

Chapter 2

Research Methodology

In this chapter, the methodology used in the study and details of the MF activities are described. The methodology consists of study design, population and sample, variables, conceptual framework, data collection and management, and statistical methods used in this study.

2.1 Study design

A cross-sectional study was conducted on factors that led to the success of the MF activities clients.

2.2 Subject of study

The subject of study was clients of the MF activities who were residents of the three Deep South provinces (Pattani, Yala, and Narathiwat) and 4 districts in Songkhla Province (Chana, Thepa, Nathawee, and Saba-yoi). During Phase 1 - Phase 7 (October 2008 - October 2010) with a total of 83 clients.

2.3 Variables and conceptual framework

Outcome variable

Outcome variable for the study was the success of the business. The MF activity had been in operation for 3 years, thus the factors for success should be studied in order to further improve the livelihood activities. The variable outcome was a binary variable, i.e. whether the vulnerable women were successful in managing their activity livelihood business.

Determinant variables

Determinant variables were socio-demographic factors (province, religion, age group, education, marital status, and family size) and the MF activity-related factors (phase, years, small scale business, business skills, source of income, marketing problems, local advisors, and peer).

Conceptual framework

Figure 2.1 presents the conceptual framework for summarizing the variables of interest in the study.

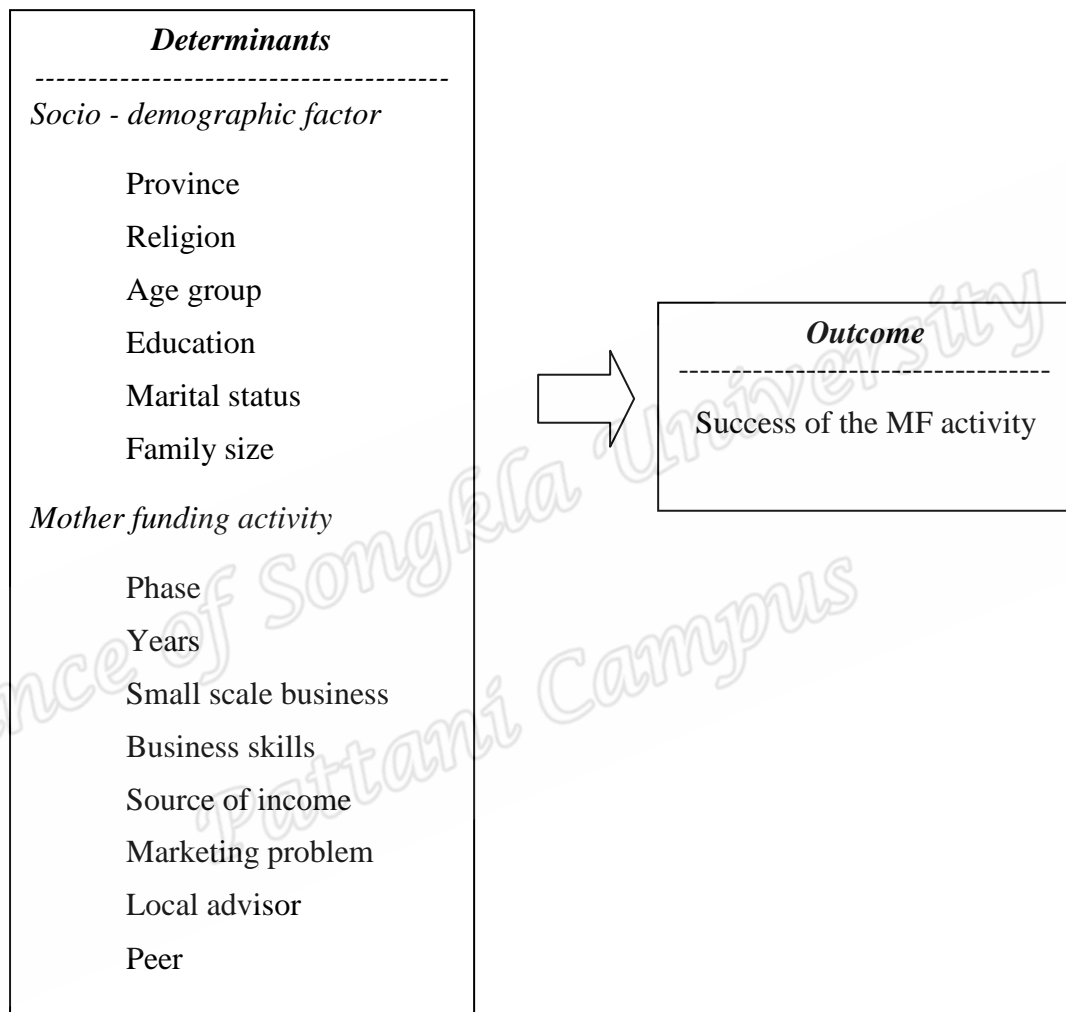


Figure 2.1: Conceptual framework showing variables in the study

2.4. The MF activity: the concept and the mechanism

Every human being has their own inherent "survival skills", thus many of the poor, impoverished, destitute, and the abandoned are still living. The induction for the poor, impoverished, destitute and the abandoned to use their existing skills to the maximum benefit that serves to develop social skills and leading to a better quality of life. An important social skill is the development of one's own economy, or livelihood earning, in which capital serves as a basic factor leading towards development. However in actual context, the poor, impoverished, destitute, and the abandoned normally lack the access to funding sources and loans. Creditors normally require the client to present collateral in order to manage risk in case of non-liquidation, thus it is a "natural phenomenon" in capitalism in which the more money the client needs, the higher the money or asset the client must present. This causes developing countries to have more "outer system loans", causing clients to accept the condition of paying