Structural Modeling for Determinants of Farmer Satisfaction with Crop Loan Insurance in Pakistan: An Application of American Customer Satisfaction Index

Sidra Ghazanfar, Zhang Qi Wen, Muhammad Abdullah, Imran Khan and Jaleel Ahmed

1College of Economics and Management, Northeast Agricultural University, Harbin, 150030, China
2The islamia University of Bahawalpur & School of Management, Harbin Institute of Technology, Harbin, 150001, China
3School of Management, Harbin Institute of Technology, Harbin, 150001, China

Abstract: The purpose of this study is to investigate the factors that determine the satisfaction level and post-purchase behavior of farmers regarding crop loan insurance in Pakistan. Based on the comprehensive review of literature regarding the satisfaction and its associated variables, a questionnaire was designed and its validity and reliability was tested via a multistage, stratified convenient sample of previously insured farmers. American Customer Satisfaction Index (ACSI) was adopted to evaluate the impact of expectation, service quality and customer value on farmer’s satisfaction. Perceived quality and perceived value were found to have a positive impact on the satisfaction level of farmers. The expectations of farmers were found to have a significant negative effect on farmers’ satisfaction level. While satisfaction was found to have a significant negative impact on complaints and positive impact on farmers’ loyalty. This is the 1st study which is aimed to measure the satisfaction of Pakistani farmers regarding crop loan insurance. The results of the study are of great importance for the policy makers/insurance companies/bankers to understand the drivers of farmer’s satisfaction. Based upon the results, better crop insurance policies/products can be developed/designed by understanding the interests of the farmers.

Key words: Crop Loan Insurance • Perceived Quality • Customer Expectation • ACSI • Satisfaction

INTRODUCTION

Many international studies have been conducted to highlight the issue of farmer stress, suicides and mental illness arising from the consecution of climate change leading to natural disasters like drought [1]. Extreme weather events and seasonal anomalies due to climate variability are going to increase with time and coping this situation has become a serious issue for climate change adaptation [2]. This concern has gained significant attention in developing areas of the world especially the countries with high vulnerability and low adaptive capacity. Climate variability has arisen the issues of food insecurity due to variability of agriculture production [3]. Agriculture is considered as a one of the most tensed occupation field; even a small change in standard climate pattern can result in changes in hydrological and crop production cycles [4]. Developing countries are particularly vulnerable to climate change because their economies largely depend upon agriculture production; lack of infrastructure and financial resources limit their ability of adaptation to climate variability [5]. Changes in climate can affect the production of food by altering the crops patterns, fishery and livestock production which in turn can affect the distribution channels of food to markets [6]. This climatic situation causes uncertainty among farmers which discourage the investment in new technology and new markets [7]. There are several
options for adaptation that are being used at universal level by farmers which include crop-livestock farming systems, drought resistant varieties, diversification, use of high yield water sensitive crops or crop varieties and changing of harvesting and planting dates [8].

[9] Stated that there is a need of formal mechanism to cope up with agricultural associated risks otherwise farmers would not invest in the modern high risk crops and techniques. In last few years, different capital market tools have been designed to transfer weather related risks [10]. Micro-insurance schemes can be opted as a practice to deal with these natural hazards faced by poor farmers [11]. Crop insurance is one of the most important mechanisms from a risk management perspective as it spreads the risk of loss over time and space [12] and provides with an opportunity to manage more variability and frequent extreme events [13]. Especially in developing countries where crop insurance programs are launched not only to facilitate farmers as another risk management tool but also to facilitate other benefits and goals such as to guarantee the repayment of loans, which motivate the farmers to produce high yield crops varieties [14]. This study was conducted in Punjab province of Pakistan which is one of the four provinces of Pakistan. Cotton, wheat, corn, rice and sugarcane are the major crops grown in this province [15]. Agriculture sector contributes 21% share in the GDP of Pakistan. 80% of the country’s total export earnings are fetched by this sector and its agro-based products therefore this sector can be called the backbone of the economy of Pakistan. Punjab province is one the four provinces in Pakistan and occupies 29% area of the country, occupies 57% cultivated area of the country and 69% of the total cropped area of Pakistan. Punjab province is a major contributor of agricultural production in Pakistan as it produces 83% cotton, 80% wheat, 97% fine aromatic rice, 63% sugarcane and 51% maize of the total production of above mentioned commodities in the country [16].

