

A Study of the Policy-oriented Special Agricultural Loan on Customer Satisfaction and Loyalty of Farmers' Association in Hualian County

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Abstract: The Farmer's association in Taiwan has been facing serious and new circumstances, for example the severe competition in financial market and its economic businesses. To implement the policy-oriented special agricultural loan is an important topic. The policy-oriented special agricultural loan by the farmers' association is to handle customer demand and increase customer satisfaction in order to maintain the customer relationship. Furthermore, raise the customer loyalty to create new businesses. Using structural equation modeling (SEM), the results reveal that has significant effects on customer satisfaction. The mediating effects of customer satisfaction on the relationship between the policy-oriented special agricultural loan and customer loyalty were investigated. And the results reveal that customer satisfaction positively and significantly mediating the effects of the policy-oriented special agricultural loan function on customer loyalty.

Key words: the policy-oriented special agricultural loan; customer satisfaction; customer loyalty

JEL code: Q

1. Preface

1.1 Research Motivation and Background

Joining World Trade Organization no doubt has an important effect on our agricultural and fishery production. International agricultural trade has a direct impact on our country's agricultural production environment, while environment change also have a considerate extent influence on operation of Farmer's Association. Credit department of Farmer's Association generally deepen into rural areas, play the role of assisting agricultural development and stable rural society, only in initial stage of economic development, financial market exists the type of oligopoly competition. Government adopts control measures to financial management, credit department of Farmer's Association survives in a protected business environment.

With the changing of political environment home and abroad, Taiwan has transformed into industrial and commercial trade country. Agriculture's proportion in GDP declined year by year, compared with bank or other financial institution, credit department of Farmer's Association belongs to regional financial institution, based on

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its small operation scale, limited business items and hard accumulated capital etc factors, operation seems to be more harder. Government provides “policy-oriented agricultural loan”, setting credit department of agriculture, fishing association and national agricultural vault as lending institution, to cope with capitals need in agriculture, forestry, fishing, animal husbandry development and transformation, thereby improve the life quality of farmers and active agricultural and fishing economy.

This research pitching-in from farmers' view, with Farmer's Association assorts government policy and manages policy-oriented agricultural loans, how to build and maintain customer satisfaction and loyalty is one motivation of this study. This research mainly aims at Hualian County farmers, after analysising and learning the agricultural development fund loan service provider in credit department by them, whether satisfaction will improve? Whether it can affect customer loyalty? Which is the second motivation?

1.2 Research Purpose

According to above research motivation, this research willing to the following purposes:

- (1) To explore the influence of Farmer's Association conducting lending policy-oriented agricultural project loan on customer satisfaction.
- (2) To explore the influence of Farmer's Association conducting lending policy-oriented agricultural project loan on customer loyalty.
- (3) To explore whether customer satisfaction has effects on customer loyalty.
- (4) To provide suggestions with practical value to farmer operators.

2. Literature Review

2.1 Policy-oriented Special Agricultural Loan

Capital is the energy to provide industrial development, and also the key to business success. Council of Agriculture (hereinafter referred to COA) in order to help vulnerable farmers and fishermen to obtain a smooth low-interest financing required for business, launched policy-oriented agricultural project loan since 1973 (hereinafter referred to as Project Agricultural Loan), to cope with the promotion of important agricultural policy (Jinyi Huang, 2007). Policy-oriented agricultural project loan can only be managed by Farmer's Association credit department to care for the low-interest loans to farmers, so it is possible to change the relationship with customer loyalty and satisfaction, therefore this study hopes to test the relation between satisfaction and loyalty.

2.2 Customer Satisfaction

2.2.1 Definition of Customer Satisfaction

One is to define from domain, divided into special transaction view and accumulated view; the other is to define from nature, divided into cognitive evaluation and emotional evaluation view.

- (1) Define customer satisfaction from domain

Anderson, Fornell and Lehmann (1994) proposed two different views to explain customer satisfaction: transaction-specific view: customer satisfaction is the customer in a specific situation, the value gained from using product, an immediate emotional response. Cumulative view: customer satisfaction is the overall evaluation of customer's all purchase experience aiming at product or service, which can be regarded as basic indicator, can also show the performance of enterprise in the past, present and even future.

