

INTEGRATED HOUSEHOLD LIVING CONDITIONS SURVEY IN MYANMAR (2009-2010)

POVERTY DYNAMICS REPORT



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Poverty Dynamics Report

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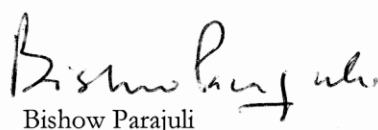
FOREWORD

The Integrated Household Living Conditions Assessment (IHLCA) project provides the Government of the Republic of the Union of Myanmar, the UN and other national and international stakeholders with statistical data for determining living conditions in the country. The first nation-wide survey was carried out in 2004-2005. This second survey, in addition to providing the most recent state of living conditions and poverty levels, also provides opportunities to make comparisons and trend analysis for contributing to well-informed, pro-poor decision making.

The overall survey design of the IHLCA-II was chosen to mirror the IHLCA-I, in order to secure comparability. For this reason almost half of the number of interviewed households was the same households as in 2004-2005, allowing for poverty dynamics analysis. The survey included a nationwide representative sample of 18,660 households. As in the first survey, all of the field work was divided into two rounds; the first round took place between December 2009 and January 2010 (after the harvest) and the second round from May 2010 onwards (before the harvest).

The survey has been undertaken in close cooperation with the Planning Department of the Ministry of National Planning and Economic Development (MNPED), the United Nations Children's Fund (UNICEF) and the Swedish International Development Cooperation Agency (Sida). The survey methodology and process follows international control standards and the project team has received extensive technical oversight and support from organizations such as the World Bank and Statistic Sweden, as well as from technical staff from UNICEF and UNDP. These partners have also monitored the survey process from design and methodology to data analysis.

Being one of the most comprehensive surveys on living conditions and poverty undertaken in Myanmar we trust that this statistical data will be useful and valuable for various purposes and a variety of stakeholders, and it is our hope that this will lead to well-informed planning and decision making and subsequent improvements in the well-being of the Myanmar population.



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Additional contributions were made by the National Nutrition Center, the Department of Health Planning, the Yangon Institute of Economics, the Education Planning and Training Department, the Department of Labor, the Department of Agricultural Planning, the Settlements and Land Records Department, and the Department of Population.

Special thanks go also to the United Nations Development Programme (UNDP) for their support to the IHLCA surveys, more specifically Mr. Bishow Parajuli, United Nations Resident Coordinator and UNDP Resident Representative, Mr. Akbar Usmani, UNDP Senior Deputy Resident Representative, Mr. Sanaka Samarasingha, UNDP Deputy Resident Representative as well as U Min Htut Yin, Assistant Resident Representative, UNDP. Special thanks to Ms. Yoshimi Nishino, Chief, Social Policy and Planning, Monitoring and Evaluation Section, UNICEF and Mr. Jörgen Schönning, Counsellor, Sida for their keen interest and support for project activities.

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ACRONYMS

DDR	Demographic Dependency Ratio
EDR	Economic Dependency Ratio
FHH	Female Headed Household
Sida	Swedish International Development Cooperation Agency
UNICEF	United Nations Children's Fund

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Executive Summary

1. Introduction

The *Poverty Dynamic Report* presents results from the panel component of the IHCLA-I and II surveys. Its core is to shed light on the following question: why do people enter into, escape from or stay in poverty? In terms of format, the *Poverty Dynamics Report* examines the following issues in turn: Concepts, Definitions and Methods (Section 2); Spatial Dimension of Poverty Dynamics in Myanmar (Section 3); Shocks and Stresses (Section 4); Population Characteristics (Section 5); Coping and Survival Strategies (Section 6) and Summary and Conclusion (Section 7).

2. Concepts, Definitions and Methods

Poverty dynamics is about flows of persons into and out of poverty and not simply the stock of poverty at one or more given points of time. Accordingly, it allows one to distinguish between four population groups: entrants into poverty; escapees from poverty; the chronically poor, the non-poor. Further, it shifts attention to a finer analysis of the nature of flows as well as an analysis of vulnerability and its sources.

The analysis in the *Poverty Dynamics Reports* exploits the panel component of the IHCLA surveys. The methodological approach is to present descriptive statistics on the four categories of the poverty transition matrix, mentioned above. Following the discussion of the cycle of vulnerability it presents data on shock and stresses, population characteristics and coping and survival strategies.

3. Poverty Dynamics in Myanmar

Overall, transitory poverty, which comprises entries into and escapes from poverty, appears to be a significant phenomenon in Myanmar. It is close to 3 times the size of chronic poverty, affecting 28% vs. 10% of households with significant numbers of *both* entrants and escapees (11.3% and 16.5% of households respectively). Both rural and urban areas have relatively high levels of transitory poverty vs. chronic poverty at 19% vs. 5%, and 31% vs. 12%, respectively. This pattern repeats across most states/divisions, though high standard errors urge caution in interpretation. It is interesting that there appears to be a high degree of transitory poverty in states/divisions with both high and low poverty incidence, such as Chin and Yangon, respectively.

4. Shocks and Stresses

Storms, floods and stagnant water are more closely associated with entries into poverty than with chronic poverty, while the latter is more closely associated with droughts. Households who have escaped poverty are less affected by storms, floods and stagnant water, than entrants into poverty, though more so by droughts. In terms of the comparison between escapees and the chronically poor, the former are less likely to be affected by drought and be surrounded by stagnant water, but more likely to be affected by floods and storms. In summary, storms, floods and stagnant water are more closely associated with entries into poverty than with chronic poverty (or escapes from poverty). Droughts, on the other hand, do not appear to be a major shock leading to descents into poverty.

5. Population Characteristics

5.1 Demographic Characteristics

The only variable which is much more closely associated with entries into poverty than with chronic poverty is the Economic Dependency Ratio. It should be noted that the importance of the EDR to transitory poverty remains despite its *inverse* relationship with 2010 poverty (see Section 3.2.2 of the *Poverty Profile*). Households who have escaped poverty have smaller household size, and are more likely to be female-headed, than entrants into poverty and the chronically poor. The value of EDR indicator for 2010 poor (0.62) falls in between the value for entries (0.69) and chronic poverty (0.57), which masks the significant differences between these population groups. The demographic dependency ratio is identical across all categories of the poor in the transition matrix. In summary, data on demographic characteristics, in particular the Economic Dependency Ratio, suggest that loss of, or inability to, work is more closely associated with descents into poverty than with chronic poverty, while (smaller) family size is closely associated with escapes from poverty.

5.2 Industrial Classification

Entrants into poverty are much less likely than the chronically poor to be associated with agriculture and more likely to be associated with manufacturing, construction, trades/repairs and other. Interestingly, the main economy activity of those who have escaped poverty is similar to that of the chronically poor though the former are less likely to be involved in fishing and much more likely to be involved in trade/repairs. The percentage of the 2010 poor in agriculture (61%) falls in between the value for entries (56%) and chronic poverty (67%), which masks the significant differences between these population groups. In summary, while agriculture is by far the main economic activity of all groups in the poverty transition matrix in Myanmar, entrants into poverty are much more likely to be associated with manufacturing, construction and trades/repairs than the chronically poor. This latter industry is also more closely associated with those who have escaped poverty. Overall, these data suggest that while agriculture should remain of primary policy relevance for chronic poverty, other sectors are increasingly important to forestall entries into poverty and increase the likelihood of escapes.

5.3 Employment-Type

In terms of employment-type, the profile of entrants into poverty and the chronically poor are very similar, though the latter are more likely to be casual labourers. Those who have escaped poverty are more likely to be employers and own-account workers than casual labourers. In summary, there are not major differences between the chronically poor and those who have become poor with respect to employment-type. The increasing association of poverty with casual labour found in the *Poverty Profile* is due in part to new entries into poverty by casual labourers and not simply an increase in casual labour among the chronically poor.

5.4 Factor Ownership and Access

Households who have entered poverty own more land than the chronically poor and are less likely to be landless. Households who have escaped poverty own more land, and are less likely to be landless, than entrants into poverty and the chronically poor. Access to credit is similar across all the categories of the poor.

In summary, data on factor ownership points to the importance of land size as a correlate of escape from poverty and a factor which differentiates the chronically poor from those who have fallen into poverty. The increase in landlessness among the very poor found in the *Poverty Profile* is due, in part, to the excess of entrants to, over escapees from, poverty (29.3% vs. 23.8% respectively) who are, or have become, landless.

5.5 Labour and Unemployment

Households who have entered poverty have lower labour force participation rates and higher unemployment rates than the chronically poor. Households who have escaped poverty have lower unemployment rates, but higher underemployment rates, than entrants into poverty and the chronically poor. It is significant that labour force participation rates are very high overall, even among the chronically poor, and open unemployment is very low. In summary, data on the labour force and employment confirm the previous findings on the economic dependency ratio that lack of work, loss of work, or inability to work, is associated with descents into poverty. Nevertheless, the very high participation rates and low unemployment rates confirm the underlying conclusion in the *Poverty Profile* (Section 5) that lack of employment is not a major contributor to overall poverty.