**Conceptual Framework:** Satisfaction has long been considered as one of the major theoretical and practical issue both at market and research level [17]. In order to determine customer satisfaction objectively, American Customer Satisfaction Index (ACSI) was established in 1994 by Anderson and Fornell and his colleagues. ACSI has been accepted as a market-based tool to measure the performance for the national economies. Furthermore it predicts market value, profitability [18] and productivity levels of a firm [19]. Because the model involves both antecedents such as customer’s expectation, perceived performance, perceived customer value and consequences which include customer’s complaints & loyalty and measures cause and effect relationship between them [20]. The ACSI model contains six elements as shown in Figure 1 so in our literature a brief discussion about their roles and relationship has been made and presented below.

**Expectation:** [21] defined expectations as customer’s thoughts, beliefs or attitude which influence the judgment made by customer about a service or a product. [22] Explained that customer expectations are concluded from the past experiences of customers, their positive or negative word-of-mouth communications and external marketing sources of the firm. According to [23] misinterpretation of expectation can be a crisis for the management of an organization because pre-purchase expectations influence the customer’s assessment about service performance and satisfaction [24]. Hence expectations influence customers’ perceptions of service

![Fig. 1: The American Customer Satisfaction Index Model. Source: www.theacsi.org](image-url)
quality which further influence the post purchase attitude [25]. Therefore the high expectations increase the chance of purchase by new customers while low service expectations decrease the chance of purchase by new customer [26].

**Expectation and Perceived Value:** [27] and [28] conducted their studies to find the relationship between expectation and perceived customer value. We propose our 1st hypothesis to find out the relationship between these two variables.

**Hypothesis 1:** Expectations are positively related to perceived value.

**Expectation and Perceived Service Quality:** [29] Also revealed that customers’ expectations influence customer’s perceived performance. [30] Showed a positive relationship between expectation and perceived performance. On the basis of these arguments we proffer our second hypothesis.

**Hypothesis 2:** Expectations are positively related to perceived service quality.

**Expectation and Satisfaction:** Role of consumer expectation in the formation of satisfaction process is considered to be virtually undisputed [31]. Although a large number of researches have empirically considered a direct and positive link between expectations and satisfaction [32, 33, 34-35] that is distinct from the mediating effect of disconfirmation [36]. [37] Defined expectation as a static variable which can influence the satisfaction both directly and indirectly. Overall satisfaction is mostly determined by overall expectation and perceived performance of a product or service [38, 39]. On the basis of these arguments we proffer our third hypothesis.

**Hypothesis 3:** Expectations are positively related to customer satisfaction.

**Perceived Service Quality:** Service quality is defined as a customer analysis about the overall performance and excellence of service or product [40]. When this judgment meets the consumer needs, consumer feels satisfied and incase when it falls short of consumer’s demands, causes dissatisfaction which leads to service failure. According to [41] service failure has become the main cause for switching behavior of customers. Different scholars have illustrated a linkage between value, service quality and satisfaction which in turn affect the behavioral intentions of customers [42, 43]. While [44] argue that service quality has a direct relationship to behavioral intentions [25, 45]. And [46] showed a positive relationship between perceived service quality and perceived value so by considering the above statements; we proposed our fourth and the fifth hypothesis.

**Hypothesis 4:** Perceived service quality is positively related to perceived value.

Most of the scholars have considered perceived service quality as an important predicator of customer satisfaction [47-54]. (Higher satisfaction level can be achieved by improving service quality and perceptions of a customer which in return influence the complaint behavior commitment [54].

