



Chapter 2

Literature Review

Well-being describes our happiness, confidence, physical condition and general outlook on life. It is about feeling good and taking care of yourself; responsibilities that can often be neglected when juggling the rigorous demands of everyday living in the 21st century.

Well-being and healthy living go hand-in-hand. Healthy living goes beyond eating a balanced diet, taking regular exercise and avoiding illness. It also reflects the mental, emotional and social aspects of an individual's life. The key aspects of healthy living can be broken down into the following elements.

“Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.”

—World Health Organization

2.1 The Review of the Literature

This study is focused on the subjective well-being, social capital and happiness of the people living in areas differently damaged by the arrival of Nargis in May 2008, who have been forced to rebuild all or most of their lives. Already, the citizens of Myanmar, in terms of socio-economic and political power, have had to face deep impacts and challenges in their day-to-day lives. The following are the theoretical concepts which the researcher has used in this field research. First, we shall review the literature on subjective well-being. Then, the literature that analyzes and assesses disasters and their impacts will be reviewed.

2.2 Subjective Well-Being

The well-being or quality of life of a population is an important concern in economics and social science. The study of subjective well-being from an economic point of view aims to estimate, rank, and test the significance of the general forms of several variables that are hypothesized to affect poverty. The results may be useful for understanding levels of well-being in developing economies. The well-being of individuals should be considered within the context in which they live. Rural areas of developing countries are different than urban areas in terms of commodities available, needs of the residents, livelihood opportunities and the natural and man-made environment. The basic needs approach is therefore a useful tool for understanding the unique subsistence needs of each developing economy.

The literature on subjective well-being leads individuals to evaluate and describe their own well-being. One of the challenges for researchers or policy makers is how to identify basic needs and which level of needs should be considered as basic (Streeten, 1984). However, the Millennium Development Goals (World Bank 2010) agenda also uses the ideas of basic needs to identify the targets and construct the indicators to follow up on the fulfillment of needs in the areas of health, education and employment

In this thesis, the researcher will import the subjective approach into the basic needs framework in order to allow individuals to quantify the level of their basic needs. By means of econometric techniques, this research estimates the set of goods and opportunities that determines the subjective level of satisfaction. The literature on subjective well-being gives insights into what external basic needs fulfillment should

be related to subjective well-being. The research assumes that basic needs can directly influence subjective well-being and reshapes the definition of basic needs to account for subjective factors.

By adding the subjective approach to this problem, it will be possible to overcome some of the objective conceptual problems involved in identifying the reason for meeting basic needs. The analysis of subjective well-being has advantages for policy design and the scientific understanding of what affects people's happiness beyond rising income. Estimation of satisfying factors of basic needs by the individual has important policy implications as it provides insight about real-life aspects of households that are specific to a given region of study, as well as providing information to policy makers about what the individuals actually need.

Subjective well-being approaches have been used to measure the perceived poverty line, thus complementing or replacing income-based approaches (Kingdom and Knight, 2006; Pradhan and Ravallion, 2000; Rojs, 2008). In this thesis the researcher proposed the simple method of measuring poverty by using the basic needs approach as it is perceived by the household. Therefore we also capture the psychological, demographic and social aspects that are taken into account in subjective well-being approaches by considering the individual or household as poor or non poor. The researcher will apply this concept to the data set and argue that, due to the completeness of the concept, the perceived basic needs approach is more accurate than poverty lines related to income.

There are many components to well-being. Some economists might assume the well-being simply reflects satisfaction with current or instantaneous consumption

of goods and services. Some psychologists would also argue that responses to questions about well-being can reflect different aspects of individuals' self-perception. In responding, individuals may place different weights on "inner" or "outer" aspects of well-being, and on the opportunity set that they face or the outcomes they have experienced. One way of conceptualizing this is illustrated in Table (2.1).

Table 2.1 Four Kinds of Being Well

	Outer Qualities	Inner Qualities
Life Chances	Living in a good environment	Being able to cope with life
Life Results	Feeling satisfied with one's contribution to the world.	Enjoyment of life

Veehoven (1998)

Source: <http://www.scotland.gov.uk/Publications/2006/01/13110743/9>

An expanded version of the above framework would also include the standard of living, the economic situation, goods and services, health and the environmental resources to which a person has access. A good living environment can include enough income to meet basic needs, social networking, mental health, and religious faith amongst other social and physical assets. These factors are determined by conditions of the individual. Economists can measure qualities of the external influences and try to measure how closely these are related with economic factors. Important different characteristics such as life chances and life results for inner and outer qualities have been examined to understand how economists analyze well-being. The measurement of well-being implies recognition of some external standards such as service to the community.