5.6 Housing, Water and Sanitation

There is a consistent ranking of population groups across all indicators, with the chronically poor faring the worse following by entrants into poverty, escapees and the non-poor. The relative standing of the chronically poor is significant in that there is debate within the broader literature about whether the chronically poor are also the 'poorest of the poor'. They do have poorer conditions of housing, water and sanitation in Myanmar.

5.7 Health and Nutrition

Households who have entered poverty have similar levels of self-reported morbidity and malnutrition than the chronically poor and higher levels of health care access and health shares in consumption expenditure than the chronically poor. Households who have escaped poverty have higher self-reported morbidity rates than entrants into poverty and the chronically poor and similar malnutrition rates to these two groups. They have lower access to health care than entrants into poverty and similar levels of health shares in consumption expenditure. In summary, there is no clear relationship between health and nutritional indicators and the individual categories of the poor in the transition matrix, which suggests that health-related shocks are not major causes of impoverishment. Further, the chronically poor are not the poorest of the poor with respect to health and nutritional outcomes.

5.8 Education

Households who have entered poverty have higher literacy levels than the chronically poor but identical or similar primary enrolment rates and educational shares in consumption expenditure. Households who have escaped poverty have higher literacy and primary enrolment rates than entrants into poverty and the chronically poor and similar education shares in expenditure to these two groups. In summary, literacy and net enrolment in primary are associated with escapes from poverty, though only the former distinguishes entrants into poverty from the chronically poor.

6 Coping and Survival Strategies

Very few households have sold gold and/or jewellery. A higher percentages of escapees than entrants have engaged in such sales which suggests that they are not widely used as a coping/survival strategies. Interestingly, a similar percentages of households which have entered poverty, escaped from poverty and stayed non-poor have received donation. The number of such households is still very low, and highest among the chronically poor. In summary, neither sales of gold and/or jewellery or receipt of donations appear to be coping/survival strategies which differentiate entrants into poverty from the other poverty categories in the transition matrix.

7. Summary and Conclusion

Data from the *Poverty Dynamics Report* facilitate a number of interesting comparisons, namely:

- characteristics of entrants into poverty and the chronically poor, the two categories of the poor who are indistinguishable in the standard comparative static analysis of stocks of poverty (see Section 2.1);
- characteristics of those who escaped poverty;
- characteristics of entrants into poverty and the chronically poor on the one hand, and those who were poor in 2010 on the other.

Certain of the main findings of the report are as follows:

- storms, floods and stagnant water are more closely associated with entries into poverty than with chronic poverty (or escapes from poverty);
- lack of, loss of, or inability to, work is much more closely associated with descents into poverty than with chronic poverty, while (smaller) family size is closely associated with escapes from poverty;
- entrants into poverty are much more likely to be associated with manufacturing, construction and trades/repairs than the chronically poor. This latter industry is also more closely associated with those who have escaped poverty;
- land size is associated with escape from poverty and a factor which differentiates the chronically poor from those who have fallen into poverty;
- data on the labour force and employment confirm the previous findings on the economic dependency ratio that lack of work, loss of work, or inability to work, is associated with descents into poverty though very high participation rates and low unemployment rates affirm the underlying conclusion in the *Poverty Profile* (Section 5) that lack of employment is not a major contributor to overall poverty;
- data on housing, water, sanitation and electricity affirm that the chronically poor are the worse-off with respect to these conditions of living followed in ascending order by entrants into poverty, escapees and the non-poor;
- there is no clear relationship between health and nutritional indicators and the individual categories of the poor in the transition matrix, which suggests that health-related shocks are not major causes of impoverishment;
- literacy and net enrolment in primary are associated with escapes from poverty, though only the former distinguishes entrants into poverty from the chronically poor.

The analysis of poverty dynamics is important for at least three reasons. First, it appears to be a sizeable phenomenon, as discussed in Section 3.¹ Second, characteristics of entrants into poverty and the chronically poor may systematically differ, as shown above. Accordingly, the appropriate policy response will differ. Finally, characteristics of those who have escaped poverty may be important to point to factors which enable such positive well-being trajectories.

¹ This point is subject to the caveat about measurement error discussion in Section 2.4.

1. Introduction

Section 1 begins with a brief history of the IHLCA-II survey (Section 1.1) and proceeds to outline a number of methodological features of the survey. Specifically, it reviews select issues concerning data collection and analysis and provides an overview of the IHLCA-II questionnaire (Section 1.2). Next, a number of sampling issues are discussed and clarified (Section 1.3). It concludes with an overview of the format and objectives of the *Poverty Dynamics Report* (Section 1.4).

1.1 Background

The Integrated Household Living Conditions Assessment (IHLCA) is a multi-purpose household survey which provides data on key dimensions of living conditions and well-being. The first IHLCA survey was conducted in 2004-2005 with the support of the United Nations Development Programme and national partners including the Ministry of National Planning and Economic Development and the Central Statistical Organization. The IHLCA-I was a nationally representative sample of 18 660 households in both rural and urban areas across Myanmar. It allowed for the estimation of poverty levels drawing on a detailed consumption module, using modern, ‘industry-standard’ techniques to set the poverty line.

At the request of the government of Myanmar, UNDP, UNICEF and Sida have supported a follow-up survey to the original IHLCA. The core objective is to update the 2004-2005 data, shedding new light on levels and trends in living conditions. To this end, a technical workshop was held with stakeholders in April, 2009 to discuss issues of survey design, data analysis and processing. It was agreed that the IHLCA-II should retain a similar format as the IHLCA-I to facilitate consistent comparisons of results over time.

1.2 Data Sources, Collection and Analysis²

The IHLCA-II survey is comprised of three main instruments: the Household Questionnaire, the Community Questionnaire for Key Informants and the Community Price Questionnaire.

The Household Questionnaire forms the basis of most of the information presented in the *Poverty Dynamics Report*. It contains the following modules:

- i. Household Characteristics;
- ii. Housing;
- iii. Education and Literacy;
- iv. Health, Nutrition and Mortality;
- v. Consumption Expenditure;
- vi. Household Assets, Gifts and Remittances;
- vii. Labour and Employment;
- viii. Business Activities;
- ix. Finance and Savings.

The Community Questionnaire for Key Informants contains a range of community-level information on infrastructure, housing, economic activities, schools, health facilities, etc. In most cases, these data are not presented in the *Poverty Dynamics Report* which focuses on household level information. Data from the Community Price Questionnaire were used to adjust consumption expenditure data for difference across space (states, divisions) and over time (between 2004-05 and 2009-2010).

Following the format of IHLCA-I, data collection was conducted in two rounds, December-January, 2009-10 and May, 2010. The original rationale to conduct two rounds was to capture seasonal variation in

² These issues are discussed in much greater detail in IHLCA-II, *Technical Report on Survey Design and Implementation*, Feb. 15, 2010.

core well-being indicators associated primarily with the agricultural cycle. Generally, December-January marks a period of greater prosperity for many rural households following, or during, the harvesting of the monsoon paddy. May falls within the summer months and is a time of greater hardship. Data from the two separate rounds are necessary to estimate 'true' average, annual figures for data which experience higher and lower levels over the course of the year, such as consumption expenditure. The IHLCA-II retained this format for those indicators which are expected to vary seasonally.

At the level of data collection, a number of measures were put in place to reduce measurement error. Consistency checks were performed on-site by field supervisors which allowed enumerators to return to respondents and probe discrepant information. Field enumerators were recruited locally to increase the likelihood that translation issues, or contextual differences in interpretation, did not influence results. In addition, field teams comprised both male and female enumerators to ensure that respondents could be interviewed by persons of their same gender. The aim was to enhance the validity of sensitive information on issues such as reproductive health.

Data entry and cleaning has been undertaken by the Planning Department (PD) of the Ministry of National Planning and Economic Development (MNPED) with technical assistance from the World Bank. Data analysis has been conducted by the IHLCA technical unit drawing on technical support and training provided during the first IHLCA. Analytical support concerning sampling, and standard error estimation, has been provided by Statistics Sweden.

1.3 Sampling Issues

The IHLCA-II is a nationally 'representative,' 50% 'panel' survey with sample size of 18,660 households. It is important to clarify at the outset the meaning of the terms 'representative' and 'panel' and to say a word about the special sampling problems posed by cyclone *Nargis* in May, 2008.

The IHLCA-II also contains a 'panel' element, in that 50% of households are the same as those selected in 2004-05. Panel data facilitates the analysis of poverty dynamics, i.e. the entry into, and escape from, poverty of individual households, and not simply the analysis of stocks of poverty at different points of time. The panel data are the informational basis of the *Poverty Dynamics Report*.

