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Prospects and Challenges of Privatization of Agricultural Extension Service in Bangladesh

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Abstract

Globally there has been a growing interest towards the privatization of agricultural extension services. Privatization of extension service delivery is being considered for Bangladesh with a view to lower the government expenditures, to increase the efficiency of service delivery and to improve the quality of the extension services in changed circumstances on the part of the farmers. Farmers' willingness to pay for the extension service in Bangladesh is still unknown. The lesson learned from the world review indicates that though some developed countries went for complete privatization of agricultural extension services, the most of the developing countries still remaining in the process of gradual privatization on a partly basis. Therefore, after critical analysis, this paper assumed some challenges of privatization of agricultural extension service delivery in Bangladesh. Despite the challenges, it is hoped that Bangladesh still has some prospects to adopt privatization of agricultural extension service if the recommended policy guidelines out lined in this paper are followed accordingly.

Keywords: Privatization, Agricultural extension services, Challenges, Prospects, Bangladesh

Introduction

Still now agricultural extension is considered as the central approach of delivering rural advisory services for bringing farm peoples' autonomy as well as agricultural and rural development. Extension is now recognized as comprising a range of services offering knowledge and information to farm people to enable them to change their behavior and use of technologies to get better their livelihood. Its functions and tasks are increasingly assumed by multiple public and

private organizations (Rivera and Alex, 2004). Agricultural extension services of Bangladesh are under invariable pressure to be responsive to ever-growing challenges of, and to demonstrate impact in food production. This force for being reactive is giving rise to call for a shifting from traditional extension service to more demand driven, efficient and effective one. Since, pre-independence of Bangladesh extension service is running by public funds. Public funds come from revenue, foreign loans and from foreign donor support as projects.

Foreign donors have spent huge money for improving the public extension system and its reform over the past four decades among the

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developing countries including Bangladesh (Anderson & Feder. 2004. Overseas Development Institute, 1994; World Bank, 2006, Islam et al., 2011). Despite outsized financial intervention by these projects the reforms in extension revealed unstable once the donor support had withdrawn (Anderson et al., 2006; Dow, 2004; Faure & Kleene, 2004; Gill et al., 2003; Purcell & Anderson, 1997; Saviroff & Lindarte, 2004). After the two decades of functions Training and Visit model (T & V) is no longer operating with the termination of World Bank support aid in 1990's (Anderson et al., 2006; World Bank, 2006). T & V has not met user demand for appropriate content and learning methods (Omotayo, 2005). Similar fate has been revealed in the very recent reform initiative of donor supported project that implemented the Farmer - Led Extension Model in Bangladesh (Islam, et al., 2011).

With the change of global context like climate restructuring change, in the economy, globalization and trade liberalization, (Adejo et. al., 2012) revolution in information and communication technologies, the demand and approaches of extension being shaped (Alex et. al., 2002; FAO/World Bank, 2000; Rivera et. al., 2002) that call for a demand driven, cost effective and efficient service combining state of art technologies and methods of delivery. Globally public extension services alone would never be able to meet the entire demand for extension service of the farmers (Maalouf et. al., 1991). Thus, there must have inclusive "power shift" from government to private is in progress (Mathews, 1997). For providing efficient agricultural extension services to the farmers, private extension has been widely debated (Kidd et al., 2000, Rivera, 2001) such that a higher level of farmers involvement in the extension processes is advocated and the need to meet diverse range of requirements including information on markets, rural industry and other income opportunities (Farrington et al., 2002). According to Umali and Schwartz (1993) the prime objectives of privatized extension is offering the right message to the right users at right time in the course of a demand driven service system that efficient also.

The weak and opportunistic economic, political and legal institutions and prevalent corruptions

resulting marked increases in transaction cost and weakening service delivery (Nnaemeka et TIB, Moreover, al., 2006; 2012). government is heavily loaded with foreign loan leading to declining budget for agricultural extension. So, fiscal crisis is the one of the important causes of finding alternative ways of delivering extension services in Bangladesh. Poor, inefficient and outdated services by the public extension agents are the others important causes that's why farmers in many cases seeking demand driven and efficient services. It is assumed that private extension is more clients responsible and competent service provider that raises the voice of the farmers in problems definition, develops public finance, promote competitive participation of private sector and increase professionalism of extension service providers (Adejo et al., 2012; Mercy, 2008, Sulaiman et al., 2005; Saravanan, 2001). In view of the above litany it should be mention here that massive privation is indispensable and rational for Bangladesh. At the same time the following consistent questions are arising in contrast of the rationality of provisioning privatized agricultural extension service delivery in Bangladesh: Is the private extension enough supplement the public extension Bangladesh? What would be institutional framework for supporting privatization of extension service delivery? What would be the policy and how the policy should be implemented? What are the latent challenges associated with privatization of extension service delivery in Bangladesh?

