

Constraints Faced by Farmers and Village Level Entrepreneurs in Agricultural Extension Services

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Abstract – Village level entrepreneurs (VLEs) are owner and operator of common service centres (CSCs) which have been established as institutional mechanism to take IT-enabled services to the villagers. CSC provides both public (G2C) and private (B2C) services to the clients. Besides other services, farmers are also expected to get agricultural extension services from CSCs. During this process, both farmers and VLEs face constraints. A study was conducted in selected districts of Jharkhand state to identify constraints faced by the farmers and VLEs. The research design adopted was ex-post-facto. Altogether 300 farmers and 30 VLEs constituted the sample. As reported by the farmers, unwillingness of VLEs towards agricultural extension services (62.33 %) was the major constraint which was followed by charges for services (59.66 %), lack of awareness about availability of agricultural services at CSCs (38.66 %), lack of confidence on information furnished by CSCs (37.66 %) and unavailability of information in local and understandable language (36.33 %). The VLEs faced constraints like lack of good content in local language (70.00 %), difficulty in establishing linkage with agricultural research centres (60.00 %), less number of clients seeking information (53.33 %), problem of bandwidth and connectivity (46.67 %), problem of support services (40.00 %), low income from agricultural services (30.00 %), difficulty in getting input license (26.67 %), lack of updated content (20.00 %), clients not willing to pay (16.67 %), inter-VLE competition and problem of electricity (13.33 %) and unawareness about content availability (10.00 %). The findings led to conclude that for promotion of IT-based agricultural extension, the constraints need to be taken care of by the concerned stakeholders. As CSC scheme is being implemented in public-private-partnership mode, public institution like research and extension system should form strong linkage with CSC so that on one hand it could increase economic viability of CSC and on another hand, it could increase the reach of institutions for attaining the ultimate goal of development of farming community.

Keywords – CSC, VLE, ICT, ITEs.

I. INTRODUCTION

The Government has approved a Common Services Centres (CSCs) Scheme for providing support for establishing 100,000 Common Services Centers in 600,000 villages of India. The Scheme, as approved by the Government of India, envisions CSCs as the front-end delivery points for Government, private and social sector services to rural citizens of India, in an integrated manner. The objective is to develop a platform that can enable Government, private and social sector organizations to align their social and commercial goals for the benefit of the rural population in the remotest corners of the country through a combination of IT-based as well as non-IT-based services. A three-tier structure has been constituted

to establish Common Service Centres at Panchayat level.

At the grass root level, there is Common Service Centre which is run by a person of that locality popularly known as village level entrepreneur (VLE). A VLE possessing the correct entrepreneurial skills is essential for the ground level success of the project. As they are delivering essential government services, they could not be treated as normal entrepreneurs. Their services are required to be sustained in public interest. If they do not get income commensurate with their investment and qualification, it is likely that they would not take interest in the business.

II. METHODOLOGY

A. Research Design and Locale of Study

The research design adopted for the study was ex-post facto. The study was conducted in the purposively selected three districts, one each from three divisions of Jharkhand state i.e. Deoghar from Santhal Paragana, Hazaribag from North Chhotanagpur and Ranchi from South Chhotanagpur. These districts were reported to have some agriculture related activities by the CSCs. Two blocks each were purposively selected from selected districts based on the suggestions of special purpose vehicle (SPV) which is responsible for promotion of CSCs in the state. Thus Sarath and Mohanpur blocks from Deoghar district, Katkamdag and Churchu blocks from Hazaribag district and Kanke and Ormanjhi blocks from Ranchi district were selected for the study. Five Panchayats (operational area of VLE) from each block were selected randomly.

B. Selection of the Respondents

Village level entrepreneurs from the study blocks were selected randomly. Ten farmers from the operational area (Panchayat) of each VLE were also randomly selected. Thus, the sample size constituted 30 VLE and 300 farmer respondents.

III. RESULTS AND DISCUSSION

The results of the study are presented under the following sections:

Constraints Faced by Farmers in Accessing Agricultural Services from CSCs:

Farmers face difficulties in accessing agricultural services from common service centres (CSCs) the frequency distribution of which is presented in Table 1.