high rates of interest to earn loans with no collateral and no flexibility in paying the principal. Muhammad Yunus established Grameen Bank (UNDP, 2009) in order to allow the poor to access microcredit to develop their quality of life, with an emphasis on providing small funds for women to earn their livelihood. He believes when the women earned their income, they would spend the income on the children and other household responsibilities. Moreover, the women were more responsible in repaying the debts than men.

The unrest in the Deep South of Thailand has resulted/increased in a higher number of widows and impoverished women among all religions. Once the husband passed away, the family would lack income. The widows and impoverished women lacked the know-how on proper livelihood earning and were abandoned, thus these women must

help themselves, form groups, and receive emotional and social relief. The MF activity was thus established in 2008 based on Yunus's concepts.

The goal of the MF activities is to create opportunities for access to small loans to social entrepreneurs, and to create sustainable businesses that generate income for low-income families on individual lending system with interest free and monthly-installment payment with reasonably long term of loans. It targets the multitude of widows and vulnerable women have been suffered from the unrest situation both direct and indirect affected enabling them to build on their existing skill to earn a better income and increase their self reliance become financially self-sustaining. The MF activity aim to improve the livelihoods of widows and vulnerable women through economic empowerment, enabling them to immediately use their existing skills in order to increase their self reliance. These approaches enable them to have emotional healing from meeting and bonding with their peers from the same activity. The income that these women receive would be the tool and the key to many more skills. The MF activity operated under the Alternative Activity Research (AAR) Project, supported by the Thailand Research Fund (TRF).

2.5 The small business process

The MF activity was an activity in which the villagers were encouraged to form their own problems and find the solution through actual practice in order to empower them to solve their own problems. Livelihood business activity fund worth 5,000 Thai Bahts would be provided by submitting individual project proposal. The objective of the MF activity was to create opportunity and changes among widows and impoverished women who were victims of the violence in the area, as well as to

create confidence in their existing capacity in fulfilling their livelihood potential, provide for their family, and develop other skills in the community.