Objectives of the Study

The general objective of the study is to assess the prospects and challenges of privatization in delivering agricultural extension services to the farmers of Bangladesh. However, the specific objectives of the study are to:

- Ascertain the driving forces for the paradigm shift from public extension to private sector participation in extension service delivery.
- II. Describe the present status of privatization of agricultural extension services in Bangladesh.
- III. Consider the lessons learned by the other countries in adopting privatized extension service delivery model.

- IV. Know the farmers' willingness to pay for the extension services around the world.
- V. Recommend policy guidelines in pursuing privatization of extension service delivery in Bangladesh.

Methodology

Data, arguments and experiences of privatization were taken for discussion from secondary sources like journals, books, reports and online repositories and used through content analysis which further provided the basis for sum up the content and policy recommendations regarding privation of agricultural extension service delivery in Bangladesh.

Present Status of Privatization of Agricultural Extension Services in Bangladesh

Agricultural extension services in Bangladesh is a public goods that is accessed at free of cost by the farmers since the independence in 1971. Besides the public extension system there are several forms of privatized extension service delivery options. After 1993, the private sector was allowed entry into agriculture sector by giving permission carrying on business of agricultural inputs and irrigation equipment (Haque, n.d.). But right now there is no formal institutional arrangement for private extension system. The private sector extension in Bangladesh can be broadly categorized in to NGOs, private companies and individual consultants. Based on the motive of operation NGOs are broadly two types - the service motive NGOs and business motive NGOs. On the other hand private extension service providers are dealers of seed companies, pesticides fertilizer dealers dealers. and companies involved in contact Individual consultant provides suggestions to the farms and households of agriculture, livestock and fisheries.

Since the birth of independent Bangladesh, many social welfare organizations from home and overseas came forward to help the distressed people. With the passage of time most of these organizations have been transformed to nongovernment organizations (NGOs). According to a recent estimation about 20,000 NGOs are

working in Bangladesh of which about 400 NGOs are directly involved in agricultural activities (World Bank, 2003). Some of the leading NGOs providing agricultural extension services are BRAC, PROSHIKA, CARE-Bangladesh, Rangpur-Dinajpur Rural Services (RDRS), Thangamara Mohila Shobuj Sangho (TMSS), Helen Keller International, Mennonite Central Committee (MCC), Gono Unnayan Prochestra. Gono-Kalyan Trust (GKT), Voluntary Paribar Kalyan Association (VPKA), World View International Foundation (WIF) etc. NGOs target mostly landless and marginal farmers and in many cases they focus on women. Services provided by NGOs typically include credits, inputs supply and training. In some cases, NGOs target that category of farmers who practically fall out of the public extension services. The public sector extension and advisory agencies have relatively narrow focus (i.e. DAE focuses on crops, DLS focuses on livestock, DoF on fisheries, etc), where as NGOs have become accustomed to provide multiple services to their beneficiaries. Most of the NGOs are, however, handicapped by the limited land area of their beneficiaries (Haque, n.d.).

In the beginning private companies were limited to agro-chemicals and seeds of vegetables. Afterward, they expanded their scope to seeds, forestry, dairy, poultry and fisheries enterprises. The seed, pesticides and fertilizers companies have launched extension work and motivational drive through result demonstration of their inputs to maximize return (World Bank, 2003). The leading seed companies in Bangladesh are: Lal Teer Seed Limited, Syngenta, ACI, Supreme Company, Mollika Seeds, Bahumukhi Farm, Agri Business Corporation, McDonald (Bangladesh) Ltd., Tinpata Seeds, Petrochem Ltd, Duncan, Kushtia Seed Stores, A.R. Malik & Namdharee Seeds, Allied Agro Industries, Masud Seed Company, Blue Moon International, Alpha Agro and Agri Concern (Bodker et al., 2006). These seed companies supply seeds in one hand and give extension service to their contact seed growers on the other hand. At the same time a large number of pesticides and fertilizers companies importers are supplying agrochemical through their dealers all over the county. These dealers provide valuable information on pest and soil

fertility problems to the farmers at the expense of selling their products.