The IHLCA surveys are 'representative' of the population of Myanmar in the sense that it is possible to estimate the relationship between sample results and the 'true' results in the entire population. In order to make such estimates, and interpret them correctly, it is important to define four additional concepts: i) standard errors; ii) sampling error; iii) confidence intervals and iv) levels of statistical significance.

- i. *Standard errors* provide a measure of how far estimated sample statistics differ from their 'true' values in the entire population. They are calculated on the basis of the variance and number of observations in the sample. The variance is a measure of the dispersion, or the spread, of the values of a variable.
- ii. The estimated difference between sample estimates and population values is known as *sampling error*. The extent of sampling error is known by examination of the size of the standard errors in question.
- iii. *Confidence intervals* provide a range of plausible values for an unknown population parameter. The wider the confidence interval, the more uncertain we are about the unknown parameter. Confidence limits are the lower and upper boundaries of a confidence interval.
- iv. *Levels of statistical significance* provide a degree of certainty that sample results are not due to chance. By convention, statistical significance is often set at the 95% level.

These four concepts are relevant to the interpretation of results in the *Poverty Dynamics Report* in the following way. Standard errors are presented (in parenthesis) below all results in the report. If we multiply the standard error by approximately 2 (1.96), and subsequently add and subtract that value from the value of our results, we arrive at a 95% confidence intervals for all data in the *Poverty Dynamics Report*. Otherwise stated, the reader can determine, with 95% certainty, how far the estimated sample results from the IHLCA-II differ from the 'true' population results in Myanmar.

There is one important difference which is worth noting between the statistics presented in the *Poverty Dynamics Report* on the one hand, and the *Poverty Profile* and *MDG Data Report* on the other. Unlike these latter reports, the *Poverty Dynamics Report* does not claim to be ‘representative’ of the population of Myanmar in 2010. The reason is that it uses the population weights of the 2005 survey in order to consistently compare the situation of individual households since 2005. Accordingly, the standard errors and confidence intervals calculated, do not take into account changes to the overall population since 2005.

From the point of view of sampling, cyclone *Nargis* poses immediate challenges in that certain villages have either ‘disappeared’ or have been so extensively damaged to preclude conducting a survey. In particular, the issue arose for eleven villages in Bogalay and Laputta Township in Ayeyarwady Division. To address this problem, eleven villages with similar characteristics, from the same or nearby village tracts, have been substituted into the sampling frame. It should be emphasized that widespread loss of life associated with this tragedy will not increase poverty rates, if those who perished were on average no worse/better off than those who survived.³

1.4 Format and Objectives of the Poverty Dynamics Report

The *Poverty Dynamic Report* presents results from the panel component of the IHLCA-I and II surveys. Its core is to shed light on the following question: why do people enter into, escape from or stay in poverty? The data presented in this report distinguish between four well-being categories in an attempt to answer this question, namely: i) entries into poverty; ii) escapes from poverty; iii) chronic poverty and iv) non-poor.

The structure of the report parallels the analysis of vulnerability and its sources (Section 2.3) which distinguishes between downward pressures (shocks and stresses, Section 4) and responses (coping and survival strategies, Section 6). There is also a section which examines the relationship between population characteristics and above categories in the poverty transition matrix (Section 5).

There are two companion volumes to the *Poverty Dynamics Report*. First, the *Poverty Profile* presents data on a range of indicators of economic and social dimensions of well-being with emphasis on consumption poverty and its correlates. Second, the *MDG Data Report*, which presents data on a range of MDG indicators.

In terms of format, the *Poverty Dynamics Report* examines the following issues in turn: Concepts, Definitions and Methods (Section 2); Spatial Dimension of Poverty Dynamics in Myanmar (Section 3); Shocks and Stresses (Section 4); Population Characteristics (Section 5); Coping and Survival Strategies (Section 6) and Summary and Conclusion (Section 7).

³ This paradox of poverty measurement is explored in Kanbur R. and D. Mukherjee, 2007, “Premature Mortality and Poverty Measurement,” *Bulletin of Economic Research*, Vol. 59. No. 4.

2. Poverty Dynamics: Concepts, Definitions and Methods⁴

As discussed in Section 1, poverty dynamics analyses flows of households into and out of poverty and not simply the stock of poverty at a given point in time. Section 2.1 elaborates upon this distinction between stocks and flows of poverty, and Section 2.2 unpacks further the concept of ‘flows’. Section 2.3 links the discussion to the concept of vulnerability and its sources. Finally, Section 2.4 briefly discusses methodologies for the analysis of poverty dynamics along with the one chosen methodological approach in the *Poverty Dynamics Report*.

2.1 Stocks vs. Flows of Poverty

Figure 1 schematically depicts analytical differences between analyses of stocks and flows of poverty as well as the related distinction between chronic and transitory poverty. Two points are particularly important.

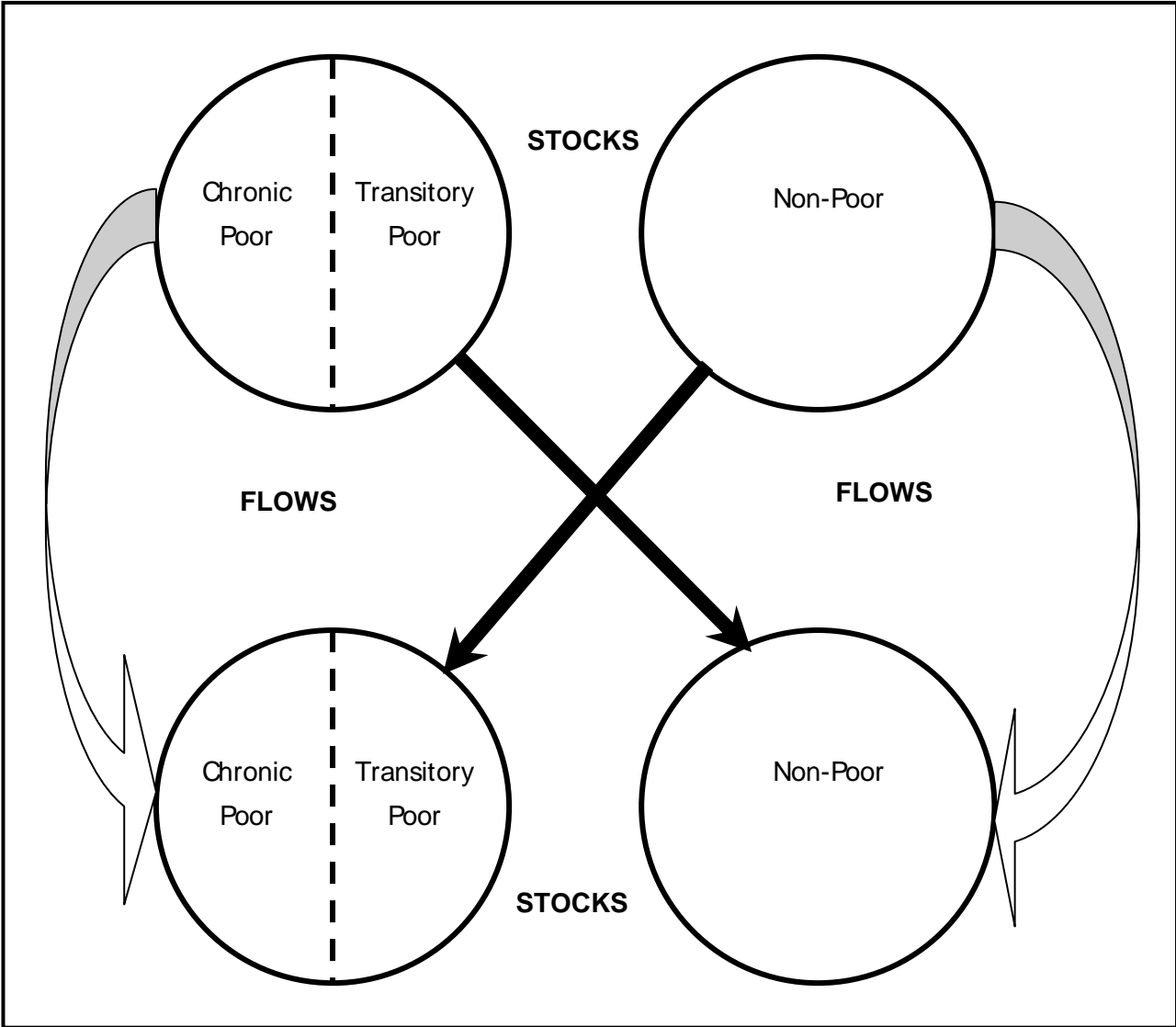
First, in the absence of panel data, poverty analysis is typically unable to distinguish between chronic and transitory poverty. The approach was to analyse correlates of the entire ‘poor’ circle depicted in Figure 1 (comprised of transitory and chronic poverty) at one or more points in time. This is the standard ‘comparative static’ analysis of stocks of poverty. Implicitly, this approach entailed a focus on causes and remedies for chronic poverty, reflected in the long-term poverty reduction strategies which often followed from the comparative static analysis. Analysis of data from the first round of the IHLCA survey in 2005 followed this broad approach.

