

Factors Hindering Pakistani Farmers' Choices Towards Adoption of Crop Insurance

Sidra Ghazanfar¹, Zhang Qi-wen^{1*}, Muhammad Abdullah¹, Jaleel Ahmed², Imran Khan³, and Zeeshan Ahmad¹

¹ College of Economics and Management, Northeast Agricultural University, Harbin 150030, China

² School of Management, Harbin Institute of Technology, Harbin 150001, China

³ Department of Management Sciences, Harbin Institute of Technology, Harbin 150001, China

Abstract: This study was conducted to analyze the factors that negatively influence Pakistani farmers' willingness to participate in crop insurance. Probit model was applied to identify the significant factors which influenced our dependent variable "not willing to participate". The results of the analyses showed that crop insurance premium was the most influencing factor which had positive and significant impact on dependent variable. Similarly dissatisfaction with crop loan insurance scheme, lacking of knowledge about crop insurance, believing of being against Islamic rules and time taking process was also found to be positive and significantly influenced the dependent variable. While limited decision power and limited perils were not found to be significant in the results.

Key words: crop insurance, willingness to participate, Probit model, Premium

CLC number: F310 **Document code:** A **Article ID:** 1006-8104(2015)-02-0092-05

Introduction

Pakistan is a highly climate sensitive agriculture dependent country where development and growth of the economy depend on the agriculture sector, as agriculture contributes about 21.4% to Gross Domestic Product (GDP) and engages about 45% of labor in agriculture sector (GOP, 2013). Situation of climate uncertainty in Pakistan is getting worse and worse day by day. Pakistan is exposed to a number of natural disasters, including cyclones, floods, drought, intense rainfall, and earthquakes (TFCC, 2010). Almost one-third of the households is living below the "food poverty line" and the quantity of the food available to them is not enough to meet their nutritional requirements (Arif and Khalid, 2007) and out of 120

districts, 74 are food deficit, in terms of net availability (Abid and Sahib, 2009). Water-stressed condition had increased the condition of food insecurity by reducing the agriculture productivity in arid and semi-arid areas of Pakistan (Iqbal, 2013).

Hence, the analyses of the situation demand an efficient crop insurance market in agriculture system which provides the security to agriculture production and farmers' income. Although crop insurance market exists to protect farmers from these disasters, farmers seem to be not interested in participating in crop insurance. Most farmers in Pakistan, either ignored or overweighted low probability risks which showed that farmers were more sensitive about their current outcomes rather than future income risks. There were several factors for lowing crop insurance market penetration and lowing interest of farmers towards

Received 11 December 2014

Sidra Ghazanfar (1986-), female, researcher, Ph. D, engaged in the research of crop insurance in Pakistan. E-mail: neau2011@outlook.com

* Corresponding author. Zhang Qi-wen, professor, supervisor of Ph. D student, engaged in the research of financial theory and policy. E-mail: 5390748@qq.com

E-mail: xuebaoenglish@neau.edu.cn

crop insurance, so the purpose of this study was to investigate the factors that negatively influenced, the farmers' willingness to participate for crop insurance programs.

Materials and Methods

We had collected the data from Punjab Province of Pakistan, three districts of Punjab were chosen to conduct the study, namely Dera Gazi Khan, Rajan Pur, and Bahawalpur. These districts were purposely chosen, as they were highly vulnerable to disasters of flood and drought. From each district, two tehsils were selected randomly to conduct the survey, among the farmers of these tehsils. A total of 300 farmers were selected by selecting randomly 50 farmers from each selected tehsil. Before they were asked to fill the questionnaire, a briefing was given to farmers about crop insurance scheme, just to make farmers familiar with the mechanism and benefits of the crop insurance program. A questionnaire was developed to collect the required data regarding the demographics of the farmers, their willingness to participate for a hypothetical crop insurance program and the factors that influenced their decision of the participation. Overall, 300 farmers were asked whether they were willing to participate in the given crop insurance scheme. Out of which 184 farmers responded that they were willing to participate in crop insurance and 116 farmers replied that they were not willing to participate. Those farmers, who refused to participate in the hypothetical crop insurance plan, were asked regarding the factors that influenced their decision of "not willing to participate" for the designed hypothetical crop insurance scheme. This research was an attempt to explore those factors, among the farmers in Pakistan.

Probit model

In this research, we had tried to find out the key factors which were associated with the decision of farmers who were not willing to participate in crop insurance

schemes. We had used not willing to participate (NWTP) as our dependent variable. As not willing to participate was a qualitative dummy dependent variable, hence, we could not use Classical Linear Regression Model (CLRM). To avoid the problem of linear probability model of having value beyond the range of zero and one, we could use the Logit and Probit models. As, these models solved the problems of non-normality of the residuals, heteroskedasticity and a smaller *R*-square. Logit and Probit models produced almost the same results for large samples. In this research paper, we had used Probit model, because Asteriou and Hall (2007) had mentioned that Probit model was more sophisticated than that of Logit model. For the present study, the Probit model was specified as the following:

$$NWTP_i = \beta_0 + \beta_1 AIR_i + \beta_2 DIS_i + \beta_3 INA_i + \beta_4 KIS_i + \beta_5 LDP_i + \beta_6 LP_i + \beta_7 PC_i + \beta_8 TTP_i + \beta_9 Age_i + \varepsilon_i$$

Where,

$NWTP_i$ = Not Willing to Participate was a dummy variable that was measured as 1 for not willing to participate and 0 otherwise.

AIR_i = Believe of being Against Islamic Rules. It was measured as 1 for those who had mentioned it as against the Islamic rules and 0 otherwise.

DIS_i = Dissatisfaction of the farmers was a dummy variable. 1 for dissatisfied farmers and 0 otherwise.

INA_i = Inaccessibility was a dichotomous dummy variable that was 1 for those farmers who had not access to insurance schemes otherwise 0.

KIS_i = Knowledge about Insurance Schemes was a dichotomous dummy variable that was 1 for those farmers who had knowledge about insurance schemes otherwise 0.

LDP_i = Limited Decision Power was also a dummy variable.

LP_i = Limited Perils was a dummy variable.

PC_i = Premium Cost was a dummy variable. 1 for those farmers who didn't want to involve/participate in insurance schemes due to the high premium 0 otherwise.

TTP_i = Time Taking Process was a dummy variable. 1

Download English Version:

<https://daneshyari.com/en/article/4495330>

Download Persian Version:

<https://daneshyari.com/article/4495330>

[Daneshyari.com](https://daneshyari.com)