- (2) Define customer satisfaction from nature

Woodruff (1983) proposed two points to explain customer satisfaction: cognitive evaluation view: customer

satisfaction is the evaluation after purchasing about product quality under the expectation before purchase; emotional view: customer will use emotional words to express feeling of using product, to represent the feeling to generate customer satisfaction, that is to say customer satisfaction is an emotional response come from consumption experience.

2.3 Customer Satisfaction

Peter and Olson (1990): customer satisfaction is expectation before purchase to be achieved or exceed level. Engel, Blackwell and Miniard (1993) thought "customer satisfaction level" is customer will assess the consistency between product performance after using product and belief before purchase, when there is a rather consistency between the two, customer will get satisfaction. On contrary, if customer's belief to product and actual performance has difference, customer will generate unsatisfied.

2.4 Customer Loyalty

2.4.1 Definition of Customer Loyalty

A loyal customer's lifetime value is very large and significant (Heskett, 1994), loyal customer is one source of enterprise competitive advantage, so increasing customer loyalty is a rather important job to enterprise. Jones and Sasser (1995): customer's repurchase willing in the future to certain special product or service. Olive (1997): even though maybe trigger potential transition behaviour affected by environment and marketing methods, customer preferences for product or service of their future re-purchase commitment is still the same. In short, loyalty is related to improve retaining customer and increase customer purchase proportion.

2.4.2 Measure of Customer Loyalty

Selnes's (1993) point: "whether customer is willing to consumption again", "customer introduces this enterprise to families and friends", "help this enterprise build positive public praise" etc willings to measure customer loyalty, taking re-purchase willing into consideration. Gronholdt, Martensen and Kristensen (2000) pointed out that the following four indicators can be constituted customer loyalty. (1) customer re-purchase willing; (2) willingness to recommend to others; (3) price tolerance; (4) customer cross purchase intention (to buy the same company's other products). This study adpots Selnes's (1993) point as the six dimensions to measure customer loyalty.

2.4.3 Relationship between Customer Satisfaction and Customer Loyalty

Observe most scholars' relativity research of customer satisfaction and loyalty, they thought a positive correlation between the two, such as Sasser and Schlesinger (1994) pointed out customer loyalty directly affects customer satisfaction, a positive correlation. Part of scholars believed the two have high correlation, such as Anseron and Sullivan (1990) found in research aimed at Swedish customer satisfaction, customer satisfaction will positively effect re-purchase behaviour and thought customer satisfaction and loyalty are positively correlated. However, there are still some scholars hold different views, such as Stum and Thiry (1991) believed enterprise can not only focus on customer satisfaction, they should pay more attention to real customer loyalty.

This research regards satisfaction and loyalty as the main influence force to farmers, but whether policy-oriented project loan will change farmer's preference, and assuming Farmer's Association conduct policy-oriented project loan is positively related with satisfaction and loyalty.

3. Research Methods

3.1 Research Framework

According to literature review in chapter 2, we propose research framework of this study as shown in Figure 1.