Eligibility: Widows and impoverished women with existing capital for livelihood activity in the Provinces of Pattani, Yala, Narathiwat, and Songkhla (in Chana, Thepa, Nathawi, and Saba-yoi Districts).

Mother funding activity process consists of eight steps.

1. Widows and impoverished women could access the fund by 2 channels:

- *Announcement on AAR lessons learnt forum*, organized once every 3-4 months. The forum invited fund recipients and the general public in the 3 southern border provinces and 4 districts to related state agencies to participate and share their experiences.

- *Announcement by the committee and the local advisors* which could be used for creating awareness and understanding on the project's procedures, access, and proposal-writing for widows and impoverished women in the area.

2. Project proposal: Widows and impoverished women who wish to apply for funding must produce the proposal by themselves. The proposal would be in the form of a letter stating the story of the applicant's life e.g. family situation, their children, and the occupation that they wished to pursue, as well as accompanying documents i.e. photocopy of the Thai national identity card and photocopy of the household register. The time frame for submission was not fixed; project submission could be made year-round.

3. The MF activity selection process:

The MF activity selection process is divided into 9 steps as follow:

1. Receiving project proposal: Widows and impoverished women in the Deep South provinces and 4 districts of Songkhla submitted the proposal by themselves to the local advisors.

2. Initial proposal screening: Local advisors visited the family of the applicant to consider suitability, hardship, and the actual need for occupational activity of the applicant.

3. Initial document screening: Local advisors checked for completeness of the documents and divided the applications into two groups: complete documents and incomplete documents.

4. Initial coordination: For those whose documents were not completed, Mother's Fund staff would contact the local advisor for follow-up and additional details on the part of the applicant.

5. Preparing summary: the MF activity staff summarized the project proposal, whether the supporting documents were complete or otherwise, to present to the local Project Committee.

6. Presentation to committee: Mother's Fund staff summarized initial project information for local project committee to consider.

7. Initial consideration: Local Project Committee screened information before conducting fieldwork, and submit the fieldwork plan.

8. *Fieldwork*: Preliminary Project Committee and the Mother's Fund

staff visited the projects which passed initial approval to gather information based on discussions and analyzed the skills and feasibility in the occupational activity, and see the actual living conditions of the clients. The main objectives of the fieldwork were to:

1) See whether the ability was the need of the widower / impoverished woman herself, and whether she believed that she had enough potential to constantly earn her living.

2) See whether, once the fund was granted, it would lead towards creating income to support the client's family and allow for better quality of life.

9. *Approval*: Once field-based screening was completed, the final meeting would be held for each Project Committee and staff to approve the project.

4. *Notification of the results*: Once the selection process was completed, the MF activity would then send the approved summary together with the notification letter to the Project Committee, local advisors, and fund recipients. All of the 9 steps would be completed within 2 months.

5. *Funding support / contract*: Once the clients was notified, the Mother's Fund staff would make an appointment for clients from all areas (3 Deep South provinces and 4 districts in Songkhla Province) to receive the fund package at the same time. The Mother's Fund staff would inform the clients of the history and objectives of the Fund and provide a chance for the clients to become acquainted with one another and exchange experiences with one another e.g. occupational skills, living conditions, and support each other in order to form network and peer groups. Funding

contract would also be made and guarantee would be given among the clients themselves, creating a sense of mutual trust and responsibility. Required documents included photocopy of household registration and photocopy of the Thai national identity card of the client and the guarantor. Signature of the client would also be noted on the receipt to be used as evidence of receiving the fund.

6. Repayment: Once the widow or impoverished woman had receive the fund, repayment would start at the 4th month anniversary of receiving the fund at the rate of 150 Thai Bahts per month until the principal amount of 5,000 Thai Bahts was covered over a 3 year period. Repayment would be made without any interest or profit. The local advisor would collect the money from the clients and transfer the money to the MF activity bank account. The local advisor would verify repayment to the Mother's Fund staff and issue receipt to the client at every payment. The client could ask for a new loan when repayment has been reached, in which another sum of 5,000 Thai Bahts would be provided without needing to submit new proposal and supporting documents.

