YANGON UNIVERSITY OF ECONOMICS
MASTER OF DEVELOPMENT STUDIES PROGRAMME

THE ROLE OF LOCAL INSTITUTIONS AND SOCIAL CAPITAL
FOR HOUSEHOLD WELFARE
IN CHAUNGZON TOWNSHIP, MON STATE

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EMDevS – 27 (16th BATCH)

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This is to certify that this thesis entitled **"The Role of Local Institutions and Social Capital for Household Welfare in Chaungzon Township, Mon State"**, submitted as a partial fulfillment of the requirements for the degree of Master of Development Studies has been accepted by the Board of Examiners.

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ABSTRACT

There is currently considerable interest among economists and policy makers in the possible role of "social capital" in fostering economic development. The primary objective of the study is to investigate whether social capital's contribution to the economic welfare of households was greater than that of other types of capital. Another objective is to identify whether social capital is relevant to the behavior of household savings as well as to asset accumulation and access to credit. The research applied a descriptive method with a quantitative approach using both primary and secondary data. This study found that human capital, such as year of schooling of household members, is the most significant contributor to the generation of household welfare, rather than social capital. In the other hand, participation in organizational decision-making and cash contribution is related to greater ownership of assets, but meetings attendance and the number of active memberships are not linked with the availability of credit.

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2SLS	Two-Stage Least Squares
ADB	Asian Development Bank
CBD	Community-based Development
CDD	Community Driven Development
DPs	Development Partners
DRD	The Department of Rural Development
GII	Gender Inequality Index
HDI	Human Development Initiative
IDA	The International Development Association
IPO	Input-Process-Output
LLI	Local Level Institutions
MADB	Myanma Agricultural Development Bank
MCH	Maternal and Child Health
MCHVS	Maternal and Child Health Voucher System
MOALI	Ministry of Agriculture, Livestock and Irrigation
NCDDP	The National Community Driven Development Project
NGO	Non-Governmental Organization
OIR	Over-identifying Restrictions
OLS	Ordinary Least Squares
SBAs	Services Through Trained Birth Attendants
UNDP	The United Nations Development Programme

CHAPTER 1

INTRODUCTION

1.1 Rationale of Study

Social capital is the networks of relationships between people living and working in a particular society, enabling the community to operate effectively. Case studies of Italian communities, such as Putnam et al., (1993), indicate that social capital is a key facilitator of economic development. It has been found that social capital created by past social and economic activities accumulates and if properly used, improves the effectiveness of development. What is not clear is how it is possible to articulate this idea in operational terms and encourage it in the sense of development. Formal structures of government are integrated within the sense of local social institutions. However, understanding how and when local authorities are inclusive and work efficiently in the delivery of public services and the household welfare involves understanding between tradition, politics and changes in social institutions.

Social institutions are the cornerstones of social and economic development. These institutions conventional at community, local, regional, and national level and in the public, private, and political sectors are the mechanisms by which social change and social action take place. Development needs to improve local institutions and reinforce the social capital on which they depend to be successful. Many initiatives have sponsored and promoted community action at the local level to facilitate poverty alleviation and strengthen local level resource management. However there is a weak understanding of the context for collective action, the existence of the current structures that can promote it and the social capital that might be needed to support that. A crucial role to be conducted by politicians, NGOs and development practitioners in bringing about positive changes in social capital for households welfare.

1.2 Objective of the Study

The primary objective of the study is to investigate whether social capital's contribution to the economic welfare of households was greater than that of other types of capital. Another objective is to identify whether social capital is relevant to the behavior of household savings as well as to asset accumulation and access to credit.

1.3 Method of Study

In this study, both quantitative and qualitative research methods are used to understand the causes and dynamics of relationships and the local community's background. A method of welfare evaluation that relies on the calculation of the total expenditure of households and the sources of income that provide the means for household consumption. The key-informant interview with those who are formal or informal community leaders at Chaungzon township was used to understand a specific issue.

1.4 Scope and Limitations of the Study

For both scholars and development practitioners, this study can help bring about further progress by providing a variety of empirical evidence for the evaluation of social capital in Myanmar. The aim of this study is to provide a basis for measuring multiple aspects of social capital. It would promote greater dialogue between academics, politicians, administrators, managers and the poor themselves. But the research is limited to micro-level social capital (individuals, households) and meso-level (community). Since Coronavirus disease (COVID-19) is prevalent in Myanmar, travel restrictions were also restricted to the data collection process to reach planned respondents. Instead, around 5-6 villages were selected within Chaungzon township area covering a socioeconomic spectrum of income streams, asset level, affiliation level, etc. Eventually, 15-20 households were randomly selected within each village. This results in a sample size of 104 households and 8 of focal individual in total, which is adequate to draw empirical conclusions about the behavior of local institutions and the relationship with the living conditions of households and the access to services.

1.5 Organization of the Study

Based on the available facts and details, this thesis is composed of five chapters. Chapter 1 contains the introduction, the reason for research, the purpose of study, the method of study and the scope of study. Chapter 2 is a literature review of local institutions, social capital and household welfare models and Chapter 3 is about the status of local institutions and social capital in Myanmar. The results of the survey research are discussed in Chapter 4. Chapter 5 is the conclusion, with results and recommendations, of the thesis.

CHAPTER 2
LITERATURE REVIEW

2.1 Concept of Local Institutions

These concepts of institutions are subject to various interpretations and debates. Many of these various "arrangement" whatever their characteristics, are known to be "institutions" of one sort or another. But people seeking to recognize institutions in the sector so that they can establish programs to better the livelihoods of the vulnerable need to find a way of "characterizing" various forms of institutions. To do this, it is generally best not to care over whether a single structure should be considered an "institution" or an "organization" or a "process" but to think about the various qualities or features that different institutions (including organizations and processes) might have. There are at least three key collections of characteristics that are sure to be relevant to investigators (Messer & Townsley, 2003).

2.1.1 Visibility

Some institutions are more "visible" than others because they have a transparent hierarchy, are formal, have well defined rules and regulations, and are structured. Such institutions, on the other hand, may be "invisible" because they do not have a very well-defined form, they are "informal", and they may not have any apparent organization at all (at least not in the eyes of the "outsiders" investigating them). For instance, a village's official "government" may have an office and a variety of people who hold well-established positions - the village president, his secretary, and numerous other persons who fulfill officially defined community roles in compliance with formal rules and regulations set out in the country's statute books and laws. This institution is a "visible" one. Almost at the same time, there could be a much more "invisible" form of community government in the same village, where the village "elders" are assumed to have the last word in dispute resolution. There will also be no official acknowledgment for the position of these elders, and it may not be clearly established or written down. As a consequence, older people's roles and obligations can change dramatically over

time. Within this category, even though they exert a large amount of influence within the society, there might be no organization or hierarchy.

2.1.2 Objectives and Activities

Some institutions have objectives that are realistic and specifically concerned with the everyday life of people and carry out programs of one sort or another to attain the objectives. Other institutions are more concerned with setting norms of behavior and do not undertake any actual "activities" at all. A law is a good example of a "institution" that sets standards of conduct, but does not specifically specify what concrete steps are to be done to guarantee the maintenance of such standards.

2.1.3 Membership and Participation

Some institutions consist of a well-defined group of individuals (who either choose to become members or were "born members") and have simple, exclusive membership requirements. Others are more inclusive, mostly because they determine how individuals should act in general rather than what real individuals should do. It is possible to imagine these characteristics (see Figure 2.1) to help investigators recognize and learn about individual institutions and the features they do or do not have and why. In this diagram, it may not be possible to "locate" institutions perfectly around the various axes, and it is very difficult to measure these characteristics.

Figure 2.1 The Attributes of Institutions
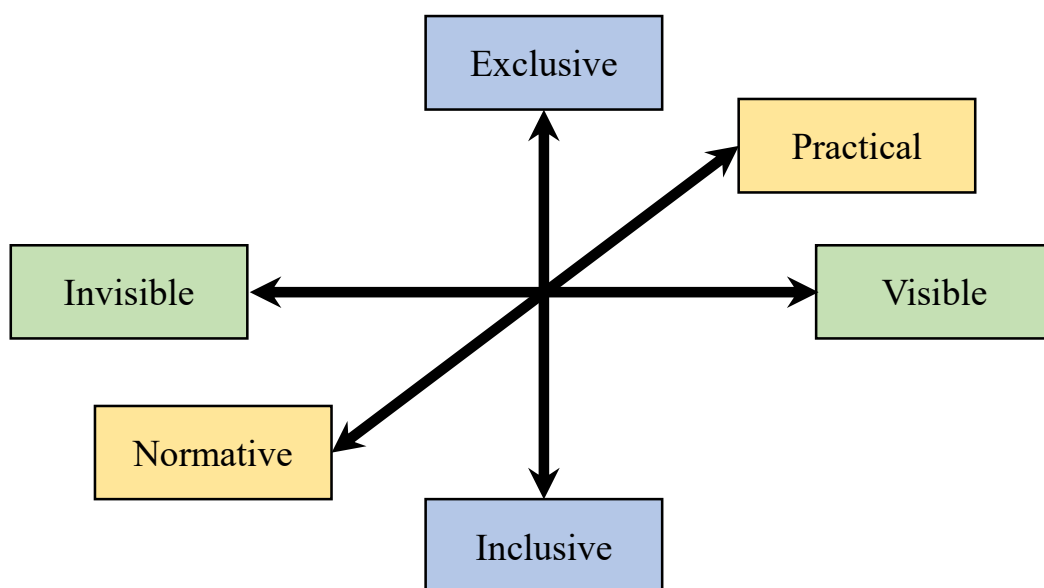
Source: Messer & Townsley, (2003, p. 12)

The phrase "institution" encompasses a wide variety of organizations, procedures and mechanisms that can impact both the decisions made by households to use their assets and the kinds and quantities of assets they can reach. Institutions are also mechanisms that include a broad variety of "arrangements" seen in societies all over the world. Such structures can be more or less organized (and may contain "organizations"), organized or unorganized, visible or invisible.

The phrases "institutions" and "organization" are sometimes used interchangeably, but differences can be made between the two. Institutions usually determine what kind of behavior they are "normal" in society is "normative". Organizations set a common goal for the people who make them up, and their role in reaching that goal is more "structured". Organizations and institutions can intersect, an organization may or may not be an institution, and an institution may or may not be an organization. For example, a local bank branch is an organization but not an institution; a central bank is an organization that is also an institution, whereas money is an institution, not an organization (Uphoff et al., 1997).

Both institutions and organizations sometimes, but not always, convey "collective goals" that are universally agreed by all its members. Institutions and organizations sometimes include certain individuals and avoid others. This may be an important part of how they are described, the role they play and the influence they have on rural poverty and the livelihoods of poor households. It is important to consider why and how this happens when people look at rural poverty. Organizations may gain unique status and prestige if they fulfill people's desires and aspirations over time. In these situations, it may assume that the organization has been "institutionalized" (Messer & Townsley, 2003).

According to Singh (1994), institutional guidelines on who takes decisions are formal or informal, according to which processes, what activities are allowed, what details must be given, and what compensation will be distributed to citizens. Grace et al., (2000) emphasized this by suggesting that institutions should either incorporate or exempt a community of actors from access to services (e.g. individuals, households, ethnic groups). Formal structures are written or codified legislation, such as the constitution, the laws of the courts, organized economies and property rights. Informal structures, respectively, are laws defined by social, family or community moral traditions, including sanctions, taboos, practices and ethical norms that fit local institutions in this society. They may take the form of a structured organizational

framework, but they typically consist of informal standards and traditions within a society or ethnic group. However, formal structures are still plentiful and significant in the local sense.

It is necessary to differentiate local institutions from national institutions in the analysis of institutions. Very much, the word "local" has become a residual concept, equivalent to something that is not national (Uphoff N. , n.d, p. 3). But what is "local" has its own positive characteristics, offering a framework for joint action, creating unity, performing coordination and management roles, gathering, processing and assessing information, energized by a degree of interpersonal solidarity (Uphoff N. , n.d). The fact that people at the local level know each other better, have more relationship and a sense of identity, creates opportunities for collaboration and joint action to handle natural resources on a self-governing and self-sufficient basis.

2.2 Concept of Social Capital

Social capital refers to social organizational characteristics such as networks, behavioral norms, trust and reciprocity that enhance the economic potential of a community (Fukuyama, 2000). Social capital is usually considered a collective attribute, while human capital is considered an individual attribute (UK ONS, 2001). Social capital is efficient, but where policies are not introduced to increase it, it can be diminished. The more communities and institutions work together, the greater the development of social capital, and the fewer people work together, the greater the loss of social capital supplies in the society (Halpern, 2005).

Social capital, which more and more every day has been among the operating stories in recent years, has been the focus of many kinds of analysis. The conceptual work for the notion of social capital, which has been identified since the past in several different fields, is focused on a path that initially appears to be fragmented and competitive (e.g. Coleman (1988); Putnam et al., (1993), etc.) against a single theory of social capital (e.g. Lin (2001)), which has a reason, an attempt of reconstruction has arisen in the field. Methods and methodological forms of analysis have been gradually sponsored in this theoreticalization initiative (Başak & Öztaş, 2010).

Many scientists describe the idea of social capital in various forms and objectives. In the concept of social capital, questions are raised about partnerships, interactions, friendships and family bonds when searching for answers, "who do you know?" (Luthans, 2004). According to Whiteley, the definition of social capital is characterized by people's ability to trust their family members, their residents, and others in general (Yavuz, 2012). While Kosgeb (2005) describes social capital as social norms, laws, networks, contact and shared confidence impacting economic growth, the economic definition forms the foundation of a new strategy.

As mentioned above, social capital is described in different ways by different names. However, as the development of the concept of social capital is discussed on a regular basis, three names give real meaning to the concept of social capital.

2.2.1 Opinions on Bourdieu's Social Capital

Citizens are actively competing with other entities to preserve their place within the hierarchical social system. They describe capital in three dimensions; cultural capital, economic capital, and social capital. Obligations and networks, a part of social capital, are powerful and continuous components of mutual ties (Çetin, 2006). In this

sense, social capital can be seen as a critical force allowing individuals to harness economic and cultural capital (Bourdieu, 1986). The analysis of the educational success of children of various social backgrounds, which describes social capital as valuable assistance where appropriate, indicates that social and cultural capital is the product of imbalances. It describes social capital as the goal of acquiring economic capital while, at the same time, it defines social capital as the means of access to common goods.

2.2.2 Opinions on Coleman's Social Capital

Coleman (1988) suggests that, unlike physical capital and human capital, social capital requires a system of connections between actors, which exposes the disparities between physical capital, social capital and human capital. Social capital, when aiming at the achievement of human capital, is described as the social work plans that the person uses to realize his or her interests. Opinion on Coleman's definition of social capital; responsibilities, anticipations, and also in systems, knowledge networks streaming through the social system, diminishing uncertainty, norms and successful sanctions.

2.2.3 Opinions on Putnam's Social Capital

Putnam, extending the definition of social capital by being inspired by Coleman, describes social capital as "characteristics of social organization such as trust, social norms and networks that enable actors to act jointly and actively in order to achieve common objectives" Putnam et al., (1993). Putnam believes that social capital is of special significance to group behavior. It refers to the concept of social capital as efficient democracy and the purpose of the economy, while describing the concept of social capital as trust, networks and norms that promote mutually beneficial cooperation.

2.3 The Effects of Social Capital on Household Welfare

By spending time and resources in local institutions, why are households involved in gaining social capital? The partial response in Indonesia is that several national organizations with compulsory membership were established by the government. However, to help it, Indonesia still has a deep local culture of mutual assistance and association life. The LLI study's survey questionnaires offer insights into why households join local associations. As the primary factor, just 17 percent of households mention mandatory memberships. The other answers are similarly split between the immediate effect on the livelihood of the family, the impact on the environment, and precautions in the event of potential crises or needs (Grootaert, 1999).

In a relatively poor rural environment, building coping strategies to deal with the possibility of income volatility is a prime concern for households. This requires the accumulation of funds (which can be sold or lent at times of need) or the arrangement of credit access. Asset accumulation is also at a low level in rural areas that are included in Grootaert's report. The effects of social capital can be measured using the following factors:

2.3.1 Asset Accumulation

Grootaert re-estimated an asset score variable as a dependent variable to see if social capital is successful in leading to asset accumulation. This score was determined using weights obtained from the key component study of the 15 durable goods (Filmer & Pritchett, 1998), since the results did not include price information. The ability to provide savings is another component of asset accumulation. Although the amount of savings was not reported in the LLI questionnaire, it questioned if households had been able to raise savings in the past year. Households with more local association memberships were slightly more capable of doing so than others. The influence of membership in credit and savings associations was exceptionally high, suggesting that such organizations are currently meeting their stated target. The household's original financial status also mattered, as wealthier families were considerably more likely to raise their savings. Of necessity, this highlights the value of credit and savings associations for the vulnerable.

2.3.2 Access to Credit

Grooteart results confirm the value of access to credit for financial associations: members were 13 percentage points more likely than non-members to receive credit, and the credit sums received were even higher. However, the finding also makes it clear that access to credit also leads to membership and active involvement of other local associations, the primary purpose of which is not commercial. This is perhaps the way in which social capital is genuinely 'social,' and that, in the context of a social environment, the creation of networks and trust among participants spills over into financial gains, e.g. by better access to credit. Several scholars have suggested this understanding of social capital, such as Putnam (1993), Dasgupta (1988) and Fukuyama (1995). Sharma & Zeller (1997) report that a positive spillover impact on the success of credit groups is the number of self-help groups in communities in Bangladesh. In other industries as well, related spillovers have been recorded. Kähkönen (1999) states that the presence of other non-water-related networks and organizations in the public aids community action to set up water supply systems. The findings also show that the associations' internal heterogeneity has increased access to credit. Gender and education are the main dimensions which contribute to this impact. In other words, in organizations whose participants consist of both men and women and who have a diverse educational experience, the spillover effect is greatest.

2.3.3 Collective Action

Social capital has also been recorded, in addition to leading to the creation of assets and access to credit, to help in collective action and collective decision-making. This is particularly important in rural settings where a group needs to control common property resources, such as water, forestry or grazing land (Narayan (1995); Uphoff (1992)). There is a long history of mutual aid in Indonesia and quite a number of the local organizations inventoried by the LLI report have been set up for that particular reason. This tradition is often expressed in community action (gotong ryong), often performed to construct or sustain local infrastructure.

Further research found that the main dimensions are the kin group and religion, i.e. collective action is more effectively coordinated in groups putting together individuals from the same kin group and/or religion. The relevance of these aspects has been recorded elsewhere. Kähkönen (1999) states that kinship, caste and ethnic context homogeneity facilitates collective water source practice.

2.4 Models of Household Behavior

There has been a notable rise in academic studies over the past decade, in the field of population-economic relations, by economists. Economists, on the other hand, are starting to challenge the theoretical and methodological basis of certain long-standing economic-demographic relations outlined in economic development studies and to make appropriate refinements based on alternate analytical frameworks. One of these similarities relates to the effects on economic development of higher dependency rates and, in particular, to the influence of greater family sizes on household rates and the composition of savings and labor force participation.

In most models where these economic-demographic relations have been specifically explored, children are believed to be (1) to make very mechanically calculated demands on the consumption of household resources (through adult equivalency weights); (2) to have an adverse (or likely neutral) impact on the labor participation of the household; and (3) to be "financed" by drawing on the household saving amount. There is growing criticism of these models and assumptions. The effect of children on the rate of asset accumulation in the household is an open question. For example, children can increase or decrease the activity of parents in the workplace or home work, and children can directly contribute to this activity. Similarly, provided the economies of scale inherent in some forms of household consumption, children may make significant or relatively small demands for consumption. Depending on the essence of the household's saving motives and if the saving measure is broadened to include human-capital assets as well as financial saving, children can stimulate or discourage the rate of asset accumulation.

