



Factors Effecting Socio-Economic Characteristics of Kissan Call Centre Beneficiaries in Relation to Awareness and Benefits

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ABSTRACT

Kissan Call Centre (KCC) is an important initiative undertaken by Ministry of Agriculture and Farmers Welfare, Government of India on usage of new media tools for instantaneous transfer of farm advisories. A research study was conducted in Mahaboobnagar district of Telangana state to analyze the factors effecting relationship between awareness and benefits with socio-economic characteristics KCC farmers. An ex-post facto research design was employed for study. By employing simple random sampling techniques 90 KCC beneficiaries were chosen as respondents. Data were collected with the help of pre-tested interview schedule. Data were analyzed using statistical approach of multiple regression. Dependent variables of the study were awareness and benefits. Independent variables were selected for study such as age, education, farm size, farming experience, source of irrigation, contact with extension and other agencies, information seeking behavior, perception towards mobile phone in farming, innovativeness. From the results it was observed that, the variables Education status, Contact with extension and other agencies, Information seeking behaviour, Perception towards mobile phone in farming, Innovativeness showed their positive contribution on the awareness. The R² value has shown that all the variables together contributed 63.10 per cent variation in the level of awareness among the respondents. It was also revealed from results that, the variables Farming experience, Contact with extension and other agencies, Perception towards mobile phone in farming, Innovativeness showed their positive contribution on the benefits. The R² value has shown that all the variables together contributed 50.10 per cent variation in the obtained benefits among the respondents. On identification of training needs in KCC, demonstration, outreach campaign, the mentioned socio-economic characteristics have to be considered as it has influenced the KCC beneficiary farmers to build awareness and benefits.

Key words: Farmer Call Centre, Socio-economic characteristics, independent variables, dependent variables.

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INTRODUCTION

The Gross Domestic Product (GDP) contribution in Indian Agriculture sector which accounts 15.87% (2018-19) comparing the world of 6.4%. The situation in Indian has become one of the challenging tasks to meet the food requirements of growing population. There is a wide gap between farmers and extension agents who serves and educates the farmers on recent technologies from research institutes. Several emerging challenges confront Indian farmers. These include limited land and water availability, which is further exacerbated by degradation of natural resources; climate changes; changes in demand and consumption patterns, moving toward high-value agriculture; increasing population pressure; and liberalization of trade [3].

According to Claire J. Glendenning [2], despite the variety of agricultural extension approaches that operate in parallel and sometimes duplicate one another, the majority of farmers in India do not have access to any source of information. This severely limits their ability to increase their productivity and income and thereby reduce poverty. Another problem is that the extension agent found difficult to reach the targeted audience [5]. In this context, Information and Communication Technology (ICT) has the potential to revolutionize Indian farming sector in terms of significantly improving farm productivity, production and profitability at the level of lakhs of small, marginal, tenant and women farmers [1].

Farmer can access and use information related agriculture and allied sectors. Among all ICT tools, telephone services have been made available in small towns, markets and villages. Mobile and Telephone which is a powerful electronic machine that was a farmer's dream earlier has become a reality as the farmers can immediately make use of it to address their field problems and other farm related problems [4].

With a view to utilize the extensive telecom infrastructure in the country for farmers, the Dept. of Agriculture and Cooperation (DAC), Government of India launched KCC on January 21, 2004. KCC provides free tele agricultural advisory services to the farming community by exploiting the tele communication facility. The service can be availed from 6 am to 10 pm throughout the week by the farming community in their respective local language throughout the country through the toll free number 1800-180-1551 [5]. Keeping in the view of importance of KCC present study was undertaken to know the relationship between socio-economic characteristics of KCC beneficiary farmers with awareness and benefits.

MATERIAL AND METHODS

A research study was conducted in Mahaboobnagar district of Telangana state. In Mahaboobnagar district two mandals (blocks) were selected for the study. In each block three villages were selected randomly. Total Six villages were selected for the study. From each village 15 beneficiary farmers were selected for the study. Total 90 respondents were selected for the study. Expost-facto research design was adopted for the study. Simple random sampling method was followed for the study. The variables were selected through matrix ranking method. A pre-tested interview scheduled was used for data collection. Awareness and benefits were selected as dependent variables. Age, educational status, farm size, farming experience, cropping pattern, source of irrigation, material possession, contact with extension and other agencies, information seeking behavior, participation in extension methods, perception towards mobile phone in farming, innovativeness were selected as independent variables. Data coded, tabulated and analyzed through multiple regression model. Multiple regression analysis was performed to know the relationship between dependent variables such as awareness and benefits with profile characteristics of KCC beneficiaries.

RESULTS AND DISCUSSION

Multiple regression analysis helps us to understand how much the dependent variable change will influence change in the independent variables. In order to find out the relative influence of each independent variable towards participation, multiple regression analysis was performed and the results are presented in Table 1.

Multiple regression analysis of independent variables with Awareness

The result from Table 1, indicated that the variables Education status (X_2), Contact with extension and other agencies (X_8), Information seeking behaviour (X_9), Perception towards mobile phone in farming (X_{11}), Innovativeness (X_{12}) showed their positive contribution towards awareness. The R^2 value has shown that all the variables put together contributed 63.10 per cent variation in the level of awareness among the respondents.