7. Conclusion meeting: The Meeting serves as a forum for the MF activity clients in the deep south and 4 districts in Songkhla Province, as well as other widows and impoverished women in their village who were interested in the project, to meet, learn, and create opportunity for marginalized widows and impoverished women to be acquainted and understand about the MF activity. At the meeting, the results of the livelihood activity of clients would be presented, stories and problems and obstacles would be shared to lead towards solving the client's problem. Products made by the clients would also be on sale, and local advisors who had proper voluntary attitude would be recruited to become part of the MF activity.

8. Monitoring and Evaluation: Once the clients received the fund, the MF activity would make follow-up and evaluate the results of livelihood activity and improvement in quality of life every 6 months for a period of 3 years, with a total of 7 evaluations. Evaluation was made by 2 types of questionnaire: 1) Preliminary questionnaire on living conditions and economic status of the family before receiving the fund at 4 months; and 2) Questionnaire on living conditions and economic status of the family after receiving the fund, which would be made once every 6 months for a period of 3 years, i.e. a total of 6 evaluations. Evaluation was made by local advisors in each area together with the Mother's Fund staff. Evaluation was made by dialogues and interviews on living conditions and providing emotional support for the clients livelihood business activity, as well as the problems, obstacles, and opportunities in earning their livelihood, the market, and approaches to solve the existing problems e.g. the supporting market, problems about the cost, materials, pricing, etc. Data on the progress of the MF activity during each period would also be collected.

2.6 Roles of the project committee

The Project Committee had a total of 21 members which consisted of 8 expert members, 4 members from children / youths / orphans volunteers, 6 members who were widows / impoverished women, 3 members who were religious leaders. Thus the Project Committee consisted of representatives from the 3 mentioned target groups in the 3 provinces and 4 districts in the Deep South. They were representatives of villagers and experts chosen by the villagers to participate in the project with a volunteer conscience. The committee was developed through a process called “merging into an older branch” which created a sense of pride, self-esteem, and a

volunteer-based conscience to help contribute to the society (Assoc.Dr. Chaweewan Prachubmoh's summarization from the Alternative Activity Research Meeting, Phase 6, on 11-12 July 2009 at Southern View Hotel, Mueang District, Pattani Province).

The roles of the Committee were:

1. Developed the system of project management.
2. Made announcements and gave information about the Project to widows and impoverished women in the area.
3. Made initial consideration of the projects.
4. Coordinated between the Mother's Fund staff and local advisors after initial consideration.
5. Conducted fieldwork to consider the proposal of the widows and impoverished women who passed initial document screening together with the Mother's Fund staff to discuss, provide emotional support, and analyzed the skills and feasibility in livelihood earning and observed the actual conditions of the applicant.
6. Considered, deliberated, and approved the project proposal.
7. Contacted and notified the approval of the project to the local advisors.

2.7 Roles of the local advisors

The local advisors consisted of local volunteers, with unlimited number of membership. The local advisors must have good relationship with the fund clients and worked to provide advice and have a friendly attitude towards the clients and a frequent monitoring activity. Local advisors played a very important role in being a liaison between the clients and the Mother's Fund staff. The local advisors must know when to be strict with the clients, while not disturbing the clients to an extreme extent

and caused the clients to lose their self-confidence in earning their livelihood. However, they may create excessive pressure and discourage good clients from borrowing, jeopardizing both growth and sustainability. The roles of the local advisors could be classified as follow:

1. Made announcements or promote about the project to widows and impoverished women in the area.
2. Screened project proposals based on appropriateness, hardship, and the actual willingness to earn livelihood.
3. Presented the project proposals to the MF activity.
4. Served as the liaison between the Mother's Fund staff, Project Committee, and the applicants.
 - Modified and provided additional supporting documents after initial document screening.
 - Notified the results and project approval to the clients.
 - Informed the clients of the summary meeting, 3 months each.
5. Made follow-up visits, monitoring, providing incentives, and advice on livelihood earning for the fund clients, and provided advice and opportunity when the clients wished to change their business.
6. Ascertaining, clients will make sure that funds are invested properly and effort exerted.
7. Collecting loan repayments and checked for repayment-related information with the Mother's Fund staff.