Table 1. Frequency distribution of farmer respondents in respect of constraints faced in accessing agricultural services from CSCs.

Sl. No.	Constraint	Deoghar (n ₁ = 100)	Hazaribag (n ₂ = 100)	Ranchi (n ₃ = 100)	Pooled (n=300)	Rank
1.	Lack of awareness about the availability of agricultural services at CSCs	52 (52.00)	36 (36.00)	28 (28.00)	116 (38.66)	III
2.	Unavailability of information in local and understandable language	35 (35.00)	42 (42.00)	32 (32.00)	109 (36.33)	V
3.	Charge for services	53 (53.00)	67 (67.00)	59 (59.00)	179 (59.66)	II
4.	Unwillingness of village level entrepreneur towards agricultural services	57 (57.00)	62 (62.00)	68 (68.00)	187 (62.33)	I
5.	Lack of confidence on information furnished by CSCs	43 (43.00)	38 (38.00)	32 (32.00)	113 (37.66)	IV

Figures in parentheses indicate percentages

It is revealed by the table that unwillingness of village level entrepreneurs towards agricultural services was the major constraint as depicted by 57.50%, 62.00%, 68.00% and 62.33% respondents in case of Deoghar, Hazaribag and Ranchi districts as well as in pooled, respectively. This was followed by the constraint *viz.* charges for services as depicted by the percentage values of 53.00%, 67.00%, 59.00% and 59.66% in case of Deoghar, Hazaribag, Ranchi districts and in pooled, respectively. Lack of awareness about the availability of agricultural services at CSCs was ranked third most important constraint faced by the farmers as depicted by the percentage values of 52.00%, 36.00%, 28.00% and 38.66% respondents in case of Deoghar, Hazaribag, Ranchi districts and pooled, respectively. Lack of confidence on information furnished by CSCs was ranked fourth major constraint as indicated by 43.00%, 38.00%, 32.00% and 37.66% respondents in case of Deoghar, Hazaribag, Ranchi districts and pooled, respectively. Unavailability of information in local and understandable language was reported as fifth major constraint as depicted by 35.00%, 42.00%, 32.00% and 36.33% respondents in case of Deoghar, Hazaribag and Ranchi districts as well as in pooled, respectively.

Jaeger and Thompson (2003) asserted that an e-governance project would fail if the government did not take an active role in educating its citizens about its benefit [10]. Islam and Hasan (2008) found that the multi community tele-centres (MCTs) in Bangladesh were facing the challenge of very low literacy rates and an even lower rate of computer awareness [9]. Balaji *et al.* (2007) highlighted that content need to be aggregated from different sources but it needs to be sorted in granular format for rapid adaptation for local use [3]. Castells

(1996) stated that the minimization of the cost of access constitutes the main route to converting the role of ICTs, from instruments of the relative poverty of those excluded from the network [6]. Oestmann and Dymond (2001) stated that to maximize access within the poorest strata of the population, the service needs to be free of charge or in any way cost-minimizing [14]. Rohana (2005) found that commercialization of extension services is not desirable in the interest of poor farmers [15]. Bhatnagar (2000) observed that implementing e-government projects in developing countries required tremendous change in the mindset of the stakeholders involved [4].

It is common knowledge that CSC has been established to deliver all kinds of IT – enabled services to rural people. Agriculture being prime economic activity in rural areas cannot be ignored. The constraint analysis led to conclude that VLEs should be motivated on regular basis to provide agricultural services to the farmers. They need to be made part and parcel of the agricultural extension system. They should be backed by agricultural contents in understandable and local language of the areas. Some mechanism needs to be developed whereby they should be linked to Department of Agriculture, State Agricultural Universities and ICAR Institutes. Farmers should be made aware about the agricultural services available in CSCs. As VLEs are private entrepreneur and they charge for services and the farmers in general do not have the habit to pay for services especially for information services, the service charge for information accessed may be paid by the government for the poor and marginal farmers. This will not only improve the economic viability of CSCs but will also enable farmers to access information at their door step.

