improve extension professionals' capacity, improve their focus on farmers' problems, reduce their burden of multiple objectives, and increase extension's reach in different agroecological zones. Continuous improvement in the technical, managerial, and leadership capacities of extension professionals that goes beyond foundational training should be a key part of national extension strategies.
7. **PARTICIPATION FROM FARMERS AND OTHERS.** Innovative policy and programmatic approaches are needed to move away from top-down approaches to information sharing. Increasing farmer participation in decision-making about what the extension services provide will help move extension services toward market-driven approaches. Use of the private sector, traders, volunteer farmers, lead farmers, and youth as entrepreneurs to increase the reach of advisory services will require adequate attention at the policy level.
8. **USING DIGITAL TECHNOLOGIES.** Using digital ICTs to reach producers on topics such as weather, technology, markets, and prices also requires adequate policy and institutional arrangements at various levels. Digital technologies and the Internet of Things can save resources at the extension-system and farmer levels. Their use can be intensified both as extension delivery tools and as mechanisms for demand articulation, monitoring, and greater transparency and accountability.

9. **MEETING EMERGING NEEDS.** Finally, the future of extension systems crucially depends on whether they are well-built to meet emerging challenges such as climate change, precision agriculture, nutrition and health goals, youth and gender, and other challenges related to the transformation of food systems and to resilience building. In this context, the extension worker is seen more as a problem solver and a facilitator of services in rural areas. Developing a policy environment to strengthen the capacity of extension systems to meet these emerging needs remains the most important development concern.

Looking Ahead

In the context of changing extension service needs, research is needed to continuously update our knowledge of what works and why. As the food and agriculture sectors rapidly evolve, extension and advisory services will need to transform to meet new needs and challenges, including the expansion of high-value agriculture; the growing role of the private sector; increasingly pluralistic systems; natural resource constraints, disasters, and climate change; and the emergence of opportunities to use big data to improve extension services. In this challenging context, more ambitious objectives should be set for assessment and evaluation of extension and advisory services. The best-fit framework can support assessments of performance and impact by looking at how the extension services' characteristics fit with the prevailing environment and what policy reforms are needed. More and better evaluations that clearly link extension and advisory services to their outcomes and impact will garner significant support for these services that are critical to over a billion small-scale and marginalized farmers worldwide.

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This synopsis is based on the peer-reviewed book *Agricultural Extension: Global Status and Performance in Selected Countries*, published by the International Food Policy Research Institute. Any opinions stated in this book are those of the authors and are not necessarily representative of or endorsed by IFPRI.

***Agricultural Extension: Global Status and Performance in Selected Countries* is available for free download at <https://doi.org/10.2499/9780896293755>**

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DOI: <https://doi.org/10.2499/9780896293762>

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