In summary, the effect of alternate family sizes and dynamics on the basic economic decisions of households, such as saving, spending and income accumulation, is a very complicated matter. One model that would take all of these variables into account would become very complex. In fact, from an analytical and theoretical point of view, it would become unworkably difficult. Researchers may be careful to accept simplistic generalizations of the adverse effect of large families well before closer analytical and scientific evaluation has been subjected to household behavior (Kelley, 1980).

2.4.1 Measuring Social Capital in a Policy-relevant Manner

Several useful proxies for measuring social capital in a policy-relevant manner have been identified, based on extensive empirical work (Grootaert & Bastelaer, 2001). Specifically, the three types of proxy measures: membership of local institutions, trust and collective action indicators:

1) Membership of Networks and Local Institutions

This structural social capital indicator is focused on organization density and household membership incidence. There are also important indices of different aspects of membership (such as internal diversity) and institutional functioning (such as context or democratic decision-making). Which organizations are culturally appropriate to include in the indicators: agricultural syndicates may be important in one country, rotating credit and savings associations in another, parent-teacher associations in another. In the case of networks that are less formal, the network scope and internal diversity of membership are important facts.

2) Indicators of Trust and Adherence to Norms

Measuring trust and adherence to standards (cognitive social capital) demands that respondents be questioned about their perceptions and experiences of trust-requiring behavior. Key questions relate to the degree to which households in case of different emergencies (loss of income, illness) received or will receive assistance from members of their group or network.

3) Indicators of Collective Action

Providing certain programs involves a group of people to work collectively. It is possible to quantify the degree to which this collective action takes place and is an indication of underlying social capital (at least to the degree that collaboration is not enforced by an external power, such as government).

All three types of indicators, as metaphors, measure social capital from different vantage points. Clearly, membership in local organizations and networks is an input indicator, because organizations and networks are the mechanisms by which social capital can be built up. Perhaps this metric most closely parallels the use of schooling years as a proxy for human capital. Depending on one's conceptual approach, trust can be seen as an input or output indicator, or even as a direct measure of social capital. Collective behavior is indicator of the output.

2.4.2 The Conventional Model of Household Economic Behavior

A simple conceptual framework in which social capital is seen as one class of assets available and income-generating to households enabling consumption. The household disposes of assets consisting of physical assets (land, equipment, livestock), human capital (years of education and work experience) and social capital. The family integrates these assets to participate in successful operations, either in family businesses or in the labor market outside. This process involves taking decisions on the labor supply of each household member and acquiring a number of productive inputs (agricultural inputs, credits) and (education , health) services, which may be provided In order to generate income, it is necessary to combine it with labor supply. The level of social capital (i.e. the extent of participation in local institutions), in accordance with the social and demographic characteristics of households, influences access to these inputs and services.

This model can be formalized in the form of a set of structural equations. Grootaert, Oh, & Swamy (1999) build up a conventional model of household economic behavior under constrained utility maximization. Recognizing that household consumption behavior is a function of the level and composition of household consumption behaviour, revenue, the set of structural equations, can be summed up by a reduced formula equation that directly expresses household consumption as a function of asset endowments and other exogenous characteristics of household consumption and of the economic environment in which it takes decisions. It results in the following equation for the estimation:

$$lnE_i = \alpha + \beta SC_i + \gamma HC_i + \delta OC_i + \varepsilon X_i + \eta Z_i + u_i \tag{1}$$

Where E_i = household expenditure per capita

SC_i = household endowment of social capital,

HC_i = household endowment of human capital

OC_i = household endowment of other assets,

X_i = avector of household characteristics,

Z_i = a vector of village/ region characteristics, and

u_i = error term.

The main characteristic of this model is the premise that "capital" actually is social capital and thus has a meaningful return to the household. Social capital has several 'capital' characteristics: it involves the development of resources (especially time) and is subject to accumulation and decumulation. Social capital, much as human capital, can be obtained in formal or informal contexts (e.g. schools versus learning-by-doing). During encounters that exist for social, religious, or cultural purposes, a lot of social capital is constructed. The main expectation is that the networks built by these connections have observable effects for the involved individuals and contribute to a higher degree of well-being, directly or indirectly (Putnam, Leonardi, & Nonetti, 1993). This is the idea that explore empirically by way of equation (1). Structurally, if, for example, one's network aids in having better-paying positions or raises, the returns to social capital could be calculated in the earnings functions. It may also be expressed in the different roles that decide access to credit, agricultural inputs, or other variables that increase the competitiveness of a household business.

The dependent equation (1) variable is the normal logarithm of per capita household expenditure. The explanatory variables consist of households' asset endowments, demographic influence variables, and locational dummy variables. It is believed that household assets consist of human resources, social capital, property, and physical assets. Human capital is calculated conventionally by the years of schooling of the household's adult members and also used the amount of hectares of land owned and run by the household in the regressions. And also included variables capturing the ownership of cattle and agricultural machinery by the household. The regressions require household size, in addition to the asset variables, to catch the regularly observed negative relationship between household welfare and household size. A dummy variable was used to suggest that, under the presumption that such households could face special income generation restrictions, the household head was female. To capture the life cycle of household welfare, the age of the head of household and their square term were included. Dummy variables were used to denote the province and to capture the provinces' general economic and social circumstances in dimensions other than those that were able to use in the model. Finally, for language/ethnic groups, a collection of dummy variables was used (the 'other' subset was omitted), aiming to catch the basic cultural and social features of each population.

2.5 The Conventional Reduced-form of a Household Welfare Model

The conventional reduced-form model of household welfare used in Grootaert, Oh, & Swamy (1999), i.e. incorporating physical and human resource factors, but lacking social capital metrics. This model, which describes the difference in household expenditure per capita, shows that both human and physical resources make a major contribution to the generation of welfare, and that the latter is also significantly influenced by the demographic characteristics of households, like the female head of household and the age of the head of household. The calculation results also indicate that there are important provincial measurements that are not included in the model. In the other hand, there do not seem to be important features of language/ethnic groups that are not already regulated in the model, because none of the language/ethnic group dummy variable coefficients are significant.

Social capital can be implemented in two ways in this model. One way of doing this is to consider each of the eight dimensions independently in an additive model. The solution used by Narayan & Pritchett (1997) is to take any of these measurements and place them in a multiplicative index. A modified multiplicative index is the number of active participants, the heterogeneity index and the active participation index, re-normalized to a limit of 100. This index is close to the index used by Narayan and Pritchett in Tanzania.

An component of active participation in the association is captured by four of the social capital aspects, including meeting attendance, participation in decision-making, and contribution in cash and in kind. The latter two tend to be the most significant in the sense of Burkina Faso, and are positively correlated with levels of household welfare. In comparison, the root or mode of organization of the group (formal or informal) does not seem to be consistently connected to per capita expenditure amounts. It is important to note that the shift in specification from a multiplicative to an additive index of social capital does not significantly change the coefficients of physical and human capital variables, suggesting that there is a low association between social capital and these other categories of asset groups and that the model's basic specification is resilient to changes in the definition of the social capital variable.

Although this proof of robustness is reassuring, there is one big concern to be solved. It may be costly, in terms of time and other capital, to form organizations and

alliances of various sorts. It is also possible that revenue growth itself will lead to social capital development. The Ordinary Least Squares calculations discussed above will be subject to simultaneity bias in this case. Then, the effective approach is instrumental variable calculation in which the effect of social capital is defined by isolating components of it that are not impacted by revenue growth. Instrumental variable estimates broadly support the results obtained using the calculation of ordinary least squares.

2.6 Instrumental Variable Estimation

In implementing instrumental variable estimation, the real challenge is to find an effective instrument for social capital: tools must assess social capital, but not household welfare (nor be determined by household welfare). Three instruments at the household level:

a) A Measure of Trust

This is an index derived from questions as to whether people expect others to make equal contributions to collective activities in the village and whether they agree that villagers other than relatives and close friends will receive emergency support. Such "generalized trust" is developed over time and is a function of village stability and norms (i.e. trust not connected to particular established individuals, such as friends). It is independent of a single household's income level. Generalized confidence tests have also been used as resources for social capital in other research (Narayan & Pritchett, 1997).

b) Length of Residence in the Village

Building a social network takes time and thus the longer a household resides in a village, the greater the ability to create social capital through association activities.

c) Trend in Association Membership

Households have been asked if they are already members of more associations, the same or less than five years earlier. The retroactive existence of this information makes it an excellent method because current income can obviously not be affected by it.

At village level, the same three instruments averaged. In addition, three variables obtained at the level of the village (from main informants, such as village representatives, teachers, health professionals, etc and independent of the data on the household level are:

1) **Traditional Authority**

This is a binary variable that shows whether the village is still run by a traditional authority (e.g. the council of village elders).

2) **Organizational Strength**

This is an index extracted from the key informants' assessments of the degree to which village organizations work effectively. The probability that households enter and are involved in associations can be expected to increase as associations are considered to be effective.

3) **Community-created Associations**

This is a count of the number of local associations set up by the community. It is the village-level equivalent of the vector "community initiation" that used in the OLS regression, but the data was independently gathered.

At first, only household instruments were used and the standard test for over-identifying constraints suggested by Davidson & MacKinnon (1993) was applied. This measures the joint null-hypothesis that the underlying model is correctly stated in equation (1) and that the instruments used are valid. (It is difficult to test the above hypothesis separately.)

2.7 Reviews on Previous Studies

In Burkina Faso, Donnelly-Roark et al., (2001) observed that local institutions surround and connect communities and communicate with other institutional structures, such as local government, in order to express neighborhood needs. Local institutions will be successful in engaging the energy and social ties of ordinary people and increasing the desire of citizens to engage in public goods. However, a constructive relationship with rural communities should continue by acknowledging that they have institutions by which to exercise or organize collective action (Heltberg, 2001).

Khine Tin Zar, Sinha, & Gibb (2020) systematically examined the structural limitations conceived by entrepreneurs in Myanmar, both formal and informal, and the ways in which they continue to deal with those constraints. Based on in-depth interviews with entrepreneurs, entrepreneurs perceive access to finance as substantial formal institutional restrictions and a change in employee values and practices as major informal constraints, weakening their market operations. The limitations, however, first appeared to emerge as an insufficiency or a lack of a support system characteristic of transition economies. In combination with current emerging institutions which have either partial formal reforms or a change in informal values, these shadows are from a previous institutional legacy. As a result, entrepreneurs in Myanmar rely on trust-based social capital, such as trust-based social network borrowing and recruiting of current employees through social networks, to help mitigate the adverse effects of those institutional constraints and, in turn, to maintain their businesses' viability and growth.

Grootaert (1999) investigated the effects of social capital on household welfare in Indonesia, the average household owned only 2.2 items out of a list of 15 household durable goods. A radio, a pressure lamp and a bicycle were the most widely owned. A big explanation why Indonesian households join local associations is to boost access to credit and savings. For this reason, one-fifth of all memberships are mainly based on Jawa Tengah, which has a history of rotating credit and saving partnerships (Werner, 1998). As a secondary target, several other groups have the availability of credit.

An analysis of Burkina Faso by Grootaert, Oh, & Swamy (1999) reveals that the multiplicative social capital index is a major variable in the model, although its use contributes just marginally to the explanatory strength of the model. Provided that the average social capital index is 19, the coefficient suggests that a one-unit rise in social capital (i.e. an increase of 5 percent) will increase household expenditure per capita by

0.45 percent. By comparison, an increase in human capital by one additional year in education will increase household spending by 9.3 percen. However, given that the total number of years of schooling is 0.7, this would mean more than double the amount of human capital. If one postulates a comparable 5 percent increase in the volume of human capital, the result is a related increase in household expenditure per capita of 0.33 percent. In other words, the results of the rise in social capital assets and human capital assets on household welfare are close. This conclusion correlates similarly to the findings of the local level institutions analysis for Indonesia (Grootaert, 1999). An additive model of the eight dimensions of social capital, which raises the R-square from 0.25 to 0.29. The findings indicate that the main effects derive from the density of interactions and internal variability. Specifically, additional membership is correlated with a 7 percent rise in household expenditure per capita. Provided that the total number of active members in the study is 1.8, this will represent a 55 percent rise in the number of active members.

The heterogeneity index coefficient shows that a 10-point rise in the heterogeneity index is correlated with a 3.6 percent increase in per capita expenditure. In other words, the advantages of engaging in internally heterogeneous associations are greater than those of associations whose participants are more comparable. The explanations for this could have to do with the sharing of knowledge and information between participants. Members with different backgrounds can learn more from each other because they have different knowledge to start with. Further study of heterogeneity (including each dimension as a different regressor in the model) confirmed this conclusion: the economic aspects of heterogeneity (economic status and education) matter most. This is particularly important in the sense of a poor rural economy, where the vast majority of the population depends on agriculture, and where economic heterogeneity is also low to begin with.

The findings also suggest that demographic heterogeneity also matters: divided groups of age and gender include participants with smaller welfare benefits than mixed groups of age and gender. This is also an important finding since the major farmer-oriented organizations in Burkina Faso, the Village Communities, operate in both gender-segregated and mixed ways. In part, this is a cultural problem. Mixed groups of age and gender primarily work in Yatenga and Sanmatenga, where the Mossi are the majority ethnic group, while age and gender divided associations are mostly found in more ethnically mixed Houet and Sissili. This discovery, however, indicates that the

relative efficacy of age and gender segregated versus mixed groups might not be the same and further research is required (Grootaert, Oh, & Swamy, 1999).

Grootaert, Oh, & Swamy (1999) also applied instrumental variable estimation, although the incremental R-squared is weak, the test is passed by the tool collection. As a result, the social capital index coefficient increased significantly from 0.0045 in the OLS model to 0.0271 in the Independent Variable results. This six-fold jump in the coefficient's magnitude is comparable to the findings for Tanzania of Narayan & Pritchett (1997), who also used trust as an instrument. The outcome supports the statement that equation (1) is correctly defined and that social capital is an exogenous household welfare determinant. The social capital index coefficient in the Two-Stage least squares (2SLS) regression would have been lower than the Ordinary least squares (OLS) coefficient if substantial inverse causality occurred.

However the outcome dramatically changes the previous OLS-based estimation of the relative value of social and human resources. A 5 percent rise in social capital endowment now leads to a 2.7 percent increase in per capita household expenditure, while a 5 percent increase in human capital endowment only raises per capita household expenditure by 0.22 percent (in the Two-Stage least squares (2SLS) equation, the coefficient of years of schooling was lower than in the Ordinary least squares (OLS) equation). This closely correlates to the findings of Narayan and Pritchett for Tanzania, which found that the effect of social capital was 4 to 10 times greater than the effect of human capital, depending on the specification.

Independent variable findings, of course, are just as good as the tools are credible and it helps to test the results for instrument selection sensitivity. Using village averages of the three instruments, then first repeated the exam. The resulting social capital index coefficient was much lower and not substantially different from zero, although this set passed the Over-identifying Restrictions (OIR) test. Then the independent instruments at the village level, which led to coefficients in the narrow range of 0.0173 to 0.0179, were introduced, still suggesting effects on social capital 5-6 times greater than the effects on human capital. In the last test, only the separate instruments at the village level were used, which yielded a coefficient of 0.0278, almost similar to the result obtained with the instruments at the household level.

Multiple assumptions emerge. First the findings indicate that the causality extends mainly from social capital to household health, and this is robust to the choice of resources. Second, the approximate magnitude of the impact of social capital is

highly dependent on the choice of tools, but it has been found to be much greater than the effect of human capital in all situations. In this regard, the result of findings and those of Narayan & Pritchett (1997) for Tanzania are clear.

However these results are not the same as those obtained in the LLI report for the other two nations. For Indonesia, Grootaert (1999) found that the impact of social capital was in the same range as the effect of human capital, and for Bolivia, Grootaert & Narayan (1999) found that the effect of social capital was 2 to 2.5 times higher than the effect of human capital. At this point, the reason, while fairly hypothetical, may have to do with the absolute level of education in the various countries. The average education per member of an adult household is 0.7 in Burkina Faso, 3.9 in Bolivia and 4.8 in Indonesia, respectively. Social capital can serve as a substitute for human capital at such low levels of education as in Burkina Faso, and much of the information required to generate income may have to be acquired from social networks and associations. This could explain why the social capital coefficient is so much greater than that of education. Social and human capital may become more complementary as the level of education increases, with a better balance between social networks and schooling as a source of learning. This is obviously a fascinating topic for further study.

Shein & Connell (2016) focused on an INGO project survey group that included 27 rural villages covering approximately 1200 families, including survivors of Cyclone Nargis. The purpose of this study was to address the question: how can networks foster social capital building and capacity building for women in Myanmar? While the INGO workers performed the project tasks in a versatile manner in order to allow woman cyclone survivors the ability to engage and perform activities with a sense of ownership, it could be that, in comparable circumstances, the potential focus of INGOs must be put on the significance of maximum involvement by beneficiaries in network construction.

Study was presented according to Input-Process-Output (IPO) model. The input segment concerns the resources in their village settings (i.e. physical capital) accessible to rural women and through the other villagers in their network (i.e. human capital, cultural capital and social capital). The research also included inputs from INGOs, such as project activities and capacity building training (i.e. human capital), disbursement of financial resources (financial capital) and facilitation of social capital building meetings. Population size and resource utilization were different, based on geographical location. In addition, while all the villages received the same input from the INGO, the method and outputs of each were influenced by varying levels of community

involvement in the project. The observation indicated that the degree of involvement of women in training, the amount of qualified peer educators, participation in library service and daily meetings is much smaller, relating to the method and performance parts of the IPO model. The IPO model is typically one of the measurement instruments used in business to define economic development and productivity improvements. In Shein & Connell (2016), in relation to the INGO and rural women in the Labutta village networks, the IPO used an implementation tool for evaluating social issues that helps to quantify capacity building across different types of capital.

Many of the village women refused to take up the opportunities provided by the INGO on the basis of the documentary research and consequently founded a few network groups on a voluntary basis, established their own businesses, gained from social resources or opportunities for training/capacity building. Follow-up interviews allowed the women of the village to share their stories, helping to understand why the women of the village did not engage as thoroughly in the projects as the women of other villages and missed the ability to improve their lives and create potential in the process. This research has shown that complete involvement in all facets of the curriculum is important both for the improvement of social capital and for the creation of personal/collective capacity.

Thida Win et al., (2020) explored the connection between fathers' social capital and infant malnutrition. Anthropometric tests were carried out with 1546 children aged 6 to 59 months and face-to-face interviews were carried out with 1546 biological fathers. In 2-level logistic regression models for child waste and child stunting, three social capital metrics (institutional trust, social engagement, and collective action) were used. External reinforcement from the social networks of fathers are preventive mechanisms at individual and community levels for child waste and child stunting, respectively. Child stunting at the individual level was positively correlated with the joint intervention of fathers. There was no correlation between institutional trust and all indicators of child deprivation at all levels. The concerted intervention at the individual level on child stunting was conditional on social participation at the community level. The research results indicated that current nutrition policies in Myanmar can be improved by targeting fathers to improve their child nutrition support and by targeting the population with their full support to participate in nutrition programs.

CHAPTER 3
STATUS OF LOCAL INSTITUTIONS AND SOCIAL CAPITAL IN MYANMAR

3.1 Decentralization

The concept of decentralization aims to decentralize authority from its centralized bases to rural communities. It is both an ideology and an administrative framework that aims to empower local populations. The voters of globalization are actively encouraging localization through decentralization for development. Decentralization encourages people's engagement by building a new political domain within the center, thus allowing a further strengthening of democracy (Chakrabarty & Chand, 2012).