Second, analysis of flows tracks the same households over time. It allows one to determine if households: 1) stay poor; 2) escape from poverty; 3) enter into poverty or 4) stay non-poor. For policy purposes, it may be crucial to determine whether the poverty problem stems from households who stay poor over time (chronic poverty) or whether it is due to large inflows of households into poverty (transitory poverty) who may later escape. The analysis presented in the *Poverty Dynamics Report* is based on this four-fold categorisation of population groups. As discussed below, policies to deal with stocks and flows of poverty may be very different. Often, a range of policy options which fall under the heading of ‘Social Protection’ may be more appropriate to address the latter.

The focus on flows into and out of poverty, or poverty transitions, raises two sorts of questions. First, what is the nature of the flows in question? Do they reflect steep descents into poverty or more gradual oscillations above and below the poverty line. Section 2.2 addresses these types of questions. Second, why do people fall into or escape from poverty? Otherwise stated, why are people vulnerable to falling into poverty, or greater poverty, and how do they respond? Section 2.3 focuses on this issue of vulnerability and its sources.

⁴ This section draws heavily on Shaffer, P. 2008. “New Thinking on Poverty: Implications for Globalisation and Poverty Reduction Strategies.” *UNDESA Working Paper No. 65*. ST/ESA/2008/DWP/65.

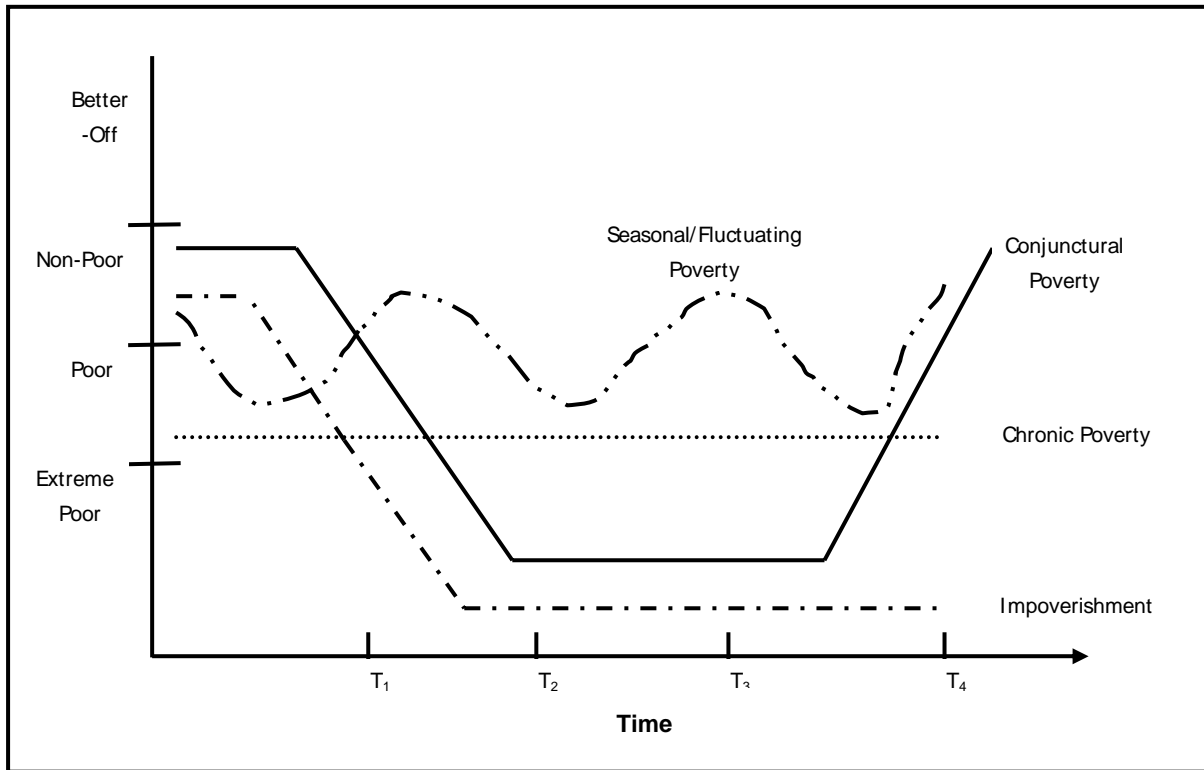
Figure 1 Stocks and Flows of Poverty



2.2 Unpacking Flows

It is useful to unpack the term 'flows of poverty' as a number of distinct processes are involved. This 'unpacking' exercise is also relevant for policy as appropriate policy responses will differ according to the 'flows' in question. Figure 2 below provides a schematic depiction of a number of these processes.

Figure 2 Trajectories of Change and Types of Poverty



Chronic poverty refers to the persistence of poverty over time. Social protection is often expressly designed to address one type of chronic poverty. This is the case of the long-term dependent poor who are unable to secure a minimal standard of living in the absence of some sort of social assistance. Often this applies to an economically inactive population, unable to work. Chronic poverty represents a long-term or permanent condition, which differs from other more transitory forms of poverty.

Impoverishment is a change in the permanent component of income or consumption. It reflects a dramatic fall in living conditions to a new long-term level. Some of the instruments to prevent impoverishment may be similar to measures designed to address transitory forms of poverty. When the *process* of impoverishment culminates in the *state* of chronic poverty different sorts of remedies will be relevant. Some are likely to be similar to those for the chronic, dependent poor.

Conjunctural poverty refers to increases in poverty due to circumstances which are likely to persist over the medium term. Examples include macroeconomic shocks, such as the Asian financial crisis, the situation facing transition countries as well as major lifecycle changes such as widowhood. The key issue here is that the duration and scale of social protection required is different than in the other situations discussed.

Fluctuating or seasonal poverty, ('Churning'), refers to income variability in 'normal' times, such as over the course of a season, or following frequent and repeated natural shocks. Once again, the nature, scale and duration of appropriate measures of social protection are likely to be different for this transitory form of poverty.

The distinction on the left hand side of the diagram between the non-poor, the poor and extreme poor is relevant for at least two reasons. First, extreme poverty is a condition which is likely to be qualitatively different from poverty, one for which the imperative to act is extremely strong. Second, affordability for poor people is an issue for certain types of social protection instruments with important differences between the poor and non-poor. Specifically, the poor are often excluded from contributory social insurance schemes, such as health, unemployment or disability insurance, because they are unable to afford the premiums or because they are unable to meet a regular payment schedule due to the irregular flow of income.

Data on population characteristics in Section 5, below, allows for some inferences as to the nature of flows in Myanmar. For example, information on marital status or demographic dependency ratios may suggest an association between life cycle factors, such as widowhood or the early child-bearing years respectively, and entries into poverty. In general, however, data presented in the *Poverty Dynamics Report* is only a first step towards an empirically informed understanding of flows.