Enjoying life is an essential concept and comes close to what economists describe as welfare - the outcome of the consumption of goods and services. It may be assumed that enjoying life is what and how individuals understand and assess the happiness and basic needs by standards on. Subjective well-being describes each of the above four aspects of well-being.

Subjective well-being gives each individual the right to decide whether his or her life is worthwhile. The earliest literature review on well-being was that of Easterlin (1974), but his work was hardly taken forward until the early 1990s. Blanchflower, Oswald and Warr (1993) argued that Easterlin's concepts in well-being were incorrect and that there had been a small but significant upward trend in well-being. The latter concentrated on individuals and four aspects that have been shown to be related to individuals' assessments of their own well-being. Well-being can be divided into different factors associated with different parts of an individual's life experience. Economists describe these aspects as influential factors on satisfactions. These variables of general well-being, known as the five aspects of satisfaction are: physical, mental, social, emotional and spiritual. They can be applied either to the level of an individual's view of their own existence or to different aspects of that experience. Thus, the survey conducted to generate and interpret the empirical data for the present thesis used these five aspects for life satisfaction or well-being.

Different individuals will define different "value" with reference to different factors. Some will consider enjoying their job while others might focus on their social capital. Thus these dimensions of satisfactions might influence overall well-being but with different "weights" (Van Praag, Fritjers, Ferrer-i-Carbonell, 2003). And there

may be interaction terms signaling significant interactions among the satisfactions themselves. For example, physical happiness may influence job satisfaction because ill health may be negatively correlated with the working environment. The most important factors of satisfactions contributing to overall well-being are basic needs, mental health and satisfaction with the environment. The influences of these factors on the life satisfaction of individual well-being are essentially personal rather than social.

Other measurable factors may also be related to individual well-being, for example marital status. Results from a variety of analyses of well-being show that those who are married are happiest, followed by those living together, widows or widowers, the divorced, and finally the separated. Helliwell (2001) uses the World Values Survey (WVS) in order to quantify, rank and test the significance of the factors that influence well-being.

One of the most important concepts for well-being is the relationship between income and well-being. The relationship between happiness and unemployment is analyzed by Clark and Oswald (1994); unemployment is strongly correlated with lower well-being. Whether individuals feel that they define their life themselves, or that they are being shaped by external forces over which they cannot control, the unemployed have less confidence than the employed, according to this studies. mental confidence would seem to be positively associated with well-being. Government policies to reduce unemployment are thus one of the most important measures that government can adopt to influence the happiness of its people.

The relationship between income and well-being is very important, since economists have traditionally argued that higher incomes will lead directly to higher levels of well-being. Politicians have accepted this argument and focused on economic growth as a primary policy objective. Individuals assess their income with some standard norms. They have expectations of what an acceptable income is; and if their income falls below it, they feel less happy. In contrast, earning an income above the norm will make give them greater well-being.

Increased income tends to lead people to expect more. Layard (2003) has over a number of years asked the question, "What is the smallest amount of money a family of four needs to get along in this community?" The increase in the answer to this question has a growth rate similar to that of incomes in the same community. In this case, goods that were previously seen as luxuries have become classified as necessities, thus indicating a possible shift in the standards of a subjective wellbeing. Clark (2003) added interestingly that the income of others in a similar situation has a negative impact. But he also found that a higher level of income inequality among the group has a positive effect on well-being. Instead of accepting that individuals prefer a more equal distribution of income, Clark argued that people may believe there are more opportunities for advancement when inequality is higher.

Another factor that relates to the well-being is self-employment. Frey (2002) has examined well-being among the self-employed and found that they have more positive levels of perceived well-being when compared to those who are employed by companies or organizations. That study found out that the self-employed are free to make their own decisions rather than be subject to decisions made by others. Frey

mentioned that the self-employed have more work-related subjective well-being than people employed by others. He theorized that the subjective well-being is influenced by processes as well as outcomes. The individuals prefer an independent environment and are happy with less hierarchy at work regardless of the outcomes. Blanchflower and Oswald (1998) confirmed that higher perceived well-being is positively correlated with being self employed.