Global Scenario of Privatization of Agricultural Extension Services

The emerging social, environmental, political, and economic dynamics have shaped the strategy of delivering agricultural extension service across the globe. The United States reappraised currently reformed and Cooperative Extension Services once that was criticized for lacking significance and vision (Dillman, 1986). The Extension Committee on Organization and Policy (ECOP) has made a future task force to analyze issues and to offer recommendations to revive the scheme and to promote private sector participation (ECOP, 1987). In the meantime, the development of electronic information systems has directed to increased privatization (Goe & Kenney, 1988). A fee based extension service delivery pattern has been developed in the northwest region of Mexico and similar plan has also been taken for the small-scale farmers in the south central region (Wilson, 1991). In Chile the public extension service delivery approach has been with voucher, distributed substituted government services, for farmers to hire private extension consultants. In Colombia coupons are attached with agricultural bank loans and a certain percentage of the loan must be used for buying extension services (Rivera and Cary, 1997). In Bolivia, the USAID mission started a private extension service in mid-1990s. The project emphasized private extension service without considering farmers' willingness to pay for the services. In that case only one private producers' organization agricultural successfully providing extension service and reaching only an elite group of farmers (Byrne, 1991).

Agricultural extension service in England and Wales is privatized and operates on a partial cost-recovery system. This provision of cost-recovery was started in 1987 and by 1993-94 half of its income from saleable fees was directed towards the agency (Bunney & Bawcutt, 1991; Harter, 1992). In 1990 The Netherlands has privatized about 50 percent of its government extension service by transferring field extension staffs, with initial government

monetary support, to the farmer cooperatives. The fundamental task of the extension service responsible for connecting research and the privatized extension services, formulation of policy, its execution and promotion remained under the command of the Ministry of Agriculture (Le Gouis, 1991). The board is responsible for governing privatized extension services which equally represents both farmers' organizations and the government (Proost & Röling, 1991).

Extension service has been privatized in New Zealand (Hercus, 1991). At present public extension personnel of New Zealand have given up a number of public service benefits and receiving consultation fee for the work undertaken. The source of annual budget of the agency is consultation fees derived from farmers and formal agreements with government for furnishing policy information and rural intelligence to government (Rivera and Cary, 1997). In Victoria State of Australia a mild type of "privatization" has been intended for the delivery of public extension services. The experience shows that private service provided by public extension system offers mainly private benefits to individuals, instead of cost recovery by government fee charging. On the contrast, service delivered by private sector extension is more beneficial and efficient than that of public extension system. However, a universal type service delivery is difficult to arrange because of varying degree of development in agricultural sector and constraints associated with it (Watson et al., 1992; Cary, 1993).

Currently privatization of agricultural extension services is being popular in different countries of Africa and Asia. In Nigeria, farmers are paying fees indirectly for the extension services they received from informal private organizations at expense of purchasing inputs from them (Saliu and Age, 2009). The foremost participants in private extension services are United African Company (UAC), John Holt, Nigerian Tobacco Company (NTC), Diocesan Agricultural Development Programme of the Catholic Diocese of Ijebu-Ode, among several others who became involved in agricultural production, processing, marketing some decades ago (Adedoyin, 1995). However, Adetayo and Eunice (2013) argued that a county like Nigeria where about more than 90% farmers are subsistence type who are too poor to pay the fee should not be serviced on payment for provisioning extension service as a matter of policy. Privatization of agricultural extension service has been operating in Iran in different forms but not evident as institutional form right now. Most of the extension experts have expressed a desirable view towards privatization of agricultural extension service in Iran (Lashgarara and Hosseini, 2011). Many private extension players are providing agricultural extension services in different parts of India since the later part of 1990s (Saravanan, 1999). Among them individual agricultural consultants, progressive farmers, farmers organizations, NGOs, Krishi Vigyan Kendras (KVKs), Bhuvi Care Private Ltd., Mahindra Krishi Vibar, agribusiness companies, input dealers, newspaper etc are important (Shekara, 2001, Sulaiman et al., 2005). In Pakistan, the process of privatization of agricultural extension system was started in 1988 through establishing National Commission of Agriculture (Government of Pakistan, 1988).

Farmer's Willingness to Pay (WTP) for Advisory Services by Private Sector Extension

In Bangladesh, no studies have so far been conducted on farmers WTP for extension services delivered by private sector. So, to understand the farmers view on WTP the global reviews are described here.