2.3 Vulnerability and its Sources

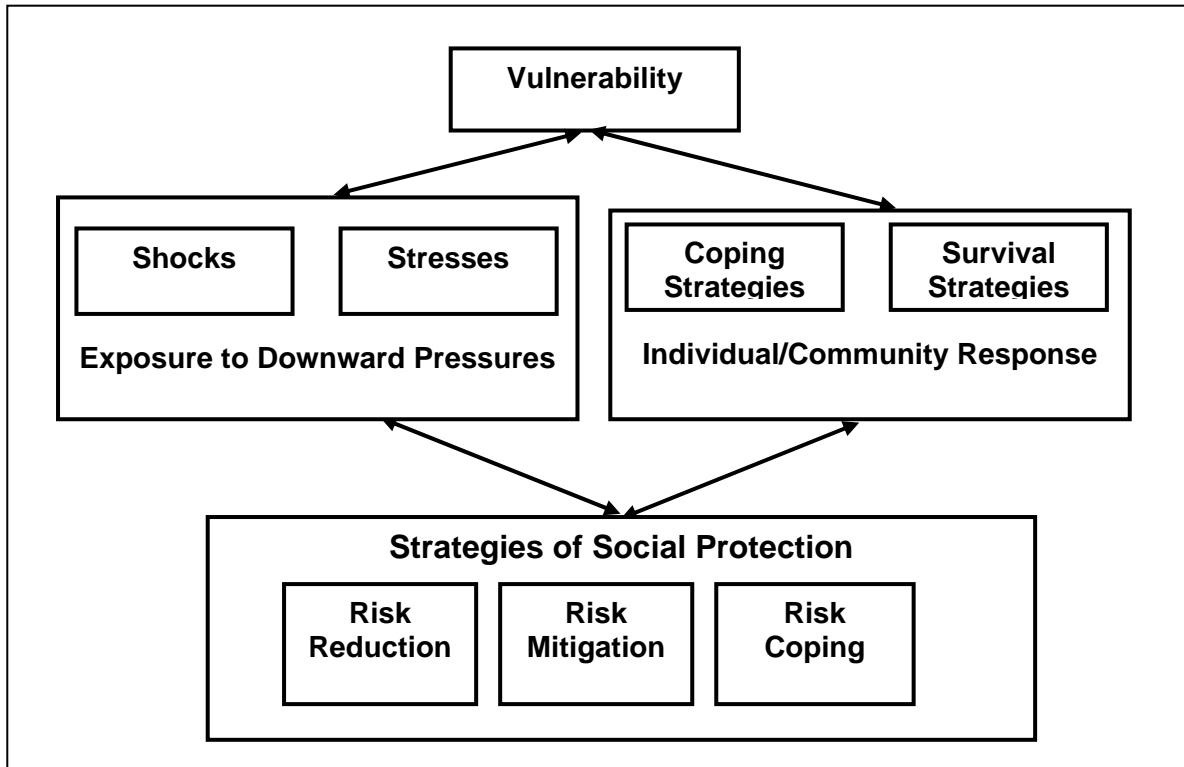
The focus on poverty transitions and flows directs attention to the concept of vulnerability, or the likelihood of falling into poverty or into more severe poverty. Alternatively, this may be phrased as 'downside risk.'

As depicted in Figure 3 below, vulnerability is due to two main factors: exposure and response to downward pressures. Downward pressures are sometimes referred to as *stresses and shocks*, the former gradual and cumulative and latter sudden and unpredictable. Six types of downward pressure are particularly important in many countries in the Global South:

- illness;
- violence/conflict;
- natural disaster;
- harvest failure;
- terms of trade deterioration;
- loss of employment.

Exposure to downward pressure varies with the size, frequency, timing and bunching of the particular pressures in question, as well as one's spatial proximity to them. At the individual or community level, responses to downward pressures are often referred to as *coping or survival strategies*. They may include such mechanisms as borrowing from friends or neighbours, migration, selling assets, drawing on savings, etc. As discussed above, at a policy level, responses often fall under the heading of social protection. As discussed below, an important distinction between social protection measures is where they are situated within this cycle of vulnerability.

Figure 3 The Cycle of Vulnerability



Risk reduction mechanisms are those which are taken in advance of a shock or stress. They aim to reduce the likelihood that it will occur. Examples include macroeconomic policy measures to reduce the risk of currency crises (e.g. not having a seriously overvalued exchange rate) and labour standards which reduce the risk of injury due to unsafe working conditions or unemployment due to arbitrary dismissal.

Risk mitigation measures are taken in anticipation of a shock with a view to minimise its deleterious consequences. At the individual or community level, they are many informal mechanism of risk mitigation including diversification of sources of income, choosing large families for farm labour or for income generation; adopting contractual arrangements, such as sharecropping, which trade-off high returns for security, etc. Examples from a public policy perspective include extension of micro-finance, provision of insurance, public works schemes, etc.

Risk coping measures are those taken after the occurrence of a shock. As above, there are many informal mechanisms of risk coping including: selling assets; drawing on savings or stocks of grain; drawing on remittances from migrants; accessing credit for consumption purposes, etc. In terms of public policy, risk coping is facilitated by transfers such as social assistance schemes, commodity subsidies, etc.

2.4 Methodological Issues

There are a number of methodological approaches which can be used to analyse the dynamics of poverty and/or vulnerability, drawing on a data-base such as the IHLCA. For vulnerability, a range of modeling techniques have been used which estimate expected mean and variance of household income or consumption. For poverty dynamics, similar models have been used to estimate the probability of falling into, or escaping poverty or, more generally, correlates of changes in income or consumption expenditure.

The approach used in the Poverty Dynamics Report is a preliminary to more formal modeling exercises. It presents descriptive statistics of the four key categories in the poverty transition matrix, namely: 1) entries into poverty; ii) escapes from poverty; iii) chronic poverty; iv) non-poor. For reference sake, descriptive statistics are also presented for those who were below the poverty line in 2010, as per the *Poverty Profile*.

These data allow a number of interesting comparisons, namely:

- characteristics of entrants into poverty and the chronically poor, the two categories of the poor who are indistinguishable in the standard comparative static analysis of stocks of poverty (see Section 2.1);
- characteristics of those who escaped poverty;
- characteristics of entrants into poverty and the chronically poor on the one hand, and those who were poor in 2010 on the other (though see below).

There are four methodological points to bear in mind when reviewing data in the *Poverty Dynamics Report*.

First, the 2005-2010 panel draws on only 50% of the population sample used in the entire 2010 dataset. Further, as discussed above, the population weights are from 2005. Accordingly, the 2010 poverty data and data on poverty transitions are not strictly comparable. The point has particular relevance for the last of the comparisons listed above.

Second, standard errors tend to be high for many of the statistics presented. This should be borne in mind when comparing across categories in the poverty transition matrix.

Third, measurement error, i.e. respondent error about household consumption, is a much more serious problem for panel data than data on stocks of poverty. When analyzing the latter, a reasonable assumption is that over/under-reporting of consumption will balance out over large enough numbers, so that the overall poverty estimate will be unbiased. In the case of panel data, over and underreporting around the poverty line will have the effect of artificially inflating the numbers of entrants into and escapees from poverty and artificially inflating the magnitude of transitory poverty. The data in the *Poverty Dynamics Report* have not been adjusted for measurement error and therefore will likely overestimate the magnitude of transitory poverty. In addition, measurement error will understate different characteristics of the four categories in the transition matrix, as the boundary between different groups becomes less distinct.

Fourth, attrition, or the disappearance of households between baseline and subsequent waves of the panel, is a potentially serious problem for panel data. The reason is that attrition may not be random but reflect population differences which may also lead to differences in household consumption or income. So, if better-off, more highly educated, etc. individuals attrite, there will be a downward bias in estimates of escapes from poverty as such individuals will no longer be in the dataset. There are a variety of techniques in the literature to address attrition bias which adjust results on the basis on the baseline characteristics of those who attrite. The data presented in the *Poverty Dynamics Report* has not been adjusted for attrition, though the size and direction of any resulting bias is unknown *a priori*.

3. Poverty Dynamics in Myanmar

Table 1 presents data on poverty dynamics between 2005 and 2010 in the form of a transition matrix displaying the four categories of households mentioned above. There are four relevant points to note:

- Overall, transitory poverty, which comprises entries into and escapes from poverty, appears to be a significant phenomenon in Myanmar. These data suggest it is close to 3 times the size of chronic poverty, affecting 28% vs. 10% of households. Even if a significant portion of transitory poverty is due to measurement error, its magnitude is still significant;
- Both rural and urban areas have relatively high levels of transitory poverty vs. chronic poverty at 19% vs. 5%, and 31% vs. 12%, respectively;
- This pattern repeats across most states/divisions, though high standard errors urge caution in interpretation. It is interesting that there appears to be a high degree of transitory poverty in states/divisions with both high and low poverty incidence, such as Chin and Yangon, respectively.

The extent of *both* descents into (11.3% of households), and escapes from (16.5% of households), poverty appears significant.