2.8 Roles of the Mother's Fund staff

The MF activity provided funding for widows and improved women under the concept of comprehensive community ownership, leading towards revival of relationships, and mutual confidence and trust. The Fund provided microcredit for widows and impoverished women in the 3 southern border provinces and 4 districts in Songkhla. The roles of the Mother's Fund staff were:

1. Developed management mechanisms together with the Project Committee.
2. Made initial screening of project proposals.
3. Support and enhance the collaboration between the Project Committee and local advisors in the area.
4. Considered initial project proposal together with the Project Committee.
5. Conducted fieldwork and made follow-up visits to fund clients together with the local advisors.
6. Checked for correctness and record repayment of fund clients.
7. Organized summarization meetings to exchange ideas on the livelihood activity business and acknowledge the problems and obstacles in order to solve the problems of fund clients in the project areas.

2.9 Data collection and management

Evaluation was done by using structured questionnaire and data were collected by interview. The questionnaire consisted of 2 sections: a) Personal and family socioeconomic status and b) Occupational information. Development of the questionnaire was made under expert adviser. The draft questionnaire was then presented at the meeting of the Alternative Activity Research executive committee on

26th and 30th May 2009 at the Meeting Room, Office of Educational Extension, Prince of Songkla University, Pattani Campus, to seek advice, and comments for modification and development of the complete version of the questionnaire. Pre-testing was made on members of the target population during the AAR Phase 6 Conclusion Meeting on 4th -5th and 7th -8th July 2009 in Narathiwat, Pattani, Yala, and Songkhla Provinces, respectively, in order for the questions and the language to be suitable. Data were collected by the Mother's Fund staff. Conversations were made in Thai and local dialect of Malay. Data were collected from October to December 2010. The collected data were coded and entered with double entry by using Epidata, then cleaned and analyzed by using R statistical package.

2.10 Statistical method

Descriptive statistics

The outcome (success) and all determinants (province, religion, age groups, education, marital status, family size, phase, years, small scale business, business skills, source of income, marketing problem, local advisor, and peer) were categorical variables which were summarized and described in percentages.

Univariate analysis

Pearson's chi-square test and 95% confidence intervals for odds ratio were used to assess the association between the determinant variables and the success of the MF activity.

Pearson's chi-squared test

Pearson's chi-squared test and 95 % confidence intervals for odds ratio were used to assess the associations between the determinant variables and the success of the MF activity. The chi-square value is defined as

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (2.1)$$

where O_{ij} is the observed count in category i of determinant and category j of the success of the MF activity, and E_{ij} is the corresponding expected count, calculated by dividing the product of the marginal totals by the overall total sample size, that is

$$E_{ij} = \frac{\sum_{j=1}^c O_{ij} \sum_{i=1}^r O_{ij}}{n} \quad (2.2)$$

When the null hypothesis of independence is true, the right-hand side of Equation 2.1 has a chi-squared distribution with $(r - 1)(c - 1)$ degree of freedom (McNeil, 1996).

Odds

The odd of the success of the MF activity defined as the ratio of the probability of success to the probability of the failure. In this case, the term 'probability' was used for referring to the proportion of success in the population of interest. Thus if the success has probability π and the corresponding failure has probability $1 - \pi$ (so that there are only two possible outcomes) the odds of the success is $\pi / (1 - \pi)$. The estimated odds of the success is obtained by replacing the population proportion π by the sample proportion p , giving the formula

$$Odds = \frac{p}{1-p} \quad (2.3)$$

The estimated odds of the success are thus the ratio of the number of success to the number of failure.