When the military regime of Burma, called the State Law and Order Restoration Council (SLORC) at the time, refused the transition of power to civilians who won the May 1990 elections. It was to be a provisional and interim military government that prepared the nation for democracy, the regime declared. It has declared, with a new constitution in hand, that it will hold multi-party elections for a democratic political system in 2010 (Nyein, 2009). The nation started a series of decentralization changes under the 2008 Constitution and after the 2010 elections that marked Myanmar's landmark transition from military rule. Sub-national governance is now focused on 14 state and regional governments, with more opportunities at the local level for citizen participation. However, Myanmar remains a strongly authoritarian state: 25 percent of the national and sub-national legislative seats are reserved by the Constitution for military service. In comparison, state and regional governments do not have their own civil service and must depend on national ministries. Although even the military now acknowledges that the future of the nation lies in a sort of federalism, considering the past of ethnic armed struggles, what it entails would be deeply debated. Meanwhile, governments in the state and region are getting more interested in defining their own policies, changes that have been pledged to continue by the current National League for Democracy-led government (Ninh & Arnold, 2016).

3.1.1 Political Decentralization

Political decentralization involves the transition of roles or power from national levels of government to local institutions. It is meant to allow citizens or their elected representatives greater influence in democratic decision-making. Greater political decentralization can lead to a greater representation for voters in government decisions. It can also enhance the assumed legitimacy of governments (Chakrabarty & Chand, 2012).

In Myanmar, the decentralization process has speeded up since the government of Thein Sein came to power in 2011. The government has stressed "People-Centered Development," establishing advisory bodies or elected district, township, and village positions. It also directed civil servants at the state and national level to negotiate over Union level duties with state and regional government, and expanded the budgets available for local public services and development projects. However, significant long-term policy implications of the decentralization process remain uncertain. The long-term trajectory of Myanmar's decentralization will be influenced by many major policy processes which are still at an early stage. Thereare constructive debates on constitutional reform, both within the legislative branch as well as within political parties as the election approaches. It is also clear that if the peace process continues to the stage of "national dialogue," the role of most ethnic armed groups needs a reorientation of center-local relationships towards a more federal model. Ultimately, ensuring greater transparency, equality, sustainability and fairness in the distribution of natural resource revenues is closely linked to successful fiscal decentralization as well as the peace process (Nixon & Joelene, 2014).

3.1.2 Administrative Decentralization

Administrative decentralization involves the delegation of responsibilities or the transition of power from the federal government to the state branches of the central government. It aims to redistribute power and responsibility for the provision of public services across various levels of government. The idea is that local governments provide more information about local interests and are best prepared to select suitable policies. Administrative decentralization is also a tool to enhance welfare by ensuring better policy decisions and better policy implementation (Chakrabarty & Chand, 2012).

Myanmar had lived with a centrally controlled economy for more than 25 years, when reform initiatives were introduced to promote a market-oriented economic system

in late 1988. Throughout the transition period the economy was governed by formulating and implementing annual plans from 1989-1990 to 1991-1992 based on prevailing conditions and in response to the central government's policy adjustments and reform measures. The key goals of the annual plans were to achieve short-term economic recovery with stability, and to lay firm foundations for sustainable long-term growth. One significant reform measure thus taken was the decentralization of power from central to local level. The decentralisation process is fairly new for Myanmar's citizen (Soe Thant Aung, n.d.).

Current subnational institutions of government and central-local relationships are crucial to Myanmar's future and are experiencing major changes. The new subnational governments have begun to give away political space, but they face huge constraints. While a significant change is the inclusion of partially elected bodies at this stage, these *hluttaws* face capacity constraints. A top-down appointment procedure still controls the executive at the level of the state and country, and ministers have no influence over the administrative apparatus, restricting the performance of new administrations (Nixon et al., 2013).

Myanmar government reform agenda includes decentralization and further devolution of executive powers, although there is still no agreed, detailed strategy to address current uncertainties about the functions of departments of the State and Region and imbalances in the political, administrative and fiscal dimensions of power sharing. While federalism continues to generate debate between government, civil society and ethnic groups, power shifts within government agencies indicate that the distribution of authority is being given way to highly centralized administrative structures. Although still largely unpredictable, it is possible to delegate decision-making to the sub-national level to speed up response and improve government efficiency. The willingness of Union government officials to cede power to lower authorities bodes well for further decentralization to the level of townships (UNDP, 2016).

3.1.3 Fiscal Decentralization

Under fiscal decentralization, historically centralized tax and revenue-generating functions are dispersed to all levels of government. Dispersal of financial accountability is a crucial aspect of decentralization. Fiscal decentralization can take several forms, including self-financing or recovery of expenses by usage charges (Chakrabarty & Chand, 2012).

Fiscal decentralization has become a popular idea in Myanmar, as in other transitional countries. Through the 2008 constitution, Myanmar transitioned from a long tradition of a centralized system to a modern, decentralized structure. Concerns have been raised over the fiscal and administrative autonomy of state and regional governments. In response to these two schedules, amendments were made in July 2015. Not many improvements have been made to explain the roles of sub-national governments. The first three pillars of fiscal decentralization are in place and have progressed within a short period of time.

Nixon & Joelene (2014) stated that decentralization takes place across horizontal (territorial) and vertical (sector-based) forms of processes. Horizontal decentralization refers to a single local authority with functions assigned to it. The local government retains jurisdiction over decisions on these assignments under devolution. In contrast, vertical decentralization is the transfer of activities and resources to the lower administrative level. The defining feature of the new sub-national fiscal system in Myanmar is its combination of horizontal and vertical decentralization. In Myanmar, though sub-national governments in the states and regions have their own revenue sources and a separate budget for some purposes, a vast majority of tax revenues are held in the Union line ministries' budget.

The assigning of expenditure happens in conjunction with the assignment of functions. This discourages the elected governments' democratic ambition to perform. The conflicting responsibilities often diminish the legitimacy of the elected government. In setting tax policies, sub-national governments have little to no control. There is also a lack of desire to pay taxes among the citizens. In terms of public programs, a straightforward tax structure that reveals where tax revenue goes could raise public trust and increase public motivation. Myanmar does not have a structured vision for decentralization. The successful transition of powers is impossible to accomplish without a strategic plan, agenda and timeline. Tying the peace process to fiscal decentralization could guarantee local autonomy and self-reliant local governments, thus resolving conflict. Depending on the local capability and administrative structures, devolution can take time. Nevertheless, a consistent allocation of duties, a transparent tax structure and a national vision of comprehensive decentralization and a fair timetable may be the most reasonable and beneficial path to Myanmar's progress towards greater decentralization (Joelene, 2016).

3.1.4 Functional Decentralization

Functional decentralization refers to the transition of roles from central institutions to intermediate or local entities. These include subjects related to rural development such as agriculture, small-scale irrigation, animal husbandry and other. It is up to the state governments to decide on the tasks to be transitioned (Chakrabarty & Chand, 2012).

Myanmar recent progressive agricultural policy reforms have enhanced the performance of the agricultural sector and its growth potential, such as (i) land law reforms; (ii) the abolition of the rice production quota, allowing farmers to choose which crops to grow; (iii) the liberalization of the domestic and international marketing of rice in 2003 and of industrial crops in 2004; (iv) the elimination of the export tax on main agricultural commodities; (v) the legislation authorizing the development of microfinance institutions; (vi) the use of crops as collateral for loans; and (vii) the introduction in 1990 of the plant pest quarantine law, in 1993 of the pesticide law, and in 2000 of the fertilizer law. Despite this progress, it remains important to follow a more coherent and detailed approach to agriculture and rural development and to make agriculture more commercially oriented, as has been achieved by the leading members of ASEAN, which have broad agricultural sectors.

In order to achieve this, since 2011, the government has introduced a value-chain approach to agriculture, which will promote the production of employment and the growth of income required to achieve not only rural development, but also sustained inclusive growth. Crucial constraints yet to be addressed are (i) weak management of land and water resources; (ii) inadequate access to agricultural support facilities, availability of inputs, analysis and expansion, business knowledge and credit (both at farm level and throughout the entire value chain of agriculture); (iii) low capacity of organizations of farmers and irrigation water users; (iv) weak, insufficient and poorly organized marketing; (v) minimal or low-quality technology (hardware and software); (vi) limited participation and engagement of the private sector in value chains; and (vii) a policy environment less than adequately supportive. In the agricultural areas destroyed by the 2008 cyclone, the loss of critical rural facilities (including flood and salinity control structures) has worsened these constraints.

The importance of agriculture and rural development in Myanmar has been illustrated by numerous recent government reforms, as expressed in the Poverty Alleviation and Rural Development Action Plan, the Framework for Economic and

Social Reforms, the National Comprehensive Development Plan and the Strategic Framework for Rural Development. Agricultural development is seen by the government as one of the driving forces of the economy and the basis for the broad-based development and sustainable development required to improve the well-being of most of the citizens of Myanmar.

However, the specified targets and objectives for the sector have not always been matched by reality. The poor condition of rural roads, for example, severely limits access to rural areas; rural areas are scarcely served by electricity; government support for sector management is well below the amount required. The challenge is to identify the core development needs, assign sufficient capital and reinforce the sector's primary institutions. Policies that encourage the private sector's role in rural and agricultural development in areas such as marketing, manufacturing, storage and supply of inputs would also need to be implemented (ADB, 2013).

3.1.5 Democratic Decentralization

Decentralization can, however, not be viewed as an end in itself. It is, in reality, the democratic environment that makes decentralization an efficient instrument of empowerment. Democratic decentralization has been conceptualized from two separate institutional and instrumental backgrounds in the context of developing countries (Chakrabarty & Chand, 2012).

The transition to Democratic Governance in Myanmar has advanced substantially through the four waves of reforms process of the government: (a) reforms in politics and democracy, (b) reforms in the socio-economic sector, (c) reforms in governance and administrative, and (d) developing the private sector. The transition towards participatory democracy and the rule of law builds on the clear momentum of change that became evident in 2012. These developments raise both opportunities and obstacles for the ongoing transformation, and are expected to affect the context and policy reform (UNDP, 2016).

3.2 Community Based Development

Community-based development (CBD) is an approach to the execution of local development programs. It encourages the involvement of the community in decision-making and management. CBD can increase resources for services and boost expenditure effectiveness. It can also improve social networks, trust, and future commitments to community-level public resources (Udry et al., 2016).

Since early 2013, the Department of Rural Development (DRD) of the Ministry of Agriculture, Livestock and Irrigation (MOALI) has been implementing the National Community Driven Development Project (NCDDP) with support from the World Bank and other development partners (DPs). The initiative currently includes 27 townships and is in the process of scaling up, potentially providing funds to communities to expand access to basic services and vital infrastructure for an estimated 7 million people across 63 Myanmar townships. Since then, NCDDP has delivered results by putting communities at the center of development in resource planning and management. Villagers discuss whether to use project funds, plan subprojects like renovation and expansion of school buildings, health facilities, water supply networks, footpaths, jetties and bridges (World Bank, 2016).

3.2.1 Social Development and Protection

Social protection is a prerequisite for poverty alleviation and inclusive and sustainable development. It addresses both absolute deprivation and vulnerability of the poorest, as well as the need for stability of the existing non-poor in the face of shocks and life-cycle incidents (ADB, 2003).

Over 28.6 percent of Myanmar's population were children (0–14 years of age); 65.6 percent are of labor force (15–64 years of age); and only 5.8 percent are aged (65 years and above). The population is still relatively young, with a decreasing birth rate and a substantial proportion of working-age people increasing after the last recorded censuses in 1973 and 1983. Many people in Myanmar reside in large families, including elderly people and grandchildren, although this is increasingly improving. The 8.8 age dependence ratio and the 43.7 child dependency ratio make it an opportune time for policymakers in Myanmar to take advantage of the generational window of opportunity (DOP & UNFPA, 2017). Investments made today in the education and health of young people, particularly girls, will help to create a professional workforce that can not only accelerate economic development but also lead to a robust social security system.

In Myanmar, the major industries are agricultural production, forestry, minerals, construction, pharmaceuticals, petroleum and natural gas, garments and jewels. Labor engagement is 64.7 percent, with a major gap between women 51.6 percent and men 80.2 percent (ILO, 2016a). Most of the employment is in informal jobs, accounted for 85.7 percent of total employment, one of the highest among ASEAN countries. This percentage of informal workers is marginally higher for women than for men. Of all informal workers, the majority are engaged in agriculture, followed by the manufacturing and service industries (ILO, 2018). People in informal jobs also earn low and erratic wages, a fact that plays an important role in determining if they have access to social security. Women and young people typically have a higher share of unpaid household jobs and informal work and thus face greater difficulties in engaging in national social security programs and in obtaining benefits (De et al., 2020).

3.2.2 Human Development and Gender

The word 'human development' can be interpreted as the extension of human capacities, the broadening of choices, the enhancement of freedoms and the fulfillment of human rights. Development cannot however be treated simply as an increase in income. The sum-total of human life is not income. Health, schooling, the physical world, and liberty are just as critical as income growth (Kumar, n.d.).

In Myanmar, the 2019 HDI of 0.583 for countries in the medium human development group is below the average of 0.631 and below the average of 0.747 for countries in East Asia and the Pacific. Myanmar's HDI value increased from 0.342 to 0.583 between 1990 and 2019, an increase of 70.5 percent. The life expectancy of Myanmar at birth increased by 10.3 years between 1990 and 2019, the mean years of schooling increased by 2.6 years and the expected years of schooling increased by 4.6 years. Between 1990 and 2019, Myanmar's GNI per capita increased by about 672.4 percent (UNDP, 2020).

A social and cultural structure that differentiates the attributes of men and women, girls and boys, and thereby contributes to the roles and responsibilities of men and women. Therefore, gender-based stereotypes and other features shift over time and vary in various cultural environments. The definition of gender involves the assumptions of both women and men regarding their characteristics, capacities and likely behaviors (femininity and masculinity) (UNICEF, 2017).

In the 2017 ranking, Myanmar has a Gender Inequality Index (GII) value of 0.456 and is ranked 106 out of 160, which qualifies it as a Medium Human Development country. Men in Myanmar are more likely than women to own land, control productive resources and maintain finances, which appears to implicitly inhibit women's power over household decisions. Gender disparities in access to motorized vehicles, communications and information and services, education and the labor market are seen in Myanmar census results. Some of the factors that limit the financial inclusion and economic involvement of women are mobility, phone ownership, land ownership and unpaid work and access to information (UNCDF, 2019).

3.2.3 Urban and Rural Development

It is basically about sharing prosperity to get urbanization and rural development right. If they migrate to mega cities, smaller towns, or remain in a rural environment, it is about ensuring that the benefits of prosperity and growth reach all people (Indrawati, 2014). Currently, urban areas in poor and middle-income countries house nearly three quarters of the world's total urban population. Sustainable development and poverty alleviation in rural areas are dependent on efficient use of common resources and local governance. Different forms of cooperatives have helped individuals struggle with different economic, social and environmental issues. There is a need to sustain natural systems and achieve greater equity in access to land for the poor and credit (Desai & Potter, 2014).

Myanmar is still in an early urbanization period. This offers more opportunities for economic growth and poverty reduction to shape communities. An inclusive strategy would help ensure that cities grow in an equal fashion, adding tremendous benefits to peace and prosperity. Creating jobs to everybody highlights key challenges and presents urbanization policy guidelines in Myanmar, with a specific emphasis on Yangon and Mandalay (World Bank, 2019). Although urbanization also provides urban dwellers with tremendous resources, keeping track with the rising needs of urban residents is also a challenge. Inadequate planning and a lack of public investment and the availability of basic services will result in sprawl, degradation of the environment, congestion and inequalities. Overtime, inequality can undermine the gains usually offered by urbanization as it can build or exacerbate social tensions and lead to growing urban crime and violence. This highlights the immediate need to concentrate efforts on equitably investing in urban development.

Myanmar remains a mostly rural region, with 15 million of the country's 51.5 million population live in urban areas. However, this figure is projected to shift, with estimates suggesting that by 2050 an extra 7.1 million of the present rural residents will migrate to cities (World Bank, 2019). Urban population growth has begun to place a severe strain on cities, particularly Yangon, as well as on the need for affordable housing, services and infrastructure. When new residents can not afford the current supply of accommodation, there is also an increase in the number of informal settlements. These infrastructure requirements could, if left unaddressed, contribute to more congestion, slums, pollution, and put a drag on development potential.

Vulnerable people and minorities in Myanmar face problems related to geographic deprivation in terms of access to urban space, infrastructure and social facilities in large part due to where they reside or their nationality status. The addresses problems related to spatial integration, such as: (a) spatial preparation is limited and inhibited by capacity constraints, (b) the management of urban property is difficult and results in high land costs, (c) there is very restricted access to subsidized accommodation, leading to increasing informal settlements, (d) rastructure and essential service demands are enormous in urban areas, (e) for many, urban mobility and transit are problems, (f) urban water and sanitation coverage is poor, leading to health risks, (g) solid waste management facilities, particularly in slums, are scarce and generate urgent challenges, and (h) disaster risk management is compounded by inadequate drainage that causes major flood risk during the monsoon season.

Social inclusion refers to encouraging and facilitating inclusive attitudes towards marginalized groups, irrespective of gender, ethnicity or region of origin differences. In the urban background, a few subgroups in Myanmar are vulnerable to exclusion internal migrants, urban poor, people with disabilities, and some race and religion minorities. While roles of urban service delivery have been shifted to subnational governments, local governance is often hindered in practice due to restricted execution of policies/frameworks, financial resources, and technical capabilities. Lack of accountability and equitable decision-making, as well as inadequate funding for the effective execution of on-the-ground services and policies, will contribute to uneven urban development and intra-city inequalities, leading to social conflicts, crime and violence (World Bank, 2019).

3.3 Civil Society

Civil society refers to the space for collective action around common goals, objectives and principles, which are typically distinct from governmental and commercial actors for profit. Civil society includes charities, development NGOs, civic groups, women's organizations, religious organizations, professional societies, labor unions, social movements, coalitions and activist groups (WHO, 2007).

A vibrant civil society existed in urban areas when Burma was under democratic rule from 1948 to 1962. successive regimes have tried to root out civil society and authorize only state-controlled organizations. Military government clamped down on most independent organizations after the military retook power in September of that year. Legal challenges are virtually impossible because the generals rule by decree and judges are under the influence of the authorities. International non-governmental organizations and some local entities have been working to launch small-scale initiatives resolving local concerns, but they need to stay away from politics. Civil society organizations are critical in promoting any solution and in consolidating the process of democratization once it starts, but they are unlikely to be central actors in achieving traction for reform (ICG, 2001).

Civil society systems in Myanmar have historically operated within religious groups at the local level. Civil society also filled the function of serving the state, especially in areas of poor central government control and armed conflict. Myanmar has civil society organizations (CSOs), community-based organizations (CBOs) and local NGOs and international NGOs. One survey places Myanmar's number of community- based organizations at 214,000 (ADB, 2015).

3.3.1 Civil Society Organizations (CSOs)

Civil society underwent a profound transformation of structure, finances, stakeholders and modalities after Cyclone Nargis devastatingly hit the southern portion of the country of 2008, and more recently with the change of government and democratic reforms. Such organizations, which concentrated on environmental issues and community development, included religious , educational, and social welfare organizations, and civil society groups. Political "space" has continued to open around the country since the 2010 elections, particularly in urban areas, with additional capital and stakeholders helping to shape and grow networks and coalitions, and the government increasingly embracing a role for the civil society. Civil society is

becoming more involved and engaging local, national and foreign communities, as well as the government of Myanmar. Civil society's develope in independent media and investigative reporting, demonstrations and public awareness events is leading to increased openness, visibility, and participation in Myanmar's civic life. Nevertheless, legislative and functional constraints exist in many countries where authorities tend to look with skepticism at civil society activity (ADB, 2015).

