Development of a Scale to Measure Attitude Towards Privatization of Agricultural Extension Service

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ABSTRACT. *Agricultural extension is a system of service and education designed to meet the needs of the people. Extension service has a long history and evolution extends over the centuries. However, modern extension systems have existed since the early years of nineteenth century. Over the years, approach of agricultural extension to transfer farm technology has undergone spectacular changes structurally and functionally across the globe. Many countries are now in the process of modifying the existing public extension approach, so as to meet current challenges such as globalization and liberalization. It is therefore imperative that discussions are triggered on issues relating to alternative approaches such as privatization. Privatization of agricultural extension can be viewed as supplementary or alternative to public extension services. Before effecting any such change, it is necessary to know the attitude of farmers, extension workers and scientists. For this purpose, the study was designed with the objective of developing a scale to measure attitude towards privatization of agricultural extension service. A summated rating scale was been developed through following stages; identification of dimensions, collection of items, relevancy test, item analysis, reliability and validity. Based on review of literature and discussion with experts, 46 attitudinal items were developed and subjected to judges' rating on a four point continuum. Considering a relevancy percentage of 75, relevant items were subjected for item analysis on a five point continuum. The scale was tested for reliability ($r_t = 0.722$) and validity. The final format of the scale with 21 statements has practical applicability in ascertaining the attitude of farmers, academicians and extension professionals, thereby facilitating right decisions by policy makers.*

INTRODUCTION

The world is in a great period of change and agriculture is no exception to this. Extension is an important force in this era of agriculture

Validity

Content validity

To judge whether each item and the dimension of items as a whole covers what it is supposed to measure and how well the content of the scale represented the subject matter under study, all the possible items covering the universe of content were selected by discussion with experts, resource personnel and from available literature on the subject, scale satisfied the content validity.

Standardized scale to measure attitude towards privatization of agricultural extension service

The scale was developed with appropriate steps and also tested for reliability and validity. So, the scale developed to measure attitude towards privatization of agricultural extension service is considered to be a standardized one.

The scale developed to measure attitude towards PAES is given below:

PAES - Privatization of Agricultural Extension Service

Sl. No.	Attitude Statements	Response Categories SA/A/UD/DA/SDA
1	PAES reduces the budget burden of state or central government	
2	PAES is not suitable because most of the operational land holdings are small and marginal	
3	PAES enhances overall efficiency of agricultural production system	
4	Subsistence nature of the farming does not support the farmers to meet the expenses of PAES	
5	Vast rainfed area subject to external calamity provides less scope for PAES	
6	PAES hampers the free flow of information	
7	Commercial interest of PAES jeopardizes achieving eco-friendly and sustainable agriculture	*Cont'd*

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Sl. No.	Attitude Statements	Response Categories SA/A/UD/DA/SDA
8	PAES ensures maximum profit to the farmers	
9	PAES is not desirable in the interest of poor farmers	
10	Achieving coordination between PAES and other allied government departments, Govt. Agricultural Research System is very difficult	
11	PAES is more inclined to charge for services and more commercial oriented rather than public interest	
12	Farmers will be more inclined to follow advice of Private Extension Worker	
13	PAES renders services based on seasonal needs	
14	PAES is likely to increases the regional imbalance	
15	PAES provides solution to all technical problems of farmers pertaining to agriculture and allied activities	
16	PAES helps extension worker to gain more confidence among farmers	
17	PAES is an hindrance to employ group approach techniques	
18	PAES extension worker upgrade their knowledge	
19	PAES ensures appropriate advisory services	
20	Information transferred by PAES needs constant monitoring by some government agency	
21	The status and recognition of extension workers increases in PAES	

SA - Strongly agree, A - Agree, UD - Undecided, DA - Disagree, SDA - Strongly disagree

Pre-testing

The developed scale was pre-tested with 30 respondents (farmers, extension personnel and scientists 10 from each group) in a non-sample area to know the suitability of the scale as well as to observe the difficulties of test administration. There was no difficulty or inadequacy in the test administration or in observing and recording the views of the respondents.

Method of scoring

The responses were obtained on a five point continuum *viz.,* strongly agree (SA), agree (A), undecided (UD), disagree (DA) and strongly disagree (SDA) with weightages of 5, 4, 3, 2 and 1 for positive statements and reverse scoring system was employed for negative statements. The total attitude score for each respondent was calculated. The possible total score of the scale ranges from 21 to 105. Based on the scores obtained by the respondents they were categorised into three categories taking mean (X) and standard deviation (SD) as measures of check.

Attitude category	Attitude Score
Least favourable	$< X - \frac{1}{2} SD$
Favourable	$X \pm \frac{1}{2} SD$
Most favourable	$> X + \frac{1}{2} SD$

Pre-test results revealed that, majority of the farmers and scientists had favourable and most favourable attitude. In contrast to this, nearly 75% of extension personnel had least favourable attitude towards privatization of agricultural extension service.

IMPLICATIONS AND RECOMMENDATIONS

The standardized scale will have practical applicability in ascertaining the direction and intensity of attitude of farmers, academicians and extension personnel, and thereby it facilitate to take right decisions by policy makers. It can be used extensively by further validating the scale.