Constraints Faced by Village Level Entrepreneurs in Delivering Agricultural Extension Services to the Farmers:

The concept of village level entrepreneurs (VLEs) is based on the premise that they will earn money in lieu of Government to customer (G2C) and business to customer (B2C) services. Government has fixed service charge for them for G2C and B2C services. Village level entrepreneurs are basically entrepreneurs who look at the things from economic perspective. Though G2C services have lent credibility to village level entrepreneurs (VLEs), however, they face difficulties of various kinds which have been grouped into technical, economic, content-related and linkage-related constraints.

Frequency distribution of village level entrepreneur respondents in respect of constraints faced in the delivery of agricultural extension services is presented in Table 2.

Table 2. Frequency distribution of village level entrepreneur respondents in respect of constraints faced in delivery of agricultural extension services.

Sl. No.	Category	Deoghar (n ₁ =10)	Hazaribag (n ₂ =10)	Ranchi (n ₃ =10)	Pooled (n=30)	Rank
I	Technical constraints					
1	Problem of electricity	1 (10.00)	2 (20.00)	1 (10.00)	4 (13.33)	X

2	Problem of bandwidth and connectivity	1 (10.00)	5 (50.00)	8 (80.00)	14 (46.66)	IV
3	Problem of support services	8 (80.00)	3 (30.00)	1 (10.00)	12 (40.00)	V
II Economic constraints						
4	Clients not willing to pay information	1 (10.00)	1 (10.00)	3 (30.00)	5 (16.67)	IX
5	Less number of clients seeking information	6 (60.00)	5 (50.00)	5 (50.00)	16 (53.33)	III
6	Low income from agricultural services	3 (30.00)	4 (40.00)	2 (20.00)	9 (30.00)	VI
III Content-related constraints						
7	Lack of good content in local language	7 (70.00)	6 (60.00)	8 (70.00)	21 (70.00)	I
8	Lack of updation in content	2 (20.00)	3 (30.00)	1 (20.00)	6 (20.00)	VIII
9	Unaware about content availability	1 (10.00)	1 (20.00)	1 (10.00)	3 (10.00)	XII
IV Linkage-related constraints						
10	Difficulty in getting input license	1 (10.00)	1 (1.00)	6 (60.00)	8 (26.66)	VII
11	Difficulty in establishing linkage with agricultural research centers	8 (80.00)	7 (70.00)	3 (30.00)	18 (60.00)	II
12	Inter-VLE competition	1 (10.00)	2 (20.00)	1 (10.00)	4 (13.33)	X

Figures in parentheses indicate percentages
Technical constraints

It is revealed by the table that the VLE respondents of Deoghar district faced problem of getting support services as major technical constraint (80.00%) which was followed by problem of electricity and problem of bandwidth and connectivity (10.00% each). In Hazaribag district, majority of the VLE respondents faced problem of bandwidth and connectivity (50.00%) which was followed by problem of support services (30.00%) and problem of electricity (20.00%). In Ranchi district, problem of bandwidth and connectivity (80.00%) was the major constraint which was followed by problem of electricity and problem of support services (10.00% each).

The pooled data showed that problem of bandwidth and connectivity (46.67%) was the major constraint faced by the VLE respondents which was followed by problem of getting support services (40.00%) and problem of electricity (13.33%).

This finding was in line with the findings of Annamalai and Rao (2003) [2], Odedra and Straub (2003) [13] and Ndou (2004) [12], Cecchini and Raina (2005) [7]

Economic Constraints

It is revealed by the table that in Deoghar district, majority of the VLE respondents (60.00%) faced the problem of less number of clients seeking information which was followed by low income from agricultural services (30.00%) and clients not willing to pay (10.00%). The VLE respondents of Hazaribag district faced the problem of less number of client seeking information (50.00%) which was followed by low income from agricultural services (40.00%) and clients not willing to pay (10.00%). Likewise, in Ranchi district, the VLE respondents faced the constraint of less number of clients seeking information (50.00%), client not willing to pay for information (30.00%) and low income from agricultural services (20.00%)

The pooled data analysis revealed that the less number of clients seeking information was the major constraint as indicated by 53.33% VLE respondents which was followed by low income from agricultural services (30.00%) and clients not willing to pay for information by (16.67%) respondents.