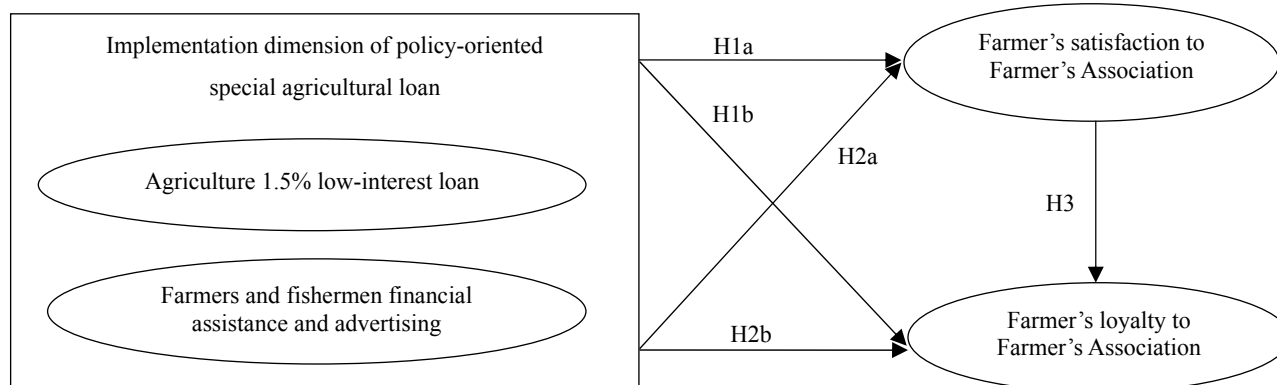


Figure 1 Research Framework

Data source: collected by this study

3.2 Research Hypothesis

Agricultural development fund loan is lending out the required funds of Farmer's Association, Fishermen's credit department, and farming, forestry, fishing and animal husbandry development and transformation, so proposes the following assumptions:

H1a: "1.5% low-interest loan of agriculture" has positive effect on "customer's satisfaction to Farmer's Association".

H2a: "1.5% low-interest loan of agriculture" has positive effect on "customer's loyalty to Farmer's Association".

H1b: "financial counseling and advocacy" has positive effect on "customer's satisfaction to Farmer's Association".

H2b: "financial counseling and advocacy" has positive effect on "customer's loyalty to Farmer's Association".

H3: "customer's satisfaction to Farmer's Association" has positive effect on "customer's loyalty to Farmer's Association".

3.3 Operational Definition of Research Variables

Operational definition through detailed operational definition of the activity or operation process to give to the concept of meaning. So operational definition detailed describe how to measure the concept of research. Variables of this study have four research dimensions, respectively exogenous variables (Agriculture 1.5% low-interest loan, Farmers and fishermen financial assistance and advertising); mediating variables customer's satisfaction to Farmer's Association and dependent variables customer's loyalty to Farmer's Association. The following is the operational definition of this article.

3.3.1 Policy-oriented special Agricultural Loan (Exogenous Variable)

(1) Agriculture 1.5% low-interest loan

Agriculture and fisheries are industries deeply affected by weather and season, income of farmer (fisherman) is very unstable, plus the high cost of domestic agricultural production cost, profit is generally modest, more difficult to operate agriculture. Policy-oriented agricultural loan is to care life of farmer (fisherman), to assist agricultural development, to assist farmer (fisherman) to obtain low-interest required for operation, to facilitate the update and purchase of new equipment.

(2) Financial counseling and advocacy

Through newspapers, magazines, radio, agricultural group meetings, production and marketing team, four healthy clubs, housekeeping class etc, to actively promote related information of project agricultural loan, widely known by farmers and fishermen, to serve their full understanding and loan application.

3.3.2 Customer's Satisfaction to Farmer's Association (Intervening Variable)

According to Ostrom and Lacobucci (1995), through obtained quality and benefit after purchasing, and the cost and effort beared to achieve this purchase (Nicholls et al., 1998), customer satisfaction will become one main factor for decision-makers to formulate each strategy.

3.3.3 Customer's Loyalty to Farmer's Association (Dependent Variable)

This study uses "customer loyalty" to measure the re-purchase intention, and its characteristics are regular repeat purchase, trust in various products and service provided by the same brand, recommend to others, and immune to promotion activities of other competitors (Sirohi et al., 1998).

3.4 Research Samples

This research in November to December 2008 period, respectively direct at customer of Rookie area, Hualian city, Ji'an township, Shoufong township, Fengrong area, Gunagfeng area, Ruisui township, Yuxi area, Fuli township etc nine Farmer's Association in Hualian County which has credit department to conduct questionnaire survey. This study adopts convenience sampling, total sent out 350 questionnaires, total 350 recovered, the recovery is 100%.

3.5 Data Analysis Method

According to need of various research variables and assumptions, this research adopted statistical software package SPSS 12.0 and AMOS6.0 to conduct data analysis, based on this recovered data to conduct data analysis and structural model checking to proceed real relationship test between construct.