Table 1 Poverty Transitions in Myanmar

State, Region and Union	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Kachin	8.9 (2.25)	23.6 (6.68)	12.5 (1.15)	55.1 (5.90)	28.6 (2.62)
Kayah	4.9 (0.14)	19.7 (1.49)	3.7 (1.40)	71.7 (0.05)	11.4 (0.37)
Kayin	13.0 (0.90)	9.5 (3.72)	1.9 (0.21)	75.6 (3.44)	17.4 (0.51)
Chin	17.4 (7.25)	20.6 (1.91)	51.5 (8.06)	10.5 (1.66)	73.3 (2.18)
Sagaing	7.5 (0.67)	19.1 (4.22)	3.1 (0.58)	70.3 (4.92)	15.1 (1.49)
Tanintharyi	15.3 (3.33)	13.2 (1.85)	15.0 (5.95)	56.6 (8.77)	32.6 (9.43)
Bago	9.7 (1.32)	17.9 (3.25)	5.6 (0.71)	66.8 (3.24)	18.3 (2.00)
- Bago (E)	10.5 (2.33)	19.1 (4.85)	6.2 (1.17)	64.3 (4.07)	20.2 (3.57)
- Bago (W)	8.9 (1.19)	16.7 (4.25)	5.0 (0.84)	69.4 (5.10)	15.9 (1.07)
Magwe	13.3 (1.70)	24.7 (6.41)	11.3 (2.59)	50.8 (5.51)	27.0 (2.98)
Mandalay	8.0 (1.66)	20.5 (2.39)	14.8 (3.83)	56.6 (5.43)	26.6 (5.77)
Mon	9.0 (1.83)	11.7 (5.36)	4.5 (0.74)	74.8 (4.34)	16.3 (1.53)
Rakhine	19.8 (5.58)	16.2 (1.54)	17.0 (4.01)	47.0 (9.31)	43.5 (7.24)
Yangon	9.9 (1.22)	7.0 (3.82)	3.3 (1.61)	79.8 (5.14)	16.1 (1.68)
Shan	12.5 (4.04)	21.0 (2.51)	18.3 (4.97)	48.2 (10.66)	33.1 (7.22)
- Shan (S)	14.3 (8.84)	18.3 (5.43)	10.0 (8.15)	57.4 (22.41)	25.2 (14.77)
- Shan (N)	9.8 (0.77)	23.7 (1.44)	26.2 (7.65)	40.3 (8.51)	37.4 (8.72)
- Shan (E)	15.8 (4.23)	21.1 (1.48)	21.1 (6.26)	42.1 (3.34)	46.4 (3.77)
Ayeyarwady	14.3 (1.60)	13.3 (0.88)	11.5 (1.63)	60.9 (2.16)	32.2 (2.94)
Urban	7.4 (0.93)	11.6 (1.33)	5.0 (0.64)	76.0 (1.74)	15.7 (1.08)
Rural	12.7 (0.75)	18.3 (1.34)	11.9 (1.09)	57.1 (1.95)	29.2 (1.55)

4. Shocks and Stresses

As discussed in Section 2.3, vulnerability, i.e. the likelihood of falling into poverty, or into more severe poverty, is due to two main factors: exposure and response to downward pressures. In the present section we examine the first of these factors, exposure to shocks and stresses. Of the six types of shocks and stresses listed in Section 2.3, the current focus is on natural disasters. Shocks related to loss of employment and illness are examined in Sections 5.5 and 5.7 respectively.

Table 2 presents data on three key types of natural disasters, namely storms, drought and floods. In addition, information on households surrounded by stagnant water is presented, given that this can be a transmission vector for water-borne diseases and malaria.

Table 2 Shocks and Stresses

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Ag HHs Affected by Storms in Past 5 Years	10.1 (3.05)	7.4 (1.65)	6.3 (2.85)	9.8 (2.02)	8.9 (2.76)
Ag HHs Affected by Drought in Past 5 Years	27.1 (5.19)	32.0 (5.46)	37.2 (6.07)	26.9 (3.94)	28.6 (4.64)
Ag HHs Affected by Floods in Past 5 Years	15.4 (3.43)	12.9 (2.32)	11.0 (2.91)	15.1 (2.23)	13.6 (2.76)
Households Surrounded by Stagnant Water (any duration)	15.2 (2.23)	9.6 (1.24)	12.4 (2.07)	13.1 (1.65)	14.9 (1.84)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- Storms, floods and stagnant water are more closely associated with entries into poverty than with chronic poverty while the latter is more closely associated with droughts;
- Households who have escaped poverty are less affected by storms, floods and stagnant water, than entrants into poverty, though more so by droughts. In terms of the comparison between escapees and the chronically poor, the former are less likely to be affected by drought and be surrounded by stagnant water, but more likely to be affected by floods and storms;
- The value of these indicators for the 2010 poor falls in between the value for entries and chronic poverty, which is what one would expect, despite the fact that the population sample is different (see Section 2.4);
- High standard errors urge caution in the interpretation of all of these comparisons.

In summary, these data suggest that storms, floods and stagnant water are more closely associated with entries into poverty than with chronic poverty (or escapes from poverty). Droughts, on the other hand, do not appear to be a major shock leading to descents into poverty.

5. Population Characteristics

5.1 Demographic Characteristics

Table 3 presents data on four demographic characteristics of households across the categories of the poverty transition matrix, namely: average household size; the Demographic Dependency Ratio (DDR); the Economic Dependency Ratio (EDR) and the percentage of female-headed households. The demographic dependency ratio compares the number of household members less than 15 and over 59 years of age, relative to those between the ages of 15-59. The higher the ratio value, the higher the ‘dependency burden’ on the household. The economic dependency ratio compares the number of economically inactive and active household members between the ages of 15-59. ‘Economically active’ is defined as being engaged in an economic activity, including a contributing family worker. As above, the higher the ratio value, the higher the ‘economic burden’ on the household.

Table 3 Demographic Characteristics

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Average Household Size	6.2 (0.10)	5.2 (0.08)	6.2 (0.10)	4.7 (0.05)	6.0 (0.06)
Demographic Dependency Ratio (DDR)	0.54 (0.02)	0.54 (0.02)	0.54 (0.02)	0.51 (0.01)	0.56 (0.01)
Economic Dependency Ratio (EDR)	0.69 (0.03)	0.62 (0.02)	0.57 (0.03)	0.71 (0.02)	0.62 (0.02)
Female- headed Households (%)	17.6 (1.50)	23.8 (1.26)	18.9 (1.42)	21.7 (1.00)	18.5 (0.79)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- The only variable which is more closely associated with entries into poverty than with chronic poverty is the Economic Dependency Ratio. This finding suggests that lack of, loss of, or inability to, work is associated with descents into poverty. It should be noted that the importance of the EDR to transitory poverty remains despite its *inverse* relationship with 2010 poverty (see Section 3.2.2 of the *Poverty Profile*);
- Households who have escaped poverty have smaller household size, and are more likely to be female-headed, than entrants into poverty and the chronically poor. The association of small household size with escapes from poverty is broadly consistent with data from the *Poverty Profile* which found that large household size to be a correlate of poverty (see Section 3.1 of the *Poverty Profile*);
- The value of EDR indicator for 2010 poor (0.62) falls in between the value for entries (0.69) and chronic poverty (0.57), which masks the significant differences between these population groups;
- The demographic dependency ratio is identical across all categories of the poor in the transition matrix.

In summary, data on demographic characteristics, in particular the Economic Dependency Ratio, suggest that loss of, or inability to, work is more closely associated with descents into poverty than with chronic poverty, while (smaller) family size is closely associated with escapes from poverty.

5.2 Industrial Classification

Table presents data on the industrial classification of the main economic activity of household members across the categories of the poverty transition matrix.

Table 4 Industrial Classification of Economically Active Population

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Agriculture, Hunting, Forestry	56.3 (2.82)	65.7 (1.89)	67.0 (2.82)	53.4 (2.20)	60.9 (2.02)
Fishing	4.8 (1.19)	2.6 (0.63)	5.1 (1.48)	2.3 (0.42)	5.0 (0.74)
Manufacturing	4.2 (1.27)	2.1 (0.42)	2.5 (0.54)	4.0 (0.38)	3.7 (0.57)
Construction	5.0 (1.27)	3.4 (0.72)	3.5 (0.66)	3.7 (0.58)	3.7 (0.51)
Trade and repair services	8.4 (1.27)	10.6 (1.49)	5.9 (1.07)	17.4 (1.35)	8.0 (0.80)
Transport, Storage and Communication	3.0 (0.82)	4.1 (0.79)	3.3 (1.46)	5.6 (0.68)	3.0 (0.61)
Education	0.4 (0.22)	1.1 (0.38)	0.6 (0.34)	2.1 (0.33)	0.4 (0.12)
Health and Social Work	0.8 (0.38)	1.0 (0.27)	0.2 (0.17)	0.7 (0.17)	0.4 (0.13)
Other	17.1 (2.21)	9.4 (1.23)	12.0 (2.36)	10.8 (0.74)	14.9 (2.24)
Total	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- Given its centrality to Myanmar's economy, it is no surprise that agriculture is the main economic activity of all groups in the poverty transition matrix;
- Entrants into poverty are much less likely than the chronically poor to be associated with agriculture and more likely to be associated with manufacturing, construction, trades/repairs and other;
- Interestingly, the main economy activity of those who have escaped poverty is similar to that of the chronically poor though the former are less likely to be involved in fishing and much more likely to be involved in trade/repairs;
- The percentage of the 2010 poor in agriculture (61%) falls in between the value for entries (56%) and chronic poverty (67%), which masks the significant differences between these population groups.

In summary, while agriculture is by far the main economic activity of all groups in the poverty transition matrix in Myanmar, entrants into poverty are much more likely to be associated with manufacturing, construction and trades/repairs than the chronically poor. This latter industry is also more closely associated with those who have escaped poverty. Overall, these data suggest that while agriculture should remain of primary policy relevance for chronic poverty, other sectors are increasingly important to forestall entries into poverty and increase the likelihood of escapes.

