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Clientele Satisfaction and Their Willingness to Pay for Public and Private Agricultural Extension Services

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ABSTRACT: *Public extension performance in many developing countries including India is not up to the expectation of farming community. Further, in recent years, many governments are very reluctant to shoulder huge financial investment for public extension. Hence, extension experts and policy makers propose privatization and or commercialization of extension services in developing countries. Considering existing agricultural extension scenario, a study was designed to determine the level of client satisfaction and to find out the clientele willingness to pay for public and private extension services in three districts of Karnataka State, India, during 2002-03. A summated rating scale was developed to measure the clientele satisfaction and structured interview schedule was used to measure clientele willingness to pay for extension services. Required information was collected from 210 clientele covered by public and private extension organizations like Farmers' Contact Centres (FCCs), Agri-Business Firms (ABFs), Agricultural Consultancies (ACs) and Non-Governmental Organizations (NGOs). Results revealed that a major proportion of the clientele of NGOs have expressed high level of relevancy, quality, usefulness and customer service. In contrast to this, a majority of the Agri-Business Firms' clientele has opined low level of relevancy, quality, usefulness and customer service. Whereas, Farmers' Contact Centres and Agricultural Consultancies, clientele have expressed low level of customer service. Further, results revealed that more than two-fifths of clientele (46.67% and 43.33%) of NGOs and agricultural consultancies clientele had high level of satisfaction, where as, a great majority (91.67%) of agribusiness firms' clientele and more than two-fifths of Farmers' Contact Centres' clientele had low level of satisfaction. The clientele were willing to pay for cultivation practices of fruit crops, plant protection, new varieties, post-harvest technology and land development. Correlation analysis revealed that educational level, annual income, farm size and extension service commitment have influenced their willingness to pay for extension service. Based on the findings, commercialization of selected public extension services and public- private extension partnership programmes have been recommended for the effective agricultural knowledge dissemination.*

INTRODUCTION

Agricultural Extension Services are an essential communication intervention and a prominent companion of agricultural development. Over the years, the 'top-down' model of public extension services has dominated in many developing countries. But, in recent past, performance of public extension has been generally disappointing (Ameur, 1994; Hansra and Adhiguru, 1998). The clientele were not satisfied with the existing public extension service provision. Further, concern for huge financial investment on public extension service, insufficient impact of services and limited

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accountability of the extension personnel makes the extension experts and policy makers to propose privatization and or commercialization of extension services in most developing countries (Umali and Schwartz, 1994). Correspondingly, later part of 1990s witnessed emergence of private extension service providers in most countries, including India (Rivera and Gustafson, 1991; Carney, 1998; Saravanan, 1999). Recent years' institutional pluralism in extension services has been increasingly recognized in India for agricultural development (Sulaiman and Sadamate, 2000). Efforts are directed towards establishing and strengthening public and private extension partnership programmes (Chandrashekara, 2001). Further, decreasing financial support to the public extension needs to evolve the cost recovery or user contribution mechanism (Dinar, 1996; Van den Ban and Hawkins, 1998; Qamar, 2002). In future, the survival of public and private extension mainly depends upon the 'clientele-satisfaction' and 'financial sustainability' of the system. Considering existing scenario in agricultural extension, the objectives of this study were to determine the level of clientele satisfaction in the selected public and private extension organizations and to find out the clientele willingness to pay for public and private extension services.

METHODOLOGY

The study area and the data collection

The research was conducted in Chitradurga, Kolar and Tumkur districts of Karnataka State, India, during, 2002-03. Selection of extension organizations and sample size was done based on purposive and random sampling methods, following (Table 1) public and private extension organizations have been included for the study. The farmers who have direct contact with the selected public and / or private extension service organization and also getting agricultural extension service were selected randomly.

Considering number of extension personnel working in field level, one client for each extension person was selected randomly in Farmers' Contact Centers. But in private extension system, comparatively less number of extension personnel and clientele were available. Hence, two clientele for each extension personnel were selected.

Measurement of the variables

Clientele satisfaction

The clientele satisfaction was operationalised as the degree of satisfaction of the client in respect of relevancy, quality, usefulness and customer service of the extension service.

