

## Microcredit and Women Empowerment in Timor-Leste

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**ABSTRACT:** Microfinance institutions (MFI) plays a strategic role in encouraging socio-economic development of the community. This study aims to examine the effect of MFI activities on the empowerment of weak economic women in Timor Leste. Following various previous studies, this study wants to compare how far the effects of MFI loans have been able to empower women through five dimensions of empowerment which include: control of savings and income, ownership of property and assets, making purchasing decisions and investing in households, self-efficacy, and self-esteem. Increased empowerment is examined by comparing women who have obtained loans with women who have not received a loan. The method used was a survey by distributing questionnaires online to around 300 respondents. Data from the first three dimensions (savings and income control, property and assets ownership, and purchasing and investment decisions) were analyzed by cross-tabulation of chi-square to determine the effect of MFI loans on the three dimensions. The last two dimensions (self-efficacy, and self-esteem) were analyzed by the Mann-Whitney test to determine whether the loans have been able to increase self-efficacy and self-esteem. The results showed a difference between female loan recipients of and those who did not receive MFI loans in terms of control of business income  $\chi^2(2, N = 303) = 9.0, p < 0.05$ ; land purchase  $\chi^2(2, N = 303) = 7.35, p < 0.05$ , and; confidence  $U = 9728.5, p = 0.027$  (mean rank = 140). But there is no difference in terms of control of savings, and ownership of property and assets.

Keywords: microcredit, empowerment, women, Timor-Leste, microfinance

### I. INTRODUCTION

This research was conducted to examine the effect of microfinance on women's empowerment in Timor-Leste, one of the very young countries that gained independence in 2002 after conducting a referendum in 1999. In the World Bank economic report in March 2018 showed that the East Timorese population was 1.3 million people with the economic level classified as a middle to lower income economy.

Ranked 158 in the list of human development index (HDI), this showed the low level of human development in Timor-Leste so that it is one of the poorest countries. More than half of the population of Timor-Leste lives below the poverty line, and 40 percent lives outside the market economy. Even though the country receives revenues from offshore oil and gas reserves, the impact has not been fully felt by the entire community. As a result, the majority of the population, both men and women, still rely on subsystem agriculture.

Although women in Timor-Leste often participated in a variety of income-generating activities, such as weaving, this activity tended to generate a little cash income compared to what men usually did. However, research has shown that income derived from women's economic activities is more likely to be spent on families, especially for their children.

Gender and development are one of the fundamental problems faced by Timor Leste but it cannot be denied that women have an important role in the process of economic development in the country. Traditional/customary law and social practices have resulted in gender inequality, which severely limits the contribution of East Timorese women to development. Inequality of access includes limitation to natural resources, decision making, and public services.

Women's discrimination frequently occurred and many women suffered from domestic violence. The female illiteracy rate was still higher than that of men at 29.4 compared to 22.7 (Timor-Leste Population and Housing Census 2015: Analytical Report on Education). In this context, empowering women is important as a means to achieve better gender equality and also a tool in fighting poverty (EsteveVolart, 2004; Mayoux, 2000).

Empowerment of women is a popular term and is widely used by academics or researchers but none provides a direct definition. The word 'empowerment' contains the word 'power' which has a broad interpretation. Kabeer (1999) defines empowerment as a process in which those who are not given the ability to make life choices are strategically able to obtain that ability. Thus, empowerment is the ability to make choices and that requires a process of social change.

Microfinance institutions (MFI) are still believed to be one of the most potent ways to improve people's lives in many parts of the world, including Timor-Leste. MFIs themselves are available in a variety of financial services (savings and loans and insurance) targeting specifically low-income communities and small traders who are not sufficiently qualified to get loans from banks. When viewed from the coverage area, according to data from Central Bank Timor-Leste, MFIs in 2016 had 671 access points higher compared to banks that only had 484 access points.

The Microfinance Institution (MFI) in Timor-Leste consists of two main institutions that aim to increase financing access to micro-enterprises. In 2009, two of these MFIs recorded 702 access points, while in 2013, the number increased to 1,005 access points. In June 2016, the number of access points for MFIs declined to 671, because one of the MFIs, KIF, changed its strategy from group loans to individual customers.

The 2010 Timor-Leste population census showed that only 6% of the adult population had loans, of which 55% borrowed from the banking system and 45% borrowed from MFIs. The loan products offered by banks are mostly given to male clients (63%) compared to female clients (37%). However, MFI loan products are aimed more at female customers, 16,257 customers (96%) compared to only 678 male customers (4%).

