CHAPTER 3

OBJECTIVES, SCALING PROCEDURES AND METHODOLOGY

This chapter deals with a detailed description of the objectives of the thesis, the scaling procedures used in the study and the methodology followed.

3.1 OBJECTIVES

The objectives of this study, following from the problem identification, are

1. To develop a scale to measure Member Satisfaction of Urban Co-operative Banks
2. To measure the Member Satisfaction level in Kerala based Urban Co-operative Banks
3. To analyze the impact of member profile and bank profile on Member Satisfaction

3.2 HYPOTHESES

The study formulated the following hypotheses for analysis.

$H_01$: Member Satisfaction is not a second-order construct made up of three equally important reflective components- ownership role, controller role and beneficiary role.
H₀₂: Member Satisfaction Level in Kerala based UCBs is not excellent. (Excellent is a priori assumed to be a value greater than 4.5 out of 5 in MSUCB scale.)

H₀₃: Member Profile does not influence Member satisfaction. (Gender, age, educational qualification, occupation, number of years of membership and Income constitute the member profile)

H₀₄: Bank Profile does not influence Member satisfaction. (Geographical location, Productivity/Employee, Productivity/Branch, Profit/Employee and Profit/Branch constitute the bank profile)

3.3 RESEARCH DESIGN

The research has four distant phases: the first phase is qualitative in nature and the next two – exploratory and confirmatory surveys are quantitative in nature. The last phase, determination of the member satisfaction level of Kerala based UCBs uses the data of the confirmatory survey. The research for the exploratory survey and confirmatory survey required data from a large number of members of UCBs of Kerala. Thus, the cross-sectional survey design was the best suited for the purpose. The advantages of this research design are that it is economical and consumes less time. The major disadvantages of this research design, however, are the lack of control over environmental factors and the inability to study the process over time (Babbie 1989; Trochim 2003).

The research is an attempt to define Member Satisfaction in the context of Urban Co-operative Banks and to develop a scale for it. Despite its importance, it has not received the importance that it deserve, even though
organizational performance is influenced by it. The extant research on member satisfaction in urban co-operative banks is small and there is virtually no study carried out in the context of a developing country like in India. Even for a developed country like U.S.A., the researcher did not come across any relevant study.

This research is set in the context of the Kerala based Urban Co-operative Banks.

The scope of this research is restricted to Urban Co-operative Banks fulfilling the following three criteria:

(a) The organization is registered under the Kerala Co-operative Societies Act of 1969.

(b) The organization is issued banking license under the Banking Regulation Act, (BRA) 1949 and as Applicable to Co-operative Banking (AACB) 1969.

(c) The geographical location is restricted to the seven southern districts of Kerala (Ernakulam, Alappuzha, Idukki, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram).

Urban co-operative banks which did not open its membership to the public at large were not considered. There were two banks which restricted membership to employees. So finally, only 26 banks qualified for the survey.

The scope of this research is restricted to members fulfilling the following three criteria:

(a) The member enjoys voting right

(b) The member has taken a loan or paid back a loan
The member has at least 2 years of membership in the bank. In other words researcher has taken two years as a reasonable minimum period after which an evaluation of the satisfaction level may be done by the member (Kumar et al 1993).

Summarizing, this study is restricted to UCBs with RBI license and to members in these banks who have voting rights, who have taken a loan and been a member for more than two years.

3.3.1 Sampling

The unit of analysis, sampling frame, key informants, data collection instruments, questionnaire design and translation and survey procedures are explained here.

3.3.1.1 Unit of Analysis

The focal construct of this research is member satisfaction in urban co-operative banks, which is an organizational-level construct. Thus, the member satisfaction in the bank is the unit of analysis. The sampling unit is an individual urban co-operative bank in Kerala that satisfies all the selection criteria mentioned in the previous section.

3.3.1.2 Sampling Frame

The official list that RBI maintains on the UCBs in Kerala was used. In the southern region of Kerala there are 28 banks which come under the list. Southern Kerala was defined as encompassing the seven districts namely, Ernakulam, Idukki, Kottayam, Alappuzha, Pathanamthitta, Kollam and Thiruvananthapuram. Eliminating the two UCBs which are employee co-
operatives, the researcher was left with 26 UCBs. The study considered 22 UCBs out of these 26 UCBs.