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change. Structural and functional change in agricultural extension is important to meet the needs and challenges of the next millennium. This globalization and liberalization era, has made people to rethink the role of public sector extension in developing countries. These include:

1. Fiscal crisis/financial burden on governments
2. Disappointing public extension services
3. Opportunities and challenges of agriculture in GATT

In this existing climate privatizing the public extension service has come as an alternative. Therefore, in the coming years, experimentation or implementation of privatization might occur in many developing countries. Before effecting such change, it is important to know the preference of farmers, extension personnel and scientists. Generally, preference of a person is expressed in terms of opinion or attitude. Attitude, many a times acts as an influencing or determinant factor and also may contribute towards action. Measuring this psychological variable provides basis for planning and also effects desirable changes in existing system. Thurstone (1946) defined attitude as a degree of positive or negative affect associated with some psychological object. It may be any symbol, phrase, slogan, person, institutions and idea towards which people can differ with respect to positive or negative affect.

The objective of the study was to develop a scale to measure attitude towards privatization of agricultural extension service.

In the present attempt, attitude was operationalised as individual's degree of favourableness or unfavourableness towards privatization of agricultural extension service.

Bloome (1993) indicated that, private extension involves personnel in the private sector which delivers advisory services in the areas of agriculture and is seen as an alternative to public extension. Whereas, Van den Ban and Hawkins (1996) state that farmers are expected to share the responsibility for this service and pay all or part of the cost.

For this purpose, the idea of privatization was operationalised in the following manner:

"Privatization of agricultural extension service refers to the services rendered in the area of agriculture and allied aspects by extension personnel working in private agencies

or organizations for which farmers are expected to pay a fee and it can be viewed as supplementary or alternative to public extension services".

METHODOLOGY

To measure this psychological natural tendency, the method suggested by Likert (1932), Devellis (1991) and Spector (1992) in developing summated rating scale was followed and attitude scale developed through following stages.

1. Identification of dimensions
2. Collection of statements
3. Relevancy test
4. Item analysis
5. Reliability, and
6. Validity

Identification of dimensions

Dimensions were related to privatization of agricultural extension service identified through review of literature, discussion with extension experts, economists, sociologists, and psychologists. Information was gathered through informal discussions with different categories of farmers. Finally, three major dimensions viz., general viewpoint, farmers concern and extension functionary level were considered in development of attitude scale.

Collection of statements

Large numbers of statements reflecting favourable or unfavourableness of attitudes towards each dimension of privatization of agricultural extension service were collected from reviews of literature, discussions with specialists and farmers. The statements thus collected were carefully edited, revised and restructured in the light of fourteen criteria suggested by Edwards (1969). Care was taken to include approximately equal number of positive and negative statements. Thus 46 statements were finally selected for further analysis.

RESULTS AND DISCUSSION

Relevancy test

To know the relevancy of the selected 46 statements, questionnaires were mailed with appropriate instruction to 100 judges, who were experts in the field of agricultural extension in Indian Council of Agricultural Research (ICAR) Institutes, State Agricultural Universities (SAUs) and Department of Agriculture. They were asked to check each of the statement carefully whether relevant or not relevant, using four point continuum *viz.*, most relevant, relevant, least relevant, not relevant. Judges were also requested to make necessary modifications and additions or deletions of words or sentences, if they so desired.

Sixty five per cent of judges responded to the questionnaire. Considering a relevancy weightage of more than 0.75 (relevancy per cent of more than 75 or mean relevancy score more than 3) statements were selected for further analysis. Further, in the light of comments of the judges, the items were modified and rewritten.

Item analysis

Item analysis is an important step in constructing a valid and reliable scale. The purpose of item analysis was to examine how well each item is discriminating between persons having different attitude. For this, selected, relevant, 26 statements were administered for 60 farmers, scientists, and extension personnel (20 each) in non-sample area. The responses were obtained on a 5 point continuum *viz.*, strongly agree, agree, undecided, disagree, strongly disagree. Positive statements were scored with weightages of 5, 4, 3, 2 and 1, and in case of negative statements reverse scoring was adopted, *i.e.*, 1, 2, 3, 4 and 5 respectively. The attitude for each individual on the scale was computed by summing up the scores of all the statements.

Computing 't' values

For the purpose of evaluating the statements, the respondents were arranged in descending/ascending order based on individual attitude scores. After that, criterion group was selected, *i.e.*, 25 per cent of the respondents having the low score and 25 per cent respondents having the high score were taken.

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The t-value for each statement was calculated by using the following formula:

$$ t = \frac{X_H - X_L}{\sqrt{SX^2_H - \frac{(SX_H)^2}{n_1} + SX^2_L - \frac{(SX_L)^2}{n_2}}} $$

Where,

X_H - The mean score on a given statement for high score group

X_L - The mean score on a given statement for low score group

SX^2_H - Sum of the squares of the individual scores in the high score group

SX^2_L - Sum of the squares of the individual scores in the low score group

n_1 - 25 percentage of respondents having high score

n_2 - 25 percentage of respondents having low score

The 't' value is a measure of the extent to which a given statement differentiates between the high and low groups. The 't' value equal to or greater than 2.064 ($n_1 + n_2 - 2$ df at 5%) indicates the average response of high and low groups to a statement differs significantly. Those 21 (10 positive and 11 negative) statements with good discriminating values were retained and other statements were deleted.

Reliability

Scale consistency was measured by employing test-retest method. This test was conducted on 38 respondents from non-sample area. After first administration of the scale the score of each respondent was calculated. The second administration of the scale on the same sample was conducted 30 days after the first administration. The Pearson-product moment correlation coefficient (r_t) between the two scores were worked out. The $_t$r value was 0.722. The reliability value was found to be significant at 0.01 level of probability indicating high reliability of the scale.

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