Saravanan and Veerabhalah (2003) in an Indian Studies found that farmers were willing to pay for cultivation practice of fruit crops, plant protection, marketing information, varieties, post-harvest technology and land development. Singh et al. (2011) in an another Indian study found that about 30 percent farmers were having good or better economic status showing their willingness to pay for input delivery, advisory and diagnostic services. Ali et al. (2008) conducted a study in Punjab province of Pakistan and found that farmers of rice, wheat and cotton zones were willing to pay for the services where farmers of central mixed zone were not willing to pay for the extension services. Ajayi (2006) in his study conducted in Oyo State of Nigeria found that majority of the

farmers described themselves as having the ability to pay for services and were willing to pay if their income from farming would increase and the program made be relevant to them. The farmers were also willing to pay through cooperative societies. The individual farmer was willing to pay 391.47 Naira per year. In Adana province of Turkey it was found that majority of the farmers were willing to pay for the extension services which depends on farmers need (Budak et al., 2010). According to Oladele (2008) only 30 percent of the farmers of the Oyo state of Nigeria were willing to pay for selected extension service which is shaped by the various needs of the farmers. In a study in Uganda, Mwaura et al. (2010) found that about 35 percent and 40 percent farmers were willing to pay Ugandan shilling 3400 (US\$ 1.8) and 3700 (US\$ 2) per trip for extension services in crop and animal husbandry respectively.

Prospects of Privatized Agricultural Extension Service Delivery in Bangladesh

Experience from the history of other counties of the world suggest that public extension is not enough to support the entire farming community in one hand, the privatization of agricultural extension cannot be substitute of public extension on the other hand. Rather private and public extension can be complementary to each other in many folds. But private extension service providers have to play a more active role in providing extension services. However, to promote privatization of agricultural extension service the following prospects need to be considered:

Formation of Viable Farmers' Organization

Though seventy percent of the rural people directly involve with farming, there are very few viable farmers' organization in Bangladesh. A strong and active farmers' organization can play an important role in market economy and in providing agricultural extension services in Bangladesh. Private extension agents can contact with farmers cooperatives regarding agricultural problems of the farmers and can collect consultation fees against their services. Formation of viable farmers' cooperatives or strengthening the existing cooperatives is very essential for Bangladesh. Farmers of the same socio-economic status or farmers of same

enterprise can form groups or cooperative to increase their voice in addressing farm problems and economic benefit out of it. The funds of the cooperative can contribute to help the farmers during crisis as loan which is payable in a stipulated period of time. The savings may also help in paying the fees for extension service continuously.

Extension Service Provided by Agro-input Companies

There has been a rapid growth of agro-input companies by last couple of decades in Bangladesh. Agro-input companies can play a vital role in providing quality agro-input and others extension service delivery to the farmers at expense of their product selling. Both farmers and input companies can be mutually benefited in that case. The government can arrange agricultural training for the marketing representatives and for their dealers on a regular basis at every six months interval.

Public-private Partnership

Success of effective agricultural extension service delivery is in partnership and complimentary actions of public and private sector. Public-private partnership will make agricultural extension less burdensome to government and more relevant to farmers. Small farmers still believe that extension service is public goods and they lack ability to pay for the extension services. Therefore, complete withdrawal of public extension service might not compatible with the present socio-economic and political situation of the country.

Individual Consultancy

Huge number of agricultural graduates and diploma holders in Bangladesh are wondering for job. There is a good chance to be involved with agricultural consultancy that might help them to be self employed. Moreover, it needs no capital or less capital to start individual consultancy.

NGOs in Agriculture

At present about 400 NGOs are involved in agricultural activities in Bangladesh. If government encourages NGOs, more and more NGOs will be interested to works with farmers. NGOs target mainly small, marginal and landless farmers for providing service. NGOs

can provide credit, inputs and market information together with other production information.

Making Extension Service Demand Driven

Be it the program of public sector or private, farmers should be involved with program building. If farmers are involved in program planning, implementation and evaluation it creates a feeling among them that this is their own program and they better understand their needs to be satisfied. Moreover, public extension is general type where private extension is more commodity oriented. Therefore, private extension service delivery will be more demand driven, effective and appropriate to the farmers needs.

Increase Investment and Cost Minimization

Privatization will create competition in the service markets and there is opportunity of huge foreign and domestic investment in this sector as a result of trade liberalization. Due to open competition extension service charge will also be decreased. In general, over time this will lead to lower prices, improved quality, more choices and less corruption. Therefore, government will get relief from fund deficit in one hand and farmers will get quality service in a discount rate on the other hand. Ultimately the privatization of agricultural extension service delivery will contribute to gradual economic growth of the country.