These findings were in accordance with the findings of Watson *et al.* (1992) [16], Cary (1993) [5] and Jiwan *et al.* (2009) [11] that a number of constraints were identified which precluded universal application of privatizing extension services. Study indicated that only 22% farmers are ready to pay for services.

Content-Related Constraints

It is apparent from the table that lack of good content was the major constraint as expressed by 70.00%, 60.00%, 80.00% and 70.00% respondents in case of Deoghar, Hazaribag and Ranchi districts as well as in pooled, respectively. This was followed by lack of updated content in Deoghar (20.00%), Hazaribag (30.00%), Ranchi (10.00%) and pooled (20.00%). Unawareness about content availability was the least important content-related constraint as revealed by 10.00% respondents each in all the districts as well as in pooled.

According to Harris (1999), the social sustainability of tele-centres is the capacity of providing locally relevant content to prospective users [8]. Aker (2010) found that ICT on agricultural extension services delivery in remote areas suffered probably due to the lack of reliable data on outcome variables [1].

Linkage-Related Constraints

Perusal of data indicated that in Deoghar district, 80% of the VLE respondents had faced the difficulty in establishing linkage with agricultural research centers which was followed by difficulty in getting input license and inter-VLE competition as revealed by 10% respondents in each case. In Hazaribag district, 70.00% VLE respondents faced difficulty in establishing linkage with agricultural research centers which was followed by inter-VLE competition (20.00%) and difficulty in getting input license (10.00%). Similarly in Ranchi district, majority of the VLE respondents faced difficulty in getting input license (60.00%) followed by difficulty in

establishing linkage with agriculture research centers (30.00%) and inter-VLE competition (10.00%). The pooled data analysis showed that difficulty in establishing linkage with agricultural research centers (60.00%) was the major constraint which was followed by difficulty in getting input license (26.66%) and inter-VLE competition (13.33%).

The ranking of constraints indicated that lack of good content in local language was the most important constraint which occupied first rank. Difficulty in establishing linkage with agricultural research was ranked second. These constraints were followed by less number of clients seeking information which occupied third rank. Fourth rank was occupied by problem of bandwidth and connectivity. Problem of support services was ranked fifth. Low income from agricultural services occupied sixth rank and difficulty in getting input license occupied seventh rank whereas lack of updated content was ranked eighth. Client not willing to pay for information was ranked ninth whereas inter-VLE competition and problem of electricity jointly occupied tenth rank. Unawareness about content availability was ranked last i.e. twelfth.

If CSCs are to be made centre for rural extension, their linkage with State Department of Agriculture, ICAR institutes, Krishi Vigyan Kendras (KVKs), Zonal Agricultural Research Stations (ZARS) and State Agricultural University (SAU) must be ensured. The interface between field level extension functionaries like VLWs/Farmer Friend and VLEs must be strengthened through a proper mechanism. Agricultural research centers should develop content in local language. It is an established fact that demand-driven agricultural extension is yet to gain momentum. This could be achieved through massive awareness programme. Problem of bandwidth and connectivity will be solved slowly. The problem of unwillingness of clients to pay for services may be solved by the intervention of the government. Some of the centers are willing to start agriculture input centre for which license is required. State Department of Agriculture should facilitate the process so that CSCs should emerge as the viable centre of extension.

IV. CONCLUSION

Both farmers and VLEs are facing constraints in agricultural extension services. The constraints led to conclude that interventions are required by the concerned stakeholders. As CSC scheme is being implemented in public- private- partnership mode, public institution like research and extension system should form strong linkage with CSC so that on one hand it could increase economic viability of CSC and on another hand, it could increase the reach of institutions for attaining ultimate goal of development of farming community.

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