3.3.2 Community-based Organizations (CBOs)

Community-based organizations (CBO's) are non-profit organizations that seek to improve the lives of people at the local level. CBO's are staffed by local residents - community members who understand the needs of their communities first-hand. Increasingly, governments delegate transparency to CBOs and rely on them to collect local issues, create, prepare, and help provide solutions. CBOs are storehouses, gatekeepers, with local knowledge clearly important for their own purposes, but this data is often beneficial to other organizations and government departments. The only bond between staff members and their desires is always the motivation and ability to contribute (PBworks, 2008).

Civil wars between the central administration led by Burma and ethnic armed groups arose as the government sought to put all communities under its influence. Ethnic armed groups were seeking to establish themselves or maintain territorial power and meet the needs of their ethnic communities. The signing of ceasefire agreements in many ethnic areas in the 1990s enabled civil society organizations to emerge, mostly to fill the void as social and health service providers. Sources include the Metta Development Foundation and the Shalom Foundation (now the Nyein Foundation), and Kachin State-based NGOs with informal connections with the Kachin Independence Organization. Community-based organizations and NGOs have been proliferating from within ethnic communities, especially in areas of poor central government control (ADB, 2015).

There are only four registered community organizations in Chaungzon township. Shwe Myint Mo Funeral Service Group was set up on 12-8-2014. The goal of the organization is to share the sorrow of the bereaved family at the end of one's life. The activities carried out by the association are primarily the transport of the dead by the Nirvana vehicle, the financial aid, the free transport of the sick by ambulance and

the donation of the oxygen tank. Only the Lu Ngae Arr Mann Group is set up for literature and culture-related services.

Table 3.1 Registered Local Community Organizations

No.	Organizations	Office / Branch Location	Registration Number	Service Provision
1	Shwe Kyun Kon Yet	Hpan Hpa Village	5/Mawlamyine/001	Social Services
2	Shwe Myint Mo Funeral Service Group	Chaungzon West Ward	6/Chaungzon/001	Social Services
3	Lu Ngae Arr Mann Group	Kwan Yike Village	6/Chaungzon/002	Literature and culture Services
4	Myintta Shin Funeral Service Group	Chaungzon Toe Cheit Ward	6/Chaungzon/003	Social Services

Source: General Administration Department, Chaungzon Township (2019)

3.3.3 Local NGOs and international NGOs

Two different, but frequently interrelated, forms of practices are better known to NGOs: the distribution of services to people in need and the coordination of policy advocacy and civic initiatives in support of social transformation. NGOs are also involved in a broad variety of other professional positions, including the development of democracy, conflict resolution, human rights work, cultural protection, environmental advocacy, policy analysis, research and provision of information (Lewis, 2010).

Local NGOs originate from cities, townships, or population centers and establish relations with communities. Most local non-governmental organizations have ties to ethnic armed groups in ethnic areas. Several large NGOs are registered with ministries of government and often work with government and development agencies to implement projects in various sectors, including healthcare, rural development, education, and agriculture.

International NGOs are extremely engaged in Myanmar, working in humanitarian response and long-term development in a number of sectors. Increasingly, domestic civil society is networked into international community focused on democracy and rights. Foreign actors pursue local collaborators, professional workers, training participants and practical advice.

Local organizations with links to regional and international actors are involved in the fields of natural resource management, HIV prevention, protection of historical sites, rule of law and legal transparency. Civil society 's reaction to significant

investment initiatives and major rights-based concerns is proof of greater freedom of speech. As political circumstances have changed, such NGOs have adapted their advocacy approaches. However though legal and practical obstacles remain, the space and reach for civil society operation in Myanmar today is clearly growing (ADB, 2015).

Almost 54.4 percent of women population have joined the women's association and have been deeply participating in women's affairs since late 2003. And also 15 percent of women join the Maternal and Child Health community. The Maternal and Child Health Voucher System (MCHVS) was launched in Myanmar to counter high maternal and infant mortality rates. The goal was to expand access to maternal and child health (MCH) services through trained birth attendants (SBAs) and to improve the health of pregnant women and their infants (Pilasant, et al., 2016). In Table 3.2, 69 of the army served Veterans, 134 Red Cross officers and a total of 916 Auxiliary Firefighters reside in Chaungzon Township.

Table 3.2 Non-Governmental Organizations

There are no international NGOs in Chaungzon Township.

No.	Women's Affairs	Maternal and Child Health Department	Veteran	Red Cross	Auxiliary Firefighters
1	30180	8170	69	134	916

Source: General Administration Department, Chaungzon Township (2019)

3.4 Social Capital

Social capital refers to those aspects of social organization in the context of rural development and sustainable natural resource management. In many countries, traditional communities dependent on natural resources may have high levels of social capital based on relations of kinship, cultural or religious ties, ethnicity or geographical proximity. The social, economic and environmental forces of change may, however, undermine the traditional foundations of social capital (Prior, 2010).

Social capital played a vital role in Ayeyarwady Delta. First, citizens supported each other in the initial days after Nargis. Then, the pre-existing high degree of social capital was absorbed, channeled into institutions such as the 110-strong Red Cross brigade, and improved when foreign organizations arrived in the remote village. In a way, this happened by accident: nobody had heard of the word 'social capital,' nor was the assessment especially rigorous. The society has a solid social basis and is now more informed about natural disasters and well prepared for them. At the same time, they are very poor and lack access to the more substantial resources required for structural measures that would be needed to make them both safer and more resilient, particularly in the face of long-term climate change challenges (Bolte & Eucker, 2012).

The health care infrastructure of the country, the quality of government, and social bonds are all important when reacting to coronavirus. There are significant trade-offs occur between medical, social, economic, and political needs. The shortage of funding and the historical lack of coordination between the various ministries of government threaten the Government of Myanmar's implementation capability at all stages. In local-level government, these issues are especially severe, which is crucial for an effective response. In Myanmar, people have a low level of trust in most government institutions compared to most nations, and in most of their fellow citizens as well. This is a major obstacle in responding successfully to the coronavirus threat. However, certain channels, such as the State Counsellor (Daw Aung San Suu Kyi), the President, local communities (such as wards/villages), and religious leaders, are strongly trusted and have a vital role to play in the coronavirus response. The State Counsellor helps to communicate important strategic decisions at the national level and to provide the public with very frequent reports. CSOs and religious leaders leverage their social capital in the township, wards/village tracts, and village levels for successful coordination and execution (Aung Hein & Minoletti, 2020).

3.4.1 Social

The population of Myanmar (formerly Burma) was divided into two major sections: a tiny elite centralized in government administration, party bureaucracy and the army on the one hand, and peasants, small merchants, businessmen and hired workers on the other. There is a very small community of middle-class people and skilled professionals amongst them. While the average income level was exceptionally low, at least until 1962, the range between the highest and the lowest income categories was very large.

The new elite was small, and while the internal distinction is slight, the antagonism is substantial. Before the takeover, the major adversary groups (excluding underground organizations) were administrators, politicians and students. The elite classes enjoyed no democracy and freedom of maneuver, since there was little choice but government bureaucracy, the military and the underdeveloped party bureaucracies. The weakness of the legitimate opposition parties and trade unions, the limited number of independent economic organizations, made it impossible for the opposition elite to establish and institutionalize themselves in increasingly independent positions of power. This has had numerous consequences for an already limited potential of the political and social center to deal with economic and political issues. Despite the generally universalist requirements for acceptance in the numerous elite classes and the not negligible de facto mobility, there were few outlets for such upward mobility, confined to some segments of the political and governmental bureaucracy. This permitted the ruling elite to exercise a great deal of control on the recruiting of suitable candidates, but generated permanent pressure from unemployed or underemployed high school and university graduates.

Apart from ethnic minorities, crystallized class-oriented societies were very rare, and the key qualifications for belonging to the few that remained were the level of education received and the amount of exposure to Western culture. The boundary line drawn by these parameters did not fully correspond with that between the city and the countryside. In this respect, there was no difference between the majority of the urban and rural population. Burma's class composition seems, therefore, to be in a state of substantial flux. It would also appear that the primary challenge is to create a more institutionalized differentiation of the sub-elite strata. This would, in turn, close the divide between the elites and the rest of the society and promote contact, while there

would be more 'non-congruent' status classes capable of functioning as intermediaries between the elites and the more sophisticated, segregated population (Lissak, 1970).

There is not just extreme poverty, there is pronounced injustice. Society is largely broken into a tiny elite, a very small middle class, and a vast number of very poor citizens. Although most ethnic groups have traditional leaders and new elites in some groups whose money comes from smuggling, the national elite is predominantly Burmese. Revenue from the drug trade has been an important source of income for members of the wealthy in recent years. While the economic changes of the late 1980s have seen some parts of the middle class thrive, others have not done well and remain poor. Since the military government took power in 1988, there have been three social classes in Burma. Many state-owned enterprises were privatized after the coup, and corporations became the property of military leaders and some well-to-do individuals. The third social class is civil servants, farmers and workers who barely afford to only survive a day-to-day life (Julien Moe, 1999).

In March 2011, power in Myanmar was passed to a nominally civilian but military-backed government under President Thein Sein, which has since started a series of unprecedented internal changes in an attempt to normalize its relations with the international community. A few years after the political changes took place, Myanmar has among the fastest-growing economies in Southeast Asia, with annual economic growth of 7.5 percent over the period 2012-2016, which is projected to continue for many years. One reason for rapid economic growth is the young population of the country, which helps to maintain a strong growth in consumption and income during the period 2015-2025. Members of the urban middle class in areas populated by the majority of the Bamar ethnic community have been the key beneficiaries of the new reforms, while the economic benefits for rural districts have been less visible, especially in conflict-ridden ethnic states where land-grabbing has been widespread (Stokke et al., 2018).

3.4.2 Cultural

The traditions and national identity of Myanmar are primarily based on the culture of Buddhism. Generosity, sympathy, kindness, and friendliness are qualities that can be observed, regardless of religion, among the rich and poor in the world. A downside to this strong association between the prevailing religion and national culture is that the majority often show an intolerant stance towards the 11 percent of people who practice a different religion. Myanmar is an agricultural nation, with 80% of the population live in rural areas growing rice and other crops in the fields. There is at least one monastery managed by the head monk in most villages, along with adjoining living quarters for the monks. Most rural people are devout Buddhists, but in major cities, people can also find Christian churches and Islamic mosques. The passionate Christians are certain minority ethnic groups, and a few are animists.

It is customary to defer to older people and others of a higher status. The people of Myanmar are dedicated not only to Buddha, but to all. As a sign of respect, it is not unusual to see individuals bending their heads and bowing their head slightly while passing an old person, a monk, or a teacher (Kyi Kyi May & Nugent, 2015).

According to the World Bank (2013), the female proportion of Myanmar's overall labor force was last estimated at 49.81 percent in 2013. These figures are measured by the percentage of women aged 15 and over who are involved in the labor force. In Myanmar's culture and economic life, women have a high status. Women's cultural beliefs also prohibit them from joining male dominated professions, and with similar jobs, they do not often earn equal pay. The level of respect attributed to women's status in Myanmar varies widely depending on traditional social norms, as women do not need to change their name when they are married, are able to travel independently, operate businesses at home and outside, be active in the country's management and governance structure, and are able to keep property under their names throughout their lives (Womack, 2008). Educated women leaders have therefore been active in social, economic and political forums from the times of empire through the British colonial era until 1962 (Amar, 2011).

3.4.3 Ethnicity

Ethnicity is a shared culture and way of life. It can be embodied in language, religion, cultural history, clothing and food. Unlike race, ethnicity is not dependent on biological characteristics. People can switch between ethnic groups when they are adopted or undergo religious conversion. Some nations are predominantly made up of a single ethnic group (Germany, China). However, several diverse groups are formed up of others (United States, Australia). Different ethnic groups should not apply the same criterion to the concept of group membership (Crossman, 2019).

Myanmar has been split into two categories of local administrative groups, called "divisions" and "states." since the 1947 constitution paved the way for independence from Britain. In practice, the seven divisions of today include territories where the population consists mainly of the ethnic majority community, the Burmans (or Bamars). The divisions are mainly found in the country's central and southern parts. The seven "states" cover areas populated primarily by non-Burman ethnic minorities, who are called "nationalities" or "national races" by the government and some ethnic minority leaders. Rakhine, Chin, Kachin, Shan, Kayah, Karen, and Mon, named after the main ethnic groups represented in these territories, are the seven states at present. However, mapping is far from isomorphic. In the Irrawaddy Division, for example, large numbers of Karens live; large numbers of Shan, Chin, Rakhine, and other groups live spread across the rest of the divisions; large numbers of Kachins and Burmans live in the very diverse Shan State, as well as many other groups.

In the ethnic minority states of Burma, people live under the jurisdiction of several "states" or "state-like authorities" that both mediate and create conflict between citizens and provide some facilities for residents and business interests. Often the variety of overlapping authority structures causes uncertainty that leaves individuals, corporations, and the international community completely bewildered. For others, this uncertainty often provides opportunities for personal growth and wealth creation, but most of the population has few survival or progress strategies left. Since few ordinary citizens have substantial opportunities to influence the policy choices of different political authorities anywhere in the country, those residing in ethnic minority states are among the most disenfranchised. However, in some cases, non-governmental organizations (NGOs), some ethnic minority political organizations and other non-state actors may serve as barriers or mediators between authorities and local people (Callahan, 2007).

CHAPTER 4

SURVEY ANALYSIS

4.1 Survey Profile of Chaungzon Township

Chaungzon Township's history is known as Bilu Island. Bilu Island, in the Mon language, is called Takawt Khamine. It is an island with a Kha Maung tree, by definition. The lower part of Myanmar, after the beginning of British rule, was renamed Chaungzon Township in 1901. Current Chaungzon Township's administrative area is divided into 1 town, 3 wards, 43 village tracts, and consists of 78 villages. Chaungzon township is situated between 16 ° 13'N and 16 ° 30'N, between (97°27'E) and (97°30'E) respectively. East and West (10.2) miles South and North (19.4) miles long. The Chaungzon Township area is (254.098) square miles and the Chaungzon Town area is (0.956) square miles. The township of Chaungzon is bordered on the east by the Thanlwin (Salween) River and the Mawlamyine Township, on the west by the Gulf of Martaban, on the south by the Bay of Bengal and on the north by the Thanlwin (Salween) River and the Paung Township, a separate island surrounded by water (see Appendix – 1) (GAD, 2019).

In Chaungzon township, Mon ethnicity is the majority figure of nearly 72 percent, while the second is Bamar 17 percent and the third is Kayin ethnic 5 percent respectively.

Table 4.1 Ethnic Residents in Chaungzon Township

No.	Ethnic	Residents Population	Total Population	Population in Percentage
1	Kachin	1	162903	0.0006
2	Kayin	9233	162903	5.6678
3	Mon	117350	162903	72.0367
4	Bamar	28711	162903	17.6246
5	Rakhine	20	162903	0.0123
6	Shan	8	162903	0.0049
7	Other	7573	162903	4.6488

Source: General Administration Department, Chaungzon Township (2019)

Around 94 percent of the population living in rural areas and just 6 percent of the population living in the town of Chaungzon Table 4.2. Men and women over 18 years of age also have the same percentage of 94 percent and 6 percent of the population living in rural and urban areas respectively Table 4.3.

Table 4.2 Housing/Household

The population of Chaungzon Township as of December 2018 is as follows:

No.	Resident	Housing	Household	Ward	Village Tract	Village
1	Urban	1671	1805	3	-	-
2	Rural	25861	27208	-	43	78
	Total	27532	29013	3	43	78

Source: General Administration Department, Chaungzon Township (2019)

Table 4.3 Population

Age Groups	Gender	Residents		
		Urban	Rural	Total
Over 18 years old	Male	3258	48019	51277
	Female	3561	51873	55434
Under 18 years old	Male	1576	26932	28508
	Female	1610	26074	27684
Total		10005	152898	162903

Source: General Administration Department, Chaungzon Township (2019)

In Chaungzon township, 95.4 percent of the population is Buddhism, 3.9 percent is Islam, 0.6 percent is Hindu and 0.1 percent is Christian respectively. Ordinarily, most of the population born to Buddhism Table 4.4.

Table 4.4 Religion

The religion of people living in Chaungzon Township is as follows:

No.	Buddhist	Christian	Hindu	Islam	Spirit	Other	Total
1	155466	231	923	6283	-	-	162903

Source: General Administration Department, Chaungzon Township (2019)

4.1.1 Socio-economic Characteristics of Chaungzon Township

Traditional agriculture is heavily dependent on people living on Chaungzon (Bilu Island) and 54.8 percent of its economically active population aged between 15 and 64 are engaged in work. The population is almost entirely Buddhist. There are more females than males in Chaungzon Township, with 84 males per 100 females.The majority of township residents live in rural areas, with just 6.3percent living in urban areas. Chaungzon Township's population density is 186 individuals per square kilometre. In Chaungzon Township, there are 4.3 individuals living in each household Table 4.5. This is less than the average in the Union (MOLIP, DOP, 2017).

Table 4.5 Socio-economic Indicators of Chaungzon Township

	Chaungzon Township	Mon State
Population	162,903	2,054,393
Area (km^2)	658.1	12,296.6
Population Density (people/km^2)	185.6	167.1
Percent of Urban Population	6.3	28
Percent of Female Headed Households	34.5	28.5
Child Dependency Ratio	49.1	50.2
Old Dependency Ratio	13.7	10.4
Labour Force Participation Rate (Age 15 - 64)	54.8	61.0
Employment to Population Ratio (Age 15 - 64)	48.3	57.2
Mean Household Size (persons)	4.3	4.6
Household Expenditure per Capita ('000 Kyat/year)*	**5354	-
* Based on the study areas only. At the time of data collection the exchange rate was in the range of $1=1,300-1,400 Kyat. **Authors' calculations		

Source: MOLIP, DOP, (2017); MOLIP, DOP, (2015); GAD, (2019).

Chaungzon Township is situated in Mon State and has slow economic development. The township's local citizens are primarily involved in agriculture and irrigation Table 4.6. Rice is the township's primary crop and is shipped mostly to Mawlamyine Township and Tanintharyi Region.

Table 4.6 Land Used

The land type acres used by Chaungzon Township is as follows:

No.	Land Types	Area (acres)
1	Total cultivated area	89119
	(a) Irrigated land	64898
	(b) Unirrigated crop land	13453
	(c) Dani land	10768
2	Grazing land	1042
3	Industrial land	51
4	Urban land	372
5	Rural land	1670
6	Other land	6070
7	Wasteland/Non crop land	70369
	Total	162623

Source: General Administration Department, Chaungzon Township (2019)

Farmers also use animal and human efforts in their cultivation and irrigation processes in Chaungzon township. Only a few hand plow tractors and machinery are used in their work Table 4.7.

Table 4.7 Farming Equipments

No.	Farming machinery equipment usage status	Numbers	Owner
1	Tractor	5	Government
2	Cultivator	2	Government
3	Tractor	51	Private
4	Hand plow tractor	518	Private
5	Cultivator	12	Private
6	Water pump	271	Private
	Farming equipment/animal usage status		
7	Hand plow	7382	-
8	Animal drawn plough	130	-
9	Buffalo	32154	-
10	Oxen	31115	-

Source: General Administration Department, Chaungzon Township (2019)

Chaungzon is not located on a commercial road, so there is no corporate business established on that island. Just a few financial service providers need to be there. Currently five banks are present in providing financial services. Two of them in Chaungzon township are government set-up banks and three private banking facilities Table 4.8.