Use of ICTs

There is a prospect for private investment in ICTs sector for increasing the access to information regarding pest problems, production technology and marketing of the produce. The telecommunication companies can play an important role in this sector by reducing the call cost for the farmers.

Easy and Quick Extension Service Delivery

Massive privatization will overcome the personnel shortage at organization level as well as field level. Moreover, the private agency has capacity to furnish their service department with adequate vehicle support. Therefore, it will be easy for the private company to respond quickly to farmers' problems.

Challenges in Operating Private Agricultural Extension Service in Bangladesh

The perceived challenges of agricultural extension service delivery in Bangladesh are as follows:

Organizational Structure

For making public sector extension meaningful and sustainable it requires a major change in organizational structure. The present set up of public extension cannot fully support and coordinate private sectors activities unless a prescribed forms of policies and institutional framework.

Agricultural Extension Policy

No organization can run smoothly or achieve goals without specific policy. There is extension policy in Bangladesh for public sector but there is no policy guidelines for private sector extension.

Socio-economic Condition of the Farmers

Most of the farmers of Bangladesh are small and marginal types. Their poor socio-economic status might not adopt privatization of agricultural extension service in a sustainable manner. Lack of financial capital might make them unwilling to adopt private extension support. Moreover, private company targets mainly medium and large farmers who cultivate cash crops in a commercial basis. Small and subsistence type farming is not suitable for the private sector extension provider except some NGOs to earn money.

Poor Communication Facilities and Remote Areas

All organizations are interested to works where communication facilities are good. Therefore, some private organizations may not be interested to work in remote areas. Hence, farmers of that region will be deprived from extension service.

Profit Motive of Agro-chemical Companies with Less Caring the Environmental Sustainability

The main intension of the dealers of agrochemical companies is to sale their products rather than providing services. In that case they will sale the hazardous chemicals without considering the environmental sustainability.

Politics and Corruption

At every transition periods of government the state became politically unstable. Politics and corruption is wide spread in Bangladesh and has a complementary action (TIB, 2012). Most of the corruption takes place under the power shade of politics. Grafting with threat at office or at organizational level is common in Bangladesh. People become compelled to give money being feared about the security of life. This discourages the private investor to invest money for development projects and also increases the transaction cost of the service.

Credibility and Competency of the Extension Workers

Public extension has been criticized for providing irrelevant, incomplete and irregular message to the farmers. Thus, farmers have lost their trust on public extension agents' competency. So, it will be a challenge for private extension workers to regain the credibility showing high level of skill to the farmers.

Impact of Climate Change

Climate change has a great impact on agriculture as well as extension services. Bangladesh agriculture shoulders heavily the impacts of climate change like flood, cyclone, drought, salinity, acid rain etc natural disaster of some kind in every year. These disasters cause a heavy damage of agricultural crops and make the result of extension service delivery invisible.

Bureaucratic Complexity

The big bureaucrats of the public extension organization who exercises power would not be happy to welcome privatization of extension service due to their own interest. Moreover, government also fears to lose their popularity as well as vote among the employees of the public extension organization and government job seekers.

Conclusion and Recommendations

Finally, it can be said that extension system of Bangladesh should not be continued entirely publicly funded and it is high time to look forward for private extension system to achieve pluralism in agricultural extension services. The arguments for turning towards privatization of extension service are, to minimize government expenditure, more efficient delivery of services and higher quality of services. However, private extension agents will be less responsive to government policy and there may be linkage problems between private and public research and extension organizations. Despite limitations some developed countries adopted complete privatization of agricultural extension where as in developing countries it is gradual and partial. In Bangladesh, privatization of agricultural extension will face some challenges to deliver service smoothly as a great share of the farming community is poor and marginal. Nonetheless, still Bangladesh has a prospect to go for privatization of extension service partially at least. Even, a parallel private extension system along with public extension system can increase coverage of extension service that will address farm problems and can better ensure the income of the farmers. To make a productive privatization of agricultural extension services in Bangladesh the following recommendations are put forwarded.