5.3 Employment Type

Table presents data on the main types of employment for the economically active population in Myanmar across the categories of the poverty transition matrix.

Table 5 Employment-Types of Economically Active Population

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Employer	5.8 (1.21)	7.9 (1.40)	5.3 (1.05)	13.2 (1.13)	5.5 (0.67)
Own-Account Worker	47.4 (2.03)	55.9 (1.96)	48.1 (2.63)	58.9 (1.63)	45.1 (1.68)
Employee	10.7 (1.92)	9.7 (1.04)	10.2 (2.00)	12.3 (0.88)	11.2 (1.25)
Contributing Family Worker	2.7 (0.86)	1.8 (0.79)	2.2 (0.78)	2.2 (0.42)	2.1 (0.43)
Casual Labour	27.2 (2.10)	22.1 (1.85)	31.1 (3.01)	11.7 (0.77)	31.5 (2.20)
Other	6.1 (1.04)	2.6 (0.61)	3.0 (0.90)	1.7 (0.35)	4.7 (0.56)
Total	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- In terms of employment-type, the profile of entrants into poverty and the chronically poor are very similar, though the latter are more likely to be casual laborers;
- Those who have escaped poverty are more likely to be employers and own-account workers than casual laborers;
- These data suggest that the ‘casualisation’ of poverty found in the *Poverty Profile* (see Section 4.2) is due, in part, to the excess of entrants to, over escapees from, poverty (27.2% vs. 22.1% respectively) who are, or have become, casual laborers.

In summary, there are not major differences between the chronically poor and those who have become poor with respect to employment-type. The increasing association of poverty with casual labour found in the *Poverty Profile* is due in part to new entries into poverty by casual labourers and not simply an increase in casual labour among the chronically poor.

5.4 Factor Ownership and Access

Table presents data on the main types of employment for the economically active population in Myanmar across the categories of the poverty transition matrix. Landlessness is defined as those belonging to households whose main economic activity is agriculture, that do not own any agricultural land. Landless persons include casual workers, employees, contract farmers, etc. Access to credit is defined as the proportion of households, whose main economic activity is agriculture, having received a loan between the period May-October, 2009 for agricultural activities. Debt is defined as the proportion of households with outstanding debt obligations based on questionnaire responses on debt loads at the time of the Myanmar Light Festival in 2009.

Table 6 Factor Ownership and Access

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Average Land Area Owned (Acres)	4.9 (0.33)	6.2 (0.28)	3.9 (0.21)	7.8 (0.35)	4.4 (0.20)
Landless Rate in Agriculture (%)	29.3 (3.06)	23.8 (2.03)	31.7 (3.56)	16.1 (1.08)	33.6 (2.74)
Access to Credit (Agriculture)	31.5 (3.44)	30.0 (2.65)	30.7 (3.63)	35.9 (2.25)	29.7 (2.31)
Debt (Percentage of Households)	35.1 (3.01)	32.4 (2.06)	34.9 (2.51)	29.6 (1.61)	33.0 (1.89)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- Households who have entered poverty own more land than the chronically poor and are less likely to be landless. Both groups have similar access to credit and debt;
- Households who have escaped poverty own more land, and are less likely to be landless, than entrants into poverty and the chronically poor. The association of land size with escapes from poverty is consistent with data from the poverty profile which found small land size to be a correlate of poverty (see Section 4.3 of the *Poverty Profile*);
- These data suggest that the rise in landlessness found among the poorest of the poor in the *Poverty Profile* (see Section 4.3) is due, in part, to the excess of entrants to, over escapees from, poverty (29.3% vs. 23.8% respectively) who are, or have become, landless.
- It is significant that access to credit is similar across all the categories of the poor. It is possible that credit is put to more productive uses in households which have escaped poverty, and serves more as a means of risk mitigation or coping in households who have fallen into poverty or are chronically poor.
- Debt does not appear to be associated with falls into poverty which is consistent with the improving debt situation found in the *Poverty Profile* (Section 4.4.)

In summary, data on factor ownership points to the importance of land size as a correlate of escape from poverty and a factor which differentiates the chronically poor from those who have fallen into poverty. The increase in landlessness among the very poor found in the *Poverty Profile* is due, in part, to the excess of entrants to, over escapees from, poverty who are, or have become, landless.

5.5 Labour and Unemployment

Table presents data on labour force participation, unemployment and underemployment across the categories of the poverty transition matrix. Labour force participation is defined as those who are working or available for work, for a given age group. The open unemployment rate is defined as the percentage of the labour force aged 15 and above, who did not work for either six months or seven days prior to the administration of the questionnaire. Underemployment is defined as the percentage of the working population, aged 15 years and older, who worked for less than 44 hours in the 7 days preceding the questionnaire.

Table 7 Labour Force Participation and Employment

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Labour Force Participation Rate	67.1 (0.91)	69.4 (0.83)	71.4 (0.82)	65.1 (0.60)	69.4 (0.58)
Unemployment Rate (6 months)	3.7 (0.85)	0.3 (0.01)	1.1 (0.22)	0.4 (0.01)	2.4 (0.34)
Unemployment Rate (7 days)	4.6 (0.91)	1.7 (0.32)	3.0 (0.40)	2.1 (0.23)	3.6 (0.34)
Underemployment Rate (7 days)	37.8 (1.96)	40.0 (1.46)	38.7 (1.78)	36.8 (1.48)	38.0 (1.63)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- Households who have entered poverty have lower labour force participation rates and higher unemployment rates than the chronically poor. These findings are consistent with the higher economic dependency ratio found among entrants into poverty in Section 5.1 above;
- Households who have escaped poverty have lower unemployment rates, but higher underemployment rates, than entrants into poverty and the chronically poor;
- It is significant that labour force participation rates are very high overall, even among the chronically poor, and open unemployment is very low. Accordingly, the overall conclusion in the *Poverty Profile* (Section 5) that lack of employment is not a major contributor to overall poverty stands. Nevertheless, it is more important for new entrants into poverty than for other groups in the poverty transition matrix.

In summary, data on the labour force and employment confirm the previous findings on the economic dependency ratio that lack of work, loss of work, or inability to work, is associated with descents into poverty. Nevertheless, the very high participation rates and low unemployment rates affirm the underlying conclusion in the *Poverty Profile* (Section 5) that lack of employment is not a major contributor to overall poverty.

5.6 Housing, Water and Sanitation

Error! Reference source not found. presents data on housing, water, sanitation and electricity across the categories of the poverty transition matrix. Quality roofing includes: i) thatch/leaves/palm/dhani and ii) bamboo while ‘quality’ comprises i) tin pieces; ii) tiles; iii) corrugated metal; iv) wood shingles and cement. Safe drinking water includes: i) private tap water. ii) public tap/stand pipe; iii) tube well/bore hole; iv) protected hand dug well and v) protected spring/pond/rainwater. Access requires that a safe drinking water source is within 30 minutes walking distance, according to questionnaire respondents, or approximately 1 kilometre.⁵ Improved sanitation includes: i) flush toilet connected to sewage system or septic tank; ii) pour flush toilet with water seal; iii) covered pit latrine with foot step lid and iv) direct and indirect covered pit latrine without foot step lid. Access to electricity is based on questionnaire responses to questions about the main source of lighting for their dwelling. Access includes provision from public, communal and private sources.

Table 8 Housing, Water and Sanitation

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Access to 'Quality' Roofing	36.8 (3.03)	45.8 (2.40)	31.9 (2.92)	64.5 (1.84)	32.0 (2.19)
Access to Safe Drinking Water	65.9 (4.12)	71.4 (2.75)	61.2 (3.65)	72.1 (1.80)	62.2 (3.44)
Access to Improved Sanitation	73.0 (2.98)	78.7 (1.82)	70.4 (2.97)	83.4 (1.12)	71.5 (2.21)
Access to Electricity	34.8 (3.89)	39.9 (2.83)	25.7 (2.98)	59.5 (2.44)	27.9 (2.46)

Source: IHLCA Survey 2009-2010

There are two relevant findings:

- There is a consistent ranking of population groups across all indicators, with the chronically poor faring the worse following by entrants into poverty, escapees and the non-poor;
- The relative standing of the chronically poor is significant in that there is debate within the broader literature about whether the chronically poor are also the ‘poorest of the poor’. They do have poorer conditions of housing, water and sanitation in Myanmar.

In summary, data on housing, water, sanitation and electricity affirm that the chronically poor are the worse-off with respect to these conditions of living followed in ascending order by entrants into poverty, escapees and the non-poor.