3.3.1.3 Key Informants

The member satisfaction scale was administered to the members who have taken membership, enjoyed voting rights and had taken a loan and been with the bank for more than two years. The bank related information, called the Bank Profile, was collected from the General Manager (GM) of the bank. So, in that sense, the GM may be considered to be the key informant as there was no other person senior enough to disclose bank related information. In some banks, G.M. was known as the secretary or chief executive officer, but they carried the same authority. These two people were the key informants.

3.3.1.4 Data Collection Instruments

For data collection purpose, a structured close-ended questionnaire was used in both surveys. A copy of the cover letter-cum-questionnaire used in the exploratory survey is shown in Appendix 4. A copy of the cover letter-cum-questionnaire used in the confirmatory survey is given in Appendix 5.

The exploratory questionnaire contained 37 items representing the constructs of interest in following order: Ownership Role (OR), Controllership Role (CR), Beneficiary Role (BR) and Cognitive Trust of the Management (CT). Apart from these items, the members’ name and membership number were asked (The codebook of the exploratory questionnaire is given in Appendix 9).
The confirmatory questionnaire incorporated 33 items, 11 of member profile and 22 of the MSUCB construct. A Bank Profile Questionnaire was also incorporated. A copy of the Bank Profile Questionnaire is given in Appendix 6 (The codebook of the confirmatory survey questionnaire is given in Appendix 10.)

3.3.1.5 Questionnaire Design and Translation

Podsakoff et al (2003) recommend that a questionnaire should present predictor constructs before criterion constructs. They further note that mixing of various constructs might create common method bias. Their advice was taken in the construction of both questionnaires.

The feedback from pilot study revealed that most of the respondents do not understand the English language. So, in both surveys, only vernacular language, namely Malayalam, was used. We used Behling and Law, 2000’s back-to-back scale translation technique. We requested four bilingual peers to translate to Malayalam and four others to translate it back. The final translation was based on consensus. The Malayalam translation of exploratory survey is attached as Appendix 7 and that of confirmatory survey is attached as Appendix 8.

3.3.1.6 Survey Procedures

Large scale cross-sectional studies are usually done by mail survey procedure. The researcher used this technique for exploratory survey. But the response was just average at 22.6%. Since the researcher required around 300 usable respondents at the confirmatory stage, it was decided to take the help of the General Managers of the concerned UCBs. So the packets of 50 questionnaires each were offered to the GMs of the 26 UCBs for further
distribution. Four UCBs did not participate in the survey due to various reasons. Out of 1100 questionnaires distributed at 22 UCBs, the final response was 568. At 51.64 % this was judged as effective because the GMs enjoyed the confidence of the members and were able to collect sufficient number of responses. Out of these 568 responses finally 297 were found to be of usable quality after eliminating for control questions and inadequate responses.

3.4 SCALE DEVELOPMENT PROCEDURES, MEMBER SATISFACTION LEVEL DETERMINATION AND PROFILING

The research has followed the scaling procedure recommended in the literature (Nunnally 1978; Churchill 1979; Clark and Watson 1995; Netemeyer et al 2003). The following Table 3.1 in brief and figure 3.1 in detail show the steps followed in developing the MSUCB Scale and determining member satisfaction level in Kerala based UCBs.

Table 3.1 Overview of the Steps Followed in Developing the MSUCB Scale and Treatment of Other Objectives

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### Step 1: Construct Definition and Content Domain
- Extensive review of literature on member satisfaction in co-operatives.
- In-depth interview of experts from the co-operative sector, particularly from UCBs.
- Development of the construct definition and its content domain.
- Development of a priori hypothesis about the nature of the construct.

### Step 2: Item Generation
- Generating potential items from their respective domains
  - Six senior practitioners from urban co-operative banks
  - The researcher generated a list of items based on the literature review.

### Step 3: Initial item Purification
- Editing the items for repetition, ambiguity, loaded meaning & double barreled wording.
- Items judging by five academic experts in co-operative area. Deletion of items that were ranked below ‘4’ out of ‘5’ by at least two raters.

### Step 4: Pilot Study
- Pilot test of the scale with twelve lay members of a near-by UCB to see how the items would be understood in the field settings.
- A few items were deleted based on the feedback from this pilot study.