(1) Descriptive statistical analysis: in order to learn the relevant information of personal background this research, proceed sample distribution's frequency distribution, percentage analysis to understand the sample structure, to understand distribution of tested customers.

(2) Reliability analysis: the so-called "reliability" means to measure the accuracy or precision of tool. And reliability is used to measure the reliability of individual items, that is measure the consistency and stability of result. To understand the reliability of this questionnaire, this study adopts Cronbach's α trust coefficient, through size of coefficient to judge reliability of questionnaire scale, the higher of the value, the higher of reliability.

(3) Confirmatory factor analysis: this research uses AMOS 6.0 statistical software to conduct confirmatory factor analysis, to show various fitness indicator of measure pattern, and the convergent validity between various measure items and constructs.

(4) Structure model validation: mainly used to validate model and fitness degree of survey data, and test hypotheses of this study.

4. Data Analysis

4.1 Descriptive Statistical Analysis

In this study, a total of 333 valid questionnaires, the valid rate is 95%. In the research sample, gender percentage of male (80.5%) is greater than female (19.5%); marriage status, married (82.0%) greater than unmarried (18.0%); the age concentrated in 41~50 year old (73.9%); the education level high school (vocational) is the most; average monthly marketing income concentrated in 30,001~45,000 yuan (41.5%).

4.2 Reliability Analysis

4.2.1 Reliability Analysis

If this study uses SPSS 12.0 statistical software, calculated the reliability of all constructs, the construct reliability are all greater than 0.7, the validation result is shown in Table 1.

Table 1 Reliability Analysis

| Construct | Cronbach's α |
|---|---------------------|
| Agriculture 1.5% low-interest loan | 0.872 |
| Financial counseling and advocacy | 0.878 |
| Customer's satisfaction to Farmer's Association | 0.896 |
| Customer's loyalty to Farmer's Association | 0.863 |

Data source: collected by this study

4.2.2 Average Variance Extracted (AVE)

Average variance extracted (AVE) can used to explain the amount of variation explained explained by latent variable of which how many amount of variation come from index variable. "Average variance extracted amount" is greater, shows latent variable has a higher convergence degree, Fornell and Larcker (1981) proposed the standard value must be greater than 0.5.

After using AMOS 6.0 to conduct validated factor analysis, calculate the variance of every construct in model. AVE except loyalty (0.34) all greater than 0.5, so the variance of this study is acceptable.

4.3 Overall Model Fit

Overall model fit analysis is mainly evaluating overall model and observe data fit degree, from all aspects of indicators to evaluate whether theoretical model can explain the actual survey data. In aspect of evaluating overall model fit criteria, this study used square value ratio, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), root mean square residual (RMR), root mean square error of approximation (RMSEA) et al six evaluation indicators to proceed the overall model fit evaluation. The evaluation index data shown in Table 2.

Table 2 Goodness-of-fit Index

| Evaluation indicator | | Analysis result | Goodness-of-fit standard value |
|---|--|-----------------|--------------------------------|
| Square value ratio χ^2/df | $\chi^2 = 44.11$; $DF = 15.89 = 2.78$ | 2.78 | 3 > |
| goodness-of-fit index | GFI | 0.956 | > 0.90 |
| adjusted goodness-of-fit index | AGFI | 0.921 | > 0.90 |
| comparative fit index | CFI | 0.978 | > 0.90 |
| root mean square residual | RMR | 0.050 | < 0.05 |
| root mean square error of approximation | RMSEA | 0.050 | < 0.05 |

Data source: collected by this study

(1) Square value ratio: refer to the value obtained by square value dividing freedom value, in general, if square value ratio is less than 3, then the overall model has considerate explanatory power in explaining observed information. The square value ratio of this study is 2.78, indicating the overall model fit of this research is good.