**Hypothesis 5:** Perceived quality is positively related to customer satisfaction.

**Customer Value:** [55] Defined perceived value as overall judgment of service or product utility, based on consumer’s perception of what they have get and what they have paid on behalf of it [56]. Explained customer value as valuation of prices paid for the service quality and the quality of the service which consumer received for the paid money.

Customer value has become an important aspect of marketing field; managers must realize the importance of customer value in order to survive in the growing competition [57, 58] as well as to improve customer relationship [59]. As compared to perceived service quality, customer perceived value is considered to be a more influential predicator in the service evaluation process [34]. Perceived value is considered as a predicator of consumer buying behavior [60]. It exerts direct or indirect effects on loyalty and other behavioral intentions [61, 62-63]. That’s why new market oriented organizations and firms are now more focused towards the changes in customers’ needs and plan according to them. Moreover the perceived value increases the comparability of results in customer satisfaction index model because information about price is considered into the model [64]. The positive relationship between perceived value and satisfaction has been mentioned in many studies [65-69] Revealed that value has been found to have a positive impact on customer satisfaction in developing loyalty so on the basis of above reviews, below mentioned sixth hypothesis was formed.
Hypothesis 6: Perceived value has a positive relationship with customer satisfaction.

Satisfaction: [70] Defined satisfaction as feelings of fulfillment or disappointment which a person feels as a result of comparison of perception and expectation about product or service. [71] Explained that customer satisfaction develops and promotes customer retention; increases the chances of repurchase intention & loyalty which significantly influences the sales of a company and corporate economic performance.

Loyalty: Loyalty is a commitment of consumer to repurchase a specific brand or a service constantly in future, despite of having distracting marketing campaigns and situational factors that can lead to switching behaviors [72]. Consumer loyalty is considered as one of the strategic objectives for organizations [73]. Because according to [74] keeping existing customers is more profitable than attracting new customers. [75] Explained that the satisfied customers are more likely to keep retained with service and they resist against the alternative choices. Similarly a large number of studies have supported the above argument by showing the satisfaction as an antecedent of loyalty [76, 51, 77, 78, 79- 80]. Thus these reviews lead us to our seventh hypothesis.

Hypothesis 7: Customer satisfaction is positively related to customer loyalty.

Complaints: [81] Defined customer complaint as a response occurs as a reaction of post purchase dissatisfaction of customer. Service failure has become an important concern for all the emerging and growing businesses because failure can lead to the financial and customer loss that businesses have to pay as price in future. That’s why the understanding of customers’ complaint behavior has gained an important place in the field of marketing [82]. Specifically, the understanding of customer satisfaction and its relation to complaint or repurchase intention is necessary to analyze the repurchase behavior of customers [83]. Because satisfaction has been found significantly important to reduce complaints behavior [54] and dissatisfied customers are more likely to complain [84]. Thus here we advance our last and eighth hypothesis.

Hypothesis 8: Customer satisfaction is negatively related to customer complaints.

Methodology
Case Study Area, Sampling and Questionnaire: This study was conducted in Punjab province of Pakistan which is one of the four provinces of Pakistan.

For this study, three districts of Punjab province namely Bahawalpur, RajanPur and Dera Ghazi Khan were selected as these areas are under high risk of natural hazards like floods and drought according to Disaster risk management Punjab, Pakistan [15]. District Bahawalpur has 6 tehsils, out of which two tehsils namely Ahmadpur East and Hasilpur were randomly selected for this study. District Rajanpur consists of four tehsils, out of which two tehsils namely Jampur and Rojhan were randomly selected. District Dera Ghazi Khan has four tehsils and out of these, the tehsils of Dera Ghazi Khan and Taunsa Sharif were randomly selected for this study.

Our sampling frame consisted of all the farmers in Punjab province that had experienced crop loan insurance at least once since the start of crop loan insurance scheme in Pakistan.