The impact of education on well-being is controversial. Wilson (1967) suggested that the happiest people are generally well-educated. Higher education generally leads to higher well-being, as well as to the opportunities which follow from education, such as participation in the labor market, health, perceived trust, and higher incomes.

Being a member of a voluntary organization has an impact on well-being. Helliwell (2001) has conducted one of the most comprehensive analyses of this issue. Helliwell's results showed that those people who are involved in more voluntary associations have higher average satisfaction with their lives.

Many research studies show that political, social and economic environment factors affect well-being. Those external factors are observable individual characteristics, which impact on well-being. Layard (2003) points out that place, culture and institutions may have important influences on well-being. The challenge is how such collective sociopolitical factors can be incorporated into the analysis of individual well-being. An individual's valuation of social capital variables and overall well-being may be lowered if that individual has a low level of trust in others and neighbors; in other words, he/she will enjoy reduced levels of social capital. As the

political environment provides a large component of the framework for daily living, that is likely to impact on individuals well-being. In the 1990s, the World Bank measured the quality of governance for more than 150 countries (The World Bank, 2006). Six different aspects of the quality of government were included in their aggregate index: voice and accountability, stability and lack of violence, government effectiveness, the regulatory framework, the rule of law, and the control of corruption. According to the World Bank's quality of governance measure, the country with a higher score tends to report higher levels of well-being, other things being equal. This index ranged in value from 1.72 for Switzerland at the top to -1.00 for Nigeria at the bottom. It was also found that, for a given level of expenditure, better quality of governance is likely to result in a better provision of public goods.

2.3 Social Capital

Glaeser et al. (2002) broadly define social capital at the individual level as an individual's social characteristics, such as social skills, personal relationships with others, and popularity, which are beneficial for generating market and non-market returns from interactions with others. According to Bourdieu (1983), Coleman (1998; 1990), and Putnam (1993), social capital at the aggregate level is generally defined as those "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions." Social capital is found to be positively correlated with subjective happiness since social capital provides some sort of support and opportunities of sharing at the individual level. Kawachi et al. (1999) mentioned that the social capital is directly correlated with an individual's self-reported health. Helliwell (2003) offers the differences in well-being within and among

nations can be explained by differences in social capital by using the international well-being data. Helliwell (2004) presents that more social capital and higher levels of trust are associated with lower national suicide rates and they are associated with higher levels of subjective well-being. Frey (2003) mentioned that trust and honesty improves social outcomes by increasing the levels of per capita income and subjective well-being.

Adler and Kwon (2002) identified that the core intuition guiding social capital research is that the goodwill that the others have toward us is a valuable resource. They define social capital as the “goodwill available to individuals or social groups. Its source lies in the structure and content of the actor’s relations. Its effects flow from the information, influence, and solidarity makes the available to the actor” (Adler and Kwon 2002, p.32). Dekker and Uslaner (2001) posited that social capital has also been called “bridging” (Woolcock 1998) or “communal” social capital (Oh et al. 1999) while focus on internal relations is termed “bonding” or “linking”¹⁵.

When dealing with people, if others can be trusted rather than doubted, social capital is generally higher. Trustworthiness has both individual and societal dimensions; and those individuals within any given society who have greater trust in others have higher well-being; and those who live in societies with high levels of trust are likely to have higher well-being, irrespective of individual views about trust. There are thus real well-being benefits from living in an environment where people can be trusted.

The communicability and spill-over effects of social capital vary according to the type of social activity. Going to temple or church tends to raise well-being of the

¹⁵ <http://www.socialcapitalresearch.com/definition.html>



individual that goes to temple, but this does not usually rub off on other members of society. In contrast, membership in other voluntary organizations improves both the individual's well-being and contributes to the overall well-being of those who are not members.

Social capital is related to the value of the social networks, bonding with similar people and bridging between diverse people, with the norms of reciprocity (Dekker and Uslaner 2001). Sander (2002, p. 213) stated that the folk wisdom that more people get their jobs from who they know, rather than what they know, turns out to be empirically true in many cases. By providing networks of relationships and engendering the support from other people in the society, social capital is strongly related to a person's level of subjective happiness (Helliwell, 2003). This concerns the impact of democratic institutions on well-being. Helliwell argues that well-being is positively related to political, economic and individual freedoms.