In recent years, the third world countries supported by international institutions (such as the United Nations and the World Bank) have emphasized the importance of microcredit to overcome poverty among women in an effort to meet the needs of poor women who have tended to be neglected. (Pearson, 1992; Moser, 1992). The most obvious example is the success of Muhammad Yunus, in Bangladesh with Bank Grammen, and; India with SEWA. One-third of the total microcredit in the world was accepted by female target groups in India (Elavia, 1994 in Panjaitan et al., 1999)

Commitment to empowering women through MFIs in Timor-Leste can be seen in two existing MFIs; First, KaebaukInvestimentu no Finansas, SA which has a mission "To provide microfinance and allied services to a large number of poor people on an ongoing and regular basis to improve the quality of family life and empower women "and second, the Moris Rasik MFIs who have the following mission: "Moris Rasik provides microfinance outreach to the poorest among poor rural Timorese women by providing innovative products and services that meet client needs that enable women to reach their full potential, encourage change in family and community."

More micro-credit programs are intended for women, especially those with low economic strata. With arguments for justice and efficiency, microcredit for women has reduced barriers for women, especially the poor, who have been excluded from formal financial institutions to access finances that have been enjoyed more by men or more capable communities (UNDP, 1995 in Hunt, 2001). The most important thing now is that microfinance programs have been considered as a means to empower women (Hunt et al., 2001; Rajivan, 2001). Meanwhile the commemoration of the world women's day on March 8, 2005, has been marked by an emphasis on efforts to reduce poverty among women, one of which is by expanding access to micro-credit for poor women.

### 1.1 Empowering Women

The term "empowerment" is very often discussed and this word comes from the word "power" which means "the ability to do something or the ability to act". In the context of society, that means control of resources. Resources can be in the form of material such as natural, financial, and human resources such as skills, labor, or intellectual including information, ideas, and knowledge, etc. Empowerment cannot be separated from power, where power is a relational dynamic between individuals or between groups and that power is often distributed unevenly. This imbalance results in control or dominance and often accompanied by exploitation.

According to the New Oxford Dictionary, the term 'empowerment' comes from the word 'empowering' which means giving (someone) the authority or power to do something or making (someone) stronger and more confident, especially in controlling their lives and claiming their rights. According to the World English Dictionary, Encarta, the term 'empowerment' means to inspire (someone) to be confident or to give (someone) confidence or self-esteem.

Women are generally described as the most oppressed group in the third world. The majority of women are oppressed because of poverty and patriarchy. Patriarchy means father's rule. Patriarchy is used to refer to male domination, to power relations where men dominate women. Patriarchy restricts women from having abilities related to female reproduction, ownership, and control of property and other economic resources including access to education, information, etc. The whole patriarchal structure allows men in general to have more mobility, authority, and control than women in general.

Nobel laureate, Dr. AmartyaSen sees 'development as freedom' which in turn empowers. He stressed, "Indeed, women's empowerment is one of the central issues in the development process for many countries in the world today". The 1995 Human Development Report, emphasizes that "Empowerment is participation, investing in women's abilities and empowering women to use their choices, is not only valuable in itself but also the surest way to contribute to economic growth and overall development." Various ways are used to empower women including economic activities, social Activities, and political Rights and Provisions.

Srilatha Batliwala, a well-known female activist, has defined women's empowerment as, "a process by which women gain greater control over material and intellectual resources, and challenge patriarchal ideology and gender-based discrimination towards women in all institutions and structures of society.

According to Kabeer (1999), women's ability to make strategic choices has three dimensions: resources, agency, and achievement. These three dimensions reflect most aspects of the empowerment dimension that have been distinguished by different authors as mentioned above. Resources can be seen as a prerequisite for making choices. They include access to and control of physical assets, but also access to social assets such as education and social networks. Agency is the dimension of the empowerment process, namely "the ability to determine one's goals and follow them up". Like the concept of 'power', agencies have different dimensions. First of all, there is a 'feeling' of agency or self-esteem and self-confidence ('power inside'). Second, there is a negative dimension, 'power over', and three positive dimensions, 'power to'. Agency dimensions are often measured as the ability of women to make decisions, such as purchasing decisions, the decision on children's education and health, working outside the home, family planning, and child marriage. The third dimension of empowerment, achievement, can be measured as a reduction in violence against women, increased freedom to move, more autonomy over finance and more egalitarian gender roles.