Crop loan insurance scheme was implemented in 2008, with the contribution of all private and commercial banks and insurer who are registered with security exchange commission of Pakistan (SECP). The scheme is compulsory for all those farmers who request the credit loan from banks for the production of one of the five major crops such as cotton, sugarcane, wheat, maize and rice. The perils insured under scheme include floods, hailstorm, excessive rains, drought, viral and bacterial attacks, frost and damage caused by locusts. Premium is charged at 2% of amount insured per crop per season. The insurance trigger is activated when 50% of area subjected to loss [85].

The data for this study was collected using a survey questionnaire administered by well trained field investigators. After the selection of three districts, convenience sampling method was used and from six selected tehsils of all three districts, 50 respondents were selected from each tehsil, hence a sample of total 300 farmers was obtained during August 2014 to September 2014. A filter question was posed to select only those farmers who had availed crop insurance at least once since 2008. Questionnaire was developed in English language and translated into Pakistan’s national

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In Pakistan, Tehsil is an administrative division. A district usually has few tehsils and each tehsil has a number of villages under its administration and the tehsil plays the role of a headquarter for the villages.
Table 2: Demographic profile of the respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Age (in years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-35</td>
<td>48</td>
<td>16</td>
</tr>
<tr>
<td>36-50</td>
<td>120</td>
<td>40</td>
</tr>
<tr>
<td>51-65</td>
<td>104</td>
<td>34.66</td>
</tr>
<tr>
<td>66-80</td>
<td>28</td>
<td>9.33</td>
</tr>
<tr>
<td>Average age</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Standard deviation</td>
<td>12.48</td>
<td></td>
</tr>
<tr>
<td>Range:</td>
<td></td>
<td>21-76 years</td>
</tr>
<tr>
<td>Experience (in years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>23.92 years</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>152</td>
<td>50.66</td>
</tr>
<tr>
<td>Primary</td>
<td>56</td>
<td>18.66</td>
</tr>
<tr>
<td>Middle school</td>
<td>26</td>
<td>8.66</td>
</tr>
<tr>
<td>High school</td>
<td>28</td>
<td>9.33</td>
</tr>
<tr>
<td>Senior high school</td>
<td>22</td>
<td>7.33</td>
</tr>
<tr>
<td>College and above</td>
<td>16</td>
<td>5.33</td>
</tr>
<tr>
<td>Household size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>7.17 (7-8 persons)</td>
<td></td>
</tr>
<tr>
<td>Landholdings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>8.70 acres</td>
<td></td>
</tr>
</tbody>
</table>

Language, *Urdu*. All the respondents selected were male. Although women are also working in the fields along with men but men being the head of the family have the decision power. Forty percent respondents belonged to age group of 36-50 years and almost thirty five percent belonged to age group of 51-65 years. 50.66 percent of the respondents were illiterate while 18.66 percent respondent farmers had obtained primary education. Only 53.33 percent respondents had college or above level education. The average farming experience was almost 24 years and average household size was 7-8 persons that may be due to the extended family system in Pakistan. Further details regarding the demographic variables are shown in Table 2.