- 1. The government should formulate appropriate policy for both public and private sector extension services. The policy should describe the ways of coordination between DAE (Department of Agricultural Extension) and private extension partners in a cohesive manner. Under the leadership of Privatization Bangladesh Commission of new extension services system can take a shape of formal institution. However, there should have strong rules and regulations to protect the consumers' rights and fostering the welfare of the farmers. For both of the extension system, good coordination, collaboration and monitoring in place are essential to make the extension service more pluralistic and effective.
- 2. Like England more and more individual consultant should be encouraged to play role in private sector extension as it does not require much capital investment. Government can arrange interest free motor bike loan for the private field extension consultants.
- 3. Like India the educated unemployed youth can be given sufficient training followed by a handsome loan to establish an agro-input business. So that together with business they can

- also provide extension service to the community farmers.
- 4. In Bangladesh crop sector are most exposed and vulnerable to furious natural disasters. Crop insurance provision should be started to minimize the losses of the farmers. Otherwise, though being suggested by extension agents continuously, farmers will not adopt innovation and will not put the innovation commercially bearing risk.
- 5. There is much deficiency of extension information in Bangladesh. Agricultural extension information should be more exposed to the common people of Bangladesh. Extension information should be included under the coverage of information communication technology (ICT).
- 6. Both for the private extension entrepreneurs and for the farmers, credit should be provided at very low rate of interest so that both parties can run their enterprise smoothly and sustainably.

References

- Adedoyin, S. F. (1995). Non Governmental Organizations in Agricultural Development, The Experience of the Diocesan Agricultural Development Programme of the Catholic Diocese of Ijebu-Ode, Nigeria. Paper Presented at the Second Annual National Conference of the Agricultural Extension Society of Nigeria (AESON), held at NAERLS/ABU, Zaria Nigeria from 26 28 September.
- Adejo, P. E., Okwu, O. J. and Ibrahim, M. K. (2012). Challenges and prospects of privatization of agricultural extension service delivery in Nigeria. Journal of Agricultural Extension and Rural Development, 4(3): 63-68.
- Adetayo, A. J. and Eunice, B. I. (2013). Privatization of Agricultural Extension Services in Nigeria: A Fallacy? AJAEES, 2(1): 14-22.
- Ajayi, A. O. (2006). An assessment of farmers' willingness to pay for extension services using contingent valuation method (CVM): the case of Oyo State. Nigeria. J. Agric. Edu. Extension, 12(2): 97-108.

- Alex, G., Zijp, W., and Byerlee, D. (2002). Rural extension and advisory services: New directions. Unpublished manuscript.
- Ali, S., Ahmed, M., Ali, T. Islam-ud-Din and Iqbal, M. Z. (2008). Farmers' Willingness to Pay for Advisory Services by Private Sector Extension: the Case of Punjab. Pak. J. Agri. Sci., 45(3): 107-111.
- Anderson, J. R. and Feder, G. (2004). Agricultural extension: Good intentions and hard realities. The World Bank Research Observer, 19(1): 41-60.
- Anderson, J. R., Feder, G. & Ganguly, S. (2006). The rise and fall of training and visit extension: An Asian mini-drama with an African epilogue (World Bank Policy Research Working Paper No. 3928). Washington DC: The World Bank.
- Bødker, L., Wulff, N. & Torp, J. (2006). Seed sector country profile: Bangladesh. Danish seed health center for developing countries, Department of Plant Biology, Faculty of Life Sciences, Copenhagen University, Denmark.
- Budak, D. B., Budak, F. & Kacira, O. O. (2010). Livestock producers' needs and willingness to pay for extension services in Adana province of Turkey. African Journal of Agricultural Research, 5(11): 1187-1190.
- Bunney, P. M. G. & Bawcutt, D. E. (1991). Making a business of an extension service. Agricultural Progress, (66): 36-43.
- Byrne, K. J. (1991). A cross-cutting analysis of agricultural research, extension and education in AID-assisted LAC countries. Vol. 1 & 2. Washington D. C. USAID/Chemonics.
- Cary, J. W. (1993). Changing foundations for government support of agricultural extension in economically developed countries. Sociologia Ruralis, 33(3&4): 334-345.
- Dillman, D. A. (1986). Cooperative extension at the beginning of the 21st century. The Rural Sociologist, 6(2): 102-119.
- Dow, K. (2004). Ecuador: New approach to agricultural extension. In W. Rivera & G. Alex (Eds.)., Privatization of extension systems. Case studies of international initiatives (pp. 16-23). Washington DC: The World Bank.
- Extension Committee on Organization and Policy (ECOP), Futures Task Force (1987).