Malhotra et al. (2002) conducted an inventory of indicators that were most commonly used to measure women's empowerment. They found that the most commonly used indicator was the power of decision making and access to resources, thus reflecting the first two dimensions of empowerment demonstrated by Kabeer (1999). Malhotra et al. (2002) found that decision-making variables are generally measured by looking at women's decisions on finance, resource allocation, expenditure, social problems and domestic problems, and problems related to children. Women's access to resources is generally measured by considering women's access to and control of cash, household income, assets, unearned income, acceptance of welfare, household budgets and participation in paid work. The third empowerment indicator that is often used is women's mobility and freedom of movement, in accordance with the dimensions of Kabeer's achievement (1999).

According to Malhotra and Schuler (2002), women's empowerment includes aspects of controlling of savings and income, asset ownership, decision-making, mobility, self-efficacy, and self-esteem. Malhotra et al. (2002) also noted that women's empowerment is usually measured at three different levels: household level, community level, and country level. Usually, the legal and political dimensions of empowerment are measured at the community level or higher. Socio-cultural dimensions and family / interpersonal empowerment are generally measured at the household level. The psychological dimension (shown for example by a woman's sense of self-worth) is proven to be rarely operationalized in empirical research. According to Kato & Kratzer (2013), the involvement of women in microfinance institutions will increase self-esteem and self-efficacy, which will encourage their active role in the decision-making process at the household and community level.

## 1.2. Previous Research

Research on the relationship of microcredit with women empowerment has been carried out many times before. In this section, the researcher tries to gather some of the research that has been done before and the results that have been obtained. In various previous studies, there were studies that gave positive results but there were also studies with negative results. Hashemi et al. (1996) conducted a longitudinal study between 1991 and 1994 among 1,300 married women under the age of 50 in Bangladesh. They examined the effects of two different credit programs, Grameen Bank and the Bangladesh Rural Development Committee (BRAC), using two groups of participants from two different credit programs plus a control group. The control group is divided into groups of women with access to banks and other groups without access to credit at all. They concluded that involvement in credit programs had empowered women. The results showed that participation in credit programs has increased women's mobility, their ability to make major household purchases and decisions, productive asset ownership, legal and political awareness, and their participation in public campaigns and protests "(Hashemi, et al., 1996: 650). The study found that the women who participated in BRAC were more active in political campaigns and protests than those at Grameen.

Bali Swain and Wallentin (2007) examined the effects of the Mandiri Aid Group on empowering women in five Indian states. They compared the increase in empowerment between 2000 and 2003 to 805 women who were members of the SHG and had access to credit, and a smaller number of women control groups (156) who did not have access to the SHG or did not have access to credit. Empowerment is measured by looking at the area of land owned, the total value of assets owned, whether women are the main support of households, whether they are not at all income earner, literacy, whether women are involved in agricultural activities and agricultural labor, and household income. Furthermore, respondents were asked to measure the status of their independence in the household, as well as political participation both locally and regionally. They found a significant increase in empowerment from 2000 to 2003 in the SHG group compared to the control group.

Holvoet (2005) selected five different credit programs operating in India, including women and men programs, and measured their impact on the participant's household decisions. The credit programs studied were the Integrated Rural Development Program (IRDP) and the Tamil Nadu Women's Development Program

(TNWDP). The sample included 497 women who received loans from 1990-1991 under TNWDP, 200 women who received loans from 1993-1994, and 420 men and 180 women who received IDRP loans, which led to a total sample of 1297 respondents. Seven types of decisions were included which included: loan use, expenditure, money management, time allocation and assignments, family problems and kinship, agricultural business and home industry. His findings indicate that microfinance has a significant positive effect on women's decisions, but only in terms of household decisions regarding the use of loans. This means that the use of loans does not automatically lead to an increase in the power of decision making related to other household decisions.

Puhazhendi and Badatya (2002) measured the impact of the SHG Bank Linkage Program from the National Bank of Agriculture and Rural Development (NABARD), one of the first banks to start microfinance in India. They found the effect of empowerment on 115 East India SHG participants during 2000-2001, by conducting surveys before SHG membership and afterward. This survey includes questions about self-confidence and self-esteem, decision-making abilities, communication skills and behavior change, where each of these dimensions has 2 to 4 sub-indicators. This finding shows very high self-confidence as an effect of the Self Help Group (SHG) membership. In addition, a significant positive effect of SHG membership was found on respondents' financial trust, family treatment, and financial influence. Other positive effects include decision-making in the household, firmness, and courage to protest, and mobility. Also, violence was found to be declining strongly in the participant's households.