Measures and the Respective Reliability and Validity of the Latent Variables: The scales for the measurement of farmers’ expectations, perceived quality, perceived value, farmers’ satisfaction, farmers’ loyalty and farmers’ complaints were adopted from [86] & [40]. In depth interviews with farmers were performed and discussion with the bank managers and agriculture credit extending officers was made to extract the information from relevant stakeholders of crop loan insurance scheme. Five point Likert scale was used for the measurement of the variables used in this study. A five point Likert scale (5 as strongly agree and 1 as strongly disagree) was used in order to overcome the statistical problem of extreme skewness [87]. In order to check the internal-consistency/reliability of the instrument, Cronbach’s alpha was used. Its value above 0.70 is acceptable [88]. Customer expectation (insurance clients expectation) and Perceived quality/performance of the crop insurance was assessed based upon 9 questions respectively for each variable using 5 points scale anchored by 1(extremely poor) and 5(extremely good). Cronbach’s alpha value (0.83 and 0.91) respectively revealed a high degree of reliability. Customer satisfaction or farmers’ satisfaction regarding the crop insurance experience was assessed based upon 5 questions using 5 point Likert scale anchored by 1 (completely dissatisfied/ far below expectation) and 5 (completely satisfied/ far above expectation). Cronbach’s alpha value (0.94) revealed a high degree of reliability. Intention of loyalty was measured based upon 3 questions using a 5 point Likert scale anchored by 1 (completely disagree) and 5 (completely agree). Cronbach’s alpha value (0.86) revealed a good degree of reliability. Complaints were assessed using 3 questions applying a 5 points Likert scale anchored by 1 (completely disagree) and 5 (completely agree). A good degree of reliability was revealed by Cronbach’s alpha value of 0.86. Perceived value of crop insurance was measured based upon 3 questions using 5 points Likert scale anchored by 1 (completely poor) and 5 (completely or extremely good). Cronbach’s alpha value (0.73) was low as compare to other variables yet it was acceptable. In order to check the construct validity, Principal components analysis (PCA) was used for factorial structure. This test was confirmed through confirmatory factor analysis (CFA). For the most rigorous goodness-of-fit indexes, we used CFA which is considered the most appropriate for this. LISREL 8 [89] was used to calculate these indexes. These indexes fit allow researchers to select a theoretical model that corresponds to factorial structure for fitting the data empirically. We used the fit indexes proposed by [89] like chi-square to degrees of freedom ($\chi^2$/df), root mean square residual (RMR), goodness of fit (GFI) and adjusted goodness of fit (AGFI). Comparative fit indexes [90] were used to complete this like normed fit index (NFI) and non-normed fit index (NNFI) and comparative fit index (CFI) is also used suggested by [91].

Acceptable value of $\chi^2$/df ratio is not greater than 5 and more precise measure said that it should be less than 2 or 3 [92]. The least acceptable value of GFI is 0.90 and AGFI should not be lesser than 0.80. According to [93]...
Table 3: Reliability and validity analysis of the scales used

<table>
<thead>
<tr>
<th>Scale item</th>
<th>Factor loading (Validity)</th>
<th>(Chronbach’s Alpha) (Reliability)</th>
<th>No. of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer’s expectation</td>
<td></td>
<td>0.83</td>
<td>9</td>
</tr>
<tr>
<td>CE8</td>
<td>0.988</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE7</td>
<td>0.988</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE6</td>
<td>0.981</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE9</td>
<td>0.952</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE2</td>
<td>0.924</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE5</td>
<td>0.843</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE3</td>
<td>0.836</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE1</td>
<td>0.755</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE4</td>
<td>0.727</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer’s satisfaction</td>
<td></td>
<td>0.94</td>
<td>5</td>
</tr>
<tr>
<td>CS2</td>
<td>0.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS4</td>
<td>0.925</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS3</td>
<td>0.901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS5</td>
<td>0.875</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS1</td>
<td>0.870</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived quality</td>
<td></td>
<td>0.91</td>
<td>9</td>
</tr>
<tr>
<td>PQ2</td>
<td>0.991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ3</td>
<td>0.972</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ4</td>
<td>0.871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ8</td>
<td>0.862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ7</td>
<td>0.848</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ9</td>
<td>0.842</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ5</td>
<td>0.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ1</td>
<td>0.736</td>
<td></td>
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</tr>
<tr>
<td>PQ6</td>
<td>0.707</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer’s loyalty</td>
<td></td>
<td>0.86</td>
<td>3</td>
</tr>
<tr>
<td>CL2</td>
<td>0.919</td>
<td></td>
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</tr>
<tr>
<td>CL3</td>
<td>0.889</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL1</td>
<td>0.873</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer’s complaints</td>
<td></td>
<td>0.86</td>
<td>3</td>
</tr>
<tr>
<td>CC2</td>
<td>0.953</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC3</td>
<td>0.893</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC1</td>
<td>0.804</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived value</td>
<td></td>
<td>0.73</td>
<td>3</td>
</tr>
<tr>
<td>PV2</td>
<td>0.814</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV3</td>
<td>0.804</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV1</td>
<td>0.750</td>
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<td></td>
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</table>