A summated rating scale was developed (as suggested by Likert, 1932; Edwards, 1969; Devellis, 1991; and Spector, 1992). Four dimensions namely relevancy, quality, usefulness and customer service have been identified based on reviews. Client satisfaction scale has been developed through following stages; collection of items on each dimension, relevancy test, item analysis and scale has been tested for its reliability and validity. Standardized scale consisting of 26 statements (15 positive and 11 negative) was administered to the selected clientele. Responses of clientele were obtained on three point continuum *viz.*, Agree (A), Somewhat Agree

(SWA) and Disagree (DA) with the weightage of 2, 1 and 0 for positive statements and reverse scoring pattern was employed for negative statements. The dimension-wise satisfaction score for each respondent was calculated by summing of all the statement responses. Overall client satisfaction score has been obtained by summing up of four dimension scores. Based on scores obtained by the respondents in each dimension and taking mean and standard deviation, they were categorized into three categories like Low (<Mean- ½ SD). Medium (Mean ± ½ SD) and High (>Mean + ½ SD). Results were expressed in percentage.

Table 1. Selected public and private extension organizations and sample size.

Public and private extension organizations	Clientele Sample size
Public extension	
Farmers' Contact Centers -15	60
Private extension	
Agri-Business Firms	
1. Hindustan Lever Limited (HLL)	6
2. Global Green Co. Ltd.	22
3. Unicorn Ltd.	24
4. PEPSICO: India Holdings Pvt. Ltd.	8
	60
Agricultural Consultancies	
1. Rallis Kissan Kendra -- A TATA Enterprise	8
2.Vaishnavi Farm Services: Agricultural Consultants and Agro-Chemical Suppliers	22
	30
Non- Governmental Organizations (NGOs)	
1. Bharat Agro-Industries Foundation (BAIF) Institute for Rural Development --Karnataka (BIRD-K)	28
2. Mysore Resettlement and Development Agency (MYRADA)	14
3. OUTREACH: Volunteers of Rural Development	12
4. PRAYOG: Centre for Agricultural and Rural Development	12
	60
Public extension clientele	60
Private extension clientele	150
Total sample size	**210**

Clientele willingness to pay

The clientele willingness to pay was operationalised as the degree of desirability of farmers to pay for extension service. Clientele willingness to pay expressed in percentage followed by pay range and average rupees of willingness to pay (per season) of the respondents also documented. The willingness of clientele to pay for the different types of messages also expressed in rank.

Clientele's characteristics

To quantify the selected clientele's characteristics, standard measurement tools such as; scales, index and structured schedule have been used. Personnel

interview method was employed for collection of data. To find out the relationship between willingness to pay and the clientele's characteristics, correlation technique was used.

RESULTS AND DISCUSSION

Clientele satisfaction

Relevancy of extension service

Data in Table 2 reveal that a large proportion of the agricultural consultancy clientele expressed high level of relevancy of extension services followed by Farmers' Contact Centers and NGOs. High relevancy was expressed by the clientele due to the organizations' extension services being clientele need based, compatible with the overall farming system, optimal usage of local resources, practicability of the extension services, timely availability of the inputs, providing relevant market information and distributing relevant literature.

Table 2. Relevancy, quality, usefulness and customer service of the public and private extension services as perceived by the clientele.

Category and score	Public extension	Private extension		
	FCCs (n = 60)	ABFs (n=60)	ACs (n=30)	NGOs (n=60)
	%	%	%	%
Relevancy				
Low < 6.70	39.33	48.33	20.00	20.00
Medium 6.70 to 8.91	13.33	26.67	20.00	33.33
High >8.91	48.33	25.00	60.00	46.67
Quality				
Low < 6.78	21.67	60.00	16.67	26.67
Medium 6.78 to 9.12	38.33	38.33	43.33	26.67
High >9.12	40.00	1.67	40.00	46.67
Usefulness				
Low < 5.71	33.33	80.00	10.00	0.00
Medium 5.71 to 9.12	63.33	20.00	30.00	16.67
High >9.12	3.33	0.00	60.00	83.33
Customer service				
Low < 8.16	48.33	79.33	50.00	13.33
Medium 8.16 to 11.27	15.00	18.33	10.00	30.00
High >11.27	36.67	3.33	40.00	56.67

FCCs - Farmers' Contact Centers ABFs - Agri-Business Firms
ACs - Agricultural Consultancies NGOs - Non-Governmental Organizations

Quality of extension service

Table 2 indicates that more than two-fifths of the clientele in NGOs, agricultural consultancies and Farmers' Contact Centers were opined high quality of the extension service due to disseminated information being up to date, understandable communication, employing of appropriate teaching methods, well organized subject

matter and timely service. Whereas, three – fifths of the agri- business firms' clientele had expressed low quality of the extension service due to agri- business extension personnel disseminating the information to the only contract crops. For other than contract crops, they are not providing improved practices.