The odd is always greater than the corresponding proportion or probability and can be greater than 1.

Odds ratio

The odds ratio (OR) is associated with two proportions, and is simply defined as the ratio of the two odds. The estimated odds ratio from a sample of data is given by the formula

$$OR = \frac{p_1 / (1 - p_1)}{p_2 / (1 - p_2)} \quad (2.4)$$

Where p_1 and p_2 are the probabilities of success in two groups.

2 × 2 table

The odds ratio can be use to measure of the strength of an association between two binary variables (McNeil, 2006). So both the outcome and the determinant are dichotomous. For example: the outcome is successful or failure (code as 0 = failure and 1 = successful) and the determinant is having local adviser (coded as no or yes).

The data may be presented as a table with four cells (called a 2 × 2 contingency table) as follows.

Local adviser	successful		Total
	failure	success	
no	a	b	$a + b$
yes	c	d	$c + d$
Total	$a + c$	$b + d$	$a + b + c + d$

The Equation 2.4 may be expressed in terms of these counts as

$$OR = (a/b)/(c/d) \quad (2.5)$$

If the odds ratio is 1, indicating that there is no association between local adviser and the successful.

An asymptotically valid formula for the standard error of the natural logarithm of the odds ratio is given by

$$SE(\ln OR) = \sqrt{\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d}} \quad (2.6)$$

A 95% confidence interval for the population odds ratio is thus

$$OR \times \exp(-1.96 \times SE[\ln OR]), \quad OR \times \exp(1.96 \times SE[\ln OR]) \quad (2.7)$$

Graphical method

When measuring an association between two categorical variables, it is informative to graph the odds ratio, together with a 95% confidence interval based on Equation 2.7 (McNeil, 1996). The association between the outcome variable and the risk factors were investigated by odds ratios.

Logistic regression

Logistic regression is a method of analysis that gives a representation for the logarithm of the odds ratio describing the association of a binary outcome with factors (McNeil, 1996). For a set of predictor variables x_1, x_2, \dots, x_n and a dichotomous outcome Y the logistic regression model takes the form

$$\ln\left(\frac{p}{1-p}\right) = \alpha + \sum_{i=1}^n \beta_i x_i \quad (2.8)$$

where p denotes the probability of occurrence of the success, x are the set of determinant variables, α is the constant coefficient and β is the set of regression coefficients and n is the number of predictor variables. The probability of the success $Y = 1$ can be expressed as

$$P[Y = 1] = \frac{\exp(\alpha + \sum_{i=1}^n \beta_i x_i)}{1 + \exp(\alpha + \sum_{i=1}^n \beta_i x_i)} \quad (2.9)$$

Using the logistic regression model for measures of association arising from a contingency table, we suppose that the success has just two possible values of 2×2 which may be taken to be 0 (failure) and 1 (successful). Thus the logistic regression model given $x = 1$ is

$$\ln\left\{\frac{P(Y = 1 | X = 1)}{1 - P(Y = 1 | X = 1)}\right\} = \alpha + \beta \quad (2.10)$$

While the logistic regression model given the no exposure ($x = 0$) is

$$\ln\left\{\frac{P(Y = 1 | X = 0)}{1 - P(Y = 1 | X = 0)}\right\} = \alpha \quad (2.11)$$

The equations (2.14) and (2.15) are the (natural) logarithms of the odds for the outcome given the successful ($x = 1$) and non successful ($x = 0$), respectively. After exponentiation, the odds for the successful and non successful groups can be written as $\exp(\alpha + \beta)$ and $\exp(\alpha)$, respectively. Thus the odds ratio has the simple formula

$$OR = \frac{\exp(\alpha + \beta)}{\exp(\alpha)} = \exp(\beta) \quad (2.12)$$

Prince of Songkla University
Pattani Campus