2.4 Determinants of Well-Being

Surprising to some, increase in income does not lead to increased subjective well-being (Keely, 2000). This phenomenon is sometimes called the "Easterlin Paradox," after the discovery by Richard Easterlin that the same percentage people were happy in the United States over several decades, even though average real income per capita had increased substantially (Easterlin, 1974). Most people define themselves as being regardless of their material wealth (Diener & Diener, 1996). Most people assume that the external circumstances of others are powerful determinants of subjective well-being, in spite of the fact that such circumstances would have little effect on their own subjective well-being (Schkade & Kahneman, 1999).

Previous research shows that each individual has a happiness “set point” to which they return very rapidly, even after major good luck (winning the lottery) or bad luck (being the victim of a hurricane). It normally takes between 6 months and a year to return to one’s normal happiness level (Kashdan, 2003). This set point is determined by genetics and personality; and dominates and overrides most other causal factors in a “top down” manner. This theory favored by psychologists is offset by the “bottom up” view of many economists, that physical, economic, social, mental, and other dimensions of life experience do have a cumulative, long-term impact upon whether or not a person feels “happy” at a given time.

So what are the factors that make people happier or unhappier than others? This is a crucial question because it helps us to understand how and to what extent an individual’s situation can be improved. It is useful to distinguish the six types of determinants.

- a) Genetics and the make-up of the brain. This relates to the ambient levels of serotonin and other chemicals that physically create cheerfulness regardless of external circumstances.
- b) Personality factors, such as self-esteem, personal control, optimism, extraversion, and neuroticism. Taken together, a + b constitute the “set point.”
- c) Socio-demographic factors, such as age, gender, marital status, and education.
- d) Economic factors, such as individual and aggregate income, unemployment, and inflation.
- e) Contextual and situational factors, such as particular employment and working conditions, the stress involved in the work place, interpersonal relations with

work colleagues relatives and friends, and most importantly the marriage partner as well as living conditions and health.

- f) Institutional factors, such as the extent of political decentralization and citizens direct political participation rights¹⁶.

It will be noted that the above list of exogenous determinants of well-being differs from the list given above of the five internal or endogenous components of life satisfaction and well-being (physical, mental, social, emotional, and spiritual). Many previous studies have confused the internal composition of happiness with its external components.

In the remainder of this thesis we carefully separate the two, such that:

$$\begin{aligned}
 & \text{Well-being } (\omega_p \text{ physical, } \omega_m \text{ mental, } \omega_e \text{ emotional, } \omega_s \text{ social, } \omega_{sp} \text{ spiritual}) \\
 & = \beta_0 \text{ basal happiness} + \beta_1 \text{ personality (genetics + personality)} + \beta_2 \text{ socio} \\
 & \text{demographic factors} + \beta_3 \text{ economic factors} + \beta_4 \text{ interpersonal and work relations} \\
 & \quad + \beta_5 \text{ institutional factors.}
 \end{aligned}$$

More specifically, in Chapter 5 we shall estimate the endogenous weights (ω_i) of the components of well-being for each area, compare that structure between the two areas, and then explain the determinants of the overall well-being score for each area.

Studying happiness of the country and its development overtime is interesting for several reasons. It is interesting to know how rich and poor countries compare with respect to subjective well-being. In general, people in rich countries are clearly

¹⁶ World Database of Happiness: <http://worlddatabaseofhappiness.eur.nl>

happier than poor countries. There are no rich countries where people's happiness, on average, is low. But for the rich countries, it does not seem that higher per capita income has any marked effect on happiness. At the lower scale there are many poor developing countries where residents experience low satisfaction with life. (Frey & Stutzer, 2002)

Happiness may also differ among countries because their political and social lives are governed by different institutions. Institutions fundamentally shape how society is organized. In most countries, basic institutions are enshrined in the constitution, which lay down the way that decisions are to be made in society. Thus, they assign a role to politics, the market, government bureaucracy, and organized groups. Democratic institutions also attribute to the rights of individuals, in particular, basic human rights and the right to politically participate via elections or popular referenda. Within the area of political decision making, national constitutions stipulate the role of the three powers (legislative, executive and judicial) and determine the responsibilities of the central state and the federal.