- Extension in transition: Bridging the gap between vision and reality. Washington, DC: NASULGC.
- FAO/World Bank. (2000). Strategic vision and guiding principles: Agricultural knowledge and information systems for rural development (AKIS/RD). Rome: FAO/UN.
- Farrington, J. Christopolos, I., Kidd, A. and Beckman, M. (2002). Can Extension Contribute to Rural poverty Reduction? Synthesis of a Six Country Study. Research Agricultural and Extension Network, Paper No. 123. Overseas Development Institute, London.
- Faure, G. & Kleene, P. (2004). West Africa: Management advice for family farms The role of producer organizations in the delivery of sustainable agricultural extension services. In W. Rivera & G. Alex (Eds.), Demand-driven approaches to agricultural extension. Case studies of international initiatives (pp. 104-113). Washington DC: The World Bank.
- Gill, G., Bartlett, A., Huda, E. & Begum, T. (2003). Agriculture services innovation reform project (ASIRP): End of project review report. Dhaka, Bangladesh: Rural Livelihoods Evaluation Partnership (RLEP).
- Goe, W. R. & Kenney, M. (1988). The political economy of the privatization of agricultural information: The case of the United States. Agricultural Administration and Extension, 28(2): 81-99.
- Government of Pakistan (1988). Report of National Commission for Agriculture. Islamabad, Pakistan.
- Haque, J. T. (n.d.). Agrarian Transition and Livelihoods of the Rural Poor: Agriculture Extension Services. Unnayan Onneshan – The Innovators. Retrieved from: http://www.unnayan.org/reports/agri/Agricu
 - http://www.unnayan.org/reports/agri/Agricu ltureExt.pdf (30 December 2012).
- Hercus, J. M. (1991). The commercialization of government agricultural extension services in New Zealand. In W. M. Rivera & D. J. Gustafson (Eds.), Agricultural extension: Worldwide institutional evolution and forces for change. Amsterdam: Elsevier.
- Harter, D. (1992). Commercialization in Britain. Interpaks Interchange, 9(1): 5-6.
- Islam, M. M., Grey, D. I., Reid, J. I., Kelly, T.C. & Kemp, P. D. (2011). Beyond Recurrent Costs: An Institutional Analysis of the

- Unsustainability of Donor-Supported Reforms in Agricultural Extension. Journal of International Agriculture and Extension Education, 18(1): 5-18.
- Kidd, A., Lamers, J. Ficarelli, P. & Hoffman, V. (2000). Privatizing Agricultural Extension: Caveat Emptor. Journal of Rural Studies, 16: 95-102.
- Lashgarara, F. and Hosseini, S. M. (2011). Influencing Factors on Privatization of Agricultural Extension in Iran Perceived by Extension Experts. Middle-East Journal of Scientific Research, 9(2): 195-199.
- Le Gouis, M. (1991). Alternative financing of agricultural extension: Recent trends and implications for the future. In W. M. Rivera & D. J. Gustafson (Eds.), Agricultural extension: Worldwide institutional evolution and forces for change. Amsterdam: Elsevier.
- Maalouf, W., Contado, T. & Adhikarya, R. (1991). Extension Coverage and Resource Problems: The need for Public-Private Cooperation. In W. M. Rivera & D. J. Gustafson (Eds.), Agricultural Extension: Worldwide Institutional Evolution and Forces for Change. Amsterdam: Elsevier Science Publishers.
- Mathews, J. T. (1997). Power shift. Foreign Affairs, 76(1): 50-66.
- Mwaura, F., Muwanika, F. & Okoboi, G. (2010). Willingness to Pay for the Extension Services among Farmers Involved in Crop and Animal Husbandry. Paper presented at the Joint 3rd African Association of Agricultural Economists (AAAE) and 48th Agricultural Economists Association of South Africa (AEASA) Conference, Cape Town, South Africa, September, 19-23, 2010.
- Mercy, A. O. (2008). Private sector involvement in agricultural extension service delivery in Mali: Views and constraints from the pilot phase. AIAEE, Proceedings of the 24th Annual Meeting at EARTH University, Costa Rica.
- Nnaemeka, A. C., Agwu, A. E. & Nicholas, O. (2006). Constraints and Strategies towards Effective Cost-sharing of Agricultural Technology Delivery in Nigeria: Perception of Farmers and Agricultural Extension Personnel. J. Intl. Agric. Extension Educ., 13(1): 29 41.