Kabeer (2001) reported interview results he conducted with microcredit recipients in two provinces in Bangladesh. He found that women who received loans had higher self-esteem and more access to money. Even in the case of loans that have increased their workload, they still think positively about increasing their contribution to household income. In many cases, loans have increased women's ability to make decisions in the household, and that has resulted in more women having assets and more education for girls.

Berglund (2007) examined the effects of empowerment by interviewing 16 female SHG participants in the state of East India, Andhra Pradesh. The loan was received during 2005-2006. He found the effect of empowering SHG membership on mobility, decision-making, knowledge of the economic and social situation, independent elections and participating in elections.

Lakwo (2006) examined the effects of credit access on sustainable livelihoods and on women's empowerment in Uganda. While access to microcredit does not change material well being in the household but is able to encourage women's empowerment, on three levels. At the individual level, women's self-esteem increases; they achieve higher status and have taken roles that were previously only assigned to men. Within households, women obtain decision-making power over household assets and livelihood strategies and start working further away from their homes. At the community level, women have taken leadership positions and are more active in opposing polygamy or exploitation by banks.

Other studies have less positive results. Goetz and Sen Gupta (1996) studied the effects of microcredit programs in Bangladesh and found that in most cases men controlled the use of loans given to women. This is especially true for married women. However, at the same time, women are considered responsible for repayment. This situation increases tension in the household and causes more violence against women. The same conclusion was taken by Rahman (1999) about the Grameen microcredit program in Bangladesh.

Gibb (2008) conducted a study of microcredit programs in the cities of Bolivia, La Paz and El Alto. He conducted around 100 interviews, including woman beneficiaries, and women's control groups who did not have access to credit programs. The recipient group was divided into target groups (poor women) and groups with higher income. He found that loan programs do have a positive effect on women's business and household assets, but not on children's education or on women's empowerment.

In his research in rural India, Garikipati (2008) drew the same conclusions as Gibb for Bolivia. He found that micro-credit programs targeted at women led to an increase in household assets. However, because there are no changes in discriminatory ownership rules and because joint ownership of assets is not possible, this worsens the position of women in the household.

### 1.3 Research Problems

From previous studies, it seems that most studies found a positive effect of microcredit programs on women's empowerment or at least on some dimensions or indicators of women's empowerment. However, several studies had concluded that this positive effect did not occur; Microcredit programs were not able to change the rules of ownership or gender relations in households and therefore increased tension in the household and sometimes even had made women powerless.

This study was conducted in April 2019 aims to examine the effect of microfinance on women's empowerment in Timor-Leste. Research wanted to find out whether women who were the target group or recipients of microcredit have truly benefited or been empowered by being recipients of microcredit, or conversely women with domestic roles were even more burdened and thus magnified the triple burden of women, where women must perform reproductive functions, production and social functions concurrently in the community.

The purpose of this study is to find out whether microfinance institutions (MFI) have an influence on women's empowerment in East Timor. In-depth discussions about women's empowerment were provided in this study, including interviews conducted with women who took part in the services provided by MFIs in East Timor.

As previously explained, Timor Leste currently has two active MFIs and both MFIs are responsible for 68% of microfinance loans. The MFI's microfinance program prioritizes its credit services for women. Therefore, MFIs will receive relatively greater attention in this study than banks because this research is specifically about microfinance in relation to women's empowerment.

#### 1.4 Research Hypothesis

Referring to various previous studies which showed that MFI loans were able to empower weak economic women as measured by the ability of women to exercise control, or the ability to participate in decision making, at least to five dimensions as follows: 1) use of savings and income; 2) ownership of property and assets; 3) household purchases and investments. In addition, MFI loans can improve: 4) self-efficacy, and; 5) self-esteem. In this study these five dimensions are research variables, namely:

- 1) Variable use of savings and income
- 2) Variable of ownership of property and assets.
- 3) Variable for household purchases and investments.
- 4) Variable of self-efficacy.
- 5) Variable self-esteem.

Thus, referring to the five variables mentioned above, the research hypothesis proposed could be stated as follows:

H1: There is a difference between women loan recipients and those who do not receive loans in terms of control of savings and income

H2: There are differences between women who receive loans and those who do not receive loans in terms of property and asset ownership

H3: There is a difference between women who receive loans and those who do not receive loans in making decisions regarding buying and investing in households.

H4: There is a difference between women who receive loans and those who do not receive loans in terms of self-confidence.

H5: There is a difference between women who receive loans and those who do not receive loans in terms of self-esteem.