Usefulness of extension service

A majority of NGOs and agri-consultancies clientele expressed high usefulness of extension service. This was because of the NGOs' extension personnel creating general agricultural awareness, providing help to make timely decisions, helping to solve clientele problems, developing vocational efficiency, establishing local institutions like Self Help Groups (SHGs) and helping in efficient use of local resources. Whereas, agribusiness firms were not interested in above said services, they were mainly promoting their high input-consuming crops and inputs. Hence, clientele perceived low usefulness of extension service.

Customer service

A majority of the clientele of NGOs and two–fifths of the agricultural consultancy clientele opined high level of customer service due to friendly and courteous extension personnel, farm visits were convenient to farmers, taking more care for clientele, more motivated extension personnel, regular and continuous farm visits, flexible service, more client accountable extension personnel and delivering result oriented advisory services. The extension personnel of agribusiness firms did not practice the above said customer services. It is due to the fact that agri- business firms' extension personnel had pre-agreement with clientele to grow the crop and hence, extension personnel bothered only about the contract crop, not the clientele.

Table 3. Clientele satisfaction in the public and private extension services.

Client satisfaction category and score		Public extension	Private extension		
		FCCs (n = 60)	ABFs (n=60)	ACs (n=30)	NGOs (n=60)
		%	%	%	%
Low	< 28.44	43.33	91.67	23.33	26.67
Medium	28.44 to 37.20	26.67	8.33	33.33	26.67
High	> 37.20	30.00	0.00	43.33	46.67
Mann-Whitney U test					
Public Vs private: 0.201*					
FCCs Vs ABFs: 0.0001**		FCCs Vs ACs: 0.052**		FCCs Vs NGOs: 0.0002**	
ABFs Vs ACs: 0.0001**		ABFs Vs NGOs: 0.0002**		ACs Vs NGOs: 0.004**	

FCCs - Farmers' Contact Centers ABFs - Agri-Business Firms
ACs - Agricultural Consultancies NGOs - Non-Governmental Organizations
* Significant at 5 per cent level ** Significant at 1 per cent level

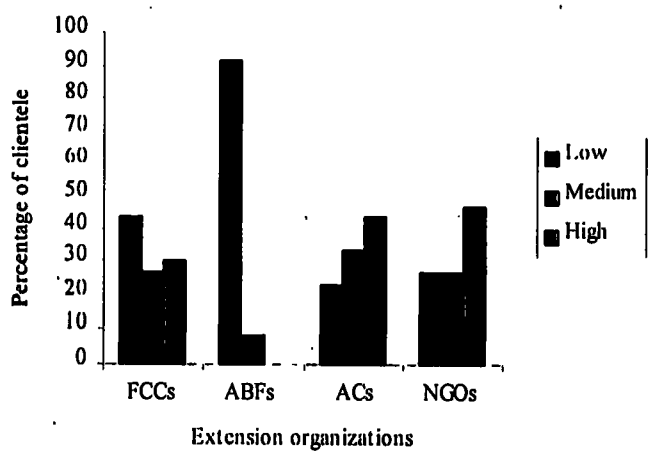

Fig. 1. Clientele satisfaction in the public and private extension services.

Mann-Whitney U test clearly shows significant difference among the public and private extension clientele in respect of clientele satisfaction. This difference is mainly attributed by the difference among the dimensions of clientele satisfaction such as: relevancy, quality, usefulness and customer service of public and private extension services.

Clientele willingness to pay for public and private extension services

Table 4 and Figure 2 show that more than one-third of public extensions (FCCs) clientele were willing to pay. This was due to the fact that often they were not able to get timely advisory services for crop production and marketing, hence, it is their expectation that paying for extension would ensure timely services. One-fourth and three-fifths of agri-business firms clientele were willing to pay for public and private extension respectively, because they were receiving technical advice only for contract crops. Technical service for other crops input supply and market information were the main requirements of the farmers. Hence, they are willing to pay. All the agricultural consultancies clientele were already paying for private extension service, even 70 % of them were willing to pay for public extension, because they mostly come from non-agricultural background, most of the time preoccupied with their primary occupation (non-agriculture occupation). They are having large land holdings with high irrigation potential. This situation makes them to pay for appropriate service, which they need on time. Interestingly, only five % of NGOs clientele were willing to pay for public extension, however, nearly half of the proportion were willing to pay for private extension. This is due to the fact that NGOs clientele are resource poor and also residing in remote villages. Only very few of them are able to get service from public extension (FCCs). They are also not very keen to visit FCCs. Further, there was a feeling among rural farmers that generally resource poor, voiceless (less influential) farmers were neglected by the public extension (FCCs) system. The NGOs extension personnel were very much committed to serve the betterment of clientele. The NGOs were making rural people to feel empowered through Self Help Groups (SHGs) and farmers were getting client-specific and need based advisory services for their overall

development. Even though, they are small and marginal farmers, they are willing to pay for private extension service due to the worthiness of the NGOs extension service.