Table 4: Means and standard deviations of the variables used:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Quality (PQ)</td>
<td>2.500</td>
<td>0.637</td>
<td>9</td>
</tr>
<tr>
<td>Customers’ expectation (CE)</td>
<td>3.930</td>
<td>0.414</td>
<td>9</td>
</tr>
<tr>
<td>Perceived Value (PV)</td>
<td>2.227</td>
<td>0.688</td>
<td>3</td>
</tr>
<tr>
<td>Customers’ Satisfaction (CS)</td>
<td>2.295</td>
<td>0.792</td>
<td>5</td>
</tr>
<tr>
<td>Customers’ Complaints (CC)</td>
<td>2.096</td>
<td>0.673</td>
<td>3</td>
</tr>
<tr>
<td>Customers’ Loyalty(CL)</td>
<td>2.154</td>
<td>0.792</td>
<td>3</td>
</tr>
</tbody>
</table>

These both measures were set at 0.80. In case of complex model, the lowest acceptable limit for AGFI is 0.70 [94]. [92] Suggest |0.05| as the highest acceptable limit for RMR. At the end, NFI, NNFI and CFI authors recommend the base standard 0.90 for them. (x²/df=2175/456=4.77; P= 0.00, RMSEA value = 0.03 (it should be less than 0.05), GFI=0.92, AGFI=0.96, RMR=0.03, NFI=0.94, NNFI=0.94, CFI=0.951). All the calculated values were within the acceptable prescribed limits. The values obtained via calculations confirm the validity and reliability of our instrument. The results show that all scales used in our study demonstrate adequate reliability and validity. The findings regarding the reliability, validity, mean and standard deviation of the latent variables are shown in Table 3 and 4.
RESULTS

On the basis of the discussion made in section 2, we investigated the proposed framework through structural equation modeling using LISREL 8 and a path analysis was conducted to test the fit between the proposed model and the collected data (empirical data). The path coefficients showing the strength of relationship between different variables are shown in Fig. 2 as well as in table 5. Based on the path estimates of ACSI and the theoretical framework of ACSI, we tested our defined hypothesis. The results are stated below. Farmers’ expectation is negatively related to perceived quality (-0.12, P < 0.01), positively related to perceived value (0.33, P < 0.01) and negatively associated with customer satisfaction (-0.13, P < 0.01), therefore we accept our second hypothesis H2 and reject our H1 and H3; the first and the third hypothesis. Perceived quality is strongly associated to perceived value (0.37, P < 0.01) and has a significant positive effect on farmers’ satisfaction (0.11, P < 0.01), thus supports our fourth H4 and fifth H5 hypothesis. Perceived value has the largest significant positive effect on farmers; satisfaction (0.21, P < 0.01), therefore supports our H6. Customer satisfaction is found to be positively related to farmers’ loyalty (0.05, P < 0.01) and negatively related to farmers’ complaints (-0.11, P < 0.01), therefore we accept our H7 and H8 hypothesis. According to our results, there has been found positive linkage from expectations to perceived value, perceived quality to perceived value, perceived quality to satisfaction perceived value to farmers’ satisfaction, farmers’ satisfaction to farmers’ loyalty and a negative relationship between farmers’ satisfaction to farmers’ complaint and these relationship are consistent with the ACSI model. Perceived quality and perceived value are found to be the largest significant determinant of farmers’ satisfaction, which is in line with the results found by [95]. The Positive relation between perceived quality and farmers’ satisfaction is found in our results which was also found by [51-53, 96, 97] in their respective studies. And the positive association found between perceived value and satisfaction in our study is also in line with the work of [67, 68, 79, 98] which support our findings. The result of the positive relationship between perceived quality and perceived value is in line with the findings of researchers [45, 63] which supports our results. The positive relationship between farmers’ satisfaction and customer loyalty is in line with the findings of [99-102]. And the results of negative relationship between farmers’ satisfaction and farmers’ complaints are in line with [54, 84, 103].