⁵ Access to Safe Drinking Water is defined in the same was as in the 2005 Poverty Profile to allow for consistent comparisons. It differs from the MDG indicator, Population Proportion Using Improved Drinking Water Sources in the following ways: i)the MDG indicator is about ‘use’, not access, and accordingly does not require the water source to be within 30 minutes walking distance; ii) the MDG indicator excludes all surface water sources including ponds whereby the present definition includes protected ponds (the IHLCA questionnaire did not distinguish between protected spring/pond or rainwater); iii) the MDG indicator includes bottled water if a secondary improved source is also available, whereby the present definition excludes bottled water altogether (the IHLCA questionnaire only asked for the main household source of water and not whether or not there was a safe secondary source).

5.7 Health and Nutrition

Table presents data on assorted health and nutritional indicators across the categories of the poverty transition matrix. Self-reported morbidity indicator is defined as the population percentage who declared having been hospitalized, staying in bed all day, or reducing their activities because of illness or injury in the 30 days preceding the survey.⁶ Incidence of moderate and severe malnutrition (underweight) represents the population proportion falling below two and three standard deviations, respectively, of a reference population norm for children under five. Access to health care is defined as those living within one hour's walking distance (1.23 miles) of a hospital (including township hospitals, public specialized hospitals and station hospitals) or health centre (including rural health centers, sub-rural health centers, maternal and child health centers).

Table 9 Health and Nutrition

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Self-Reported Morbidity Incidence	5.1 (0.38)	6.1 (0.48)	5.0 (0.46)	5.5 (0.29)	5.1 (0.30)
Moderate Malnutrition (Underweight)	34.2 (3.69)	34.6 (3.58)	35.6 (3.46)	30.0 (1.45)	35.2 (2.02)
Severe Malnutrition (Underweight)	10.7 (1.94)	9.1 (1.73)	11.6 (2.30)	9.4 (0.94)	10.2 (1.04)
Access to Health Care	79.7 (2.12)	76.1 (3.06)	71.4 (3.02)	84.0 (1.51)	77.0 (1.80)
Health Share in Consumption Exp.	4.4 (0.59)	4.4 (0.47)	3.7 (0.33)	6.0 (0.61)	3.7 (0.24)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- Households who have entered poverty have similar levels of self-reported morbidity and malnutrition than the chronically poor and higher levels of health care access and health shares in consumption expenditure than the chronically poor. Together these data suggest that health-related shocks, and lack of treatment, are not major factors explaining descents into poverty;
- Households who have escaped poverty have higher self-reported morbidity rates than entrants into poverty and the chronically poor and similar malnutrition rates to these two groups. They have lower access to health care than entrants into poverty and similar levels of health shares in consumption expenditure. These data do not suggest any clear relationship between health, nutrition and escapes from poverty;
- Unlike data on living conditions presented in Section 5.7, these data do not suggest that the chronically poor are the poorest of the poor with respect to health and nutritional outcomes.

In summary, there is no clear relationship between health and nutritional indicators and the individual categories of the poor in the transition matrix, which suggests that health-related shocks are not major causes of impoverishment. Further, the chronically poor are not the poorest of the poor with respect to health and nutritional outcomes.

⁶ It should be noted that self-reports of morbidity often introduce a bias when comparing the situation of poor and non-poor population groups because former often apply a higher standard when determining what constitutes illness and/or are less able to stay in a hospital or in bed, or reduce activities. Presumably, this bias will be less severe for comparisons across the poverty groups in the transition matrix.

5.8 Education

Table presents data on educational indicators across the categories of the poverty transition matrix. Literacy is defined as those able to easily read and understand a simple text, and solve simple mathematical problems or any individual who has completed the second standard. Net enrolment rates in primary present the number of enrolled students of official primary school age as a percentage of the total population of children of official primary school age.

Table 10 Education

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Literacy	85.9 (1.46)	89.9 (1.09)	81.4 (1.64)	93.2 (0.55)	84.3 (1.12)
Net Enrolment Rate in Primary	81.7 (2.21)	90.9 (1.57)	81.7 (1.55)	90.5 (0.83)	81.3 (1.32)
Education Share in Consumption Exp.	1.3 (0.13)	1.5 (0.09)	1.1 (0.10)	1.9 (0.09)	1.2 (0.07)

Source: IHLCA Survey 2009-2010

There are two relevant findings:

- Households who have entered poverty have higher literacy levels than the chronically poor but identical or similar primary enrolment rates and educational shares in consumption expenditure;
- Households who have escaped poverty have higher literacy and primary enrolment rates than entrants into poverty and the chronically poor and similar education shares in expenditure to these two groups.

In summary, literacy and net enrolment in primary are associated with escapes from poverty, though only the former distinguishes entrants into poverty from the chronically poor.

6. Coping and Survival Strategies

As discussed in Section 2.3, vulnerability, or the likelihood of falling into poverty, or into more severe poverty, is due to two main factors: exposure and response to downward pressures. In the present section, we examine the second of these factors, coping and survival strategies. Of the many such strategies discussed above, Table 11 presents information on sales of small assets, i.e. gold and/or jewellery, as well as receipt of donations. If such activities constitute coping or survival strategies, one would expect that they would be associated with new entrants into poverty.

Table 11 Coping and Survival Strategies

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Households that Sold Gold and/or Jewellery (%, Past 6 months)	1.02 (0.34)	2.01 (0.50)	0.06 (0.06)	1.63 (0.24)	0.85 (0.16)
Households that Received Donations (%, Past 6 months)	3.68 (0.79)	3.66 (0.79)	4.82 (1.45)	3.62 (0.50)	3.40 (0.68)

Source: IHLCA Survey 2009-2010

There are a number of relevant findings:

- Very few households have sold gold and/or jewellery. A higher percentages of escapees than entrants have engaged in such sales which suggests that they are not widely used as a coping/survival strategies;
- Interestingly, a similar percentages of households which have entered poverty, escaped from poverty and stayed non-poor have received donation. The number of such households is still very low, and highest among the chronically poor.

In summary, neither sales of gold and/or jewellery or receipt of donations appear to be coping/survival strategies which differentiate entrants into poverty from the other poverty categories in the transition matrix.

7. Summary and Conclusion

Poverty dynamics is about flows of persons into and out of poverty and not simply the stock of poverty at one or more given points of time. Accordingly, it allows one to distinguish between four population groups: entrants into poverty; escapees from poverty; the chronically poor, the non-poor. The *Poverty Dynamics Report* is among the first attempts to systematically address issues of poverty transitions in Myanmar drawing on a large panel data set of households.

The methodological approach taken in the *Poverty Dynamics Report* is to present descriptive statistics on the four key categories in the poverty transition matrix, mentioned above. Following the discussion of the cycle of vulnerability (Section 2.3), it presents data on shock and stresses, population characteristics and coping and survival strategies. Such information is a preliminary to more formal modelling which may be undertaken on the panel data.

These data allow for a number of interesting comparisons, namely:

- characteristics of entrants into poverty and the chronically poor, the two categories of the poor who are indistinguishable in the standard comparative static analysis of stocks of poverty (see Section 2.1);
- characteristics of those who escaped poverty;
- characteristics of entrants into poverty and the chronically poor on the one hand, and those who were poor in 2010 on the other (despite the fact that the population sample is different).

Certain of the main findings of the report are as follows:

- storms, floods and stagnant water are more closely associated with entries into poverty than with chronic poverty (or escapees from poverty);
- lack of, loss of, or inability to, work is much more closely associated with descents into poverty than with chronic poverty, while (smaller) family size is closely associated with escapees from poverty;
- entrants into poverty are much more likely to be associated with manufacturing, construction and trades/repairs than the chronically poor. This latter industry is also more closely associated with those who have escaped poverty;
- land size is associated with escape from poverty and a factor which differentiates the chronically poor from those who have fallen into poverty;
- data on the labour force and employment confirm the previous findings on the economic dependency ratio that lack of work, loss of work, or inability to work, is associated with descents into poverty though very high participation rates and low unemployment rates affirm the underlying conclusion in the *Poverty Profile* (Section 5) that lack of employment is not a major contributor to overall poverty;
- data on housing, water, sanitation and electricity affirm that the chronically poor are the worse-off with respect to these conditions of living followed in ascending order by entrants into poverty, escapees and the non-poor;
- there is no clear relationship between health and nutritional indicators and the individual categories of the poor in the transition matrix, which suggests that health-related shocks are not major causes of impoverishment;
- literacy and net enrolment in primary are associated with escapees from poverty, though only the former distinguishes entrants into poverty from the chronically poor

The analysis of poverty dynamics is important for at least three reasons. First, it appears to be a sizeable phenomenon, as discussed in Section 3.⁷ Second, characteristics of entrants into poverty and the chronically poor may systematically differ, as shown above. Accordingly, the appropriate policy response will differ. Finally, characteristics of those who have escaped poverty may be important to point to factors which enable such positive well-being trajectories.

⁷ This point is subject to the caveat about measurement error discussion in Section 2.4.



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