A Scale to Measure the Attitude of Farmers Towards Kisan Call Centre

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ABSTRACT

Kisan Call Centre is one of the active services provided by the Government of India exploiting the area of ICT to support the farmers in their day to day farming activities. Since the service is free of cost and can be accessed from any part of the country from 6 AM to 10 PM, it is assumed to be utilized by majority of the farmers in India. Hence the present study was undertaken to develop a scale that would help to measure the attitude of farmers towards Kisan Call Centre. Thirty statements expressing the attitude of farmers towards KCC to be included in the scale reflecting both favourable and unfavourable attitude towards KCC was collected through review of literature and discussion with experts in the field of extension and was carefully edited using the criteria suggested by Edwards (1957). S-value and Q- value for the statements were found and that statement whose S-value were spread throughout the continuum and had small Q- value was selected. Finally twenty three statements were selected to form Thurston and Chave's (1928) equal appearing scale to measure the attitude of farmers on KCC. The reliability and validity of the scale was also found in order to ensure the scale's usability.

The population in India is increasing day by day. This has created a wide gap between farmer and the extension agents which restricts the extension system from reaching the farmers to provide service. The telecommunication sector since the 1990s has paved the way for the new revolution, Information and Communication Technology (ICT). As on 30th November 2015 total telephone subscribers 1035.18 million (25.72 million fixed land line telephones, 1009.46 million wireless) and 131.49 million broadband subscribers were estimated by the Telecom Regulatory Authority of India (TRAI, 2015). The tele-density has reached 81.82% (number of telephone subscribers per 100 individuals).

This boom in the telecommunication sector and the increased advantages of ICT stimulated the Government of India to provide the services of Kissan Call Centre (KCC) to the farming community.

Kisan Call Centre was launched on the twenty first of January 2004 by the Department of Agriculture & Cooperation (DAC), Ministry of Agriculture, Govt. of India (GOI) to provide free extension services from 6 AM to 10 PM to the farming community through the toll free number 1800-180-1551.

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Today Kisan Call Centre is one among the most utilized Information communication services provided by the GOI. However there is a need to understand the farmers attitude towards the service provided. Therefore the present study was undertaken to construct and standardize a scale that would be helpful to measure the attitude of famers using the Kisan call centre service.

Attitude is defined as the degree of positive or negative affect associated with some psychological object (Thurstone, 1946). Therefore the psychological object in the present study is the service provided by the Kisan Call Centre. The following methodology was used to develop a Thurstones equal appearing interval scale to measure the attitude.

METHODOLOGY

The scale was developed for the study to measure the favourableness or unfavourableness of farmers towards Kisan Call Centre.

Item pool

Thirty five statements expressing the attitude of farmers towards KCC were first collected through exhaustive review of literature and discussion with experts in the field of extension and were carefully edited using the criteria suggested by Edwards (1957). Therefore thirty statements out of the thirty five statements which formed the universe of content were retained so as to include statements reflecting both favourable

and unfavourable attitude towards KCC. Finally scale value (S-value) and Q- value for the thirty statements were computed.

Scoring and computation of scale values and Q values

The thirty statements selected were resorted to a panel of 50 judges from various universities and research station for judges rating and was requested mark their opinion on a five point continuum equal appearing interval continuum from 'Most favourable to 'least favourable'. Thirty judges responded by sending their judgments. Based on judgment, the scale value of the distribution and the Q value for the statement were calculated. Finally those statements distributed uniformly along the psychological continuum and those items with smaller Q values were selected. Care was taken to ensure that the both positive and negative statements were included and that the statements formed the universe of content which covered different aspects of Kisan Call Centre services. Finally twenty three statements were selected to form an equal appearing interval scale. The attitude scale constructed is given in Table 1.