### Step 5: A Large-Scale Exploratory Study
- Surveyed among 10 UCBs of Kerala distributing 50 questionnaires in each UCB. Received 103 usable responses.

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**Figure 3.1 (Continued)**
• A priori item deletion rule: items showing skewness more than 3 and/or Mean/Standard Deviation less than 3 were eliminated.
• Initial item analyses using Exploratory Factor analysis.
• Internal consistency estimates.
• Initial estimates of validity.
• Finalizing the preliminary scale of MSUCB.

Step 6: A Large-Scale Confirmatory Study

• Survey among 26 UCBs of Kerala distributing 50 questionnaires in each UCB. Received 297 usable responses after eliminating for control questions namely, years of membership and loan status. Only those with at least more than 2 years of membership and having taken a loan were considered.
• Item analysis through Confirmatory Factor Analysis.
• Estimation of composite reliability and average variance extracted.

Step 7: Determination of Member Satisfaction Level in Kerala UCBs

• Estimation of the member satisfaction level of the final 19 items of the MSUCB Scale and the consolidated MSUCB Scale.

Steps 8 & 9: The Impact of Member and Bank Profiles

• The impact of member profile on member satisfaction using non-parametric tests.
• The impact of bank profile on member satisfaction using non-parametric tests.

Figure 3.1 Overview of the Steps Followed in Developing the MSUCB Scale and Treatment of Other Objectives
As portrayed in figure 3.1, the research has four broad phases. In the first phase consisting of steps 1 and 2, qualitative explorations about the nature of the construct were made. The steps three to five comprise exploratory phase and the steps six comprise the confirmatory phase. The fourth and final phase consists of determination of member satisfaction level of Kerala based UCBs and the impact of member and bank profiles on member satisfaction and is covered in steps seven and eight.

3.4.1 Step 1: Construct Definition and Content Domain

A scale is rooted in its theoretical background. A sound review of literature is an important step in the scale development process as it clearly helps define a construct and specify its content domain. The researcher has provided an in-depth review of the literature in second chapter. The chapter contains an explication of the content domain and the construct definition.

Member satisfaction is best captured by a subjective assessment of the perception of the members’ role satisfaction. The member’s three roles as an owner, controller and as beneficiary were taken into consideration. The members were assessed for their satisfaction level through questionnaire interview. The subjective assessment can be done through a measure best called the member satisfaction in urban co-operative banks scale (MSUCB scale).

3.4.2 Step 2: Item Generation

To capture the construct professionals with long work experience in senior managerial positions at various Kerala UCBs were asked to list the activities, practices and behaviors that reflected a member’s roles as owner, controller and beneficiary in a co-operative. This was in addition to the list that the author had developed based on study and observation of UCBs. The
intention in generating a large list of items was to ensure a sufficient breadth of content and an adequate pool of items within each of the theoretical components (Clark and Watson 1995).

This step was successfully completed with the help of retired General Managers (GMs) of various Urban Co-operative Banks of Kerala. Six ex-GMs with an average work experience of 20.2 years as GMs were interviewed. They generated 63 questions concerned with the member’s role as an owner, 79 as a controller and 85 as beneficiary, totaling to 227 questions. The list of questions is attached as Appendix 1.

3.4.3 Step 3: Initial Item Purification

Next was the rigorous editing done by the researcher to eliminate ambiguous, repetitive and loaded questions. Double barreled questions were split into separate questions. This was satisfactorily done by the researcher, by which the number of questions concerned was cut down; with the member’s role as an owner to 49, as a controller to 52, as a beneficiary to 58, totaling to 159 questions. This list of questions is attached as Appendix 2.

There was an academic rating where a small group of academicians with background in co-operatives are to rate the items based on their suitability to be included in the final list. If the question was very suitable to be included in the final questionnaire it was given a rating of 5. If it was very little suitable it was given a rating of 1. If the question was of intermediate quality, scores of 4, 3, or 2 were given depending on the degree of suitability in the descending order of suitability. Those items which were scored 3 or less by at least two members were rejected. The questions were also suitably reworded wherever necessary. This step was successfully completed with the help of five experienced senior academicians from the area of cooperation in India with an average academic experience of 26.6 years. The number of
questions pertaining to owner was cut down to 13, controller to 13 and beneficiary to 19, totaling to 45 questions.