## II. RESEARCH METHODS

The survey method was used in this study where questionnaires were distributed online to female respondents using convenience-sampling technique, which is part of a non-probability sample procedure that does not require researchers to have a complete list of population members. The study population was all East Timorese women who had received loans from MFIs. The study sample was 303 women from Timor Leste who had become members of microfinance institutions (MFIs) and who were not yet members. Those who are not yet members of the MFI in this study will function as control variable.

Data from three dimensions of savings and income control, property and assets ownership, and purchasing decisions and household investment were analyzed by cross-tab chi-square to determine the effect of MFI loans on the three dimensions. The last two dimensions (self-efficacy, and self-esteem) were analyzed by Mann-Whitney test to determine whether MFI loans have been able to increase self-efficacy and self-esteem. Data analysis was performed using the nonparametric Mann-Whitney U test to determine whether there were significant differences between women who were members of microfinance institutions and those who were not members, as well as testing hypotheses. Mann Whitney test is a nonparametric test that is used to determine the difference in two median free groups if the data scale of the dependent variable is ordinal or interval/ratio but not normally distributed. In addition, the t-test was used to determine whether there were differences in self-efficacy and self-esteem between women who had received loans and women who had never received a loan. All calculations are carried out using SPSS version 25.

#### 2.1 Research Variables

This study aims to explain the impact of microfinance institutions on women's empowerment in East Timor. The concept of empowerment as stated by Kabeer (1999) and Malhotra and Schuler (2002) is used in this study which includes six dimensions which in this study are the following variables:

- 1) Control on savings and income: Measured from the increase in roles and status in making decisions specifically regarding decisions to save and use income obtained or generated from business activities.

- 2) Ownership: Refers to individual and household ownership of property and assets based on legal and formal ownership.
- 3) Decision-making: Measured through who makes decisions regarding buying and investing in the household.
- 4) Self-efficacy: This variable reflects articulation and confidence when women speak with many parties in front of the public such as the authorized owner or the teacher of their children.
- 5) Self-esteem: Measured through whether women make a major contribution to family, community, and how they evaluate themselves when compared to men and other groups in society.

## 2.2 Operationalization of Variable

Variable operationalization aims to measure each of the research variables above based on respondents' answers through a questionnaire. The first part of the questionnaire was used to collect respondents' identities including name, gender, age, marital status (unmarried/married/widowed), and the number of children owned. This section is also used to obtain data on the husband's work, whether the respondent currently has a business or not. If the respondent has a business, the respondent is asked to mention the type of business being carried out. How many years did the respondent run the business? Do they have employees? How many employees they have? What is the business turnover? And did the respondent ever receive a loan (credit) from the MFI?

The second part of the questionnaire aims to measure savings and income use variable, namely the ability of respondents to exercise control over savings and income as measured by increasing roles and conditions in making decisions specifically regarding the decision to save and use income obtained from business activities. In this section respondents are asked to choose three answer choices, namely: "I do it", "My partner", or "I do it with my partner". For example: "Who decides if your family wants to take money from savings?" Or "Who decides to buy items for daily household needs (rice, cooking oil/ kitchen needs)?"

This section is also used to measure the property and asset ownership variable to obtain data on ownership which refers to legal and formal property and assets owned. For example, "Which of the following assets do you buy with your own money?" In this case, the respondent is given choices ranging from assets such as radio or television to land or house, and respondents are allowed to choose more than one choice. The more choices, the higher the score, which means the respondent is more empowered in terms of ownership.

Household purchasing and investment variable refer to decision making measured by who makes decisions regarding buying and investing in the household. For example: "Who decides if your family wants to use money from business income?"

The self-efficacy variable measures the ability of the respondent to overcome the problem at hand. The self-efficacy scale generally correlates with emotions, optimism, and job satisfaction. Negative coefficients are found for depression, stress, health complaints, fatigue, and anxiety. Using references from Schwarzer & Jerusalem (1995) in the Generalized Self-Efficacy scale, several statements can be used to measure self-efficacy, for example: "I can overcome difficulties if I try hard." Or "If I am in trouble, I can find a solution"

The variable self-esteem is measured by whether women make contributions to family, community, and how they evaluate themselves when compared to men and other groups in society. As stated by Rosenberg (1965, in Gray Little et al., 1997), self-esteem is measured using a 10-item scale by measuring positive and negative feelings about self. For example: "I can do things that other people can do" or "Overall, I am satisfied with myself". All items are answered using a 4-point Likert scale format from very agree to strongly disagree.