Table 4.8 Banks

No.	Bank	Government	Private	Total
1	Myanma Economic Bank	Government	-	1
2	Myanma Agricultural Development Bank	Government	-	1
3	Global Treasure Bank	-	Private	1
4	Kanbawza Bank	-	Private	1
5	Cooperative Bank	-	Private	1

Source: General Administration Department, Chaungzon Township (2019)

There is currently no higher education (i.e. university, college etc..) in Chaungzon Township, but only basic schools at the level of education are as follows in Table 4.9. The average ratio of teachers and students is reportedly 1:22 (GAD, 2019).

Table 4.9 Education

No.	School	Numbers	Teachers	Students	Teacher/Student Ratio
1	High School	8	329	7649	1:23
2	High School (Joint)	5	141	3576	1:25
3	Middle School	3	49	1148	1:23
4	Middle School (Joint)	5	77	1965	1:25
5	Post Primary School	12	124	2552	1:20
6	Primary School	78	438	8322	1:18
7	Pre-Schools	47	78	1339	1:16

Source: General Administration Department, Chaungzon Township (2019)

Before 2017, Chaungzon township was just a remote island in Mon State. People rely heavily on water transportation at the time. Currently, Bogyoke Aung San Bridge has been constructed and is easy to access for transport and health facilities. Now they can reach up to Yangon for better treatment and care, but still most of the people rely on local hospital Table 4.10. Hospitals are also offering basic care facilities free of charge and updating instruments for better treatment services

Table 4.10 Health

Details on the health sector in Chaungzon Township is as follows:

No.	Health Sectors	Numbers
1	*Hospitals*	
	Township Hospital (50 beds)	1
	District Hospital (16 beds)	3
2	*Clinics*	
	Private clinic	13
3	*Rural Health Department/Branch*	
	Rural Health Department	7
	Maternal and Child Health Department	1
	Rural Health Division	30
4	*Health Care*	
	Number of Doctors	10
	Doctor to Population Ratio	1:16261
	Nurse	38
	Nurse to Population Ratio	1:4279
	Assistant Health Officer	10
	Assistant Health Officer to Population Ratio	1:16261

Source: General Administration Department, Chaungzon Township (2019)

4.1.2 The Household Sample of Chaungzon Township

Five rural village and an urban ward were chosen randomly within Chaungzon township. To reflect the urban areas, Toe Cheit ward was included. A brief overview of the social and economic features of the sample households is given in the following Tables 4.11. The field work was arranged to try and interview approximately 50 percent of men and 50 percent of women in order to determine whether the characteristics of the respondent, specifically gender and place in the household, would have an impact on responses. Table 4.11 shows that this target was reasonably well achieved: 38.46 percent of respondents were male and 61.54 percent were female for the study area as a whole. Nearly two-thirds of the respondents were heads of households and spouses were one-third.

Table 4.11 Selected Characteristics of Respondents (in percent)

	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	All
Gender of Respondent							
- Male	55	40	15	15	60	75	38.46
- Female	45	60	85	85	40	25	61.54
Position in Household							
- Head	70	50	55	50	85	75	62.50
- Spouse	30	50	45	50	15	25	37.50
Language							
- Burmese	5	0	75	5	0	0	16.35
- Kayin	0	0	0	0	100	0	19.23
- Mon	95	100	25	95	0	100	64.42
Religion							
- Buddhist	100	100	80	100	100	100	96.15
- Islam	0	0	20	0	0	0	3.85
Average Years Lived in Community	50.4	45.2	36.6	48.9	52.2	55.25	46.99

Source: Authors' calculations

Table 4.11 also reveals the Mon State's linguistic diversity: in eastern Chaungzon, indigenous Mon languages dominate, while in southern Chaungzon, Burmese is spoken the most. The vast majority of the population is Buddhist.

A broad breakdown of some of the main economic characteristics of the households in the sample is given in Table 4.12. Slightly over one-fourth of the population of the adult sample is inactive. In Ka Hnyaw, this number is higher. Farmers account for about 43.69 percent of economically active household members. As self-

employed or unpaid family workers, the vast majority of economically active individuals work. There is a large percentage of wage earners only in Kawt Ka Dei.

There was no schooling for less than ten percent of the sample population and less than 20 percent of the population had no education above the primary stage. Hpan Hpa is substantially better than the others in terms of educational achievement among the Chaungzon township, only 8.47 percent of the population has no schooling and almost one-half have been able to progress beyond the primary stage. In the Ka Taung Sein village, graduates of universities are very rare Table 4.12.

Table 4.12 Employment and Education Characteristics of the Sample (in percent)

(for those older than 14 years of age)	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	All
Main Occupation							
Farmer	38.10	88.89	28.57	48.39	38.46	22.22	43.69
Trade	4.76	0.00	0.00	6.45	3.85	0.00	3.88
Private sector unskilled	0.00	11.11	0.00	3.23	3.85	11.11	3.88
Private sector skilled	9.52	0.00	14.29	6.45	30.77	22.22	14.56
Public sector skilled	19.05	0.00	42.86	29.03	11.54	0.00	18.45
Other	28.57	0.00	14.29	6.45	11.54	44.44	15.53
All	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Employment Status of Economically Active People							
Wage Earner	25.97	52.33	39.56	34.21	55.10	33.33	41.76
Self-employed (1-5)*	20.78	4.65	13.19	30.26	8.16	40.74	16.26
Self-employed (5+)**	0.00	0.00	1.10	0.00	0.00	0.00	0.22
Unpaid Family Worker	2.60	3.49	2.20	0.00	1.02	0.00	1.76
Homemaker	16.88	11.63	13.19	11.84	12.24	0.00	12.31
Inactive	32.47	27.91	29.67	23.68	23.47	25.93	27.25
Able to work but has not worked over last month	1.30	0.00	1.10	0.00	0.00	0.00	0.44
All	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Education							
None	8.20	11.59	16.13	3.33	5.13	4.17	8.47
Primary School	18.03	55.07	32.26	28.33	56.41	25.00	38.42
Middle School	36.07	17.39	29.03	23.33	20.51	37.50	25.71
High School	21.31	14.49	14.52	20.00	10.26	8.33	15.25
Vocational	0.00	0.00	0.00	0.00	0.00	0.00	0.00
University	16.39	1.45	8.06	25.00	7.69	25.00	12.15
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00
All	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Note: *less than five full time employees, **Five or more full time employees							

Source: Authors' calculations

The household spending trend shows only minor variations across the six study areas Table 4.13, although the expenditure levels are very different. With an estimated annual household expenditure per capita of Ka Mar Mo is the richest village Kyats 7,281,000 a year. Hpan Hpa and Kawt Ka Dei have expenditure rate of Kyats 6,676,000 and Kyats 6,949,000 per year respectively, while Ka Taung Sein has the lowest annual per capita household expenditure of Kyats 3,600,000 per year, almost 50 percent below Ka Mar Mo's.

Table 4.13 The Level and Composition of Household Expenditure

	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	All
Composition of Household Expenditure (percent)							
Communication	1.16	0.25	0.33	0.62	0.41	0.28	0.51
Electricity and Lighting	0.79	0.34	0.29	0.31	0.27	0.48	0.37
Fuel (Cooking)	0.58	0.52	0.25	0.13	0.29	0.13	0.29
Health	1.94	1.35	17.48	13.43	0.45	0.92	7.45
Home Produced Food	11.42	5.08	0.00	14.33	3.23	1.47	6.27
Housing (Repair)	71.42	68.80	72.31	59.96	86.46	88.42	73.93
Housing (Rent)	0.00	0.00	0.26	0.00	0.00	0.00	0.06
Private Transfers	0.96	0.00	0.07	0.11	0.00	0.07	0.16
Purchased Food	11.45	23.23	8.68	11.09	8.85	7.94	10.79
Water (Purify, Cooking)	0.28	0.43	0.32	0.02	0.04	0.30	0.17
All	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Annual Household Expenditure per Capita ('000 Kyat/year)*	3876	3600	5282	6676	6949	7281	5354
Coefficient of Variation	2.20	2.19	2.26	1.86	2.70	2.77	2.28
* At the time of study $1= Ks 1300 – 1400 range.							

Source: Authors' calculations

Table 4.14 indicates households' ownership of different properties, such as durable goods, land and livestock. A television (present in over two-thirds of all households), an audio device, a motorcycle, a bicycle, and a sewing machine are the durable goods most commonly owned by the sample households. Overall, in Ka Hnyaw, which increases access to such properties, and in Hpan Hpa, which also has the highest per capita spending, asset ownership is marginally higher. In Ka Taung Sein, total asset ownership is at its lowest. In the study area, animal ownership is very low, each household owns 0.8 large animals on average, and the variance is slight across the five rural villages and an urban ward. 5.3 acres of land are still owned by the average

family. In Hpan Hpa, however the average land ownership is much higher at 11.6 acres, although it is lowest at just 0.5 acres in Toe Cheit Ward. The ease of communication is significant from the perspective of social capital and therefore phone connectivity and ease of networking, ward and village tract are higher.

Table 4.14 Ownership of Household Durables, Land and Animals

	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	Avg.
Percent of Household Owning							
- Car/Truck	1.0	0.0	1.0	3.0	1.0	2.0	1.3
- Boat	0.0	0.0	0.0	0.0	1.0	0.0	0.2
- Outboard Motor	7.0	0.0	4.0	10.0	1.0	4.0	4.3
- Motorcycle/Moped	15.0	14.0	10.0	17.0	8.0	4.0	11.3
- Bicycle	15.0	8.0	12.0	15.0	14.0	2.0	11.0
- Flat and Color TV	20.0	11.0	18.0	18.0	9.0	4.0	13.3
- Audio System	8.0	2.0	3.0	3.0	4.0	0.0	3.3
- Mobile Phone	19.0	15.0	14.0	20.0	20.0	4.0	15.3
- Radio	1.0	0.0	1.0	1.0	0.0	3.0	1.0
- Refrigerator/Freezer	15.0	3.0	10.0	11.0	2.0	4.0	7.5
- Sewing Machine	6.0	2.0	7.0	10.0	10.0	1.0	6.0
- Washing Machine/Dryer	5.0	0.0	5.0	2.0	0.0	1.0	2.2
- Pressure Lamp	0.0	0.0	0.0	1.0	0.0	0.0	0.2
- Farming Equipment*	0.0	0.0	0.0	0.0	1.0	0.0	0.2
- Other Major Assets	2.0	7.0	2.0	6.0	11.0	0.0	4.7
Average Asset Score	7.6	4.1	5.8	7.8	5.5	1.9	5.5
Average Number of Large Animals Owned**	0.4	0.2	0.7	1.3	1.4	0.0	0.8
Average Acres of Land Owned or Rented	3.9	2.3	0.5	11.6	1.5	12.0	5.3
* Tractor, Cultivator, Animal drawn plough and Planter. ** Oxen, cattle, horses, mules, goats, sheep and pigs...							

Source: Authors' calculations

To sum up, five very different villages and a ward are seen in the survey, Ka Hnyaw, Hpan Hpa and Ka Mar Mo, on the Bilu Island, is characterized by intensive agriculture on small plots of land and is the wealthiest area. Toe Cheit ward is the most linguistically and religiously diverse area in the central part of Chaungzon township. It has the highest level of education and the highest prevalence of wage jobs, but is also marked by the most unequal distribution of spending on households. Kawt Ka Dei is similar to Ka Taung Sein and is characterized by subsistence farming and a household expenditure level that is slightly below average.

4.2 Survey Design

At community level, interviews with individuals and community leaders were conducted to create an overview of the community's functioning institutions.

The household survey data collection was aimed at documenting the real involvement of households in local institutions, their use of resources and knowledge defining household welfare levels and their coping strategies. The questionnaire was composed of six parts:

(1) demographic details on household members,

(2) participation in local institutions activities,

(3) characteristics of the most important institutions,

(4) profiles of service delivery,

(5) perceptions of community trust and collective action, and

(6) household economy.

A sampling process such that the analyses would be reflective of the States and Regions at national level was not made feasible by the limited resources available. Instead, The research was performed in 5 villages and 1 Toe Cheit ward of Chaungzon Township, Mon State. Village was chosen on the basis of location, patterns of farming and a high concentration of household activity. Households in selected villages were selected using random sampling. Households engaged in both farm activities and non-farm activities in selected villages are described in selected households. Field surveys were performed between July and August 2020. The respondent of (104) households and (8) key informant interviewees is appropriate and can be used to evaluate the study objectives. The research used both primary and secondary data to interpret the status of local institutions and social capital for household welfare in Chaungzon township.

4.3 Analysis on Local Institutions and Social Capital

The survey observed 55 local organizations distributed over eight broad categories in Table 4.15. A total of 383 memberships were recorded by the respondents. Many citizens are members of social services organizations in Chaungzon township. They became more interested in cultural related and youth organizations. Since they provide social assistance and still wish to include in potential social security (i.e. get assistance from funeral service organizations) for their household members. Most are deeply engaged in the financial services and credit sectors. Since the loan is to run a family business and to support a living. Membership in some professional or education organizations and religious groups are matter for the household to select from, but merely a function of its social identity, without actually involving any active involvement on its part. One may be "born into" a group (i.e. religious groups), for instance, without being involved in it. A limited number of individuals are participate in business, trade and production organizations. This is because most individuals do not operate a business and most of the household generate revenue from remittances from overseas family members and working part time.

Table 4.15 Number of Local Organizations and Number of Memberships

Type of Organizations	Number of Organizations*	All Memberships	
		Number of Memberships	Percent
Production Groups	1	7	1.8
Trade/Business	3	4	1.0
Professional/Education	5	49	12.8
Government/Political	6	38	9.9
Religious Groups	4	50	13.1
Social/Cultural/Youth	20	162	42.3
Credit/Finance	11	59	15.4
Health/Sport/Environment	5	14	3.7
Total	55	383	100.0
*Based on study area only			

Source: Authors' calculations

Table 4.16 show that most people join the group for the benefit of the community rather than their own interests. Some households are joining as members to access services (i.e. finance, credit). Few individuals participate as members because of their social standing and self-esteem. Since they're wealthy and want to take the lead in village communities. A few other households participate as members to get access to services and help in the case of an emergency and a future need.

Table 4.16 Household's Main Benefit from Joining Groups (in percent)

| Type of Benefits | Chaungzon Township* | | | | | | |
	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	All
Access to Services	16	51	38	19	35	14	31
Emergency/Future	0	5	2	5	0	0	2
Community Benefits	73	38	55	62	27	57	51
Enjoyment/Recreation	0	0	0	0	0	0	0
Social/Self-esteem	11	5	6	14	39	29	16
Other	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100
*Based on study area only							

Source: Authors' calculations

In relation to Table 4.17, individuals are mainly involved in savings and credit groups, which are the ones receiving the most services. Many citizens still want to gain access to educational services. The education sector is important for people living in the town of Chaungzon. Increasing access to educational institutions would make a significant contribution to the growth of human capital in the future. Health, water and sanitation services are also available for the people in Chaungzon township.

Table 4.17 Households Get Access to Services by Joining Groups (in percent)

| Type of Services | Chaungzon Township* | | | | | | |
	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	All
Education/Training	47	38	26	68	27	25	39
Health Services	0	0	41	5	0	75	13
Water/Sanitation	20	0	0	0	0	0	3
Credit/Savings	13	58	33	27	73	0	41
Agricultural/technology	0	0	0	0	0	0	0
Other	20	4	0	0	0	0	4
Total	100	100	100	100	100	100	100
*Based on study area only							

Source: Authors' calculations

The information on active memberships is displayed in a different manner in Table 4.18, namely as a proportion of households involved actively in each category of organization. This shows that the most noticeable differences are the higher numbers of households belonging to the social services, cultural and youth groups in all villages and the low presence in the production, trade and business groups. In Kawt Ka Dei village, the number of households involved in religious, social service, cultural and credit groups is comparatively high.

Table 4.18 Households Participation in Local Organizations

Type of Organizations	Chaungzon Township*						Total
	Ka Hnyaw Village	Ka Taung Sein Village	Toe Cheit Ward	Hpan Hpa Village	Kawt Ka Dei Village	Ka Mar Mo Village	
Production Groups	3	0	1	2	0	0	6
Trade/Business	3	0	0	1	0	0	4
Professional/Education	9	12	11	9	3	1	45
Government/Political	9	5	6	4	1	1	26
Religious Groups	6	7	6	7	17	1	44
Social/Cultural/Youth	19	15	16	18	14	2	84
Credit/Finance	3	11	10	6	16	0	46
Health/Sport/Environment	3	0	1	4	0	3	11
*Based on study area only							

Source: Authors' calculations

In table 4.19, surprisingly, social service groups are filling the highest number and followed by educational and religious groups. It mean that, social services, education and religion matter the most. Credit and finance groups are also important for daily life, and the latter is linked to the culture and youth group, which means that the protection of traditional cultural affairs is also important for the ethnic community.

Table 4.19 The Ten Most Important Local Organizations in Chaungzon Township

No.	Organization Name*	Category	Number of Times Cited
1	Funeral Service Group	Social Service	30
2	Parent–teacher Association	Education	20
3	Dhamma Setkyar Group	Religion	20
4	Shwe Myint Mo Funeral Service Group	Social Service	14
5	Dhamma School Group	Religion	9
6	Myitta Yaung Pyan Foundation	Social Service/ Education	8
7	Myanma Agricultural Development Bank	Credit/Finance	8
8	Rice Banks (UNDP)	Credit/Finance	7
9	Mya Sein Yaung (Green Revolution) Fund	Credit/Finance	7
10	Kayin Traditional "Don" Dance Group	Cultural/Youth	7
*Based on study area only.			

Source: Authors' calculations

4.3.1 Household Welfare and Social Capital

A descriptive answer is given in Table 4.20. A group of quintile households, based on their position of social capital. Household expenditure per capita is an average of 57 lakhs per year (equivalent to 479,000 kyats a month). The average household durable assets ownership is 4.4 items. Wealthy households are now 14 percent more likely to get loans. According to the survey result, only 2.2 percent of households are able to increase saving in the past year. The custom of saving money is very low for the households in Chaungzon township. Only 0.009 percent of survey households suggest that in the course of the year they frequently go hungry. Approximately 6 percent households said they had to sell livestock or machinery in the past year in order to purchase necessities. Tap water is reasonably accessible even across the first three quintiles in terms of access to services, while 15.2 percent of households have access to electricity.

Table 4.20 Household Welfare Indicators, by Levels of Social Capital

Percent of Households	Social Capital Quintiles[1]					Average
	5th Quintile	4th Quintile	3rd Quintile	2nd Quintile	1st Quintile	
Household Expenditure Per Capita ('000 Kyats/Year)*	3875.9	5281.8	5978.8	6675.9	6949.0	5752.3
Assets Score[2]	2.0	4.0	4.0	5.0	7.0	4.4
Percent of Households with Access to Credit	11.0	12.0	12.5	13.0	14.0	12.5
Amount of Credit Received ('000 Kyats)*	500.0	580.0	1300.0	2100.0	3070.0	1510.0
Percent of Households with Increased Savings in Past Year	2.0	2.0	2.0	2.0	3.0	2.2
Percent of Households Going hungry	0.0	0.0	0.0	0.0	0.0	0.0
Which sold land, livestock or equipment in order to buy necessities	4.0	6.0	6.5	7.0	7.0	6.1
With access to electricity	9.0	13.0	16.0	19.0	19.0	15.2
With access to tap water	0.0	0.0	0.5	1.0	4.0	1.1

Notes:
1. Households were grouped in quintiles based on their ranking on the social capital variables and welfare indicators calculated as the average.
2. The assets score is based on analysis of household ownership of 15 durable goods (car, motorcycle, television, stereo system, etc.).
*Based on the study areas only. At the time of data collection the exchange rate was in the range of $1=1,300-1,400 Kyat.