Table 4. Clientele willingness to pay for public and private extension services.

Category	Public extension	Private extension		
	FCCs (n = 60)	ABFs (n=60)	ACs (n=30)	NGOs (n=60)
	%	%	%	%
Willing to pay				
Public extension	36.67	25.00	70.00	5.00
Private extension	36.67	60.00	100.00	45.00
Pay range (Rs. Per season)				
Public extension	50 to 300	50 to 250	50 to 300	100 to 200
Private extension	50 to 500	50 to 150	250 to 700	50 to 350
Average pay (Rs. Per season)				
Public extension	115.91	160.00	150.00	133.33
Private extension	131.82	188.89	378.33	143.52

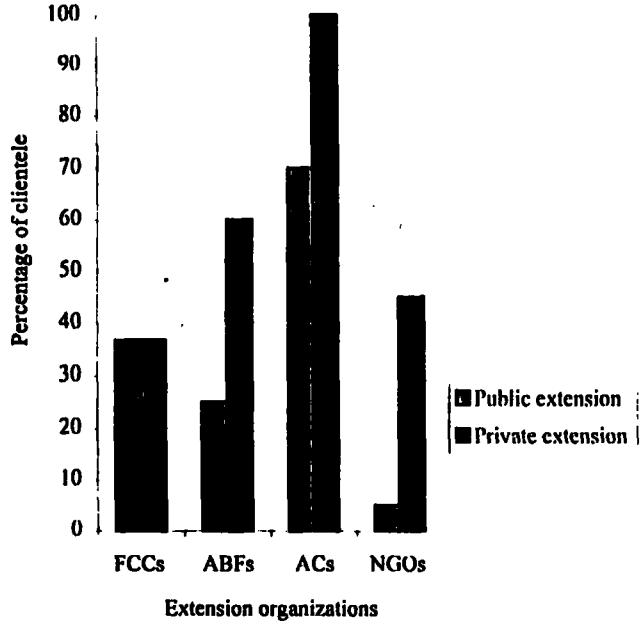

Fig. 2. Clientele willingness to pay for public and private extension services.

Data further indicate that, there was a general tendency that majority of the public and private extension clientele were willing to pay more for private extension compared to public extension. Because of the expectation of clientele that if they were paying for private extension, it ensures timely advisory services, payment was

positively linked with performance of private extension. Further, it is the matter of survival of private extension and they need to satisfy the clientele with appropriate supply and services. Further, it is expected that, if farmers are paying for the services they receive, they get the ownership rights of appropriate advisory services and it forces the extension personnel to provide information for which farmers feel a need. Private extension tries to utilize the available resources efficiently in the client system. It ensures quality extension service and creates value for the service.

Type of message that the public and private extension clientele were willing to pay

Table 5 reveals that public extension (FCCs) clientele were willing to pay for cultivation practices of fruit crops, marketing information, post harvest technology, plant protection, cultivation practices of vegetable crops followed by other messages. Whereas agribusiness firms clientele were willing to pay for new varieties, land development, post-harvest technology, plant protection, seed production followed by other messages. Agricultural consultancies and NGOs clientele were willing to pay for marketing information, new varieties, land development, plant protection followed by other messages.

Table 5. Type of message for which the public and private extension clientele were willing to pay.

Sl No	Types of messages	Public extension	Private extension		
		FCCs (n = 22)	ABFs (n=27)	ACs (n=30)	NGOs (n= 27)
		Rank	Rank	Rank	Rank
1.	Land development	VIII	II	VI	III
2.	New variety / new breeds	X	I	III	V
3.	Nursery management	X	IX	VIII	XII
4.	Seed treatment	X	XI	X	X
5.	Cultivation practices of food crops	X	XIV	XIII	VIII
6.	Cultivation practices of vegetable crops	V	XV	V	VI
7.	Cultivation practices of fruit crops	I	X	IV	IX
8.	Cultivation practices of flowers	VIII	VI	XIV	XIII
9.	Plant protection	IV	IV	II	II
10.	Irrigation management	XIV	VI	VI	XI
11.	Seed production	XIV	IV	XII	XIII
12.	Post –harvest technology	III	II	VIII	IX
13.	Marketing information	I	XI	I	I
14.	Dairy	XVI	XIII	XV	VI
15.	Poultry	VIII	XV	XV	IV
16.	Credit service	VI	VIII	X	III

Clientele were willing to pay for market information. It is useful to know the availability and price trend of the agricultural inputs and selling and purchasing of agricultural produce. Most of the vegetable growers were willing to pay for post-

harvest technology related messages to prevent losses. Plant protection measures are generally most sought information from the different types of clientele. To increase the production, the clientele need information about new varieties and land development measures. Hence, clientele were willing to pay for the specific messages.