Table 1: Operationalized Variable & Measurement

Variable	Dimensions	Indicators	Measurement
<b>Women empowerment</b>	Saving control	Who decide on spending from saving?	(a) Myself
		Who decide on revenue spending?	(b) My partner (c) Together
	Property and assets ownership	Who decide on household spending?	(a) Myself
		Who decide on spending of children clothing and personal needs?	(b) My partner (c) Together
	Purchasing & investment	Who decide on house renovation?	(a) Myself
		Who decide on land purchasing?	(b) My partner (c) Together
Self-efficacy	<i>Generalized Self-Efficacy scale</i>		Likert scale
Self-esteem	<i>Rosenberg self-esteem scale</i>		Likert scale

### 2.3 Data Analysis

Analysis techniques with cross-tab chi-square are used to determine the effect of MFI loans on the three dimensions of women's empowerment in which each dimension of women's empowerment was measured by a number of questions in the questionnaire. The three dimensions of women's empowerment are: First, control over savings and income (three questions). Second, ownership of property and assets (three questions). Third, household purchases and investments (three questions). So that overall there are nine questions, and all questions must be answered by the respondent with three categorical answer choices, namely: myself, my partner, both with a partner. Thus, measuring the dimensions of women's empowerment will produce nominal data. The analysis technique with chi-square cross tabulation is used because the MFI loan variable and the women's empowerment variable are both nominal data.

In this study, to determine whether MFI loans to weak economic women have been able to increase self-confidence and self-esteem, the Mann-Whitney test with SPSS was conducted. Mann-Whitney tests are used to determine whether there are significant differences between groups of women members of microfinance institutions, namely those who have received loans from MFIs, and groups of women who are not members of MFIs, namely women who have never received loans from MFIs, in terms of self-confidence and self-esteem.

In the end, in terms of women MFI loan recipients turned out to be significantly different because they had better ability to control the use of savings and income, asset ownership, greater ability to make decisions and greater self-efficacy and self-esteem than with women who do not receive loans, it can be declared that MFI has been able to empower weak economic women.

## III. RESULTS

The results of data collection showed that respondents' age varied greatly, from the youngest 18 years to the oldest 60 years, with the average of being 35.7 years. In terms of marital status, 80% of respondents said they were married, 7.3% were widowed, and 13% were unmarried. Married respondents on average have 2-3 children. Husband of married respondents worked in various fields of business such as: private employees (37%), civil servants (13%), self-employed (3.5%) and various other jobs. As many as 70.3% of respondents stated that they already had businesses in various fields, and in general they had cultivated their business for an average of 4.3 years with a monthly turnover of up to 200 million rupiah.

Table 2: Descriptive data of respondents (N = 303)

	Frequency	Percentage (%)
<i>Age (Year)</i>		
15 - 29	62	20,5
30 - 39	158	52,1
40 - 49	68	22,4
Above 50	15	5,0
<i>Marital Status</i>		
Married	242	79,9
Not married	39	12,9
Widow	22	7,3
<i>Have a business?</i>		
Yes	213	70,3
No	90	29,7
<i>Loan recipient?</i>		
Yes	166	54,8
No	137	45,2
<i>Have employees?</i>		
Yes	134	44,2
No	125	41,3

Source: primary data

Table 3 shows the data calculation using cross-sectional chi-square to find out the difference between women who received and did not receive MFI loans in term of three dimensions of women's empowerment which also determines the effect of MFI loans on: control of savings and income, property ownership and assets, as well as household purchases and investments. Each dimension of women's empowerment was measured by three questions, which were indicators of women's empowerment. So that overall there are nine questions, and all questions must be answered by the respondent with three categorical answer choices: myself, my partner, together with my partner. The nine indicator questions of women's empowerment are as follows:

1) Who decides if your family wants to take money from savings?

- 2) Who decides if your family wants to use money from business income?
- 3) Who decides if your family wants to use money from business profits?
- 4) Who decides to buy items for daily household needs?
- 5) Who makes the decision to buy children's clothing?
- 6) Who makes the decision to buy personal needs?
- 7) Who makes decisions on spending on a home renovation?
- 8) Who makes decisions on expenditures to purchase land?
- 9) Who makes decisions on expenditures for housing construction?