(2) GFI, AGFI and CFI index: when use GFI, AGFI and CFI index as discriminant criterion, the three should greater than 0.90 is better, and when the value closer to 1, showing the model and the actual data type have a

better fit degree. The GFI of this study is 0.956, AGFI is 0.921, CFI is 0.978, all reach the acceptable level above 0.9, the overall model fit is better.

(3) RMR: RMR value is the square root of fitted residual's variance and variance average, reflecting the size of residuals, the closer of its value to 0, indicating the model fitness is better. In general, the acceptance level is about 0.05. The RMR value of this research is 0.05, within an acceptance level.

(4) RMSEA: the RMSEA value is closer to 0, the better of model fitness. According to suggestion of Steiger (1990), RMSEA value below 0.1 represent overall model and observed value are fitted well, below 0.05 represent the fit is quite well, and below 0.01 represent the fit is very good. The RMSEA of this research is 0.05, showing a very good overall model fit.

4.4 Hypothesis Testing

Following settle the path parameter estimating value and significance of this research, as well as based on above statistical analysis testing proposed hypothesis prove, summarized as follows:

Agriculture 1.5% low-interest loan, financial counseling and advocacy both positively affect satisfaction, and satisfaction positively affect loyalty, which indicate H1a, H2a, H1b and H3 established. But financial counseling is not significant for loyalty, which shows H2b is not true. In addition, from path other indirect effect > direct effect we can see the influence of mediating variables, and low-interest loan has a significant direct effect on loyalty, the path coefficient is 0.53. While the indirect effect through satisfaction mediating variables on loyalty is also significant, its indirect effect is equal to 0.42, the total effect is 0.959. Thus, satisfaction has partial mediating effect.

Financial counseling has no significant direct effect on customer loyalty, but the indirect effect through satisfaction mediating variables on loyalty is significant, its indirect effect is equal to 0.348 ($P < 0.05$), the total effect is -0.235, so satisfaction is fully mediating effect.

5. Conclusion and Suggestion

5.1 Research Conclusion

According to empirical analysis result of Chapter IV, conclusion of this research is as follows:

(1) Farmer's Association credit department managers policy-oriented agricultural project loan will have positive effect on customer satisfaction and customer loyalty.

This study found in overall construct, government in order to commit farmer and fisherman's policy, using Farmer's Association credit department as lending policy-oriented agricultural project loan main institution, so Farmer's Association can provide capital required for agriculture, forestry, animal husbandry, fishery development and transformation, will have significant and positive effect on customer satisfaction and loyalty.

(2) Customer satisfaction has positive effect on customer loyalty

Customer loyalty can depend on analysis the amount of customer satisfaction to achieve the best interpretation, if the amount of satisfaction reach the positive effect, then will increase the satisfaction to Farmer's Association, and the same, also means the increased customer loyalty.

5.2 Suggestion

5.2.1 Research Result Application Suggestion

Farmer's Association assists farmers to manage policy-oriented agricultural project loan, will enable farmers reduce capital cost required of agricultural operation. Farmer's Association also because of providing financial

counseling etc different services form an effective differentiation, with closely relationship with farmers, Farmer's Association can get rid of low-interest competition with financial large banks and financial holding companies, changed to the funds method tailored for farmers' operating capital required, fostering strong customer loyalty and help Farmer's Association sustainable business.

This research from AMOS linear structural equation result and know, financial counseling direct effect on customer loyalty is not significant, but the indirect effect through satisfaction mediating variables affect on loyalty is significant, so manager of Farmer's Association should strengthen the cognition for policy-oriented agricultural project loan type and loan flow to all members, enable every staff with profession knowledge and become object for farmers to consult, providing farmers complete loan service.

5.2.2 Follow-up Research Suggestion

In research time and funds, although this research seeks to meet the scientific principles in design, because of the following research limits still parts not covered. So aimed at inadequacy of this research provide some suggestions as discussion direct for follow-up researchers in the future.

Limited to funds and time, this research only surveyed Hualian County, could not analysis and compare the whole industry, so the follow-up researchers can expand research range to survey for the whole industry, or compare respectively by each county.

As factors influence customer loyalty is not merely satisfaction, follow-up researchers can replace or add other factors to study.

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