The 'F' value was found significance at one per cent level of probability. Since the 'F' value was significant, the prediction equation for the cause and effect relationship was fitted for the participation of the beneficiaries as given below.

$$Y_1 = 3.497 - 0.715 X_1 + 2.019 *X_2 - 1.313 X_3 - 4.595**X_4 - 0.956*X_5 - 2.211 *X_6 - 2.353*X_7 + 2.389 *X_8 + 2.148 *X_9 - 0.562X_{10} + 2.987 **X_{11} + 3.891 **X_{12}.$$

Further, out of the twelve variables selected for the study, the variables viz., Education status (X_2), Contact with extension and other agencies (X_8), Information seeking behaviour (X_9) had exhibited a positive and significant influence on the level of awareness of KCC by the respondents at five per cent level of probability, whereas Farming experience (X_4), Source of irrigation (X_6), Material possession (X_7) had showed negative and significant contribution towards the level of awareness.

The variables Perception towards mobile phone in farming (X_{11}), Innovativeness (X_{12}) contributed significantly towards the level of awareness at one per cent level of probability. All other independent variables showed a non-significant contribution towards the participation. The results revealed that one unit increase in the following independent variables viz., perception towards mobile phone in farming, innovativeness would result in increase in the level of awareness of KCC by 2.987 and 3.891 units respectively. It is inferred from results that Education status, Contact with extension and other agencies, Information seeking behaviour, Perception towards mobile phone in farming, Innovativeness help the farmers to aware the various services offered by KCC centres.

Multiple regression analysis of independent variables with benefits

The Table 2, showed that the variables Farming experience, Contact with extension and other agencies, Perception towards mobile phone in farming and Innovativeness showed their positive contribution on the benefits. The R^2 value has shown that all the variables together contributed 50.10 per cent variation in the obtained benefits among the respondents.

The 'F' value was found significance at one per cent level of probability. Since the 'F' value was significant, the prediction equation for the cause and effect relationship was fitted for the participation of the beneficiaries as given below.

$$Y_1 = 9.990 - 0.173X_1 - 0.002 X_2 - 0.505X_3 + 3.309 **X_4 + 0.486X_5 + 1.349X_6 - 2.439 X_7 + 2.566X_8 + 0.068X_9 - 1.645X_{10} + 2.975** X_{11} + 3.362 **X_{12}.$$

In addition, out of the twelve variables selected for the study, the variables viz., Contact with extension and other agencies (X_4) had exhibited a positive and significant influence on the benefits obtained through KCC by the respondents at five per cent level of probability, whereas Material possession (X_7) had showed negative and significant contribution towards the level of awareness.

The variables Farming experience, Perception towards mobile phone in farming (X_{11}), Innovativeness (X_{12}) contributed significantly towards the benefits at one per cent level of probability. All other independent variables showed a non-significant contribution towards the participation. The result further revealed that one unit increase in the following independent variables viz., Farming experience (X_4), Perception towards mobile phone in farming (X_{11}) Innovativeness (X_{12}) would result in increase in the benefits of KCC by 3.309, 2.975, 3.362 units respectively.

Table 1. Multiple regression analysis of independent variables with Awareness

(n = 90)

Variable number	Independent Variables	Partial regression co-efficient	Standard error	Computed 't' value
X ₁	Age	0.054	0.601	0.715 NS
X ₂	Educational Status	0.149	0.336	2.019 *
X ₃	Farm Size	-0.104	0.038	-1.313 NS
X ₄	Farming Experience	-0.361	0.040	-4.595 **
X ₅	Cropping pattern	-0.069	0.484	-0.956 NS
X ₆	Source of irrigation	-0.160	0.417	-2.211 *
X ₇	Material Possession	-0.179	0.063	-2.353 *
X ₈	Contact with Extension and other Agencies	0.535	0.254	2.389 *
X ₉	Information seeking behaviour	0.169	0.111	2.148 *
X ₁₀	Participation in Extension Methods	-0.124	0.256	0.562 NS
X ₁₁	Perception towards mobile phone in farming	0.229	0.060	2.987 **
X ₁₂	Innovativeness	0.285	0.585	3.891 **

** -Significant at one per cent level $R^2 = 0.631$; * - Significant at five per cent level $F = 10.953^{**}$, NS - Non-significant

Table 2. Multiple regression analysis of independent variables with benefits

(n = 90)

Variable number	Independent Variables	Partial regression co-efficient	Standard error	Computed 't' value
X ₁	Age	0.015	0.875	0.173 NS
X ₂	Educational Status	0.000	0.490	-0.002 NS
X ₃	Farm Size	-0.046	0.056	-0.505 NS
X ₄	Farming Experience	0.302	0.058	3.309 **
X ₅	Cropping pattern	0.041	0.705	0.486 NS
X ₆	Source of irrigation	0.114	0.608	1.349 NS
X ₇	Material Possession	-0.215	0.092	-2.439 *
X ₈	Contact with Extension and other Agencies	0.668	0.371	2.566 *
X ₉	Information seeking behaviour	0.006	0.161	0.068 NS -
X ₁₀	Participation in Extension Methods	-0.423	0.373	1.645 NS
X ₁₁	Perception towards mobile phone in farming	0.265	0.087	2.975 **
X ₁₂	Innovativeness	0.286	0.852	3.362 **

** -Significant at one per cent level $R^2 = 0.501$; * - Significant at five per cent level $F = 6.430^{**}$; NS- Non-significant

CONCLUSION

The results concluded that socio-economic characteristics namely education status, contact with extension and other agencies, information seeking behaviour, perception towards mobile phone in farming, innovativeness could lead to aware the various services provided by KCC centres. Similarly, farming experience, contact with extension and other agencies, perception towards mobile phone in farming and innovativeness were infusing to avail benefits out of the KCC. The above indicators may be considered while covering the propaganda and advertisement on promoting the KCC services in near future. On identification of training needs in KCC, demonstration, outreach campaign, the mentioned socio-economic characteristics have to be considered as it has influenced the KCC beneficiary farmers to build awareness and benefits.

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