Calculations results using cross-sectional chi-square showed that MFI loans had a significant effect ( $p < 0.05$ ) only on three indicators of women's empowerment and there was no significant effect ( $p > 0.05$ ) on the other six indicators. The three indicators of women's empowerment that gets significant influence from MFI loans are:

- a) Control of business income  $\chi^2 (2, N = 303) = 9.0, p < 0.05$
- b) Control of the results of business profits  $\chi^2 (2, N = 303) = 6.47, p < 0.05$
- c) Control of land purchases  $\chi^2 (2, N = 303) = 7.35, p < 0.05$

Whereas the following six female empowerment indicators did not have a significant effect ( $p > 0.05$ ) from MFI loans, namely:

- a) Control of savings  $\chi^2 (2, N = 303) = 5.5, p = 0.064$
- b) Purchases of goods for household daily needs  $\chi^2 (2, N = 303) = 5.61, p = 0.061$
- c) Purchasing children's clothing  $\chi^2 (2, N = 303) = 2.0, p = 0.36$
- d) Purchasing personal needs  $\chi^2 (1, N = 303) = 0.39, p = 0.53$
- e) Expenditures for home renovation  $\chi^2 (2, N = 303) = 0.085, p = 0.96$
- f) Expenditures for housing construction?  $\chi^2 (2, N = 303) = 0.73, p = 0.69$

**Table 3: Comparative cross-tabulation of chi-square between the recipient and non-recipient MFI loan**

DIMENSSIONS					Asymp. Sig
<i>Control over savings &amp; income</i>		Non-recipient	Recipient	Total	(two tailed)
1) Who decides if the family is about to take money from savings?	Myself	46	52	98	0.064
		46.9%	53.1%	100.0%	
	My partner	4	16	20	
		20.0%	80.0%	100.0%	
	Together	87	98	185	
		47.0%	53.0%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non- Recipient	Recipient		
2) Who decides if the family wants touse money from revenues?	Myself	38	59	97	0.011
		39.2%	60.8%	100.0%	
	My partner	3	14	17	
		17.6%	82.4%	100.0%	
	Together	96	93	189	
		50.8%	49.2%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		
3) Who decides if family wants to use money from business profits?	Myself	39	52	91	0.039
		42.9%	57.1%	100.0%	
	My partner	2	12	14	
		14.3%	85.7%	100.0%	
	Together	96	102	198	
		48.5%	51.5%	100.0%	
<i>Property &amp; Asset Ownership</i>	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		



4) Who decides to buy daily necessities?	Myself	83	115	198	0,061
		41.9%	58.1%	100.0%	
	My partner	1	5	6	
		16.7%	83.3%	100.0%	
	Together	53	46	99	
		53.5%	46.5%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		
5) Who decides to buy children's clothes?	Myself	94	111	205	0,365
		45.9%	54.1%	100.0%	
	My partner	1	5	6	
		16.7%	83.3%	100.0%	
	Together	42	50	92	
		45.7%	54.3%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		
6) Who decides to buy your personal needs	Myself	104	131	235	0,533
		44.3%	55.7%	100.0%	
	My partner	33	35	68	
		48.5%	51.5%	100.0%	
	Together	0	0	0	
		0	0	0	
<i>Household purchases &amp; investments</i>	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		
7) Who decides upon expenses for home renovation?	Myself	29	34	63	0,958
		46.0%	54.0%	100.0%	
	My partner	10	11	21	
		47.6%	52.4%	100.0%	
	Together	98	121	219	
		44.7%	55.3%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		
8) Who decides upon expenditure for land purchase?	Myself	27	32	59	0,025
		45.8%	54.2%	100.0%	
	My partner	2	14	16	
		12.5%	87.5%	100.0%	
	Together	108	120	228	
		47.4%	52.6%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	
		Non-Recipient	Recipient		
9) Who decides upon expenditure for house development?	Myself	27	31	58	0,693
		46.6%	53.4%	100.0%	
	My partner	4	8	12	
		33.3%	66.7%	100.0%	
	Together	106	127	233	
		45.5%	54.5%	100.0%	
	Total	137	166	303	
		45.2%	54.8%	100.0%	

In this study, to determine whether MFI loans to weak economic women have been able to increase self-efficacy and self-esteem, the Mann-Whitney test with SPSS was conducted. The dimensions of self-efficacy were measured by submitting a five-point statement referring to the 10 Generalized Self-Efficacy scale statements by Schwarzer, R., & Jerusalem, M. (1995), while the dimensions of self-esteem were measured by submitting a five-point statement referring to the 10 Rosenberg statements of self-esteem scale (Rosenberg, 1965). Each item statement was measured by a 5-point Likert scale and then added to produce interval data. Mann-Whitney tests are used to determine whether there were significant differences in terms of self-efficacy and self-esteem between women group who were members of microfinance institutions, or those who had received loans from MFIs and women group who were not members of MFIs, or women who have never received loans from MFIs.