Source: Authors' calculations

The conventional reduced-form of a household welfare model, i.e. incorporating physical and human resource factors but excluding social capital metrics, is seen in the first column of Table 4.21. This model suggests that human capital contributes to the generation of welfare and the latter is also significantly influenced by household demographic attributes, such as the year of schooling. It seems that owners of physical assets, such as land, are tied to household expenses, but has less significance effect to per capita expenditure levels.

A multiplicative index of the number of active memberships, and an active participation index, are added in Column 2 of Table 4.21. The findings of the survey reveal that the multiplicative social capital index is a major variable in the model, even though its use only adds significantly to the explanatory strength of the model. The multiplicative index of social capital has been included, but the findings have not improved much. As seen in Basic Model Column 1, the year of education and land tenancy also matters. This indicates that the effect of membership numbers and participation in decision-making has no effect on household expenditure per capita. In other words, the impact on household welfare of increase of social capital and human capital assets are differ.

The third column of Table 4.21 incorporates an additive model of the seven dimensions of social capital. An aspect of active participation in the association is captured by four of the social capital dimensions, namely meeting attendance, participation in decision-making, and contribution in cash and in kind.[1] In the context of Chaungzon township, the social capital aspects of cash contribution and participation of informal communities, the participation in decision making and community initiated organization tends to be systematically connected, but has no significance effect to per capita expenditure levels. On the other hand, the human capital aspects of the education year seem to be the most important and strongly associated with levels of household welfare. If family members are highly educated, households may preserve a consistent wealth.

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[1] It is to be noted that indices, not absolute numbers, are the cash and work contribution variables. They thus capture relative variations in contributions between households, which should reduce the potential problems of endogeneity with these variables.

Table 4.21 Household Welfare and Social Capital

	(1) Basic Model			(2) With Multiplicative Social Capital Index			(3) With Additive Social Capital Variables		
	Coefficients	P-value	t-Stat	Coefficients	P-value	t-Stat	Coefficients	P-value	t-Stat
Intercept	12.6017	0.0000	(14.27)	12.4700	0.0000	(13.92)	12.6685	0.0000	(13.44)
Social Capital Index (Multiplicative)				-0.0152		(-0.90)			
Number of Active Memberships							-0.0171	0.8153	(-0.23)
Meeting Attendance							-0.1128	0.3102	(-1.02)
Index of Participation in Decision Making							-0.0738	0.1814	(-1.35)
Cash Contribution Score							0.1197	0.2261	(1.22)
Work Contribution Score							-0.0001	0.4431	(-0.77)
Percent of Community Initiated Memberships							-0.2368	0.1884	(-1.33)
Percent of Informal Memberships							0.2339	0.1333	(1.52)
Household Size	0.0052	0.9161	(0.11)	0.0047	0.9239	(0.10)	0.0156	0.7737	(0.29)
Years of Education	*0.0103	0.0698	(1.83)	*0.0113	0.0516	(1.97)	**0.0128	0.0372	(2.12)
Female Head of Household	-0.0250	0.8725	(-0.16)	-0.0253	0.8710	(-0.16)	-0.0622	0.7038	(-0.38)
Age of Head of Household	-0.0084	0.7855	(-0.27)	-0.0020	0.9489	(-0.06)	-0.0109	0.7439	(-0.33)
Age of Head of Household Squared	0.0001	0.7451	(0.33)	0.0000	0.9010	(0.12)	0.0001	0.6742	(0.42)
Land Owned & Rented (Acre)	0.0095	0.2299	(1.21)	0.0103	0.1971	(1.30)	0.0083	0.3279	(0.98)
Animal Owned (number)	0.0109	0.8037	(0.25)	0.0092	0.8350	(0.21)	0.0132	0.7672	(0.30)
Farming Equipment Owned (number)	0.0624	0.8240	(0.22)	0.0297	0.9165	(0.11)	-0.0504	0.8619	(-0.17)
Number of Observations	104			104			104		
R-squared	0.11			0.12			0.16		
F-statistic	1.44			1.36			1.14		

Notes:
1) Dependent variable = ln (household expenditure per capita)
2) t-statistics are in parentheses and are based on robust standard errors.
3) The multiplivative index is the product of the number of memberships and the participation in decision making.
4) The additive index is the arithmetic average of the number of memberships, meeting attendance, the contribution scores and the percent of community orientations.
5) See Appendix (3) for Regression Summaries.

Source: Authors' calculations

4.3.2 The Effects of Social Capital

In a relatively poor rural environment, building coping strategies to deal with the risk of income fluctuations is a prime consideration for households. This includes the accumulation of assets (which can be sold or lent at times of need) or the arrangement of credit access. The average household owned only 4.45 items out of a list of 15 household durable goods. The most commonly possessed is a television, a motorcycle and a mobile phone. A big explanation why local households join local associations is to boost access to credit and reach to social services. One-third of all memberships are mainly for this reason, with a stronger concentration that has a history of rotating credit and saving groups (i.e. Rice banks by UNDP) in Ka Hnyaw and Kawt Ka Dei villages.

Asset Accumulation

In terms of social capital, meetings attendance and the number of memberships are not related to a family's wealth, but belonging to participating in decision making and cash contribution to organization is correlated with higher asset ownership in Column 1, Table 4.22. Wealthy individuals are not often able to attend meetings of the community. Since the wealthy are more interested in cash contribution and in the role of leadership. Village leaders are usually fairly wealthy. While they engage in community initiated memberships, they are not deemed to be rich. Households who attend group events on a regular basis are less prosperous. There are other wealthy individuals who are not members of the group. Households, especially those of good relatives and authorities, appear to be wealthy.

Since having a big family would not have more assets of its own. However, large family sizes may have multiple sources of income. According to survey result, the size of the household is adversely associated with the ownership of properties. The year of education is significantly linked to the ownership of property. Educated households are richer. However, rich families would have a great deal of schooling for their youngest ones. Older children leave school to assist with household tasks or to work outside the home. The influence of the year of education is that parents' education and the youngest children's education are higher.

In Column 2, Table 4.22, increasing savings were not actually correlated with households with more meeting attendance in local associations that were noticeably more than others social capital variables. The influence of membership in financial

associations was not particularly high, suggesting that such organizations are not actually achieving their stated target. Years of education and the age of the head of household are not associated with increasing savings. However, savings in households of aged parents are diminishing at the age of the head of the household. As a consequence, medical costs are high and the social insurance scheme is lacking. The result of this study reveals that the amount of households saving money is very low. Land owners have a lower chance of saving money. Since they are eating and not selling agricultural products for money. This is because there is no conversion of rice into cash. They are grown primarily for the consumption of agricultural goods. Individuals probably do not have a tradition of savings for future use, or it may be the families of day laborers. It is a society that is not yet prepared to change its accumulated wealth.

Table 4.22 Social Capital and Asset Accumulation

	Asset Ownership[1]			Increasing Savings[2]		
	Coefficients	P-value	t-Stat	Coefficients	P-value	t-Stat
Intercept	1.6351	0.5692	(0.57)	-	-	-
Social Capital Dimensions						
Membership in Financial Associations	-	-	-	0.0226	0.7551	(0.31)
Number of Active Memberships	-0.2696	0.2267	(-1.22)	-0.0162	0.7782	(-0.28)
Meeting Attendance	***-1.1852	0.0007	(-3.51)	-0.0698	0.2595	(-1.13)
Index of Participation in Decision Making	*0.2485	0.0974	(1.67)	0.0109	0.7258	(0.35)
Cash Contribution Score	**0.6297	0.0257	(2.27)	0.0534	0.3473	(0.94)
Work Contribution Score	-0.0001	0.7848	(-0.27)	0.0000	0.6732	(0.42)
Percent of Community Initiated Memberships	-0.0355	0.8861	(-0.14)	-0.0067	0.8965	(-0.13)
Household Size	-0.1764	0.2801	(-1.09)	-0.0163	0.5907	(-0.54)
Years of Education	***0.0568	0.0020	(3.19)	0.0050	0.1394	(1.49)
Female Head of Household	**-1.2890	0.0100	(-2.63)	-0.0664	0.4642	(-0.74)
Age of Head of Household	0.0918	0.3596	(0.92)	0.0224	0.2264	(1.22)
Age of Head of Household Squared	-0.0006	0.4659	(-0.73)	-0.0002	0.3136	(-1.01)
Farmer Household	**1.1830	0.0197	(2.37)	0.0511	0.6463	(0.46)
Land Owned & Rented (Acre)	-		-	-0.0052	0.3165	(-1.01)
Animal Owned (number)	-		-	0.0167	0.4993	(0.68)
Farming Equipment Owned (number)	-		-	-0.1761	0.2899	(-1.06)
Number of Observations	104			104		
R-squared	0.42			0.14		
F-statistic	5.45			0.90		
Log Likelihood				507.93		
Chi-squared				55.54		
Chi-squared > Probability				5.54		

Notes:

1. OLS model with asset score as dependent variable; reported are coefficients and t-values based on robust standard errors.

2. Probit model of households who increased savings in the past year; reported are probability derivatives at the mean of the explanatory variables (or for 0 to 1 change in the case of dummy variables) and based on robust standard errors.

3. See Appendix (3) for Log Likelihood and Chi-squared analysis, and Regression summaries.

Source: Authors' calculations

Access to Credit

The value of financial associations for access to credit is verified in Table 4.23. Members were 20 percentage points more likely than non-members to receive credit and the credit amounts received were much greater. This is perhaps the sense in which social capital is genuinely 'social,' in the context of a social environment, the building of networks and trust among members spills over into financial benefits, e.g. through easier access to credit. It may be easier for landowners to apply for a loan. The accessibility of mortgages is high due to the availability of collateral.

Table 4.23, column 2 indicates that the contribution variables are negatively associated with access to credit, both in cash and in kind. Since most families of donors are normally well off. So most of the wealthy families could be more interested with contributions. It isn't necessary to have access to credit for them. Female heads of household are adversely associated with access to credit in the field of human resources. Since they have to form a group when forming a loan unit. In the case of such a loan unit, the community's chosen individuals are always selected and chosen. There is more trust in male head of household. Families with multiple revenue sources are also eligible to participate in the loan unit. It is not easy for a household with a widow or female household head to join the loan unit.

On the other hand, the amount of credit available will be expanded by engaging in financial organizations and community initiated associations. Depending on the number of participating agencies, loan availability can vary. More borrowers are also those who are more interested in financial organizations. The most likely to get loans are landlords and livestock farmers only. Since they own agricultural land and can get a loan for farming. Some households raise livestock to get loans, such as cattle and buffaloes. This indicates that households are more likely to gain access to credit if they have fixed assets and other resources.

Table 4.23 Social Capital and Access to Credit

	Access to Credit[1/]			Ln (Amount of Credit Received)[2/]		
	Coefficients	P-value	t-Stat	Coefficients	P-value	t-Stat
Intercept	-	-	-	11.8708	0.1955	(1.30)
Social Capital Dimensions						
Membership in Financial Associations	**0.2260	0.0163	(2.45)	**3.1244	0.0139	(1.24)
Number of Active Memberships	-0.0208	0.7778	(-0.28)	-0.2570	0.7960	(0.99)
Meeting Attendance	-0.0029	0.9711	(-0.04)	-0.0958	0.9282	(1.06)
Index of Participation in Decision Making	0.0331	0.4040	(0.84)	0.3539	0.5084	(0.53)
Cash Contribution Score	-0.1017	0.1628	(-1.41)	-1.3290	0.1763	(0.97)
Work Contribution Score	-0.0001	0.1173	(-1.58)	-0.0017	0.1332	(0.00)
Percent of Community Initiated Memberships	0.1083	0.1020	(1.65)	*1.4776	0.0983	(0.88)
Household Size	-0.0041	0.9161	(-0.11)	-0.0740	0.8874	(0.52)
Years of Education	-0.0023	0.5862	(-0.55)	-0.0308	0.5920	(0.06)
Female Head of Household	-0.1173	0.3121	(-1.02)	-1.7464	0.2649	(1.56)
Age of Head of Household	-0.0189	0.4235	(-0.80)	-0.2584	0.4181	(0.32)
Age of Head of Household Squared	0.0002	0.4037	(0.84)	0.0023	0.3903	(0.00)
Farmer Household	0.1289	0.3655	(0.91)	1.6053	0.4034	(1.91)
Land Owned & Rented (Acre)	***0.0202	0.0029	(3.06)	***0.3282	0.0004	(0.09)
Animal Owned (number)	0.0458	0.1504	(1.45)	0.5413	0.2067	(0.43)
Farming Equipment Owned (number)	-0.0573	0.7868	(-0.27)	-0.3273	0.9089	(2.85)
Number of Observations	104			104		
Log Likelihood	874.90			7201.04		
Chi-squared	1.38			1.38		
Probability > Chi-squared	48.62			48.62		

Notes:
1. Probit model of household who access to credit; reported are probability derivatives at the mean of each explanatory variable (or for 0 to 1 change in the case of dummy variables) and based on robust standard errors.
2. Tobit coefficients and t-statistics
3. See Appendix (3) for Log Likelihood and Chi-squared analysis and Regression summaries.

Source: Authors' calculations

CHAPTER 5

CONCLUSION

5.1 Findings

The current survey of local institutions and social capital investigated (a) the effect of a large measure of social capital, focused on membership in local associations, on economic welfare as expressed in household expenditure per capita, and (b) the effect of accumulation of assets (i.e. durable goods, land and livestock), and (c) the role of social capital in promoting access to credit and collective action.

For the first objective, that used a reduced model of household welfare, which regulates the related household characteristics, to estimate the contribution of social capital to household welfare. The underlying structural equations treat social capital as an entry into the output function of the household, along with human and physical capital. The effects of social capital operate by (at least) three mechanisms: exchange of knowledge among the participants of the group, minimizing opportunistic actions and enhancing mutual decision-making.

In the context of Chaungzon township, human capital is the most contributes to the generation of household welfare. Owners of physical assets, such as land, are tied to household expenses but less significance effect. The year of education and land tenancy also matters. The effect of membership numbers and participation in decision-making has no effect on household expenditure per capita. In other words, the impact on household welfare of increase of social capital and human capital assets are differ. The social capital aspects of cash contribution and participation of informal communities are systematically connected, but has no significance effect to per capita expenditure levels. The human capital aspects of the education year seem to be the most important and strongly associated with levels of household welfare.

Secondly, in terms of social capital, meetings attendance and the number of memberships are not related to a family's wealth. Wealthy individuals are not often able to attend meetings of the community. The wealthy are more interested in cash contribution and in the role of leadership. Households who attend group events on a regular basis are less prosperous. The year of education is significantly linked to the

ownership of property. Educated households are richer. Big families would have a great deal of schooling for their youngest ones. Older children leave school to assist with household tasks or to work outside the home. Study shows that the amount of households saving money is very low. Years of education and the age of the head of household are not associated with increasing savings. Land owners have a lower chance of saving money since they are eating and not selling agricultural products for money. Individuals probably do not have a tradition of savings for future use. It is a society that is not yet prepared to change its accumulated wealth. The influence of membership in financial associations was not particularly high, suggesting that such organizations are not achieving their stated target.

Finally, members of financial associations were 20 percentage points more likely than non-members to receive credit. The building of networks and trust among members spills over into financial benefits. It may be easier for landowners to apply for a loan. The contribution variables are negatively associated with access to credit, both in cash and in kind. Most wealthy families could be more interested with contributions. Female heads of household are adversely associated with access to credit in the field of human resources. It is not easy for a household with a widow or female household head to join the loan unit. Those who are more interested in financial institutions are also more creditors. It is more likely that landlords and livestock farmers can get loans. Some households raise livestock, such as cattle and buffaloes, to get loans. Households, whether they have fixed assets, are more likely to gain access to credit.

5.2 Suggestions

In the literature on social capital, the use of household level data to make this argument and to measure the influence of social capital is novel. The results of the Chaungzon township case study would have to be verified by future studies into other states and regions in Myanmar. This is also the first research, that quantifies the effects of different dimensions of social capital and various types of associations. Such results encourage a strategy of investing in social capital through donors and governments, either directly or by developing an atmosphere conducive to the creation of local associations. These results also suggest that investment in local social capital deserves to be part of efforts to reduce poverty, as returns on social capital investment are greater for the vulnerable than for others.

For countries other than businesses, the notion of social capital is of considerable significance. While the economic, political and social aspects of development are viewed separately, the fact that they are treated as a whole is very significant in terms of the sustainability of development. Without adding an individual, human relationship, networks and standards to the account, planning of growth is no different from planning to eat without content. Observers, administrators, leaders, students, researchers and practitioners from diverse professions will benefit from the definition of social capital by working on the future of the concept of social capital and by enhancing the standard of education for the reasons mentioned above. Finally, the results provide examples of the sort of associations that are likely to provide the greatest benefits.

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APPENDIXES

Appendix (1) Chaungzon Township Map

Map M.1 Village Tracts of Chaungzon Township
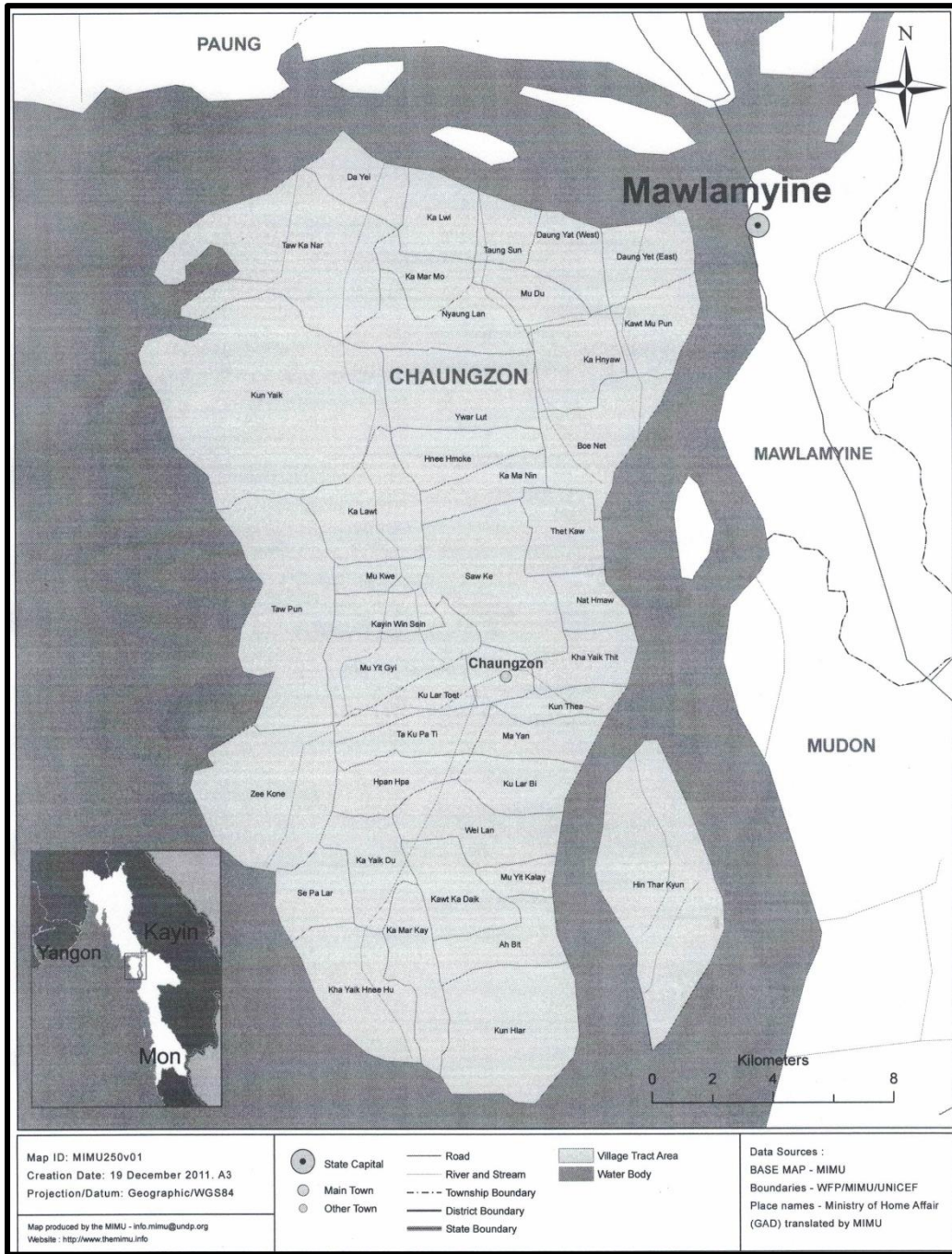
Source: Myanmar Information Management Unit (MIMU)

Appendix (2): Local Level Institutions Household Interview

In any one village, this questionnaire is to be administered to households, defined as a group of people, related or unrelated, who normally live in the same dwelling and eat together.