Reliability of the scale

A scale is said to be reliable when it produces the results with high degree of consistency when administer to the same respondents at different times. In this study the reliability of the scale was determined by split -half method. The scale was administered to 20 respondents in Trivandrum region and

Table 1.
Final Statements Selected for Scale Construction

Sl.No.	Statements	S-value	Q-value
1.	Farmers' feedback is fast through KCC than traditional methods	3.9	1.1
2.	Work assignments are not fully explained in KCC by the officials*	4.1	1.5
3.	At times, KCC is not good at all in terms of dairying*	3.5	1.6
4.	The centre provides solutions for only regular farm related problems*	3.1	1.6
5.	KCC provides new methods for solving field problems	2.7	1.6
6.	KCC provides fair amount of information for the query farmers ask	4.6	1.3
7.	For instant information KCC is always used	4.0	1.4
8.	The farmers following KCC recommendations get positive results	4.6	1.3
9.	KCC extension services avoid the personal extension contact*	4.7	1.1
10.	The benefits received from KCC are as good as most other organizations offer to other farmers	3.7	1.6
11.	KCC services' is a distant dream for resource poor farmers*	3.3	1.4
12.	Illiteracy will not deter farmers in availing KCC services	4.0	1.6
13.	KCC saves farmers time	4.2	1.2
14.	Recommendations provided through telephone is clear and easy to understand	4.5	1.1
15.	All kinds of information exchange are possible through KCC	4.0	1.6
16.	KCC agents often fail to comprehend the queries*	4.0	1.6
17.	Phone-in-line with scientists gives first-hand information about queries	2.2	1.6
18.	Solutions provided through KCC is very helpful	4.1	1.0
19.	KCC extension services provide new opportunity to build a skilled and knowledge community	2.0	2.5
20.	KCC based extension services are alternative to the present extension system	4.2	1.2
21.	KCC is one of the potential tools of ICT to reach needy farmers	3.7	1.2
22.	KCC can never replace traditional method of extension service*	3.2	1.6
23.	The chemicals recommended by the agents are never available in the input shops*	4.0	1.8

* Negative statement

were asked to mark their response on a five point continuum strongly disagree, disagree, undecided, agree, strongly agree. The scale was divided into two halves based on odd- even numbers of the statement. The scores on the odd numbered items as well as the scores of the even numbered items of same respondents were correlated using the Pearson's product moment correlation coefficient. The coefficient of internal consistency was worked out using the formula:

Where N= Number of respondents

X= Value of odd numbered items score

$$\frac{N\sum XY-(\sum X)(\sum Y)}{\sqrt{[(N\sum X^2)-(\sum X)^2][(N\sum Y^2)-(\sum Y)^2]}}$$

Y= Value of even numbered items score

The roe value obtained was again correlated using Spearman Brown formula and thus obtained the reliability "rtt" of the original test. The formula used was

$$rtt= \frac{2\ roe}{1 + roe}$$

The obtained "rtt" value was 0.9679, which indicated a high reliability of the scale.

Validity of the scale

According to Kerlinger (1973) content validity is the representativeness or sampling adequacy of the contents, the substance, the matter and topics of a measuring instrument.

To ensure the obtained test measured the variable it was supposed to measure the validity of the scale was to be assured. There are different types of validity and among them the most common one used is the content validity. In this study content validity was ensured. The statements that were gathered to form the scale were selected based on review of literature as well as after discussion with experts in the field of extension. Later the statements selected was also subjected to judges rating in order to be included the scale developed.

The final statements selected to form the scale can be used to measure the attitude of farmers. The farmers to whom the scale is administered can be asked to mark their agreement or disagreement on a five point continuum ranging Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA). The score ranges from 5 to 1 for positive statements with 5 for strongly agree and 1 for strongly disagree. The scoring pattern is reversed for the negative statements. The individual's score is worked out by multiplying scale value for a particular statement and respective score assigned by the individual. Thus score obtained for each statement will be summed up to arrive at the attitude score of the individual respondents.

CONCLUSION

The scale formed with the twenty three statements after ascertaining the reliability and validity can be used to measure the

attitude of the farmers towards KCC. This will be helpful in understanding the strengths as well the drawbacks of the call centres working in various states and there by bringing changes in the working of call centre in order to provide better services to the farming community.

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