The reliability test for the 5 self-efficacy statements using Cronbach Alpha showed  $\alpha = 0.72$ . While the reliability test for the 5 self-esteem statements showed  $\alpha = 0.54$ . Thus, an analysis of the self-efficacy indicator would continue because it has an alpha value above 0.7, while the self-esteem indicator was not continued to be analyzed because it has an alpha value of less than 0.7.

Tabel 4: Mann-Whitney test output

Have you ever received a MFI loan?	N	Mean Rank	Sum of Ranks
Non-Recipient	137	140,01	19181,50
Recipient	166	161,89	26874,50
	303		
		Mann-Whitney U	9728,50
		Wilcoxon W	19181,50
		Z	-2,21
		Asymp. Sig. (2-tailed)	0.027

Calculations with Mann-Whitney test showed that the self-efficacy of women receiving loans from MFIs was significantly greater (Mean rank = 162) compared to women who did not receive or had never received an MFI loan (Mean rank = 140),  $U = 9728.5$ ,  $p = 0.027$ . In other words, based on the Test Statistics output it is found that the Asymp. Sig value (2-tailed) of 0.027 which means smaller than 0.05, it can be concluded that the null hypothesis ( $H_0$ ) is rejected, and thus it can be said that there is a significant difference in terms of self-efficacy between women who received loans from MFIs ( $U = 9728.5$ ,  $p = 0.027$ ) with women who did not receive loans. Because there were significant differences, it can be said that "there was an MFI loan influence on self-efficacy".

#### IV. DISCUSSION AND CONCLUSION

The results showed that of the five variables with nine indicators used, MFI loans had a significant effect ( $p < 0.05$ ) only on three indicators of women's empowerment and did not have a significant effect ( $p > 0.05$ ) on the other six indicators. The three indicators of women's empowerment that get significant influence from MFI loans are: control of business income  $\chi^2 (2, N = 303) = 9.0$ ,  $p < 0.05$ ; control of business profits  $\chi^2 (2, N = 303) = 6.47$ ,  $p < 0.05$ ; and control of land purchases  $\chi^2 (2, N = 303) = 7.35$ ,  $p < 0.05$ . In addition, the MFI loan program has influenced the increase of East Timorese women's confidence ( $U = 9728.5$ ,  $p = 0.027$ ). These results indicate that the MFI loan program has an influence on women's empowerment even though it is not optimal.

In some aspects, the results of this study show the same results with several previous studies, including research by Hashemi et al. (1996) in Bangladesh, which concluded that involvement in credit programs had empowered women, one of them in terms of ownership of productive assets. Similarly, the research of Bali Swain and Wallentin (2007) examined the effects of the Mandiri Aid Group on empowering women in five Indian states. They found a significant increase in empowerment from 2000 to 2003 for women in the loan group compared to the control group.

The results of this study are more or less the same as Holvoet's (2005), which showed that microfinance assistance had a significant positive effect on women's decision-making agencies, but only in terms of household decisions regarding the use of loans. This is in line with the results of the present study which shows women in Timor Leste are more empowered to exercise control over business income, business profits and land purchases. Three things that are directly related to household decisions regarding the use of loans. This means that increasing the ability to make decisions as the influence of using these loans does not automatically lead to an increase in the power of decision making related to other household decisions.

The present study also showed a better self-efficacy in female MFI loan recipients than women who did not receive loans. The present findings were similar to the study results by Puhazhendi and Badatya (2002) that measured the impact of microloans on self-efficacy and self-esteem, decision-making ability, communication skills, and behavior change, where each of these dimensions had 2 to 4 sub-indicators. The findings of Puhazhendi and Badatya (2002) showed very high self-efficacy as an effect of MFI membership.

The study results were also in line with Lakwo (2006) who examined the effects of access to credit on women's empowerment in Uganda. He considered micro-credit to encourage women's empowerment, on three levels. At the individual level, women's self-esteem increased; they achieved higher status and had taken roles that were previously only assigned to men. Within households, women obtained decision-making power over household assets and livelihood strategies and started working further away from their homes. At the community level, women have taken leadership positions and were more active in opposing polygamy or exploitation by banks.

Based on what has been described above and refers to the hypotheses that have been proposed previously, it can be concluded that there are differences between female loan recipients of MFIs and those who do not receive MFI loans in terms of control: (1) business income  $\chi^2(2, N = 303) = 9.0, p < 0.05$ ; land purchase  $\chi^2(2, N = 303) = 7.35, p < 0.05$ , and; confidence  $U = 9728.5, p = 0.027$  (mean rank = 140). But there is no difference in terms of control of savings, ownership of property and assets.

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