Section 1. Demographic Details On Household Members

Date of interview: _____

Household ID: _____

Q1.1 Name of respondent: _____

Q1.2 Village Tract/Ward: _____

[e.g. Muyitkalay Village Tract/ Kawt Ka Dei Village]

Q1.3 Position of household: ☐ Head of household or ☐ Spouse

Q1.4 Gender of respondent: ☐ Male ☐ Female

Q1.5 Main language of repondent: ☐ Burmese ☐ Kayin ☐ Mon

☐ Other (Specify) _____

Q1.6 Religion of respondent: ☐ Buddhist ☐ Catholic ☐ Protestant

☐ Hindu ☐ Islam

☐ Other (Specify) _____

Q1.7 How long have you lived in this village? _____ Months/Years

Rounding UP/DOWN ↑↓ at 6 Months

Section 1. Demographic Details On Household Members

[Note to interviwer: for ordering household members, relatively list them in the order of codes, like head, spouse children...]

No.	Name of household member (elder to youngest)	Q1.8 Relationships to head of household	Q1.9 Age	Q1.10 Gender 1. Male, 2. Female	Q1.11 Main Occupation	Q1.12 Employment Status	Q1.13 Level of Education
1							
2							
3							
4							
5							
6							
7							
8							

Note: Use the following code numbers for each answer of related question in the table above.

Q1.8   1. Head of household. 2. Spouse, 3. Child of head of household, 4. Parent, 5. Grandson/Granddaughter, 6. Other relatives,
7. Servants and their household, 8. Other non-relatives, 9. Brother/Sister

Q1.11 1. Farmer, 2. Fisherman, 3. Trade, 4. Artesanal manufacturing, 5. Industrial manufacturing, 6. Private sector services – unskilled
7. Private sector services – skilled, 8. Public sector services – unskilled, 9. Public sector services – skilled,
10. Other (specify) _____

Q1.12 1. Wage earner (e.g. landless laborer), 2. Self-employed (less than 5 full time employees),
3. Self-employed (5 or more full time employees), 4. Unpaid family worker, 5. Homemaker, 6. Inactive (e.g. student, retired)
7. Able to work but has not worked over last month

Q1.13 1. None, 2. Primary school, 3. Middle school, 4. High school, 5. Vocational college, 6. University, 7. Other (specify)_____

Section 2. Participation In Local Institutions Activities

This is a survey mainly about the groups and organization in this community and the reasons why people join them, so we would now like to ask you some questions about the groups in this village. Can you please tell me which of these groups, or any others (both traditional and more recently created), in which you or other members of your household participate?

Q2.1 [List Organizations Participated Only]	Q2.2 How important is this group to your household? 1. Very important 2. Somewhat important 3. Not important	Q2.3 How actively do members in the groups participate in making decisions? 1. Leader 2. Very actively 3. Somewhat actively 4. Not at all actively	Q2.4 Is this group: 1. State initiated (or initiated by government) 2. Community initiated 3. Company	Q2.5 Is this group: 1. Formally organized 2. Informally organized or centered around activity
Farmer/Fisherman group or cooperative				
010				
011				
012				
013				
Other production group				
020				
021				
022				
Traders or Business Association				
030				
031				
032				
Professional Association (doctors, teachers, veterans)				
040				
041				
042				

Section 2. Participation In Local Institutions Activities

Q2.1 [List Organizations Participated Only]	Q2.2 How important is this group to your household? 1. Very important 2. Somewhat important 3. Not important	Q2.3 How actively do members in the groups participate in making decisions? 1. Leader 2. Very actively 3. Somewhat actively 4. Not at all actively	Q2.4 Is this group: 1. State initiated (or initiated by government) 2. Community initiated 3. Company	Q2.5 Is this group: 1. Formally organized 2. Informally organized or centered around activity
Trade Union or Labor Union				
050				
051				
052				
Neighborhood/ Village committee				
060				
061				
062				
Religious or spiritual group (e.g. church, mosque, temple, informal religious group, religious study group)				
070				
071				
072				
Political group or movement				
080				
081				
082				

Section 2. Participation In Local Institutions Activities

Q2.1 [List Organizations Participated Only]	Q2.2 How important is this group to your household? 1. Very important 2. Somewhat important 3. Not important	Q2.3 How actively do members in the groups participate in making decisions? 1. Leader 2. Very actively 3. Somewhat actively 4. Not at all actively	Q2.4 Is this group: 1. State initiated (or initiated by government) 2. Community initiated 3. Company	Q2.5 Is this group: 1. Formally organized 2. Informally organized or centered around activity
Cultural group or association (e.g. arts, music, theater, film)				
090				
091				
092				
093				
Burial society or festival society				
100				
101				
102				
103				
104				
105				
Education group (e.g. parent-teacher association, school committee)				
110				
111				
112				
113				
114				

Section 2. Participation In Local Institutions Activities

Q2.1 [List Organizations Participated Only]	Q2.2 How important is this group to your household? 1. Very important 2. Somewhat important 3. Not important	Q2.3 How actively do members in the groups participate in making decisions? 1. Leader 2. Very actively 3. Somewhat actively 4. Not at all actively	Q2.4 Is this group: 1. State initiated (or initiated by government) 2. Community initiated 3. Company	Q2.5 Is this group: 1. Formally organized 2. Informally organized or centered around activity
Finance, credit or savings group				
120				
121				
122				
123				
124				
125				
Health group				
130				
131				
132				
Water and waste management group				
140				
141				
142				
Sports group				
150				
151				
152				

Section 2. Participation In Local Institutions Activities

Q2.1 [List Organizations Participated Only]	Q2.2 How important is this group to your household? 1. Very important 2. Somewhat important 3. Not important	Q2.3 How actively do members in the groups participate in making decisions? 1. Leader 2. Very actively 3. Somewhat actively 4. Not at all actively	Q2.4 Is this group: 1. State initiated (or initiated by government) 2. Community initiated 3. Company	Q2.5 Is this group: 1. Formally organized 2. Informally organized or centered around activity
Youth group				
160				
161				
162				
NGO or civic group (e.g. Rotary Club, Red Cross)				
170				
171				
172				
Ethnic-based community group				
180				
181				
182				
183				
184				
Other groups				
190				
191				
192				
193				

Section 3. Characteristics Of The Most Important Institutions/Organizations

Q3.1 Of all the groups to which members of your household belong, which three are the most important to your household?

Group Name 1: _____

Group Name 2: _____

Group Name 3: _____

Q3.2 What is the main benefit from joining this group?

Group 1: ☐ Improves my household's current livelihood or access to services,

☐ Important in times of emergency/in future,

☐ Benefits the community, ☐ Enjoyment/Recreation,

☐ Spiritual, social status, self-esteem,

☐ Other (specify) _____

Group 2: ☐ Improves my household's current livelihood or access to services,

☐ Important in times of emergency/in future,

☐ Benefits the community, ☐ Enjoyment/Recreation,

☐ Spiritual, social status, self-esteem,

☐ Other (specify) _____

Group 3: ☐ Improves my household's current livelihood or access to services,

☐ Important in times of emergency/in future,

☐ Benefits the community, ☐ Enjoyment/Recreation,

☐ Spiritual, social status, self-esteem,

☐ Other (specify) _____

Q3.3 Does the group help your household get access to any of the following services?

	Group 1	Group 2	Group 3
1. Education or Training	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No
2. Health services	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No
3. Water supply or sanitation	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No
4. Credit or Savings	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No
5. Agricultural input or technology	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No
6. Irrigation	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No
7. Other (Specify)	☐ Yes, ☐ No	☐ Yes, ☐ No	☐ Yes, ☐ No

Section 3. Characteristics Of The Most Important Institutions/Organizations

Q3.4 Compared to 5 years ago, does your household today participate actively in more organizations, or fewer organization?

Group 1: ☐ More organizations, ☐ Same number of organization,
☐ Fewer organization

Group 2: ☐ More organizations, ☐ Same number of organization,
☐ Fewer organization

Group 3: ☐ More organizations, ☐ Same number of organization,
☐ Fewer organization

Q3.5 What is the most important source of funding of this group?

Group 1: ☐ From members'dues, ☐ Other sources within the community,
☐ Sources outside the community

Group 2: ☐ From members'dues, ☐ Other sources within the community,
☐ Sources outside the community

Group 3: ☐ From members'dues, ☐ Other sources within the community,
☐ Sources outside the community

Section 4. Profiles Of Service Delivery

In the past 3 months, how much did you or your household spend for

Q4.1 Consultations: _____ (include amount payments in-kind)

Q4.2 Medication: _____ (include amount payments in-kind)

Q4.3 Hospital stay: _____ (include amount payments in-kind)

Q4.4 Other medical expenses: _____ (include amount payments in-kind)

Q4.5 Do you ever go to meetings to discuss what to do with the village lands?

☐ Yes,

☐ No

Q4.6 Do you ever go to meetings to discuss what to do with neighborhood houses?

☐ Yes,

☐ No

Section 4. Profiles Of Service Delivery

Over the last year, did anyone in this household borrow or obtain credit for purposes other than your own business?
[If loan or credit was in goods, convert it to reasonable equivalent in local currency]

	Financial Sources	During the last year	
		Q4.7 Has anyone in your household borrowed or received credit from the following source?	Q4.8 Amount borrowed/ received on credit
1	Household member	☐ Yes, ☐ No	
2	Friends	☐ Yes, ☐ No	
3	Relatives not members of household	☐ Yes, ☐ No	
4	Money lender	☐ Yes, ☐ No	
5	Trader/store	☐ Yes, ☐ No	
6	Community credit society (specify)	☐ Yes, ☐ No	
7	Government Bank	☐ Yes, ☐ No	
8	Commercial Bank	☐ Yes, ☐ No	
9	NGO	☐ Yes, ☐ No	
10	Pawnshop	☐ Yes, ☐ No	
11	Other (specify)	☐ Yes, ☐ No	

Over the last 10 years, have you borrowed money or received credit to help you establish or maintain this business activity from any of the following?
[If loan or credit was in goods, convert it to reasonable equivalent in local currency]

	Financial Sources	During the last 10 year	
		Q4.9 Has anyone in your household borrowed or received credit from the following source?	Q4.10 Amount borrowed/ received on credit
1	Household member	☐ Yes, ☐ No	
2	Friends	☐ Yes, ☐ No	
3	Relatives not members of household	☐ Yes, ☐ No	
4	Money lender	☐ Yes, ☐ No	
5	Trader/store	☐ Yes, ☐ No	
6	Community credit society (specify)	☐ Yes, ☐ No	
7	Government Bank	☐ Yes, ☐ No	
8	Commercial Bank	☐ Yes, ☐ No	
9	NGO	☐ Yes, ☐ No	
10	Pawnshop	☐ Yes, ☐ No	
11	Other (specify)	☐ Yes, ☐ No	

Section 5. Perceptions Of Community Trust And Collective Action

Q5.1 How many times last year did you participate in collective action?

        A. In your neighborhood: _____ (times)

        B. In your village: _____ (times)

Q5.2 If your household was very short of money and food, or if members of the household were ill, are there people beyond your household and relatives from whom it could get assistance?

    ☐ 1. Definitely,   ☐ 2. Probably,   ☐ 3. Probably not,

    ☐ 4. Definitely not,   ☐ 5. Difficult to answer

Section 6. Household Economy

What is your normal monthly expenditure for:

	Item	Monthly amount (Kyats)
Q6.1	Main food staples	
Q6.2	Transportation (fuel, maintenance for car, bike)	
Q6.3	Communication (postage, phone, telegram)	
Q6.4	Personal care (hairdresser, soap, etc.)	
Q6.5	Products for use in house (cleaners, etc.)	
Q6.6	Entertainment (movies, cassettes, newspapers)	
Q6.7	Payments for servants and maids	

Over the last year, did your household consume any products that it produced or gathered itself? If so, can you estimate the value of these?

	Item	Consumed	Annual value of items consumed (Kyats)
Q6.8	Crops	☐ Yes, ☐ No	
Q6.9	Processed crop products	☐ Yes, ☐ No	
Q6.10	Livestock	☐ Yes, ☐ No	
Q6.11	Livestock products	☐ Yes, ☐ No	
Q6.12	Forest products	☐ Yes, ☐ No	
Q6.13	Fish	☐ Yes, ☐ No	
Q6.14	Other	☐ Yes, ☐ No	

Q6.15 Would you say that your family

    ☐ 1. Often goes hungry,   ☐ 2. Has enough but simple food

    ☐ 3. Has a variety of foods,   ☐ 4. Also eats luxury foods

Section 6. Household Economy

Q6.16 In the past year, did your household have to sell any land, livestock or equipment, in order to have money to buy enough food, clothing, or to pay for health care?

    ☐ Yes,

    ☐ No

Q6.17 Does your household now have more or less savings than a year ago?

    ☐ 1. More saving, ☐ 2. Less savings, ☐ 3. About the same savings

    ☐ 4. Household has no savings

Q6.18 If you rent, how much is your monthly rent? [Note to interviewer: If rent includes utilities, try to separate those utility expenses from the rend. If it is not possible to separate them, put rent amount here and those utility expenses should be zero at 6.21, 6.23]

	Monthly value

Q6.19 Over the past year, how much did you spend on repair and maintenance of your home?

	Monthly value

Q6.20 What drinking water facilities does the household have?
    ☐ 1. Indoor tap,   ☐ 2. Outdoor tap,   ☐ 3. Public standpipe,

    ☐ 4. Purchases water from vendor, ☐ 5. Well,   ☐ 6. Spring,

    ☐ 7. River, lake,   ☐ 8. Other (specify) _____

Q6.21 How much does this household normally spend on water each month?

	Monthly value

Q6.22 What lighting facilities does this household have?
    ☐ 1. Own electricity connection,   ☐ 2. Neighbors' electricity connection,

    ☐ 3. Solar panel,   ☐ 4. Kerosene lighting,   ☐ 5. Candles

Q6.23 How much does this household normally spend each month on electricity/ kerosene/ candles [Note to interviewer: Say the answer given in 6.22]

	Monthly value

Section 6. Household Economy

Q6.24 How much does this household normally spend each month on gas, wood, coal and charcoal?
[Note to interviewer: Do not include electricity as this has already been noted in the question on expenditure for lighting]

	Monthly value

Does the household own any of the following?

Asset		Own
Q6.25	Car/van/truck	☐ Yes, ☐ No
Q6.26	Boat	☐ Yes, ☐ No
Q6.27	Outboard motor	☐ Yes, ☐ No
Q6.28	Motorcycle/moped	☐ Yes, ☐ No
Q6.29	Bicycle	☐ Yes, ☐ No
Q6.30	Color TV	☐ Yes, ☐ No
Q6.31	Black and white TV	☐ Yes, ☐ No
Q6.32	Audio system	☐ Yes, ☐ No
Q6.33	Telephone	☐ Yes, ☐ No
Q6.34	Radio	☐ Yes, ☐ No
Q6.35	Refrigerator/freezer	☐ Yes, ☐ No
Q6.36	Sewing machine	☐ Yes, ☐ No
Q6.37	Washing machine/dryer	☐ Yes, ☐ No
Q6.38	Pressure lamp	☐ Yes, ☐ No
Q6.39	Other major asset (specify)	☐ Yes, ☐ No

Does this household own any livestock, and if so, how many animals?

Animal		How many
Q6.40	Oxen	
Q6.41	Cattle	
Q6.42	Horses	
Q6.43	Mules	
Q6.44	Goats	
Q6.45	Sheep	
Q6.46	Pigs	
Q6.47	Poultry	
Q6.48	Fish pond	

Section 6. Household Economy

Q6.49 Does the household own any farmland?

☐ Yes,

☐ No

If yes, how many acres?

	Type of land	Acres
Q6.50	Irrigated land	
Q6.51	Unirrigated annual crop land	
Q6.52	Unirrigated permanent crop	
Q6.53	Wasteland/Grazing land	

Q6.54 Does the household rent or sharecrop any farmland which does not belong to it?

☐ Yes,

☐ No

If yes, how many acres?

	Type of land	Acres
Q6.55	Irrigated land	
Q6.56	Unirrigated annual crop land	
Q6.57	Unirrigated permanent crop	
Q6.58	Wasteland/Grazing land	

Does the household own any farming equipment?