2.5 Poverty

In order to determine the extent of poverty under all of the above conditions, it is important to define poverty. Poverty means not having enough money, opportunities, education, or earning potential to feed and clothe a family; not having a school or clinic to go to; not having the land on which to grow one's food or a job to earn one's living.; and not having access to credit. It also means insecurity; powerlessness and exclusion of individuals, household and communities. Poverty means susceptibility to violence, and it often implies living on marginal or fragile environments, without

access to clean water or sanitation. Therefore, security, power and inclusion of individuals, households and communities are crucial for the poor to take advantage of opportunities created by economic development.

According to Asia Development (1999), “Poverty” means more than a lack of adequate income. A state of poverty has non-economic dimensions such as discrimination, exploitation, lack of power, and fear. Thus poverty means lack of human development, lack of voice in decision making or empowerment, and high degree of vulnerability.

Finally, the 1980s was characterized by a rapid increase in the study of “gender.” The debate moved from a focus on women alone to wider gender relations (Gender and Development). There is a strong correlation between rural poverty on the other hand and a number of major economic and social development variables, on the other. The variable consider are the access to land; population growth; overall GDP growth emanating from agriculture; rate of inflation; infant mortality rate; and gross primary school enrollment ratio. Several if these economic and social factors are highly correlated¹⁷.

To accurately and objectively identify the poor as potential targets of social and economic policy, it is important to derive poverty lines that provide the consistency in welfare measurement over space and time. Although destitution is defined in different ways by various organizations, poverty lines are generally defined as the per capita monetary requirements and individuals needs to afford the purchase of a basic bundle of goods and services, including notably food and shelter. Different

¹⁷ Kyaw, D. D. (2006). Rural Poverty Analysis in Myanmar: A Micro Level Study in the Dry Zone

poverty concepts define the different poverty methods. According to the United Nations (1998), poverty is a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society.

2.6 Literature Review on the Impacts of Disasters

At present, the literature on the impact of climate change in Myanmar is limited. The researcher will examine the short and long run impact of natural disasters on economic growth by combining information from comparative case studies. The researcher found that large disasters have a negative effect on output for both the short and the long run. Large natural disasters such as earthquakes, tsunamis, hurricanes, and floods generate destruction upon impact: taking people's lives, injuring and rendering them homeless, and destroying property and public infrastructure. Some disasters that happened recently such as the Indian Ocean tsunami in 2004, Hurricane Katrina in 2005, and cyclone Nargis and the Sichuan earthquake in 2008 have received worldwide media coverage, and there is an increasing sense of awareness among the general public about the destructive nature of disasters. Most of the research in both the social and natural sciences has been concentrated to increasing our ability to predict disasters and prepare for them; though the economic research on natural disasters and their consequences is fairly limited.

Raschky (2008) states that socio-economic factors have been found to be the key determinants of a society's response to disasters. In his panel study for the period of 1984-2004, Raschky found that economic development (measured by GDP per capita) is an important factor in determining a society's vulnerability against natural hazards. He found that higher-income countries, in general, experience a lower death

toll from natural disasters. Another very important factor also exists. Institutional factors such as the stability of the government, investment in climate and strong community understanding on the environment reduce the adverse effects of both, the death toll and the overall economic losses from natural disasters.

Horwich (2000) also argued that any economy's response to a natural disaster depends on its level of wealth. A wealthy or richer country can be a safer country. Since the demand for safety is positively correlated with money, a nation's per capita income is a good first approximation of the degree of safety it enjoys. Moreover, a rise in income will provide not only general safety but also protect from disasters (Horwich, 2000). Rasmussen (2004) also figured out that income and the number of persons affected by natural disasters are inversely correlated with each other. In his study the country with improvement income has the capacity to prevent the human cost of disasters as income levels increases.

In other research, Albala-Bertrand (1993) argues that the higher the level of development, the smaller both the number of deaths, injured, lost and the relative material losses of poverty and all other social capital. Income per capita and income equality, economic diversification and social inclusion, institutionalization and participation, education and health, choice and protection are included in the level of development. Kahn (2005) states that countries with higher per capita income experience disasters but suffer less death from similar events in poorer countries. However the richer countries have not much experience for natural disaster than poorer countries, they do less suffer and death and deprivation. Richer nations will have the rich capital to make investment to acquire such kind of events. Thus

economic development can help to insure from the negative consequences of a natural disaster. Kahn (2005) argues that countries with better institutions, lower income inequality and higher levels of democracy experience fewer post disaster' problems. A study by Toya and Skidmore (2007) using time series data for some countries, researched several measures for social/economic infrastructure variables that included income, education, openness, financial development, and the size of the government as determinants of disaster recovery. The result showed that the economic development of those countries and economic losses from disasters are inversely related. Nations with higher levels of human capital are less vulnerable to disasters. Also, when the scope of the government is smaller and the strength is stronger, that country is associated with a lower disaster death toll.