Clientele satisfaction and willingness to pay for extension service

Results from Table 6 reveal that in case of public extension clientele characteristics like educational level, willingness to pay had positive significant relationship with clientele satisfaction. Whereas in private extension clientele characteristics like farm size and irrigation intensity had negative significant relationship with client satisfaction. But, extension service commitment had positive significant relationship with client satisfaction.

Table 6. Relationship between personal, socio-economic and psychological characteristics of the clientele & their satisfaction and willingness to pay for public and private extension services.

Sl. No.	Characteristics	Public Extension Service (n=60)			Private Extension Service (n=150)		
		Clientele Satisfaction	Clientele willingness to pay		Clientele Satisfaction	Clientele willingness to pay	
			Public extension	Private Extension		Public extension	Private extension
1	Education level	0.407**	0.416**	0.428**	0.091 NS	0.218**	0.278**
2	Fanning experience	-0.232 NS	-0.231 NS	0.076 NS	0.125 NS	-0.093 NS	-0.053 NS
3	Annual income	0.228 NS	0.450**	0.497**	0.073 NS	0.289**	0.372**
4	Farm Size	0.145 NS	0.425**	0.451**	-0.303**	0.428**	0.341**
5	Irrigation intensity	-0.188	0.029 NS	-0.021 NS	0.0481 NS	0.190*	0.191*
6	Cropping intensity	-0.121NS	0.158 NS	0.167 NS	0.167 NS	-0.018 NS	-0 076 NS
7	Innovation proneness	-0.121 NS	0.158 NS	0.167 NS	-0.094 NS	0.197**	0.193**
8	Extension service commitment	0.133 NS	0 372**	0.353**	0.047 NS	0.433**	0.196**
9.	Willingness to pay						
	Public extension	0 288**	-	0.963**	-0.33 NS	-	0.671**
	Private extension	0.297**	0.158NS	-	-0.021 NS	0.136NS	-

** Significant at 1 per cent level * Significant at 5 per cent level NS- Non- Significant

Public and private extension clientele characteristics such as educational level, annual income, farm size, extension service commitment had positive significant relationship with willingness to pay for public and private extension. Willingness to pay for public extension had positive significant relationship with willingness to pay for private extension service.

From the results it is clear that clientele satisfaction in Farmers' Contact Centers had positive influence on willingness to pay for public extension, but it is not so among private extension clientele. Further, results reveal that high level of

education, high annual income, farm size and extension service commitment of the clientele influenced their willingness to pay for extension service.

CONCLUSION

From the results of the investigation it can be concluded that a major proportion of the clientele of NGOs have expressed high level of relevancy, quality, usefulness and customer service. In contrast to this, a majority of the Agri-Business Firms' clientele has opined low level of relevancy, quality, usefulness and customer service. Whereas, Farmers' Contact Centers and Agricultural Consultancies clientele have expressed low level of customer service. Further, results revealed that more than two-fifths of clientele of NGOs and agricultural consultancies clientele had high level of satisfaction. But, a great majority of agribusiness firms' clientele and more than two-fifths of Farmers' Contact Centers clientele had low level of satisfaction. Clientele were willing to pay for cultivation practices of fruit crops, plant protection, marketing information, new varieties, post-harvest technology and land development. Education level, annual income, farm size and extension service commitment influenced clientele's willingness to pay for extension service.

IMPLICATION AND RECOMMENDATIONS

- The development and standardization of measurement device designed for quantifying 'clientele satisfaction' is expected to serve as a rational and feasible tool for researchers and extension experts to measure the clientele satisfaction in public and private agricultural extension service organizations.
- Agri-business firms' and FCCs' extension personnel need to be trained on effective extension service delivery.
- Public and private extension organizations personnel (except NGOs) need to be trained on better "customer service" aspects.
- Through public and private extension service partnership programmes, NGOs and agricultural consultancies need to be given more responsibilities.
- In public extension, fee-based extension service may be introduced for the topics like plant protection, market intervention and post-harvest technology.
- It is recommended that public extension may be withdrawn for farmers who are having big land holdings and high annual income.

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