- Oladele, O. I. (2008). Factors Determining Farmers, Willingness to pay for Extension Services in Oyo State Nigeria. Agricultura Tropica Et Subtropica, 41(4): 165-170.
- Omotayo, A. M. (2005). ICT and Agricultural Extension: Emerging Issues in Transferring Agricultural Technologies in Developing Countries. In edl Adedoyin, S. F. (2005). Agricultural Extension in Nigeria. Agricultural Extension Society of Nigeria, p. 146.
- Overseas Development Institute (1994). Public sector agricultural extension: Is there life after structural adjustment? Natural Resource Perspectives, Number 2, London: ODI.
- Proost, J. & Röling, N. (1991). Going Dutch in extension. Interpaks Interchange, 9(1): 3-4.
- Purcell, D. L. & Anderson, J. R. (1997).
 Agricultural extension and research:
 Achievements and problems in national systems (World Bank Operations Evaluation Study No. 16851). Washington DC: The World Bank.
- Rivera, W. M. (2001). Agriculture and Rural Extension Worldwide, Options for Institutional Reform in the Developing Countries. Rome: FAO.
- Rivera, W. M. & Alex, G. (2004). The continuing role of government in pluralistic extension system. Journal of International Agriculture and Extension Education, 11(3): 41-51.
- Rivera, W. M. & Cary, J. W. (1997). Privatizing Agricultural Extension. In: Swanson, B. E., Bentz, R. P. and Sofranko, J. A. (ed.), Improving Agricultural Extension: A Reference Manual. Rome: FAO pp. 203-211.
- Rivera, W. M., Qamar, M. K. & Crowder, L. (2002). Agriculture and rural extension worldwide: Options for institutional reform in the developing countries. Rome: FAO/UN; Research, Extension and Training Service.
- Saliu, O. J. & Age, A. I. (2009). Privatization of agricultural extension services in Nigeria proposed guidelines for implementation. Journal of Sustainable Development in Africa, 2(11): 160-176.
- Saravanan, R. (2001). Privatization of agricultural extension. In Shekara, P. C. (ed.), Private extension in India: Myths,

- realities, comprehensions and approaches. Hyderabad: National Institute of Agricultural Extension Management, India.
- Saravanan, R. (1999). A study on privatization of agricultural extension services. M. Sc. thesis, Department of Agricultural Extension, University of Agricultural Science (UAS)., GKVK, Bangalore, India.
- Saviroff, M. & Lindarte, E. (2004). Venezuela: Reforming national extension-recent experience. In W. Rivera & G. Alex (Eds.)., Privatization of extension systems-Case studies of international initiatives (pp, 72-80). Washington DC: The World Bank.
- Shekara, P. C. (2001). Private Extension in India: Myths, Realities, Apprehensions and Approaches. National Institute of Agricultural Extension Management, Rajendranagar, Hyderabad, India, pp, 1-160.
- Saravanan, R. & Veerabhadraiah, V. (2003). Clientele satisfaction and their willingness to pay for public and private agricultural extension services. Tropical Agricultural Research. 15: 87-97.
- Singh, A. K., Narayan, S. and Chauhan, J. (2011). Capacity of the Farmers to Pay for Extension Services. Indian Res. J. Ext. Edu., 11(3): 60-62.
- Sulaiman, R. V., Hall, A. & Suresh, N. (2005). Effectiveness of private sector extension in India and lessons for the new extension policy agenda. Agricultural Research and Extension Network, 141: 1-11.
- TIB (2012). Corruption increased extensively in Bangladesh, champion in Asia, Anti-Corruption Commission's (ACC) stand is

- controversial, campaign of corruption objection ending no more. The Daily Amardesh (In Bengali), Retrieved from: http://www.amardeshonline.com/pages/details/2012/12/06/176696#.UNkY-a6W6_I (25 December 2012)
- Umali, D. & Schwartz, L. (1993). Public and Private Agricultural Extension: Beyond Traditional Frontiers. World Bank Discussion Paper No. 236. Washington DC: The World Bank.
- Watson, A. S., Hely, R., O'Keeffe, M., Cary, J. W. & dark, N. (1992). Review of field-based services in the Victorian Department of Food and Agriculture. Melbourne: Agmedia.
- Wilson, M. (1991). Reducing the costs of public extension services: Initiatives in Latin America. In W. M. Rivera & D. J. Gustafson (Eds.), Agricultural extension: Worldwide institutional evolution and forces for change. Amsterdam: Elsevier.
- World Bank (2003). Existing extension system: Strengths, weaknesses and proposed reforms in Bangladesh. Country paper prepared for regional workshop on Operationalizing reforms in agricultural extension in South Asia, held on 6 -8 February, 2003 at New Delhi, India.
- World Bank (2006). Investments in agricultural extension and information services. Retrieved from:
 - http://web.worldbank.org/WBSITE/EXTER NAL/TOPICS/EXTARD/EXTAGISOU/0,, contentMDK:20930648~pagePK:64168445 ~piPK:64168309~theSitePK:2502781,00.ht ml