In a recent study by Noy (2008), the research found that countries with higher educational attainment, better institutions, good governance, higher per capita income, high social capital and higher levels of government spending are better able to withstand the initial disaster shock and prevent further spillovers into the macro-economy.

This literature review reveals that the damage caused by disasters is directly related to the physical intensity of the event; there are a series of economic, social and political characteristics that also affect vulnerability. But while the initial disaster impact leads to varying degrees of mortality, morbidity, and loss of physical infrastructure in different countries, these observations do not shed any light on how these initial impacts are followed by subsequent impacts on the economy, in particular



on the dynamics of domestic production. Research that has taken into account this broader economic impact will now be examined.

Generally, the literature on macroeconomics distinguishes between short run effects (usually up to five years), and long run effects (anything beyond that horizon). Albala-Bertrand (1993) developed an analytical model of disaster occurrence and reaction for short run macroeconomic dynamics of natural disasters. Albala_Bertrand collected data on a set of disaster events: 28 disasters in 26 countries from 1960-1979. Based on before and after statistical data analysis, he found that GDP actually increases after the events.

The more recent literature typically utilizes econometric techniques and finds different results. Raddatz (2007) studied the effects of external shocks on short run output dynamics in developing countries. He concludes that natural disasters have an adverse short-run impact on output dynamics. After that, Raddatz (2009) used a similar methodology to study the impact of various types of natural disasters on countries in different income groups. He collected data from 112 countries over the period 1975 to 2006. He figured out that the smaller and poorer states are more vulnerable, especially to climatic events, and that most of the output cost occurs during the year of the disaster. Loayza et al. (2009) and Fomby et. al. (2009) studied the economic impacts of disaster by type of events, distinguishing between droughts, floods, earthquakes, and storms and their impacts by economic sectors. They conclude that disasters affect economic growth but not always negatively and that the impact is different across disasters and economic sectors.

2.7 The Pivotal Role of Agriculture in South East Asian Development

Nearly three fourths of the poor in South East Asia live in rural areas. A large majority of them are dependent on agriculture. Agricultural development and rural development is thus the key to achieve broad-base, inclusive growth in these regions. By international standards, South East Asia has done remarkably well in both economic growth and poverty reduction. The region's economic growth rate during the past 25 years averaged about 5% per year, while the corresponding figures for Asia and the world were about 3.9% and 2.6% respectively¹⁸. The growth accompanied a historic rapid poverty reduction, especially in Indonesia, Malaysia, Thailand and Vietnam.

While the Asia financial crisis in the late 1990s adversely affected the welfare of the region's population, Southeast Asia's achievements in economic and human development during the past quarter-century remain impressive, especially when seen against the performance of South Asia. These achievements, however, have not been uniform across countries in the region. While Indonesia, Thailand and Vietnam have posted rapid economic growth and are well on their way to achieving the Millennium Development Goals (MDGs)¹⁹, the same cannot be said for the Cambodia, Lao PDR, Myanmar and the Philippines whose growth rates of output were completely low, and those of population high. Even within countries, the diversity of performance in growth and poverty reduction is very evident (Balisacan, 2004; Balisacan and Fuwa 2004). Sub-national studies suggest that the nature of growth, not just its speed, matters to production. They also suggest considerable heterogeneity in impacts across

¹⁸ Kyaw, D. D. (2006). Rural Poverty Analysis in Myanmar: A Micro Level Study in the Dry Zone

¹⁹ Balisacan, Edillion & Piza. (2005) Rural Poverty in Southeast Asia: Issues, Policies, and Challenges

households with different characteristics, including location, at any given level of income (Ravallion 2004).

Like other developing countries, incidence of poverty also exists in Myanmar, particularly in the remote and border areas. The economy slowed to an estimated 3.6% in fiscal year (FY) 2008 (ended 31 March 2009) from 5.5% in FY2007²⁰. Myanmar was not directly hit by the global recession and world financial crisis, given the absence of trade and financial linkages with industrial countries. However, exports and private consumption were reduced by the combined effect of economic slowdowns in neighboring economies, a collapse in commodity prices, and the impact of Cyclone Nargis. Economic growth picked up to about 4.4% in FY2009, most likely in tandem with a recovery in regional demand and a partial recovery in agricultural production in areas damaged by the cyclone.