	Equipment	Own
Q6.59	Tractor	☐ Yes, ☐ No
Q6.60	Cultivator	☐ Yes, ☐ No
Q6.61	Animal drawn plough	☐ Yes, ☐ No
Q6.62	Planter	☐ Yes, ☐ No

Appendix (3): Detailed Tables on Social Capital Dimensions

Table A.1 Means and Standard Deviations of Regression Variables

Variable List	Chaungzon Township		Ka Hnyaw Village		Ka Taung Sein Village		Toe Cheit Ward		Hpan Hpa Village		Kawt Ka Dei Village		Ka Mar Mo Village	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Dependent Variables														
Ln (Household Expenditure Per Capita)	12.76	0.635	12.59	0.504	12.48	0.451	12.71	0.733	12.96	0.681	12.98	0.647	13.12	0.682
Durable Goods Score	4.45	2.364	5.60	2.037	2.75	1.585	4.25	2.845	5.55	2.038	3.55	1.761	7.25	0.500
Fraction of Households Who Increased Savings	0.13	0.343	0.10	0.308	0.00	0.000	0.10	0.308	0.25	0.444	0.15	0.366	0.50	0.577
Fraction of Households Who Obtained Credit	0.56	0.499	0.55	0.510	0.45	0.510	0.45	0.510	0.65	0.489	0.70	0.470	0.50	0.577
Ln (Amount of Credit Received)	7.67	6.905	7.48	6.998	5.87	6.690	6.16	7.000	9.55	7.204	9.31	6.287	7.50	8.673
Times of Participation in Collective Action	93.60	268.88	37.40	230.70	148.45	442.76	10.65	39.43	283.10	502.44	1.00	0.00	30.50	31.54
Social Capital Variables														
Additive Social Capital Index	2.98	1.82	3.25	2.25	2.63	1.58	3.93	1.58	2.75	2.04	2.50	1.32	2.13	1.75
Multiplicative Social Capital Index	5.27	3.99	6.40	5.60	4.25	3.55	5.75	2.84	5.25	4.56	4.80	2.82	4.75	3.77
Membership in Financial Associations	0.57	0.785	0.15	0.366	0.60	0.598	1.00	1.298	0.30	0.470	0.90	0.553	0.00	0.000
Number of Active Memberships	3.68	2.362	3.90	2.634	3.05	2.012	5.15	2.300	3.40	2.644	3.15	1.694	2.50	2.082
Meeting Attendance	1.02	0.591	0.60	0.503	1.35	0.813	1.25	0.444	1.00	0.324	1.00	0.459	0.50	0.577
Index of Participation in Decision Making	1.59	2.060	2.50	3.103	1.20	1.852	0.60	1.046	1.85	2.134	1.65	1.268	2.25	1.708
Cash Contribution Score	1.56	1.328	1.55	1.050	1.00	0.795	2.90	1.714	1.55	1.191	0.95	0.759	0.75	0.957
Work Contribution Score	187.19	637.07	74.80	326.04	296.90	897.09	21.30	79.87	566.20	1018.02	2.00	0.00	61.00	68.13
Percent of Community Initiated Memberships	2.27	1.436	2.60	1.984	2.20	1.240	2.70	1.129	2.10	1.586	1.85	0.988	1.75	1.500
Percent of Membership in informally Organized	2.25	1.544	2.65	2.183	2.15	1.309	2.00	0.973	2.35	1.814	2.20	1.196	1.75	1.708
Control Variables														
Household Size	4.81	1.758	4.55	1.572	4.70	1.625	4.90	1.971	4.50	2.039	5.00	1.556	6.75	0.957
Years of Education Per Adult Household	26.92	14.834	27.90	15.901	23.60	11.780	25.00	14.135	27.70	16.213	25.40	11.807	52.00	17.282
Female Head of Household	0.24	0.429	0.15	0.366	0.10	0.308	0.40	0.503	0.35	0.489	0.25	0.444	0.00	0.000
Age of Head of Household	57.25	14.297	56.15	10.737	49.00	12.831	59.25	16.409	62.60	16.888	56.80	11.063	69.50	8.813
Age of Head of Household Squared	3480.00	1721.19	3262.35	1150.53	2557.40	1327.93	3766.35	1978.25	4189.70	2231.23	3342.50	1357.73	4888.50	1226.46
Farmer Household	0.18	0.388	0.25	0.444	0.15	0.366	0.00	0.000	0.30	0.470	0.20	0.410	0.25	0.500
Land Ownership (Acres)	4.27	8.847	3.85	6.812	2.33	5.377	0.50	2.236	11.64	13.748	1.48	2.628	12.00	17.963
Number of Large Animals Owned	0.74	1.619	0.35	1.182	0.15	0.671	0.70	1.720	1.25	1.832	1.40	2.162	0.00	0.000
Number of Farming Equipment Owned	0.08	0.268	0.10	0.308	0.05	0.224	0.00	0.000	0.10	0.308	0.15	0.366	0.00	0.000

Source: Authors' calculations.

Table A.2 Basic Model Summary Output

Regression Statistics	
Multiple R	0.3284
R Square	0.1078
Adjusted R Square	0.0327
Standard Error	0.6246
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	8	4.4793	0.5599	1.4352	0.1920
	95	37.0623	0.3901		
Total	103	41.5416			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	12.6017	0.8830	14.27	0.0000	10.8488	14.3546
Household Size	0.0052	0.0488	0.11	0.9161	-0.0918	0.1021
Year of Education	0.0103	0.0056	1.83	0.0698	-0.0009	0.0215
Female Head of Household	-0.0250	0.1555	-0.16	0.8725	-0.3337	0.2836
Age of Head of Household	-0.0084	0.0307	-0.27	0.7855	-0.0694	0.0526
Age2 of Head of Household Squared	0.0001	0.0003	0.33	0.7451	-0.0004	0.0006
Land Owned & Rented (Acre)	0.0095	0.0079	1.21	0.2299	-0.0061	0.0251
Animal Owned (number)	0.0109	0.0437	0.25	0.8037	-0.0759	0.0977
Farming Equipment Owned (number)	0.0624	0.2796	0.22	0.8240	-0.4928	0.6175

Source: Authors' calculations

Table A.3 Multiplicative Social Capital Summary Output

Regression Statistics	
Multiple R	0.3399
R Square	0.1155
Adjusted R Square	0.0308
Standard Error	0.6252
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	9	4.7987	0.5332	1.3641	0.2156
Residual	94	36.7428	0.3909		
Total	103	41.5416			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	12.4700	0.8957	13.92	0.0000	10.6915	14.2485
Household Size	0.0047	0.0489	0.10	0.9239	-0.0924	0.1017
Year of Education	0.0113	0.0057	1.97	0.0516	-0.0001	0.0227
Female Head of Household	-0.0253	0.1556	-0.16	0.8710	-0.3343	0.2836
Age of Head of Household	-0.0020	0.0315	-0.06	0.9489	-0.0646	0.0606
Age2 of Head of Household Squared	0.0000	0.0003	0.12	0.9010	-0.0005	0.0006
Land Owned & Rented (Acre)	0.0103	0.0079	1.30	0.1971	-0.0054	0.0260
Animal Owned (number)	0.0092	0.0438	0.21	0.8350	-0.0779	0.0962
Farming Equipment Owned (number)	0.0297	0.2822	0.11	0.9165	-0.5307	0.5901
Social Capital Index (Multiplicative)	-0.0152	0.0169	-0.90	0.3683	-0.0487	0.0182

Source: Authors' calculations

Table A.4 Additive Social Capital Summary Output

Regression Statistics	
Multiple R	0.4029
R Square	0.1623
Adjusted R Square	0.0195
Standard Error	0.6288
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	15	6.7429	0.4495	1.1368	0.3369
Residual	88	34.7987	0.3954		
Total	103	41.5416			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	12.6685	0.9428	13.44	0.0000	10.7949	14.5421
Active Memberships	-0.0171	0.0729	-0.23	0.8153	-0.1621	0.1279
Meeting Attendance	-0.1128	0.1105	-1.02	0.3102	-0.3323	0.1068
Participation in Decision Making	-0.0738	0.0548	-1.35	0.1814	-0.1826	0.0351
Cash Contribution	0.1197	0.0982	1.22	0.2261	-0.0754	0.3148
Work Contribution	-0.0001	0.0001	-0.77	0.4431	-0.0003	0.0001
Community Initiated Memberships	-0.2368	0.1787	-1.33	0.1884	-0.5919	0.1183
Percent of Informal Memberships	0.2339	0.1544	1.52	0.1333	-0.0729	0.5407
Household Size	0.0156	0.0542	0.29	0.7737	-0.0921	0.1234
Year of Education	0.0128	0.0061	2.12	0.0372	0.0008	0.0249
Female Head of Household	-0.0622	0.1631	-0.38	0.7038	-0.3865	0.2620
Age of Head of Household	-0.0109	0.0332	-0.33	0.7439	-0.0768	0.0550
Age2 of Head of Household Squared	0.0001	0.0003	0.42	0.6742	-0.0004	0.0007
Land Owned & Rented (Acre)	0.0083	0.0085	0.98	0.3279	-0.0085	0.0252
Animal Owned (number)	0.0132	0.0444	0.30	0.7672	-0.0750	0.1014
Farming Equipment Owned (number)	-0.0504	0.2891	-0.17	0.8619	-0.6249	0.5240

Source: Authors' calculations

Table A.5 Asset Ownership Summary Output

Regression Statistics	
Multiple R	0.6468
R Square	0.4183
Adjusted R Square	0.3416
Standard Error	1.9184
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	12	240.8647	20.0721	5.4541	0.0000
Residual	91	334.8949	3.6802		
Total	103	575.7596			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1.6351	2.8621	0.57	0.5692	-4.0502	7.3203
Active Memberships	-0.2696	0.2215	-1.22	0.2267	-0.7096	0.1704
Meeting Attendance	-1.1852	0.3374	-3.51	0.0007	-1.8554	-0.5150
Participation in Decision Making	0.2485	0.1484	1.67	0.0974	-0.0462	0.5432
Cash Contribution	0.6297	0.2776	2.27	0.0257	0.0782	1.1812
Work Contribution	-0.0001	0.0004	-0.27	0.7848	-0.0008	0.0006
Community Initiated Memberships	-0.0355	0.2475	-0.14	0.8861	-0.5272	0.4562
Household Size	-0.1764	0.1623	-1.09	0.2801	-0.4988	0.1461
Year of Education	0.0568	0.0178	3.19	0.0020	0.0214	0.0921
Female Head of Household	-1.2890	0.4901	-2.63	0.0100	-2.2625	-0.3155
Age of Head of Household	0.0918	0.0997	0.92	0.3596	-0.1062	0.2898
Age2 of Head of Household Squared	-0.0006	0.0008	-0.73	0.4659	-0.0022	0.0010
Farmer Household	1.1830	0.4982	2.37	0.0197	0.1933	2.1727

Source: Authors' calculations

Table A.6 Increasing Savings Summary Output

Regression Statistics	
Multiple R	0.37625
R Square	0.14156
Adjusted R Square	-0.01631
Standard Error	0.34575
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	16	1.7151	0.1072	0.8967	0.5751
Residual	87	10.4003	0.1195		
Total	103	12.1154			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.6120	0.5279	-1.16	0.2495	-1.6612	0.4372
Membership in Financial Associations	0.0226	0.0722	0.31	0.7551	-0.1209	0.1661
Active Memberships	-0.0162	0.0575	-0.28	0.7782	-0.1305	0.0980
Meeting Attendance	-0.0698	0.0615	-1.13	0.2595	-0.1922	0.0525
Participation in Decision Making	0.0109	0.0309	0.35	0.7258	-0.0506	0.0723
Cash Contribution	0.0534	0.0565	0.94	0.3473	-0.0590	0.1658
Work Contribution	0.0000	0.0001	0.42	0.6732	-0.0001	0.0002
Community Initiated Memberships	-0.0067	0.0513	-0.13	0.8965	-0.1086	0.0953
Household Size	-0.0163	0.0302	-0.54	0.5907	-0.0764	0.0438
Year of Education	0.0050	0.0033	1.49	0.1394	-0.0016	0.0116
Female Head of Household	-0.0664	0.0903	-0.74	0.4642	-0.2458	0.1131
Age of Head of Household	0.0224	0.0184	1.22	0.2264	-0.0142	0.0591
Age2 of Head of Household Squared	-0.0002	0.0002	-1.01	0.3136	-0.0005	0.0001
Farmer Household	0.0511	0.1109	0.46	0.6463	-0.1693	0.2715
Land Owned & Rented (Acre)	-0.0052	0.0052	-1.01	0.3165	-0.0155	0.0051
Animal Owned (number)	0.0167	0.0247	0.68	0.4993	-0.0323	0.0658
Farming Equipment Owned (number)	-0.1761	0.1653	-1.06	0.2899	-0.5047	0.1526

Source: Authors' calculations

Table A.7 Access to Credit Summary Output

Regression Statistics	
Multiple R	0.5816
R Square	0.3382
Adjusted R Square	0.2165
Standard Error	0.4417
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	16	8.6771	0.5423	2.7792	0.0012
Residual	87	16.9768	0.1951		
Total	103	25.6538			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.8813	0.6744	1.31	0.1947	-0.4592	2.2218
Membership in Financial Associations	0.2260	0.0923	2.45	0.0163	0.0426	0.4094
Active Memberships	-0.0208	0.0735	-0.28	0.7778	-0.1668	0.1252
Meeting Attendance	-0.0029	0.0786	-0.04	0.9711	-0.1591	0.1534
Participation in Decision Making	0.0331	0.0395	0.84	0.4040	-0.0454	0.1116
Cash Contribution	-0.1017	0.0722	-1.41	0.1628	-0.2453	0.0419
Work Contribution	-0.0001	0.0001	-1.58	0.1173	-0.0003	0.0000
Community Initiated Memberships	0.1083	0.0655	1.65	0.1020	-0.0219	0.2385
Household Size	-0.0041	0.0386	-0.11	0.9161	-0.0809	0.0727
Year of Education	-0.0023	0.0042	-0.55	0.5862	-0.0108	0.0061
Female Head of Household	-0.1173	0.1154	-1.02	0.3121	-0.3465	0.1120
Age of Head of Household	-0.0189	0.0235	-0.80	0.4235	-0.0657	0.0279
Age2 of Head of Household Squared	0.0002	0.0002	0.84	0.4037	-0.0002	0.0005
Farmer Household	0.1289	0.1417	0.91	0.3655	-0.1527	0.4105
Land Owned & Rented (Acre)	0.0202	0.0066	3.06	0.0029	0.0071	0.0333
Animal Owned (number)	0.0458	0.0315	1.45	0.1504	-0.0169	0.1084
Farming Equipment Owned (number)	-0.0573	0.2113	-0.27	0.7868	-0.4772	0.3626

Source: Authors' calculations

Table A.8 Amount of Credit Summary Output

Regression Statistics	
Multiple R	0.6088
R Square	0.3707
Adjusted R Square	0.2549
Standard Error	5.9600
Observations	104

ANOVA

	df	SS	MS	F	Significance F
Regression	16	1820.2861	113.7679	3.2028	0.0002
Residual	87	3090.3719	35.5215		
Total	103	4910.6580			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	11.8708	9.0994	1.30	0.1955	-6.2151	29.9568
Membership in Financial Associations	3.1244	1.2448	2.51	0.0139	0.6503	5.5986
Active Memberships	-0.2570	0.9912	-0.26	0.7960	-2.2271	1.7130
Meeting Attendance	-0.0958	1.0608	-0.09	0.9282	-2.2044	2.0127
Participation in Decision Making	0.3539	0.5329	0.66	0.5084	-0.7052	1.4130
Cash Contribution	-1.3290	0.9748	-1.36	0.1763	-3.2664	0.6085
Work Contribution	-0.0017	0.0011	-1.52	0.1332	-0.0039	0.0005
Community Initiated Memberships	1.4776	0.8841	1.67	0.0983	-0.2797	3.2349
Household Size	-0.0740	0.5212	-0.14	0.8874	-1.1100	0.9619
Year of Education	-0.0308	0.0573	-0.54	0.5920	-0.1446	0.0830
Female Head of Household	-1.7464	1.5563	-1.12	0.2649	-4.8398	1.3470
Age of Head of Household	-0.2584	0.3176	-0.81	0.4181	-0.8897	0.3729
Age2 of Head of Household Squared	0.0023	0.0026	0.86	0.3903	-0.0029	0.0075
Farmer Household	1.6053	1.9117	0.84	0.4034	-2.1943	5.4049
Land Owned & Rented (Acre)	0.3282	0.0890	3.69	0.0004	0.1513	0.5051
Animal Owned (number)	0.5413	0.4255	1.27	0.2067	-0.3044	1.3870
Farming Equipment Owned (number)	-0.3273	2.8503	-0.11	0.9089	-5.9925	5.3379

Source: Authors' calculations

Table A.9 Chi-squared Test of Increasing Savings

Category	Hypothesized Proportion	Observed	Expected	Chi-squared
Increase Savings	0.5	14	52	27.77
No Savings	0.5	90	52	27.77
		104		55.54

Source: Authors' calculations

Table A.10 Total of Probability, Increasting Savings and Log Likelihood

	Probability Mean	Increasing Savings	Likelyhood	Log Likelyhood
Total	50.00	14	11667222.27	507.93

Source: Authors' calculations

Table A.11 Chi-squared Test of Access to Credit

Category	Hypothesized Proportion	Observed	Expected	Chi-squared
Access to Credit	0.5	58	52	0.69
No Credit	0.5	46	52	0.69
		104		1.38

Source: Authors' calculations

Table A.12 Total of Probability, Access to Credit and Log Likelihood

	Probability Mean	Access to Credit	Likelyhood	Log Likelyhood
Total	50	58	25642498.02	874.90

Source: Authors' calculations

Table A.13 Chi-squared Test of Amount of Credit Received

Category	Hypothesized Proportion	Observed	Expected	Chi-squared
Access to Credit	0.5	58	52	0.69
No Credit	0.5	46	52	0.69
		104		1.38

Source: Authors' calculations

Table A.14 Total of Probability, Amount of Credit and Log Likelihood

	Probability Mean	Amount of Credit	Likelyhood	Log Likelyhood
Total	50	797	2.22731E+65	7201.04

Source: Authors' calculations

Table A.15 List of Local Groups/Organizations in Chaungzon Township

No.	Groups/Organizations*	Category
1	Pulses Traders Association	Production/Trade
2	Rice Traders Association	Production/Trade
3	Mon State Gold Entrepreneurs Association	Trade/Business
4	Chaungzon Motorcycle Transport Association	Trade/Business
5	Parents Teacher Group	Professional/Education
6	School Committee (General Work)	Professional/Education
7	Auxiliary Firefighters Group	Professional/Education
8	Non-formal Primary Education Teachers Group	Professional/Education
9	Teachers Association (Retired/In Service)	Professional/Education
10	National League for Democracy (NLD)	Government/Political
11	Mon Unity Party (MUP)	Government/Political
12	Union Solidarity and Development Party (USDP)	Government/Political
13	Union Betterment Party (UBP)	Government/Political
14	Village guard force (the militia)	Government/Political
15	Village Administrative	Government/Political
16	Dhamma Setkyar Group	Religious
17	Dhamma Schools	Religious
18	Islam Religious Training School	Religious
19	Hindu Women Worship Team	Religious
20	Funeral Service Group	Social Service
21	Mon Language and Literature Committee	Cultural/Youth
22	Future Pioneer Youth Group (Ahnargut Shae Saung Lu Ngae)	Social/Cultural/Youth
23	Myitta Yaung Pyan Foundation	Social Service
24	Shwe Myint Mo Funeral Service Organization	Social Service
25	Myae Cha Funeral Service Group	Social Service
26	U Ohm Twin Funeral Service Group	Social Service
27	Toe Cheit Funeral Service Group	Social Service
28	Kharite Thit Funeral Service Group	Social Service
29	Community Driven Development Village Committees	Social Service
30	Garunar Sann Yae Social Service Group	Social Service
31	Myitta Shin Funeral Service Group	Social Service
32	Kayin Traditional "Don" Dance Group	Cultural/Youth
33	Kayin Language and Literature Group	Cultural/Youth
34	Garunar Shin Free Clinic Leading Committee	Social Service
35	Aye Mya Kyi Lin (Emergency Rescue Team)	Social Service
36	Mon Women (Mother) Group	Social Service
37	Colorless (Islam) Funeral Service Group	Social Service
38	Myintta Foundation	Social Service
39	Hands outstretched (Kantaw Let Myar) Korea Migrant Workers' Group	Social Service
40	Myanma Agricultural Development Bank	Credit/Finance
41	Rice Banks (UNDP)	Credit/Finance
42	BNK Capital Myanmar	Credit/Finance
43	Korea Microfinance	Credit/Finance
44	KBZ Loan	Credit/Finance
45	Hana Microfinance Limited	Credit/Finance
46	ASA Microfinance	Credit/Finance
47	LOLC Myanmar Microfinance	Credit/Finance
48	Easy Microfinance	Credit/Finance
49	SATHAPANA Limited (Microfinance)	Credit/Finance
50	Ever Green Village (Mya Seinn Yaung)	Credit/Finance
51	Water Distribution Village Committee	Environment
52	Electric Lighting Village Committee	Environment
53	Garbage Disposal Village Committee	Environment
54	Blood Donation Group	Health
55	Garuna Shin Free Clinic	Health

Source: Survey data. *Note*: *Based on study area only.