3.4.4 Step 4: Pilot Study

A pilot study was designed with at least 10 members as participants in whom a questionnaire having the short-listed member satisfaction questions from the previous step was used. The questionnaire used is attached as Appendix 3. This stage was successfully completed with the help of Changanacherry Co-operative Urban Co-operative Bank members. Twelve of them were interviewed. Participants indicated their agreement or disagreement about the satisfaction of the bank on a five-point Likert scale. At this point, questions which the interviewees indicated as confusing, ambiguous, irrelevant or otherwise difficult to answer were deleted. At the end of the pilot study the set of questions needed for the third and last stage in preliminary scale determination was ready. The questions on owner were cut down to 8, controller to 9 and beneficiary to 16, totaling to 33 questions. This questionnaire, as mentioned earlier, was used in the next step as the one used in exploratory survey as Appendix 4.

3.4.5 Step 5: Exploratory Survey

The objective of the exploratory survey was to trim the initial list of items to a manageable number so that it can be used in the confirmatory stage. An exploratory survey was conducted where the data collection and analysis was done as follows. It was an exploratory study. The study explored whether Member Satisfaction can be measured scientifically.

A priori item deletion rule was that items showing skewness more than 3 and Mean/Standard Deviation less than 3 were to be eliminated. Based
on that 2 Owner role (OR), 1 Controller Role (CR) and 4 Beneficiary Role (BR) items were eliminated.

Exploratory Factor Analysis was done on the data collected and the scale was tested for Content, Construct and Nomological Validity. The scale was also tested for reliability. Scope was confined to the Urban Co-operative Banks of Southern Kerala (Ernakulam, Alappuzha, Idukki, Kottayam, Pathanamthitta, Kollam and Thiruvananthapuram) and to the members having operating account in urban co-operative banks and who were eligible to vote the Board of Directors to power.

For nomological validity, the following existing theoretical finding was tested. Members’ Satisfaction with the Co-operative as a trading partner and as a member organization is significantly related to members’ trust in the board of directors and of the management (Nilsson et al 2009). A validated scale of the cognitive trust of the directors’ board and top management was used as a proxy (Hansen et al 2002). It was included in the questionnaire for nomological validity testing. At the end of the exploratory survey a preliminary scale of 22 items to measure MSUCB scale was developed. The detailed analysis is described in chapter four. This scale, as mentioned earlier, was used along with member profile questions, in the next step as the questionnaire for confirmatory survey as Appendix 5.

3.4.6 Step 6: Confirmatory Survey

The objective of the confirmatory study was to finalize a reliable, validated, parsimonious and psychometrically versatile instrument for measuring the member satisfaction in co-operative banks.

Thus the last step of scale development consisted of surveying 50 members each from all the Urban Co-operative Banks of the seven southern
districts of Kerala. The selection criteria for the banks were as follows. (1) They should have Banking License issued by the Reserve Bank of India under the Acts of BRA, 1949 and AACB, 1966 (2) They should have open membership. Only 26 banks qualified. Out of this, 22 banks elected to participate.

At the end of the final survey a final scale of 19 items to measure MSUCB scale was developed. The detailed analysis is described in chapter four. The list of items encompassing the final MSUCB Scale is mentioned in chapter 4.

3.4.7 Step 7: Determination of Member Satisfaction Level in Kerala UCBs

The second objective was to measure the actual member satisfaction enjoyed by the Urban Co-operative Banks of Kerala. Based on 297 respondents, the Member Satisfaction level was measured.

3.4.8 Step 8: The Impact of Member Profile

The third and final objective was to find the impact of member and bank profiles on member satisfaction. It was tested whether there are any significant differences across member profile and bank profile. Mann-Whitney and Kruskal-Wallis tests were used to test for significance.