Private consumption is, however, likely to have remained subdued by a slowdown in inward remittances, and stagnant rural incomes as farm-gate prices remained depressed. Inflows of foreign direct investment into the energy sector helped to lift international reserves from about \$4 billion in FY2008 to \$5 billion at the end of FY2009, equivalent to eight months of imports. A joint United Nations Development Programme (UNDP)–Government of Myanmar Integrated Household Living Conditions Assessment (2007) places poverty incidence at 32%, with rural poverty significantly higher (36%) compared to urban poverty (22%)²¹. In the latest 2007 Human Development Index released by UNDP (the index is used to measure the level of human development of countries based on measures of life expectancy,

²⁰ PONJA_Post Nargis Joint Assessment, July 2008

²¹ http://www.adb.org/Documents/Facts_Sheetd/MYA.pdf

literacy, and standard of living), the country was ranked in the bottom fourth (138 out of 182) among the countries surveyed. Cyclone Nargis, which hit the country in 2008, resulted in extensive loss of life and physical damage and may have further worsened poverty incidence in the country.

Farming communities in the Irrawaddy delta have always followed a cycle of debt. Each year, wealthy land owners would lend farmers money, tools and cattle needed to till the soil. After the harvest, the debt is repaid and the cycle continues for almost all small scale farmers. Today, farmers looking to start over are caught in an incredibly frustrating situation: the wealthy land owners that used to lend money and tools lost everything as well, so now there is nobody to lend. Without cattle, tools and seeds, the farmers have little chance of ever getting ahead. Adding to the situation, prices for crops are down from past years. This leaves farming communities with few options, therefore trapping them in poverty²².

2.8 Testable Research Hypotheses

In order to structure the analysis of the remainder of this thesis, we shall test the following nine (14) hypotheses:

2.8.1 Current levels of net farm income and self-produced income in kind are adequate to supply 2100 calories and 95 grams of protein per day per adult equivalent to the majority of small scale farmers only in the slightly, but not the heavily, affected areas of the Irrawaddy Delta.

²² <http://www.mercycorps.org/chelseawieber/blog/15637>



2.8.2 Relative poverty (as measured by the Gini and Thiel indices) is higher in the heavily Nargis affected area than the slightly affected area.

2.8.3 Absolute poverty incidence is the same in both areas, but the depth and intensity of poverty are significantly higher in the heavily Nargis affected area.

2.8.4 The principal constraints facing agricultural households in the slightly affected area, Pyapon are those of weather, whereas in the heavily affected area, Bogalay are economic income.

2.8.5 The relative share of various sources of income has changed significantly for the Nargis heavily affected areas as compared to the slightly affected area.

2.8.6 The intensity of food poverty significantly increases with household size, total number of problems in farming, dependency ratio, age of household head, and the intensity of Nargis damage; and decreases with acres of farmland, total number of jobs in the household and the level of education of any household member.

2.8.7 The negative determinants of the intensity of food poverty are the simple mirror image of the positive determinants of income per capita.

2.8.8 The levels of drinking water, sanitation, building construction, and other physical determinants of living standards are as high or higher in the heavily- than the slightly-affected areas.

2.8.9 The subjective well-being (happiness) of the heavily affected area is not significantly different from the slightly-affected area, suggesting that human beings rebound rapidly from disasters.

2.8.10 The internal weighting of the sub-components of happiness differs significantly between the two areas.

2.8.11 Around similar mean happiness levels in the two areas, there are much more severe cases of unhappiness, and hence a much worse distribution of happiness, in heavily-affected Bogalay than in slightly-affected Pyapon.

2.8.12 The social capital of both types (bridging and bonding) in the Nargis heavily-affected area has increased significantly in comparison with the slightly affected area. This should give them higher protection from disaster in the future.

2.8.13. People living in households with female heads are significantly more likely to experience difficulty meeting their needs than people in household heads with male heads.

2.8.14 Access to education and to health care is significantly less good in heavily-affected Bogalay than in slightly-affected Pyapon, especially since the latter is also closer to the major city Yangon.