![Fig. 2: Path estimates of ACSI for crop loan insurance satisfaction in the study area.](image)

<table>
<thead>
<tr>
<th>Table 5: Path coefficients of the SEM.</th>
</tr>
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<tr>
<td>Customer’s Perceived Perceived Perceived Customer’s</td>
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<tr>
<td>Expectation Quality Value Satisfaction</td>
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<tr>
<td>Perceived Quality (PQ)</td>
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<tr>
<td>Perceived Value (PV)</td>
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<tr>
<td>Customer’s Satisfaction (CS)</td>
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<tr>
<td>Customer’s Complaints (CC)</td>
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<td>Customer’s Loyalty (CL)</td>
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</table>

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DISCUSSION

The performance perception and expectation often refer to customer satisfaction. [40] proposed based on his seminal work that direct and indirect association between perceived performance, customer value and expectations are drivers of customer satisfaction. His conceptualization may not be appropriate to explain customer satisfaction in service context specially crop insurance. The reason of this contradiction is the knowledge of customers (farmers) about crop insurance. They are not equipped with crop insurance knowledge as well as their education level is also very low. The negative relationship between customer expectation and perceived quality shows that the higher the farmers' expectations, the more likely it would be different from actual delivered quality, thus lower the perceived quality. The insurance providers should bridge the gap between the expectations of the farmers’ and their practical experience by addressing the real cost and benefits of their services to farmers and also by delivering them what they were promised. Fulfillment of customer expectations regarding quality attitude, ability and knowledge of insurance providers, reliability and transparency of insurance procedures and in time loss payment (compensation) can raise/enhance the satisfaction level among the farmers. The results also show that Perceived quality is positively related to perceived value that show that delivering high perceived quality can convince farmers to pay the given premium cost, high perceived quality leads to superior customer perceived value as it strongly influences the perceptions of farmers about the value they gain for their paid money(premium). Positive relationship between perceived value and customer satisfaction has been found in our the study which shows that price is the most influencing factor for farmers as if the farmers believe that price that they paid for insurance premium is worth of its quality, their satisfaction level increases. Affordable insurance price can make the farmers feel high perceived value (both in term of money and time) so insurance providers should focus more on subsidy and prices policies.

Negative relationship between farmers’ expectation and farmers’ satisfaction was found which means that the expectations of the farmers regarding the crop loan insurance are quite high and they expecting more from the scheme but after the practical experience, their expectations could not be met and due to unfulfilled expectations, the satisfaction level of the farmers declined. Positive but weak relationship between customer satisfaction and loyalty has been found which shows that unfulfilled expectations about service quality and price of the premium are the major concerns of farmers which decrease their loyalty with crop loan insurance scheme (CLIS) similarly negative and weak relationship between customer satisfaction and customer complaints shows that satisfied farmers found to have a lower tendency to complaint, poor complaint handling, delay in compensations and careless attitude of insurance providers are the reasons which make farmers not to register their complaints. So the insurance providers must consider the demands of farmers while making policies and must deliver what farmers want and satisfaction of farmers must be the main objective of insurance providers, because satisfied customers not only remain loyal but satisfaction also reduced their complaint behavior. Agriculture plays an important role in the economy of Pakistan so Government of Pakistan should introduce different crop insurance programs with vast coverage in terms of number of farmers as well as in terms of insurance perils. This step can be very effective to create and raise competition between insurance providers and they will try to provide better customer services because farmers would avail the services of only those companies who facilitate the farmers with their best services hence this solution can solve the issue of bad service quality. Considering the poverty level in rural areas, micro insurance can also be very useful as the lower would be the premium, the more likely is that majority of the farmers would be able to participate in such insurance plan. Government can facilitate the private insurance companies by removing the entry barriers or hurdles and in this way a healthy competition would be very useful for the farmers as well as the rural economy of Pakistan.

REFERENCES