In member profile, the parameters tested were gender, age (in years), educational qualification, occupation, years of membership and Income (in rupees). These were intended to shed light on the type of present members who were more satisfied with the bank.
3.4.9 Step 9: The Impact of Bank Profile

In bank profile, it was decided generally not to test any absolute parameters as there were very small banks and very large banks with a continuous spectrum in between (in terms of profits, deposits, loans, number of branches, number of employees and number of members). The only parameter that was exempted and tested on an absolute scale was geographical location. Various ratios were developed based on the number of employees and the number of branches. This was because it was observed that Profit and Business of the banks tended to vary in proportion to the number of employees and number of branches. The researcher was only interested in analyzing profitability and productivity ratios which shed light on the present organizational health of the bank.

3.5 MEASURES USED IN THE SURVEYS

The two surveys conducted are the exploratory survey and the confirmatory survey.

3.5.1 Exploratory Survey

The two measures used in exploratory survey are 1) member satisfaction in urban co-operative banks and cognitive trust of the management.

3.5.1.1 Member Satisfaction in Urban Co-operative Banks

There exists no previous scale to measure member satisfaction in urban co-operative banks. The very objective of the exploratory survey was to determine such a scale. A 33 potential construct item questionnaire was incorporated. These items were in the form of Likert-type statements, which
indicated a respondent’s level of agreement or disagreement with the statements on a scale of 1 to 5.

3.5.1.2 Cognitive Trust of the Management

It consists of a four item construct developed by Hansen et al (2002) to measure the cognitive trust of the members on the co-operative management. These items were in the form of Likert-type statements, which indicated a respondent’s level of agreement or disagreement with the statements on a scale of 1 to 5.

3.5.2 Confirmatory Survey

The measures in used in confirmatory survey are member satisfaction in urban co-operative banks, member profile and bank profile.

3.5.2.1 Member Satisfaction in Urban Co-operative Banks

From the exploratory survey a preliminary MSUCB scale was developed. A 22 potential construct item questionnaire was incorporated. This was used in the survey.

3.5.2.2 Member Profile

Eleven items were incorporated in the question including name, membership number, gender, age, educational qualification, occupation, years of membership, Income and loan status.

3.5.2.3 Bank Profile

Items included the 1) Name of Bank, 2) Place where Head Quarters (HQ) is located, 3) Year of establishment, 4) Year of coming under RBI Control, 5) Number of Members, 6) Number of Employees, 7) Number of
branches (including Head Office Branch), 8) Authorized share capital in Rs., 9) Paid up Share capital in Rs., and 10) the previous five year’s Deposits, Loans, Fixed Assets and Profit positions.

3.6 STATISTICAL TOOLS

The important statistical tools used are described below.

3.6.1 Factor Analysis using Principal Axis Factoring

To determine the preliminary scale at the end of the exploratory survey, factor analysis was done. Using SPSS package, Factor Analysis is done to group and reduce the items to manageable size. Here, since the number of factors is predetermined to be three, factorizing was done with three factors prefixed and the items were allocated to the three subscales.

3.6.2 Path Analysis using VisualPLS

VisualPLS is a statistical software package used to do path analysis in social science research. In this research the package was used to establish the reliability and validity of the final member satisfaction scale in urban co-operative banks scale after the confirmatory survey was done.

3.6.3 Non Parametric Tests

The data collected for member satisfaction in urban co-operative banks was determined to be non-normal by using the one-sample Kolmogorov-Smirnov test.

So for member and bank profile testing, non-parametric tests, namely, Mann-Whitney U test and Kruskal-Wallis H test are used.
3.6.4 **Simple Regression Analysis**

To determine the nomological validity of the preliminary scale a simple regression analysis was done.

3.7 **LIMITATIONS OF THE STUDY**

The main limitations are as follows. First the ownership role subscale achieved only 0.556 coefficient alpha value whereas we would have liked it to reach 0.7. However developing a scale is a long and iterative process, and given the preliminary nature of the scale, we consider it adequate. We believe that a larger sample and a confirmatory scale analysis would achieve the required coefficient alpha value for the subscale. Second, we covered only the seven southern districts of Kerala. It is because, an exhaustive coverage of all the 60 urban co-operative banks of Kerala, licensed by the Reserve Bank of India, would have been impossible under the time and resource constraints we had. However, the seven districts, we consider, were sufficiently divergent and representative of the state. Third, the questionnaire started with a 227 item inventory which was expected to cover all possible types of relevant questions. After that it was a systematic process of selection to the final questionnaire. So any important item omitted in the initial inventory will not get into the final version however relevant it is.